2018 - 2019

Aircraft Spruce & Specialty Co.

Worldwide Distributor of Certified and Homebuilt Aircraft Supplies



Aircraft Spruce & Specialty Co.
SINCE 1965

WELCOME!



Aircraft Spruce & Specialty Company turns 52 years old in 2017, and we've come a long way since Flo and Bob Irwin started shipping orders for aircraft grade spruce from the basement of our family home in Fullerton.

Back in 1965, Aircraft Spruce had one full time employee (Flo) and one product; aircraft spruce. Over the years, every type of aircraft part and pilot product has been added to our inventory, and the company catalog has grown to over 1,000 pages and over 100,000 products. The one employee has increased to over 170 today. From the day Flo opened the doors in 1965, to 1980 when we took the helm, all the way to 2017, the goal of our company is to offer the best price on the products we sell and the best service in the industry.

Our growth over the years has been made possible by the support of our customers worldwide, and every member of the Aircraft Spruce team is committed to living by our Mission Statement on every order, every day.

We hope that you will enjoy using this latest edition of the Aircraft Spruce catalog to locate the aircraft parts and pilot supplies you need. You can also shop on-line on our website at www.aircraftspruce.com. Place your orders by phone with our knowledgeable, friendly sales agents, fax your order to our 24 hour fax line, or order online through our easy-to-use website.

Our thanks to all of our customers worldwide for their patronage over the past 52 years; we look forward to serving you soon.

OUR MISSION STATEMENT . .

At ***AIRCRAFT SPRUCE & SPECIALTY***, we recognize that the ***CUSTOMER*** is #1. We will do everything in our power to make sure the customer is satisfied with their experience with Aircraft Spruce & Specialty.

At ***AIRCRAFT SPRUCE & SPECIALTY***, we will sell only the highest quality products at the lowest price.

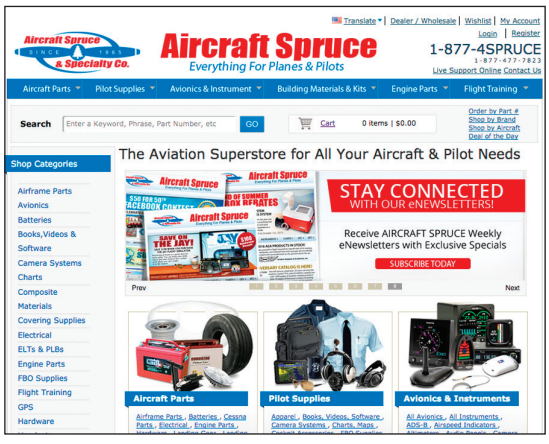
At ***AIRCRAFT SPRUCE & SPECIALTY***, it is our goal to provide everything for airplanes for our customers. We either carry or can special order the items our customers want or need.

At ***AIRCRAFT SPRUCE & SPECIALTY***, we will ship every order taken for in stock products the same day. We are committed to doing whatever is necessary to ship our customers orders accurately, completely, and on time.

At ***AIRCRAFT SPRUCE & SPECIALTY***, we will solve our customers' problems quickly, fairly, and efficiently, on the customer's ***FIRST*** call.

At ***AIRCRAFT SPRUCE & SPECIALTY***, we will work together as a team to reach our goal: 100% customer satisfaction.

AIRCRAFT SPRUCE ONLINE



There has never been an easier way to access thousands of aviation products than visiting www.AircraftSpruce.com. The Aircraft Spruce website provides easy access to information on all of the products contained in this catalog 24/7. Place your order online and confirm the order in real time as they are processed. View backorder status and product availability.

Our 1,000+ page Parts Catalog is available for download in pdf format online 24 hours a day.

Customers can also get up to the minute account and order status anytime of the day. You have real time access to your account information when you want and need it. Open order status and your filled order history is always available and updated daily. Our partnership with our freight carriers, like UPS provide you with up to the minute shipping information including package status, scheduling, and delivery.

Try our new "Shop by Aircraft" parts guide. We have compiled the application data for a number of common general aviation aircraft so our customers can easily find their applicable standard replacement parts.

• Fast, Easy, Convenient! • Check order status! • 24-hour access to all of our products!

WWW.AIRCRAFTSPRUCE.

QUICK INDEX

A complete and detailed index can be found at the back of this book.

NAME: _____

CUSTOMER #: _____

TOLL-FREE ORDER LINE / CUSTOMER SERVICE

877-477-7823 • 800-861-3192

ORDER DESK HOURS (PST)

Mon. - Fri.: 5:00am - 6:00pm, Sat.: 7:00am–3:30pm

TOLL-FREE FAX LINE

800-329-3020

SHOP ON-LINE

www.aircraftspruce.com

info@aircraftspruce.com

AVIONICS SALES TEAM

800-826-3160

THREE REGIONAL WAREHOUSES

AIRCRAFT SPRUCE WEST

ADMINISTRATION & WESTERN DISTRIBUTION CENTER

225 Airport Circle, Corona, CA 92880-2527

Phone: (951) 372-9555 • Fax: (951) 372-0555

CUSTOMER SERVICE HOURS (Pacific Time)

Mon. thru Fri.: 7:00am–4:00pm • Saturday: 7:00am–3:30pm

AIRCRAFT SPRUCE EAST

EASTERN REGIONAL DISTRIBUTION CENTER

452 Dividend Drive, Peachtree City, GA 30269

Ph: (770) 487-2310 • Fax: (770) 487-2308

CUSTOMER SERVICE HOURS (Eastern Time)

Mon. thru Fri.: 8:00am–7:00pm • Saturday: 10:00am–6:30pm

AIRCRAFT SPRUCE CANADA

27 York Rd.Brantford, ON N3T-6H2

Mailing: P.O. Box 3731

Ph: (519) 759-5017 • Fax: (519) 759-8964

STORE HOURS

Mon. thru Fri.: 8:00am–5:00pm • Saturday: 8:00am–3:00pm

www.aircraftspruce.ca • email: info@aircraftspruce.ca

CAN'T FIND WHAT YOU NEED? LET US HELP!

While we try to offer everything you might need for your aircraft, there are some products that you may not find listed in this catalog. Let us help! Just give our Sales Department a call on our Toll Free number and provide our Sales representative with as much information as possible on the parts you need. They will source the product for you and provide a quotation and lead time for the product as quickly as possible.

NOTICE! Many parts in this catalog are NOT FAA approved. Unless our catalog specifically indicates a part has a PMA (Parts Manufacturers Approval), that part may not be certified or approved for aviation use. The selling of a part should not be construed as a representation that the part is certified or approved for aviation use, nor can Aircraft Spruce & Specialty Co. include instructions for use or warnings unless provided by the manufacturer or distributor. Any concerns the purchaser may have about the suitability of a part for aviation use, instructions for use or warnings, should be promptly directed to the manufacturer.

WAIVER OF LIABILITY AND INDEMNIFICATION AGREEMENT

In as much as Aircraft Spruce & Specialty Co. has no opportunity to supervise the manufacture, installation or maintenance of the parts supplied by it, nor any opportunity to participate in the design or manufacture of the various certificated and homebuilt aircraft in which its parts are utilized, the purchaser by placing this order and accepting said merchandise from Aircraft Spruce & Specialty Co. agrees that all materials purchased will be used solely at purchaser's risk and that purchaser will indemnify and hold Aircraft Spruce & Specialty Co., its owners and employees, free and harmless from all loss, liability or damage resulting from claims brought by reasons of any alleged failure or defect of any part or parts supplied by Aircraft Spruce & Specialty Co.

COMPOSITE MATERIALS (CM) Pg.- 19-42
Glass Cloth, Resins, Foams, Tools, Safety Equipment, Kevlar, Graphite

WOOD PRODUCTS (WP) Pg.- 43-50
Spruce, Balsa, Plywood, Glues

METALS & PLASTICS (ME) Pg.- 51-62
4130 Steel, Aluminum, Tubing, Sheet, Rod, Bar, Angle, Hinge, Copper Tubing, Firewall Metals, Trailing Edge, Channel, Plastics, Plexiglas, Lexan, Nylon, Phenolic & Acrylic Tube Rod

HARDWARE (HA)Pg.- 63-120
Bolts, Nuts, Washers, Screws, Fittings, Fasteners, Rivets, Nails, Rivnuts

AIRFRAME PARTS (AP) Pg.- 121-287
Rubber Goods, Grommets, Hose O-Rings, Shock Mounts, Shock Cords, Channels, Control System Components, Fuel Supplies, Bearings, Tie Rods, Throttles & Controls, Propellers, Spinners, Cowlings, Windshields, Seat Belts & Harnesses

LANDING GEAR (LG) Pg.- 288-331
Wheels & Brakes, Tires & Tubes, Axles, Tailwheels

ENGINE PARTS (EP) Pg.- 332-457
Magnetos, Carburetors, Starters, Generators, Alternators, Spark Plugs, Ignition Harnesses, Engines, Exhaust Stacks, Engine Mounts, Air & Oil Filters

COVERING SUPPLIES (CS) Pg.- 458-535
Fabric, Tapes, Inspection Rings, Grommets, Paint Brushes, Dopes, Thinners, Finishes, Chemical Products, Registration Stencils, Placards, Decals

INSTRUMENTS (IN) Pg.- 536-614
Vacuum Pumps, Pitot Tubes, Shock Mounts, Instrument Overhaul, Tachometer Cables

ELECTRICAL (EL) Pg.- 615-703
Batteries, Lights, Strobes, Electrical Wire & Terminals

AVIONICS (AV) Pg.- 704-813
Custom Panels, Radios, Antennas, ELT'S, Encoders, GPS, Headsets, Intercoms, Accessories

TOOLS (TO) Pg.- 814-925
Tubing Benders & Cutters, Rivet Guns, Wire Twisters, Spray Guns, Welding Equipment, Spark Plug Tools, Safety Equipment

PILOT SUPPLIES (PS) Pg.- 926-1050
Oxygen Equipment, Tiedown Kits, Goggles, Sun Glasses, Videos, Charts, Flight Cases, Tow Bars, Parachutes.

BOOKS & VIDEOS (BV) Pg.- 1051-1094
Construction & Aviation Videos, Instructional Materials, Pilot Guides, Log Books, Aircraft Manuals, General Aviation Books, E-Books

Aircraft Spruce SINCE 1965 & Specialty Co.

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Cover photo courtesy of: Mike Fizer, AOPA

AIRCRAFT SPRUCE & SPECIALTY CO.

A COMPANY HISTORY



Bob and Flo Irwin



201 West Truslow Ave, Fullerton CA.
Home of Aircraft Spruce from 1973 to 1997



Present Home of Aircraft Spruce West
(225 Airport Circle, Corona, CA.)



Present Home of Aircraft Spruce East
(452 Dividend Drive, Peachtree City, GA)

The foundation for what is now Aircraft Spruce & Specialty Co. dates to the summer of 1956 when Flo and Bob Irwin founded Fullerton Air Parts at Fullerton Municipal Airport in Southern California. Bob, born and raised in Kansas City, MO., a pilot since the 1940's and active in the CAP and other aviation groups, knew airplanes and the parts that were needed to keep them flying. Flo, a native of Rochester, New York, had no aviation background but learned the business quickly and knew what it would take to keep customers coming back... fair prices and good service. Fullerton Air Parts grew into one of the largest retail aircraft parts suppliers in the western states during the next nine years.

In 1965, Bob and Flo Irwin sold the business and founded another one which sold only one product, aircraft grade spruce lumber for aircraft construction and restoration. Aircraft Spruce Co. quickly added more products to its small catalog and adopted the name Aircraft Spruce & Specialty Co., with a goal to offer everything pilots and aircraft builders need. As Aircraft Spruce served more customers and more and more products were added, staff grew from 2 in 1965 to over 180 today.

Jim Irwin, Bob and Flo's older son, grew up in the business, working in jobs such as cutting metal and spruce, pulling and shipping orders, and managing kit programs such as the Vari-Eze back in 1975 while still in college. Graduating from California State University at Fullerton in 1978 with a degree in business administration (marketing), Jim acquired the company and became president in 1980. Jim's wife Nanci, who graduated with an accounting degree from the University of Southern California in 1977, is vice-president and works full time managing the company's accounting and data processing departments. Jim Irwin has logged over 5000 hours as a multi-engine, instrument rated pilot since 1976 and Nanci Irwin is a licensed private pilot as well. They fly the company Cessna 425 extensively on business throughout the Southwest. Jim and Nanci Irwin have four children: Mike, Krissy, Jeff, and Rob, who are all members of the Aircraft Spruce management team. Mike and Jeff are pilots and fly the company's Navion Rangemaster.

Flo and Bob Irwin, along with Jim's younger brother John, moved to Lake Havasu City, Arizona in the fall of 1983 and founded ACS Products Co., which manufactures a line of products which is distributed by Aircraft Spruce. Flo Irwin passed away on June 10, 1989, but the legacy of this warm, outgoing, and talented businesswoman lives on in the businesses she founded and built to serve the aviation community. John Irwin, his wife, Frances, and Bob Irwin now manage the ACS Products Co. operation. Bob Irwin was an instrument rated pilot with more than 2000 hours logged and based his 1968 Navion Rangemaster at Lake Havasu City until May 2000 when Bob retired as a pilot, after fifty years of flying, and moved the Navion to Chino Airport for his grandchildren to fly. Prior to acquiring the Rangemaster in 1976, Bob owned a Vultee BT-13B and a 1949 Ryan Navion. Bob Irwin passed away on June 26, 2015 at the age of 95, after being active in general aviation as a pilot and businessman for over 65 years.

Aircraft Spruce was housed in downtown Fullerton, CA. from its founding in 1965 until late 1997. The last 24 years in Fullerton the company was operated in a historic Fullerton former citrus packing house, which we eventually outgrew. In the fall of 1997, Aircraft Spruce moved to a new, 62,000 square foot facility in Corona, California. In the Spring of 2004, Aircraft Spruce East moved to a new 56,000 Sq. Ft. facility in Peachtree City, GA from its old home in Griffin, GA. Aircraft Spruce Canada was opened in Toronto in December 2006, and moved to a new facility at Brantford Airport in Ontario in late 2008. In late 2012 Aircraft Spruce Canada moved into a new 20,000 square foot facility at Brantford Airport. We are proud of the tradition of our company that now dates back some 52 years, and are pleased to have had the opportunity to help aviators around the world build the plane of their dreams. Our growth, from a single room in 1965 to 120,000 square feet in three facilities that we have today, has been a direct result of the loyalty and patronage of our customers. Our goal is to continue to provide the very best in products, prices, and customer service to our friends in the years to come.

CELEBRATING 53 YEARS OF SERVICE TO AVIATION!
1965 – 2018

AIRCRAFT SPRUCE WEST
CORONA, CALIFORNIA



Aircraft Spruce West was located in a 27,000 split level packing house in downtown Fullerton, CA. from 1973 until 1997. Built in 1924 by the Union Pacific Railroad, the Building was known as the Elephant Packing House named after the original lease holder operating a citrus packing operation there. In 1996, Aircraft Spruce acquired a 5-acre parcel near the airport in Corona, CA. Construction for the new home of Aircraft Spruce West began in March 1997. In September of 1997, the new 62,000 sq. ft. facility was completed and operations were moved from Fullerton to Corona. The Corona facility features 10,000 sq.ft. of office space, a large, automated warehouse, separate workshops for preparation of metal and wood orders, and a huge retail store for fly-in and drive-in customers. Visitors are always welcome at Aircraft Spruce West.

Phone: (951) 372-9555
email: info@aircraftspruce.com

AIRCRAFT SPRUCE EAST
PEACHTREE CITY, GEORGIA



Aircraft Spruce East is located on Falcon Field (FCC) in Peachtree City, GA. 20 miles southwest of Atlanta. Aircraft Spruce East was formally located in a 27,000 sq.foot building in Griffin, GA which was the former home of Alexander Aeroplane Co., prior to the acquisition by Aircraft Spruce in January 1996. The new facility in Peachtree City is 56,000 sq. ft. and became the new home of Aircraft Spruce East in March of 2004. Aircraft Spruce East ships hundreds of orders each day to customers worldwide and features a fully stocked aircraft parts and pilot supply store. Be sure to visit Aircraft Spruce East any time you are in the Atlanta area.

Phone: (770) 487-2310
email: info@aircraftspruce.com

AIRCRAFT SPRUCE CANADA
BRANTFORD, ONTARIO



Aircraft Spruce Canada is located at the Brantford Municipal Airport in Brantford, Ontario, about an hour drive south from Toronto. A retail store is available to customers who fly or drive to the Brantford Airport to purchase aircraft parts, avionics, and pilot supplies. Aircraft Spruce Canada also provides same day shipping to customers throughout Canada from our new 20,000 square foot facility. Aircraft builders and owners in Canada have full access to products sold by Aircraft Spruce in the United States at competitive prices and shipping rates. Shipping options include Canada Post, UPS, FedEx, DHL, Dicom, and Purolator. Make plans to visit Aircraft Spruce Canada anytime you are in the Greater Toronto Area.

Phone: (519) 759-5017
email: info@aircraftspruce.ca

AIRCRAFT SPRUCE INTERNATIONAL REPRESENTATIVES



Aircraft Spruce & Specialty Co. serves our customers worldwide through International Representatives in over 55 countries. These countries include: Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Chile, China, Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Guatemala, Hungary, India, Ireland, Israel, Italy, Japan, Korea, Lithuania, Luxembourg, Madagascar, Malaysia, Mexico, Netherlands, New Zealand, Norway, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Russia, Serbia, Singapore, Slovak Republic, South Africa, Spain, Sweden, Switzerland, Taiwan, Tanzania, Thailand, Turkey, Ukraine, United Kingdom, Uruguay, Venezuela.

For complete contact information for any of our Aircraft Spruce International Representatives, please call 1-877-4-SPRUCE or visit our website at www.aircraftspruce.com

Image Courtesy of: vecteezy.com

THE AIRCRAFT SPRUCE MANAGEMENT STAFF



JIM IRWIN
President



NANCI IRWIN
Vice President



TOM MARRACCI
Director of Operations - West



DON ARRINGTON
Director of Operations - East



MIKE IRWIN
Vice President - Procurement



JEFF IRWIN
Vice President - Operations



ROB IRWIN
Vice President - Marketing



LOIS JONES
Human Resources Manager



TOM GLAZE
Inside Sales Manager



RYAN DECK
Avionics Sales Manager



JOSH SOLIS
Product Support Manager



CHUCK JONES
Warehouse Manager – West



JACK SAMUELS
Outside Sales Manager



DEBBIE MOSS
Accounting Manager



TAWNY CASTILLO
Logistics Manager



ANTHONY GARCIA
International Sales Manager



VERONICA BELTRAN
Customer Service Manager



SCOTT ROBERTSON
Shop Manager – West



ANASTASIA WALKER
Office Manager – East



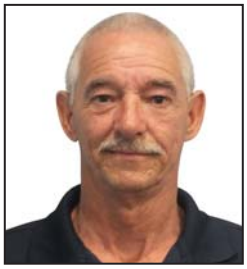
MAYRA BAHENA
Shipping Manager



ANDREY FERRELL
Warehouse Manager – East



DAVE PUSKAS
General Manager – Canada



ROB CLARKE
Warehouse Manager – Canada

AIRCRAFT SPRUCE TEAM...

COMMITTED TO CUSTOMER SATISFACTION



AIRCRAFT SPRUCE WEST STAFF - JUNE 2018



AIRCRAFT SPRUCE EAST STAFF - JUNE 2018

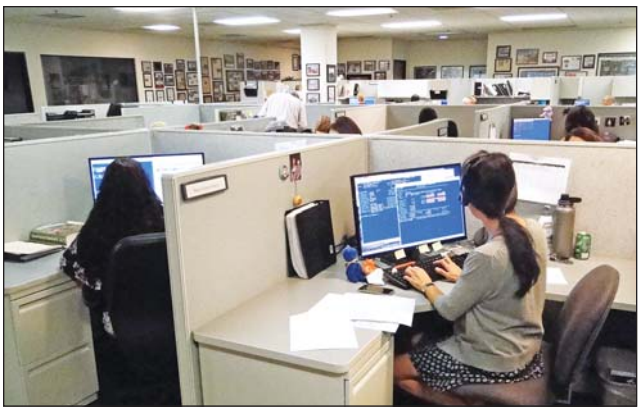


AIRCRAFT SPRUCE CANADA STAFF - JUNE 2018

WWW.AIRCRAFTSPRUCE.COM

FRIENDLY, FAST, & EFFICIENT ORDER PROCESSING..... THAT'S THE AIRCRAFT SPRUCE WAY!

At Aircraft Spruce & Specialty Company, we handle every order with the same care and diligence that we did our first order back in 1965. Here is a glimpse of some of the many departments that process thousands of orders each week and ship them to our customers around the world.



Orders may be placed by mail, FAX, email, and online at www.aircraftspruce.com, or as most customers prefer, by phone with one of our friendly, helpful sales persons. Your order is quickly input into our computer system and printed immediately in the warehouse.



Our large staff of order pickers receive the orders in the warehouse, fill the order and pass it along to the shipping department for careful packaging and shipment. We carry over 100,000 different inventory items!



Warehouse inventory is carefully arranged in computer part number sequence for fast and accurate order completion. As your single source supplier, Aircraft Spruce stocks lumber, plywood, metals, composites, hardware, instruments, tools, covering supplies, avionics....and everything in between! Walk-in customers are invited to visit our stores located at our warehouses in Corona, CA and Peachtree City, GA, and Brantford Canada.



Orders for specially cut steel and aluminum tubing, sheet, bar and plate are no problem here, and are processed on a daily basis. Aircraft Spruce furnishes raw materials to large end users in huge quantities at volume discounts, as well as cut pieces as small as one foot to homebuilders. Whatever you need, we've got it!



Hand selected aircraft grade spruce lumber was our very first product, and remains one of our specialty products today. All of our spruce is certified to MIL-S-6073 and is custom milled, inspected and packaged according to customer specifications.



An average of 2,500 packages per day leave the Aircraft Spruce warehouses in Corona, CA, Peachtree City, GA, and Brantford ON, Canada via UPS, Parcel Post, Federal Express, air freight or sea freight on their way to our customers throughout the United States and worldwide. Our state-of-the-art in-house computer systems with complete order tracking capability make Aircraft Spruce & Specialty Company the smart choice as your complete supplier for aviation materials and components.

Prices Subject to Change Without Notice

EAA & AOPA

THE POBEREZNY ESTATE



Aircraft Spruce purchased the former home of Paul and Audrey Poberezny in Oshkosh, WI in 2017 and makes the home available to the EAA for tours and special events. The original stone farmhouse is over 100 years old and was Paul and Audrey's home from 1991 until his death in 2013. Located near Wittman Field, the 9 acre estate reflects the standards and culture the Pobereznys utilized in building the world's leading sport aviation organization, EAA, and the world's premier aviation event, AirVenture. This home hosted many of aviations leaders and icons, and countless aviation artifacts and photos representing the relationships and events that shaped Paul's remarkable life are on display throughout the home, providing insight into the lifetime passion and vision of one of aviation's greatest leaders. This is where Paul built airplanes, read about aviation history, and wrote countless letters and articles. As he often said, "There isn't a day that goes by that I don't say the word airplane".



Aircraft Spruce and the Irwin family have maintained a close relationship with the Poberezny family and EAA for over 50 years and is honored to have the opportunity to partner with the EAA to make this historic home available to EAA members and aviation enthusiasts in the years ahead.

EAA CREDIT CARD DISCOUNT PROGRAM





Aircraft Spruce has been a major sponsor of EAA for many years, providing donations and materials for EAA SportAir Workshops, AirVenture Forums and Workshops, EAA Webinars, Young Eagles, and many regional and local EAA events.

Aircraft Spruce provides discounts on orders placed by EAA members using the EAA credit card. The discount varies on every product, and there are certain products on which discounts are not permitted by the manufacturer. The maximum discount is 10%, and the price with discount applied can be provided by the Aircraft Spruce sales agent or online. When you use the EAA Platinum Visa credit card our system recognizes the card and applies applicable discounts to each product.

For more information on cardholder benefits, please go to: EAA.org/Visa.

AOPA SPONSORSHIP



Aircraft Spruce has been a sponsor and advertiser with AOPA for decades. In 2012, Aircraft Spruce became the first aviation supply company to join AOPA as a Strategic Partner. This partnership provides funding and support for the many AOPA programs that are essential to the growth of general aviation. Aircraft Spruce is proud to help support AOPA's efforts to grow general aviation and protect pilots' rights.

Aircraft Spruce also offers AOPA members valuable benefits through special promotions and programs.

To become an AOPA member or get more information about the association, please visit www.aopa.org

ORDERING INFORMATION

THE AIRCRAFT SPRUCE CATALOG FREE ON REQUEST



We want all aviators to have access to the wide range of products and services offered by Aircraft Spruce. Just give us a call on our toll free order line, send us a request for a catalog by fax, mail, or e-mail, and we'll have a complimentary copy of our catalog on the way to you the same day. Our catalog is also available on CD, or for download in pdf format at www.aircraftspruce.com. If you know of someone who needs a catalog, please let us know.

Note: Free Shipping on catalogs shipped within the USA (including Alaska + Hawaii). Canadian and international catalog orders will incur a $15 freight charge via Bulk Mail. Additional items may incur additional freight charges. Expedited shipping will incur additional freight charges.

Print Catalog..... P/N 01-38400..... **FREE**
CD Catalog..... P/N 01-00612..... **FREE**



VISIT THE AIRCRAFT SPRUCE STORES

Stop by one of our stores to view and purchase the many items listed in the Aircraft Spruce catalog. The Aircraft Spruce West store is open Monday thru Friday 8:00am to 6:00pm, and Saturday 7:00am to 3:00pm. The Will Call store at Aircraft Spruce East is open Monday thru Friday 8:00am to 6:00pm, and Saturday 8:00am to 4:00pm. The Aircraft Spruce Canada store is open Monday thru Friday 9:00am to 5:00pm, Saturday 9:00am to 3:00pm. Call either office ahead of time to place your order and we will have it ready for pick-up upon your arrival. The staff at Aircraft Spruce West, East, and Canada welcome your visits.



SPRUCE ONLINE

Aircraft Spruce Online provides customers with up to the minute account and order status utilizing their own personal computers. The Aircraft Spruce Web Site provides information on many of the products contained in this catalog, real time access to account information, open order status and filled order history available daily. Confirm order on line in real time as they are processed, and view backorder status and product availability. In addition, our partnership with UPS provides you with up to the minute shipping information including package status, scheduling, and delivery exception.

www.aircraftspruce.com

CUSTOMER COMMENT CARDS

Your satisfaction is our number one priority. This is why we include a Customer Comment Card in every order we ship. Please take a moment to complete the few questions on the card and give us any comments or suggestions you might have. Simply drop the postage paid card in the mail to return to our California headquarters. Your response helps us monitor our level of service and ensure that we are performing well for you.

SHIPPING TIME

Orders placed by 4:00 pm EST and 4:00 pm PST Monday-Friday for "off-the-shelf", in-stock items are normally shipped same day from the respective location (Peachtree City, GA or Corona, CA). Our shipping departments are closed on Saturdays and Sundays.

Although we stock the vast majority of the items in our catalog, we cannot assure that they will all be on hand at all times. We ship every order as quickly as possible, and in the event of a delay, be assured that we are working hard to get your order shipped promptly. Due to order volume during holidays, we cannot guarantee that all orders placed can ship on the day after the holiday closure.

Orders for spruce, tubing and other special cut products may take a few days to ship depending on order volume. Special order products ship base on the lead times of each manufacturer. Note: Special Instructions may delay shipment of your order.

ADDING ON TO AN ORDER

In order to ensure efficient, accurate processing of orders in the warehouse, we have several restrictions for adding on to placed orders. The restrictions include:

Orders that have "Packed" or "Invoiced" status
Orders qualifying for free shipping
Orders placed by PayPal
Orders containing special order items

We have also implemented a 1:00 pm local time cutoff for add-ons at the respective origin warehouse on the day the order is shipping.

If the order has an "open" status and it is before the 1:00 pm cutoff, you can add on to it using the website in the "Order Self Help" screen or by calling our Customer Service department. If we cannot add products to the open order due to the restrictions listed above, we will be glad to take a new order for the additional products.

OUR 100% RECYCLED, BIODEGRADABLE PACKING PAPER

We have looked for a more customer friendly packing material alternative for some time, and we are pleased to announce that we will be using a 100% recycled, 100% biodegradable paper packing material to replace the peanuts. This material is suitable to our high volume shipping requirements, protects the contents of the box as well as the peanuts, and will allow customers to unpack their shipments without having to pick up peanuts afterward.

CLOSING THE TRANSACTION

For our customer's convenience we enclose a copy of the invoice covering the order with each order shipped except those shipped to a third party. ***If the order is paid by check and the check did not cover the full amount of the invoice, the amount of underpayment will be sent C.O.D. for the balance due plus C.O.D. fee of $10.50 rather than delay the order.*** If you have overpaid by check, the overpayment will be credited to your account or refunded. C.O.D. shipments are considered "paid" as soon as we receive payment from UPS, and credit card orders are paid automatically at time of shipment. We look forward to your next order!

WHEN YOU RECEIVE YOUR ORDER

Upon receipt, the package should be opened promptly and material checked against the packing slip enclosed. Items out-of-stock at time of shipment will be marked as "back-ordered – to follow." These items will not be charged on the invoice enclosed with the package and will be forwarded as soon as delivery is received from our suppliers. The back-ordered items will not be charged until shipped. About 90% of the items featured in our catalog are carried in stock. Special items of hardware, bearings, unusual fittings and slow moving items are special ordered as required. However, even with the large inventory we carry, it is not uncommon to "come up short" on some items. If an item is missing and not marked "backordered", please advise us immediately by mail or call our Customer Service Dept.

BACKORDERS

Backorders are shipped from the warehouse (WEST OR EAST) that receives stock first.

Although we make every effort to ship all orders "complete," it is often necessary to backorder one or more items if we are out of stock. When the partial order is shipped and invoiced, you are not charged for the backordered item(s) until these items are shipped. You are billed only for what is shipped. A backorder is created and shipped as soon as the items arrive. The backorder is then invoiced and any overpayment from the first invoice is applied to it. If you do not wish to have any items backordered, or wish to cancel an existing backorder, just let us know. We will do so immediately if the backorder has not been shipped. We are working continuously to keep all items in stock to preclude backorders. If a backorder is necessary, we do appreciate your patience. Aircraft Spruce pays the shipping costs within the 48 contiguous United States by surface shipping on backorders when the backordered items could have been shipped via UPS inside the first package at no additional freight cost. Except when the backordered items are oversize, hazardous, contain one gallon or larger, or COD shipments. We will continue to strive to maintain stock of all our products to keep the necessity for backordering parts to a minimum.

RETURNED MERCHANDISE

Contact Aircraft Spruce Customer Service by phone or email for RMA Number before returning any product.

Merchandise may be returned for credit or refund within 30 days from date of receipt if received in resalable condition-packed in original manufacturer's box, complete with instructions and all components (if applicable). A copy of the original order showing purchase or information stating the invoice number and date of purchase, with reason for return must accompany the article. Any refund for a return outside of 30 days may be subject to house account credit only. Do not mail purchase information in letter form under separate cover. A restocking charge may apply on items that are missing components, are considered non-stocking parts, are outside of the 30 day return period, etc. Do not return any products C.O.D. as it cannot be accepted by our warehouse. All returns (excluding Canada) must be made to Aircraft Spruce West in Corona, CA, USA. Certain items may not be eligible for return (e.g. books, DVD's, videos, special order items etc). The outbound freight charge for returns on items shipped using our Free Shipping promotion will be deducted from the refund. Call first for return authorization and instructions.

Important Note Regarding Canadian Returns: Returns for orders made from our Canadian facility may be returned to the Canadian warehouse. Canada returns do NOT need to go directly to either USA facility.

DAMAGE OR SHORTAGE

Open and examine all packages promptly. Notify the Aircraft Spruce Customer Service Department of any discrepancies in the order. If the merchandise is received in damaged condition or the carrier fails to deliver the entire shipment as shown on the Bill of Lading covering motor freight delivery, make note of the damage or shortage on the Bill of Lading and ask the driver to sign it. Then call the terminal office of the carrier and institute a claim for the loss or damage. If a package delivered by UPS arrives damaged, report this to the driver immediately. UPS will issue a report on the damage to Aircraft Spruce at which time a replacement shipment can be made.

Prices Subject to Change Without Notice

ORDERING INFORMATION

AIRCRAFT SPRUCE PRICING POLICY

Aircraft Spruce has always taken great pride in offering aircraft builders/owners the lowest overall prices in the industry. Many items in the catalog now show discounts for various quantity purchases. Special quotations on other quantity purchases gladly furnished on request. Our online catalog pricing is updated daily and should reflect current pricing. Should there be any kind of price discrepancy we will notify you immediately. We will continue to do our best to minimize increases and offer all of our products at the best possible prices. All prices are subject to change without notice.

OPEN ACCOUNTS

Aircraft Spruce has long served many companies, schools and government agencies on an open account basis. Established companies can apply for an open account by submitting a credit application including all company data and at least three business references and bank information. Credit application forms available on request. Open account terms are net 15 days after invoice date.

DEALER/OEM DISCOUNTS

We have offered discounts to our regular dealers and FBO's for many years for resale purposes, and we welcome the addition of new dealers to best serve aviation consumers worldwide. Due to the very competitive and low margin nature of most of the prices shown in this catalog, all discounts are based on volume purchasing. Discounts for many items are shown below the product in the catalog. Discounts for items with discounts not shown in the catalog or for larger quantities than those listed can be quoted by mail, phone, or FAX upon request. You can be assured, as an aviation dealer, that you will receive the best possible net prices from Aircraft Spruce on all product lines that we carry. If you ever find a lower current advertised price on any product, just let us know and we'll beat it. Call for an Aircraft Spruce dealer application if interested in becoming a dealer for our covering supplies, hardware, or Microflight products.

PRODUCT INFORMATION

For all products, call our main sales lines at 877-4-SPRUCE. Our sales representatives will consult with other staff members or call the manufacturer of the product to get you the answer you need as quickly as possible. We are here to help!

SPECIAL ORDERS

Over the years, one of the services that our company offers that seems to be most appreciated by our customers is our willingness to research and provide quotations for special items. Other supply firms tend to discourage special requests due to the time and effort it takes to find these items, and request that customers order "catalog items" only. We have always taken a different approach and welcome requests for non-catalog items. Call or write and provide as much information as possible including make, model, serial number of aircraft and exact part number or product you need, plus your credit card number. Within 24 hours if at all possible, we will advise you of the price and delivery time on the item, at which time you can place your order if acceptable. Once an order is placed for a special order item, it cannot be cancelled or returned and must be paid in advance. If we cannot drop ship your special order, then freight charges from the factory to our warehouse will be added to your invoice. Our goal is to provide you with everything you need - if you do not find it in this catalog, let us know and we'll find it for you!

PRODUCT WARRANTY

In cooperation with the manufacturers we represent, Aircraft Spruce & Specialty Co. warrants for a period of one year (on most products) from the date of original purchase its products to be free from defects in material and workmanship. Aircraft Spruce & Specialty Co.'s obligation under this warranty is limited to repair or replacement of the purchased product only, and under no circumstances shall Aircraft Spruce & Specialty Co. be liable for any loss, damage, injury, cost of repair or consequential damages of any kind in connection with the sale, use or repair of any product purchased from Aircraft Spruce & Specialty Co. Products sold are subject to manufacturer's warranty policy. Defective merchandise or out of box failure of product is repaired or replaced at manufacturer's option. Avionics, electrical, instruments, or similar products that are defective are subject to manufacturer's warranty only, and will not be replaced immediately from Aircraft Spruce inventory.

WAIVER OF LIABILITY AND INDEMNIFICATION AGREEMENT

Inasmuch as Aircraft Spruce & Specialty Co. has no opportunity to supervise the manufacture, installation or maintenance of the parts supplied by it, nor any opportunity to participate in the design or manufacture of the various certificated and homebuilt aircraft in which its parts are utilized, the purchaser by placing an order and accepting said merchandise from Aircraft Spruce & Specialty Co. agrees that all materials purchased will be used solely at purchaser's risk and that purchaser will indemnify and hold Aircraft Spruce & Specialty Co., its owners and employees, free and harmless from all loss, liability or damage resulting from claims brought by any reason of any alleged failure or defect of any part or parts supplied by Aircraft Spruce & Specialty Co.

INTERNATIONAL CUSTOMERS

Aircraft Spruce is recognized as the leading source of materials for aircraft builders, owners and pilots around the world. Over the past 45 years we have developed a family of customers in every part of the globe. Our International order dept. is more than happy to assist you in placing and processing your order for international shipment. Please note the following guidelines for placing an international order.

You may place your order with any of our international representatives or directly with our USA, Corona facility. Correspondence should be sent in English or Spanish to expedite service.

Requests for quotation are processed within 72 hours, unless additional research is required on a product. All prices quoted and invoiced by Aircraft Spruce West are FOB Corona, CA and by Aircraft Spruce East are FOB, Peachtree City, GA. A quotation is processed as a proforma invoice for all overseas customers. A proforma invoice is not considered an order until funds are received to process the order. Actual freight charges may differ from a freight quote or estimate provided by a freight carrier.

First time orders are preferably received by fax or e-mail to insure correct notation of name and billing and shipping information. Please note the information on 8130 forms in the following paragraphs. If 8130 forms are required, we must be notified at the time the order is placed so that we may special order the documentation.

To economize on the shipping costs, International orders are generally shipped complete unless otherwise advised by the customer. We utilize DHL, UPS, Fed-Ex and Air Parcel Post for most international shipments. Shipments by DHL, UPS and Fed-Ex are highly recommended because of the excellent traceability of the shipments. Parcel post traces are very time consuming and unreliable. We cannot be responsible for shipments made by Parcel Post. Our international dept. also utilizes the services of many other air and sea carriers. Should the services of a freight forwarder be necessary we can work with one who is familiar with our service or with one of your choice to meet all of your shipment requirements. All freight, duty and customs charges are the responsibility of the customer. Preferred methods of payment are credit cards (American Express, Visa, Mastercard, Discover) and by bank transfer. There is an additional $20 service charge for bank transfers. When making a bank transfer please fax a copy of your transfer along with your order request to ensure accurate allocation of funds. Please note that if payment is made by bank transfer there is an approximate 7 day delay before funds are confirmed and allocated.

HAZMAT SHIPMENTS – A fee of $50 is charged on all international shipments containing hazardous materials. This fee covers special packaging, documentation, and certification requirements that apply to hazmat orders shipping to customers outside the United States.

A complete listing of Aircraft Spruce international representatives can be found on our website. Always remember to furnish your complete communications information on your correspondence so that we may respond to your requests promptly. We welcome your orders and look forward to being part of your team during your entire project.

CERTIFICATE OF CONFORMANCE AND FORM 8130 (EXPORT)

Aircraft Spruce provides you with its own Certificate of Conformance for our products at no charge. This is noted on every invoice. Factory certification and test reports are available on some items and Form 8130 are available on FAA approved products. A cost of $100 per product is charged to secure these forms. Please inquire at time of order if test reports are available for the items you are ordering. If available, the forms must be requested at time of order and the product must be special-ordered from the factory with the forms. These forms cannot be furnished after you receive the product. Anticipate shipping delays if Form 8130 is requested. Do not order products using catalog part number if you require form 8130, as you will receive standard parts without the form. Simply describe the part and specifically request Form 8130. Due to delays and costs involved in furnishing these forms, we strongly suggest that you check to see if the Aircraft Spruce Certificate of Conformance will be acceptable in lieu of Form 8130.

AIRCRAFT SPRUCE GIFT CARDS



Do you want to give an aircraft builder or pilot a gift from Aircraft Spruce for a birthday, holiday, or another special occasion and don't know what to get? Let them decide. Give one of our sales representatives a call at (877) 4-SPRUCE and order an Aircraft Spruce Gift Card for any dollar amount you want. The cards are valid indefinitely and can be used toward the purchase of any products sold by Aircraft Spruce. These cards are very popular and are a gift that is sure to please any aviator. Available in any denomination. If selecting USPS First Class Mail, we'll ship any gift card only order prepaid within the United States. Gift Cards are valid at all Aircraft Spruce locations.

SHIPPING INFORMATION

UNITED PARCEL SERVICE (GROUND)

Unless otherwise specified, all shipments will be made by UPS (size and weight permitting).

Weights & Limits - Maximum weight per package for shipment to any destination served by UPS is 150 lbs. with no other weight restrictions applicable. If a shipment exceeds 80 lbs. a motor freight shipment is usually more economical. A UPS C.O.D. fee of $13.50 is charged for each C.O.D. parcel. Ground shipments larger than 1728 cubic inches and all air shipments will rate at the greater of actual or dimensional weight.

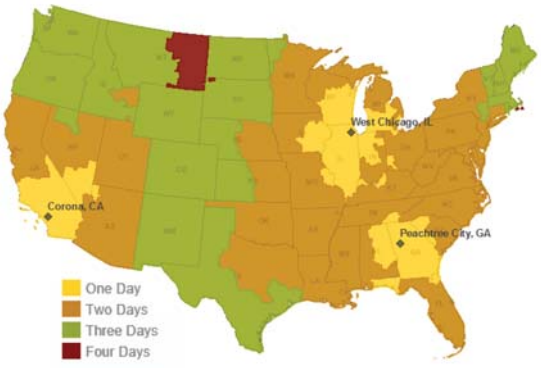
Maximum Size per Package - 130“ in length and girth combined (once down and once around the parcel). Packages over 165” length & girth or over 96” long are rated at a minimum 90 lbs and include an additional handling charge of $65.00. Packages over 48” long are subject to an additional $12.00 handling fee. Charges subject to change by UPS and FedEx.

Territory Served - Regular UPS service (surface) available to all 48 states, parts of Hawaii and Alaska, and Canada. All points in Hawaii, Alaska, and Canada are served by UPS “Next Day Air” or “2nd Day Air”. Flammable and corrosive material restricted. There is a $3.00 additional rate charge for residential shipments to rural zip codes. UPS surface serves some points in Alaska, Hawaii, and Canadian Provinces of Alberta, British Columbia, Manitoba, Ontario, Quebec & Saskatchewan.

Insurance - Each parcel carries $100.00 insurance against loss or damage. Additional insurance coverage added as required per parcel. Maximum insurance allowable - $10,000 per package. A street address with zip code is required. C.O.D. shipments acceptable for commercial accounts with money order or certified funds on first order. United Parcel Service will leave a parcel without signature if so authorized by the shipper. Orders of significant value will require a signature at time of delivery. If purchaser is willing to accept responsibility for delivery, ask that the instructions “OK to leave without signature” be added to the shipping label. However, these instructions will release Aircraft Spruce of liability for loss or damage.

Delivery Time - One to seven days depending on the zone and destination zip code.

Shipment Of Hazardous Materials - Shipment of items such as dopes, primers, and many other liquid products require extensive, precise documentation and specially constructed cartons that comply with DOT regulations. Each flammable or hazardous product must be packed in a separate package and cannot be shipped with non-hazardous materials. In many cases, motor freight shipments may be more economical for multiple package orders of hazardous materials due to the fees charged by UPS. A hazardous shipping charge of $32.00 will be added to UPS Ground shipments, $90.00 will be added to Air Shipments. Some hazardous items in small volume can ship ORMD and the hazardous shipping charge will not apply. Hazardous items shipped overseas require special handling and must ship by freight service. Call for details and current pricing.



Method	Zone 2	Zone 4	Zone 6	Zone 8
UPS Red	$31.24	$72.61	$84.79	$91.98
UPS Blue PM	$15.23	$22.42	$45.15	$50.56
Fed Ex Priority Overnight	$31.92	$72.03	$88.99	$93.98
Fed Ex Standard Overnight	$27.51	$64.00	$77.60	$81.95
Fed Ex Econo 2nd Day	$18.59	$22.68	$44.60	$50.03
USPS Priority Mail	$9.79	$10.84	$12.02	$14.42
UPS Ground	$10.29	$15.45	$23.60	$31.05

- Rates for comparison purposes only. Based on 10lb. package shipped to each listed zone.
- Rates do not include insurance, oversize, hazardous, COD etc. Subject to change without notice.

UNITED PARCEL SERVICE (AIR)

Weight and Limits are the same as outlined for UPS Surface delivery to all areas served. See above for more details on shipment of flammables and other hazardous items.
Delivery Time - Three days (3rd Day Air) and two days from California (2nd Day Air) or next day (via Next Day Air).
Areas Served - Shaded states on map above, with limited service to some as noted.

MOTOR FREIGHT

The charge for motor freight delivery is based on the commodity being transported, the weight of the shipment and the distance it will travel. The rate for a shipment of steel tubing, for instance, may be $5.00 Cwt. as compared to $15.00 Cwt. for foam. The steel tubing is a heavy commodity taking up a small space whereas the foam is very light but the volume is large and takes considerable space in the trailer. The rates reflect these factors in addition to the susceptibility to damage of the shipment. All truck shipments are insured for full value. It is good practice to include a phone number on the order which can be shown on the Bill of Lading. This enables the carrier personnel to advise of the arrival of the shipment and arrangements can be made for delivery. No C.O.D shipments for truck delivery. Consignee must inspect shipment on arrival and note any shortages or damage on freight bill to file claim for loss. Any claims for lost or damaged merchandise will be denied if the customer receives the shipment and signs for the shipment free and clear.

FEDERAL EXPRESS

In addition to UPS, we also provide delivery via Federal Express Priority, Economy, and Ground service. Federal Express charges are competitive with UPS and the same weight, size, and hazardous limits will apply. Hazardous materials shipping by FedEx Express Air service are subject to a $100 dangerous goods charge. As an added advantage, Federal Express does offer Saturday delivery, and almost all deliveries are made before noon. Federal Express Home Delivery is a residential ground service with deliveries Tuesday through Saturday.

US POSTAL SERVICE

Priority Mail parcels may not exceed 70 lbs. or 108“ in length and girth combined. We will utilize a Priority Mail Flat Rate Box if your items will fit in the box and the postage will cost less. Packages less than 13 ounces may ship First Class Mail. Maximum allowable insurance via Post is $400 per package. No shipments made without adequate insurance coverage. Packages destined for overseas will ship the cheaper of First Class or Priority Mail and must not exceed 44 lbs. (with exception to certain countries) or 72 inches in length and girth combined and must not be longer than 42“. No hazardous materials or C.O.D. orders may be shipped by Post. Please provide adequate time for delivery. Claims for lost or damaged packages must be made within 60 days of shipment.

CANADA

What are my shipping options? **From Canada (Brantford warehouse):** Canada Post, UPS Canada, FedEx Canada, Purolator, or Can Par. Hazardous materials can only be shipped Purolator. **From the U.S. (California or Georgia warehouse):** Mail (USPS to border/delivery by Canada Post), *Customer will pay duties and taxes directly to Canada Post *For delivery duty paid via Canada Post, order must ship from Canada, UPS, FedEx. ***Customer will choose their own broker for customs clearance.**

AIRCRAFT KITS

COZY MARK IV



The Cozy MK IV is a high-performance, four-seat canard aircraft which is comfortable, efficient, and economical to build. It has a range of about 1,000 miles and a top speed of 200 mph. When constructed according to plans and operated within the approval C. G. range, the canard configuration makes it highly resistant to stalls or loss of position control. The MK IV features full dual control and two-axis trim. The composite construction is very strong, resistant to corrosion and fatigue, and offers better protection to the occupants than other types of construction. Aircraft Spruce acquired the Cozy design rights in January 2004 and is now the sole source for Cozy plans and info packs.

FREE INSTRUCTIONAL DVD WITH PLANS

Building the Rutan Composites – This step-by-step instructional program features Burt Rutan and Mike Melvill proceeding through the complete foam-epoxy-fiberglass composite construction procedure as used on the VariEze, Long-EZ, Quickie, Q2, Dragonfly, Sea Hawk, and other composite aircraft. Also included is a formation flight by the Long-EZ, Defiant & VariViggen. 1hr, 36 mins. .....P/N 13-04809 ..... **$26.95**

- Cozy Mark IV Plans with Newsletters on CD... P/N 01-00178 .. **$500.00**
- Cozy Mark IV Info Pac ..... P/N 01-00566 .... **$16.95**
- Cozy "M" Drawings* ..... P/N 01-00570 .... **$49.95**
- Cozy Newsletters on CD ..... P/N 01-00569 .... **$20.00**
- Cozy Owner's Manual* ..... P/N 01-00565 ..... **$9.50**
- Cozy Mark IV DVD "Award Winning" ..... P/N 01-00982 .... **$14.95**

**** Can only be sold to a builder, must provide plans # to order.***

COZY MATERIALS KITS

SECTION 1 KITS

	Part #	Price
Foam Kit	01-01410	**$3,155.93**
Fiberglass Kit	01-01415	**$3,740.20**
Wood Kit	01-01420	**$194.08**
Hardware Kit	01-01430	**$252.39**
Metal Kit	01-01425	**$264.24**
Misc. Mats	01-01440	**$6,281.01**
Tools Kit	01-01435	**$540.25**
Fuel Fittings	01-01431	**$91.18**
Epoxy Kit	01-38201	**$624.00**

SECTION II KITS

	Part #	Price
Bolts	01-01505	**$36.78**
Screws	01-01510	**$35.41**
Washers	01-01515	**$22.29**
Nuts	01-01520	**$71.65**
Rivets	01-01540	**$56.52**
Fittings	01-01535	**$156.64**
Foam	01-00297	**$470.75**
Expoxy	01-01545	**$310.95**
Metal	01-01530	**$197.99**
Misc	01-01560	**$2,048.28**
Fiberglass	01-00298	**$445.50**

CHAPTER KITS

	Part #	Price
Chapter 4 Fuselage Bulkhead	01-00256	**$593.00**
Chapter 5 Fuselage Sides	01-00257	**$499.20**
Chapter 6 Fuselage Assy	01-00259	**$325.77**
Chapter 7 Fuselage Exterior	01-00260	**$253.05**
Chapter 8 Headrest, Heatduct, Seatbelt	01-00261	**$976.57**
Chapter 9 Main Gear-Brake	01-00263	**$3,343.89**
Chapter 10 Canard Construction	01-00264	**$752.89**
Chapter 11 Elevators	01-00266	**$71.43**
Chapter 12 Canard Installation	01-00267	**$3.21**
Chapter 13 Nose Gear	01-00268	**$1,990.91**
Chapter 14 Center section Spar	01-00271	**$842.73**
Chapter 15 Firewall Accessories	01-00272	**$328.82**
Chapter 16 Control System	01-00273	**$552.00**
Chapter 17 Pitch-Roll-Trim	01-00275	**$99.77**
Chapter 18 Canopy	01-00277	**$829.28**
Chapter 19 Wings & Ailerons	01-00280	**$3,106.03**
Chapter 20 Winglets & Rudders	01-00282	**$198.39**
Chapter 21 Strake-Fuel-Baggage	01-00283	**$1,260.68**
Chapter 22 Electrical	01-00285	**$1,683.10**
Chapter 23 Engine-Prop Installation	01-00286	**$1,698.82**
Chapter 24 Covers Fairing	01-00291	**$297.00**
Chapter 25 Finishing	01-00292	**$769.60**



CHRISTAVIA MK-1/MK-2 & MK-4

Aircraft Spruce & Specialty Co. has acquired the design rights to the popular Christavia MK1, Christavia MK2, and Christavia MK4 homebuilt aircraft from the designer, Ron Mason of Elmwood Aviation in Canada. The Christavia was designed in 1982 as a mission field workhorse. Design requirements were short take-off and landing, small engine (low fuel consumption), low stall speed, good cruise speed and rate of climb, large cabin area, low maintenance and high safety factor. The Christavia is easy to fly, and the large cabin makes long flights very comfortable. Over 1000 sets of the plans have been sold for the MK1 (two place tandem), MK2 (two place side-by-side), and Christavia MK4 (four place). Aircraft Spruce has plans available for these aircraft at $225 per set as well as an information pack for $10. Complete materials packages for construction of the aircraft are available from Aircraft Spruce.

Christavia MK-1/MK-2 Info Pack P/N 01-00662 ..... **FREE**

CHRISTAVIA MK-1 KIT PRICE LIST

MK-1/MK-2 Info Pack ..... 01-00662 ..... **FREE**	Spruce Kit for MK-1 ..... 01-39810 ... **$1,355.00**	MK-1 4130 Sheet Kit ..... 01-39850 ..... **$291.09**
MK-1 Plans ..... 01-00663 .... **$375.00**	Plywood Kit (MK-1) ..... 01-39820 ..... **$537.80**	MK-1 Hardware Kit ..... 01-39860 ..... **$138.48**
MK-2 Supplement ..... 01-00664 ..... **$57.65**	MK-1 Alum. Sheet Kit ..... 01-39830 ..... **$592.24**	MISC Kit for MK-1 ..... 01-39870 ... **$7,457.36**
MK-2 Plans Complete ..... 01-00692 .... **$431.95**	MK-1 4130 Tube Kit ..... 01-39840 ... **$4,082.88**	MK-1 Spruce Kit ..... 01-39880 ... **$1,355.00**

CHRISTAVIA MK-4 KIT PRICE LIST

MK-4 Info Pack ..... 01-00683 ..... **FREE**	MK-4 Plans ..... 01-00665 ..... **$275.00**	MK-4 4130 Tube Kit ..... 01-00674 ... **$4,384.25**
MK-4 Misc. Kit ..... 01-00675 .. **$11,635.70**	MK-4 4130 Sheet Kit ..... 01-00676 ..... **$597.78**	MK-4 Plywood Kit ..... 01-00677 ..... **$648.25**
MK-4 Aluminum Kit ..... 01-00678 .... **$3,726.66**	MK-4 Hardware Kit ..... 01-00679 ..... **$310.78**	

AIRCRAFT KITS

STARDUSTER TOO SA 300



The Starduster Too was built to fill a need for a reasonably sized, 2-place, open sport biplane. Stability is good and the light wing loading makes slow landing and short-field operation outstanding. The main structure of the aircraft is built of 4130 steel tubing and sheet stock and has no machined fitting or other complicated bends. The wings have spruce spars and the ribs are made of 1/4" plywood. Construction of the plane has been kept as simple as possible. The Lycoming 0-360 (180 hp or 200 hp) is the best size engine for the aircraft.

Plans .....P/N 01-00424 ..... **$249.95**
Info Pack .....P/N 01-00596 .....**FREE**

ACRODUSTER TOO SA 750



This two-place biplane is about 10% smaller than the Starduster Too. It is a very strong machine designed to +/-9 G. It is a high performance machine meant for minimum of 180 and up to 360 horsepower. The roll rate is spectacular with four ailerons and symmetrical wings.

Plans..... P/N 01-00427.....**$125.00**
Info Pack..... P/N 01-00443..... **FREE**

STARLET SA 500



A low-horsepower, single-place parasol, this is a fun machine. Easy to build and easy to fly, it is the best of both worlds. Engines in the 65 to 125 HP range work best. Excellent visibility and a pretty design keep your excitement high.

Plans .....P/N 01-00428 .....**$125.00**
Info Pack .....P/N 01-00463 ..... **FREE**

V-STAR SA 900



This is an exciting, single place biplane. Rated for +/-6 G, this machine will keep you smiling. With stall speed approaching 35 mph and horsepower in the 75 to 85 range, fun flying is not slowed at the gas pump.

Plans..... P/N 01-00429..... **$195.00**
Info Pack..... P/N 01-00471.....**FREE**

STARDUSTER ONE SA 100



This is the single place biplane designed by Lou Stolp back in 1964 that started it all. It is a very easy aircraft to fly, powered by engines in the 125 horsepower range - A fun machine! Constructed with a 4130 steel fuselage, wood spars and ribs, and covered with fabric. The Starduster One can only classified as "classic".

Plans.....P/N 01-00425 .....**$115.00**

SKYOTË



The Skyotë was designed to have the superb control response and the high structural strength of the Bucker Jungmeister while maintaining the slow flight and short field capabilities of a Rose Parakeet, The Skyotë will take off as quickly as a Super Cub and will fly, power on, down to about 33knots (38mph). Rate of climb with a Continental C-90 engine is 1,500 ft./min. with a ceiling of 16,500 ft.

For further details and contact info on suppliers of complete matched- hole components contact:
FlyTeam 88, LLC
3088 Mountainview Rd., Clover, SC 29710
www.FlyTeam88.com · info@FlyTeam88.com

Description	Part No.	Price
Skyote Plans Kit	01-01512	**$595.00**
Skyote (Plans Only)	01-01512-1	**$539.00**
Skyote Wing Metal Kit	01-01497	**$333.04**
Skyote Landing Gear Metal Kit	01-01498	**$227.87**
Skyote Tail Feather Metal Kit	01-01499	**$354.24**
Skyote Metal Fuselage Kit	01-01501	**$639.55**
Skyote Metal Kit	01-01502	**$1,940.90**
Skyote Center Section Metal Kits	01-01503	**$150.50**
Skyote Center Section Hardware	01-01504	**$216.61**
Skyote Rib, Spar & Aileron Hardware Kit	01-01506	**$115.13**
Skyote Tail Feathers Hardware Kit	01-01507	**$108.08**
Skyote Cockpit & Floor Boards	01-01508	**$72.47**
Skyote Wing Hardware Kit	01-01509	**$772.70**
Skyote Landing Gear Hardware	01-01511	**$580.17**
Skyote Patch	01-01512-2	**$5.00**
Skyote Id Plate	01-01512-3	**$5.00**
Skyote Controls Hardware Kit	01-01513	**$4,030.62**
Skyote Wing Rib Set	01-01514	**$2,495.00**

BK FLIER



- Pilot Size: Up to 6 ft 4 in 250 lb in the roomy cockpit
- Cruise: 130 mph for 400 miles with reserves
- Fuel: 3-3.5 Gallons per Hour - Automobile Gas
- Baggage: 30 lbs in roomy compartment-For that week long fly-in
- Stall: Light Sport Aircraft Category 48 mph no flap, 45 mph full flaps
- Options: Tricycle or Tail Wheel-Electric Start
- VW Type 1 Conversion from Great Plains, Hummel, Aerovee, Revmaster...etc..
- Certified in Canada as Basic-Ultra-Light Airplane (BULA), greatly simplifies approval process.

Description	Part No.	Price
Bk Flier Airframe Kit	01-01468	**$2,282.06**
Bk Flier Main Gear Kit	01-01469	**$680.22**
Bk Flier Nose Wheel Option Kit	01-01470	**$46.40**
Bk Flier Tail Wheel Option Kit	01-01471	**$72.55**
Bk Flier Flight Control Hardware Kit	01-01472	**$120.30**
Bk Flier Flaperon Hardware Kit	01-01473	**$27.90**
Bk Flier Fuel System Kit	01-01474	**$197.02**
Bk Flier Pitot-static System Kit	01-01475	**$94.75**
Bk Flier Electrical System Kit	01-01476	**$371.11**
Bk Flier Instrument Panel Kit	01-01477	**$1,772.85**
Bk Flier Miscellaneous Kit	01-01478	**$66.70**

Contact Info: BK Fliers LLC
2126 Turkey Ledge, San Antonio, TX 78218
Web: www.bkfliers.com · Email: bruce@bkfliers.com
Phone: 210-363-3288

Prices Subject to Change Without Notice

AIRCRAFT KITS

WITTMAN TAILWIND



Introduced at the first EAA fly-in 1953, Tailwind was designed and built by legendary designer and air racer Steve Wittman. This high performance homebuilt is constructed with a steel tubing fuselage, wood wings, and fabric covering. It offers exceptional cruising speeds and is economical to operate and maintain. Aircraft Spruce acquired the rights to the Tailwind in January 1996 and is currently the exclusive distributor for plans and materials kits. Complete information package and materials list is available.

W-10 SPECIFICATIONS

Length: 19' 6" **Wing Span:** 24' **Wing Area:** 90 Sq. Ft.
Engine: Cont. 85, 90, 100 or 145 HP - Lyc. 108-160 HP
Cruising Speed (Vc): 150 to 190 MPH

Wittman Tailwind Info Pk/Kit Price List	P/N 01-10003	**FREE**
Wittman Tailwind Plans	P/N 01-10007	**$195.00***
Wittman Olds V-8 Eng. Conversion Plans	P/N 01-10002	**$39.95**
Wittman V-Witt Racer Plans	P/N 01-10009	**$95.00***
Wittman VW Prop Shaft extension	P/N 01-10006	**$19.95**

TAILWIND / V-WITT KITS

Tailwind 4130 Tube kit	P/N 03-15800	**$2,580.69**
Tailwind Complete Spruce Kit	P/N 02-06500	**$1,296.00**
Tailwind Spruce Spar Kit	P/N 02-08500	**$621.50**
Tailwind Ply Wood Kit	P/N 02-00122	**$965.00**
Tailwind Landing Gear	P/N 06-00139	**$967.00**
Tailwind Tailspring	P/N 06-00140	**$156.75**
V-Witt Spar Kit	P/N 02-08600	**$343.95**

Ask about prefabricated parts available for the Tailwind

BABY GREAT LAKES, SUPER BABY LAKES, AND BUDDY BABY LAKES

BABY GREAT LAKES MATERIALS REQUIREMENTS

Kit #1	**Spruce and Plywood Kit**	P/N 02-03910	**$1,241.50**
	Complete Spruce Kit Only	P/N 02-03900	**$982.44**
	Spar Kit only	P/N 02-06700	**$588.40**
Kit #2	**Wing Metals Package** Includes finished parts requiring machining	P/N 01-10020	**$1,511.00**
Kit #3A	**Wing Hardware Kit (Baby Great Lakes)**	P/N 01-10030	**$73.98**
Kit #3B	**Wing Hardware Kit (Super & Buddy)**	P/N 01-10035	**$63.58**
Kit 4130	**Steel Tubing and Sheet Kit**		
	Baby Great Lakes Kit-4A	P/N 03-14300	**$1,681.99**
	Super Baby Lakes Kit-4B	P/N 03-14310	**$1,783.39**
	Buddy Baby Lakes Kit-4C	P/N 03-14320	**$1,966.66**
Kit #5	**Landing Gear/Brakes Kit**	P/N 01-10040	**$4,383.05**
Kit #6	**Wing Alignment Materials Package.**	P/N 01-10050	**$10.08**
Kit #7	**Fuel Tank and Installation Package**	P/N 01-10060	**$78.55**
Kit #7A	**Fuel tank Installation Kit**	P/N 01-10070	**$78.55**
Kit #8	**Flying Controls Materials Package.**	P/N 01-10080	**$872.33**
Kit #9	**Fairings, Firewall, Instrument & Fuselage Panels w/Hardware**	P/N 01-10090	**$754.81**
Kit #10	**Poly - Fiber Materials Package**	P/N 01-10095	**$2,302.64**
Baby Great Lakes Top Nose Cowl		P/N 05-02883	**$398.00**
Baby Great Lakes Bottom Nose Cowl		P/N 05-02884	**$398.00**
Seat for Buddy Great Lakes		P/N 05-02885	**$250.00**
Baby Great Lakes Fuel Tank (Standard 10 Gal.)		P/N 05-03058	**$943.00**
Baby Great Lakes Fuel Tank(3" Longer 11 Gal.)		P/N 05-03059	**$992.00**

ASK ABOUT THE MANY PRE-FABRICATED PARTS AVAILABLE FOR BABY GREAT LAKES AIRCRAFT.



The Baby Great Lakes (one place) and Buddy Great Lakes (two place) aircraft are well proven designs which are easy to construct and fly, provide classic good looks, and are aerobatic. Construction is of wood and steel tubing and plans are well presented for the first time builder. Aircraft Spruce & Specialty Company acquired all rights to these designs in May, 1996 and now offers info packs, plans, raw materials kits, and pre-fabricated kits for these fine aircraft. Contact Aircraft Spruce for information on info packs and plans.

Baby Great Lakes Info Packs	P/N 01-10013	**FREE**
Plans for Baby Great Lakes	P/N 01-10010	**$295.00**
Plans for Super Baby Lakes	P/N 01-10011	**$295.00**
Plans for Buddy Baby Lakes	P/N 01-10012	**$275.00**

ACROLITE



Aircraft Spruce & Specialty is the exclusive supplier of plans and materials packages for Ron Wilson's aerobatic aircraft design, the single seat Acrolite. Complete construction material packages, 16 in total, for the Acrolite can be purchased for under $10,000.

The Rotax 912 engine is used in the prototype. The Acrolite can also be built with the Rotax 532-618.

Acrolites are designed to be a quick, easy build for beginners. The biplane cruises at 110 mph, has a range of 250 miles, takes off and lands in 500 feet and has a service ceiling of 12,000 feet. Empty weight is 495 lbs. and gross is 750. The airplane stands six feet tall, is 17' long and has 133 square feet of wing area. It is designed for sportsman aerobatics.

The Acrolite was chosen as one of two finalists in the Scratchbuild Design Contest which was sponsored by Aircraft Spruce & Specialty.

ACROLITE KITS

Info Pack,	P/N 01-20005	**FREE**
Plans,	P/N 01-20090	**$300.00**

Plans Kit includes Plans, Builders Manual, Maintenance Manual and Photo Set.

MATERIALS REQUIREMENTS

Kit #1	Aluminum Tube Kit,	P/N 01-20010	**$391.47**
Kit #2	4130 Tube Kit,	P/N 01-20015	**$1,324.82**
Kit #3	Aluminum Sheet and Bar Kit,	P/N 01-20020	**$459.01**
Kit #4	4130 Sheet and Bar Kit,	P/N 01-20025	**$537.23**
Kit #5	Aluminum Wing Kit,	P/N 01-20030	**$1,785.95**
Kit #6	Misc. Wood Kit,	P/N 01-20035	**$193.46**
Kit #7	Wood Wing Kit (Optional),	P/N 01-20040	**$2,531.44**
Kit #8	Fastener kit,	P/N 01-20045	**$247.95**
Kit #9	Control System Kit,	P/N 01-20050	**$1,048.90**
Kit #10	Fuel System Kit,	P/N 01-20055	**$533.75**
Kit #11	Misc Hardware Kit,	P/N 01-20060	**$110.17**
Kit #12	Wheels and Brakes ,	P/N 01-20065	**$246.45**
Kit #13	Misc. Accessories Kit,	P/N 01-20070	**$444.66**
Kit #14	Basic Instruments Kit,	P/N 01-20075	**$1,744.00**
Kit #15	Covering Kit,	P/N 01-20080	**$953.66**
Kit #16	Cowl Kit,	P/N 01-20085	**$189.50**

WITTMAN BUTTERCUP



We all want to fly fast and land slow. Sylvester "Steve" Wittman solved the problem. Wittman built two types of airplanes: Racing machines and Travel machines. The ancestors of these two blood lines were Chief Oshkosh and Buttercup.The Buttercup was built as a utility hauler, and there was only one made - in 1937. He flew it all over the western hemisphere, from Alaska to Bermuda, Florida to Oregon. The Buttercup almost made it into production (cancelled due to WWII) coming to the interest of Fairchild as a four-place project, called the 'Big X'. One plane was built for them by "Witt" - a 4-place, 6 cylinder, 130 HP Franklin powered prototype. The real genius of the Buttercup design is Wittman's claim of 38 - 40 mph (indicated) slow-flight speed and a near 150 mph top speed, and all on 85 hp! The high speed is vintage Wittman, the low speed is due to an ingenious flap-coupled, retracting lead edge design (seen in today's airliners). Earl Luce of LuceAir, Inc. has 'revived' the Buttercup, featured in the April, 2003 issue of Sport Aviation. Kits and fabricated assemblies for the Buttercup are available from Aircraft Spruce. For info and plans contact:

LuceAir • 35 Beverly Dr. • Brockport, NY 14420
Ph: (585) 637-5768 • www.luceair.com • e-mail: earl@luceair.com

Buttercup Retrack Lead Edge Kit	P/N 01-00474	**$326.60**
Buttercup Fuselage Sides Kit	P/N 01-00475	**$516.22**
Buttercup Fuselage Completion Kit	P/N 01-00476	**$463.41**
Empennage Vert-Hort Stabilizer Kit	P/N 01-00477	**$420.75**
Buttercup Wing Wood Kit	P/N 01-00478	**$1,161.69**
Buttercup Wing Metal Kit	P/N 01-00479	**$908.11**
Buttercup Flaps & Ailerons Kit	P/N 01-00480	**$313.05**
Buttercup Lift Strut Kit	P/N 01-01055	**$886.25**
Buttercup Engine Mount-Land Gear	P/N 01-00482	**$155.60**
Buttercup Controls & Finishing	P/N 01-00483	**$271.72**
Buttercup Covering Kit	P/N 01-00571	**$2,301.90**

PAZMANY PL-9 STORK



Pazmany PL-2



Pazmany PL-4a Part of the LSA class.



The original German Luftwaffe Fieseler F-156 Storch was an outstanding WWII airplane, designed to take off and land in extremely short distances. The Storch had a take off ground roll of 131 feet and a landing roll of 36 feet with 13 miles per hour head wind.

The Pazmany PL-9 Stork is a 3/4 replica. With the same flying and handling characteristics as the original German Aircraft. The PL-9 Stork is a professionally designed STOL aircraft. It has a well proven aircraft configuration designed for a number of functions such as fish spotting, forest fire detection, farm work, missionary work etc. It features a welded chrome alloy steel tube fuselage and aluminum sheet metal/fabric covered wings and empennage. The PL-9 Stork has a cruise speed of 104mph with a standard Lyc.O-320/150 hp engine. Aircraft Spruce is a major supplier of materials for the PL-9 Stork.

For more information, info pack and plans, contact:

Aircraft Spruce & Specialty Co.
225 Airport Circle, Corona, CA 92880-2527
Phone: (951) 372-9555 • Fax: (951) 372-0555



PAZMANY PLANS

PL-9 Plans	P/N 13-01505	**$550.00**
PL-2 Plans	P/N 13-01506	**$425.00**
PL-4A Plans	P/N 13-01507	**$375.00**

(Now part of the LSA class)

SONEX



Unique in design, the Sonex is a basic and economical all metal two-place monoplane. Both taildragger and tri-gear versions are available. The Sonex is 17.5 ft. in length and has a 22 ft. wing span. It features easily removable wings for transport and storage. Designed to meet the needs of both European and domestic aviators, it can incorporate various lightweight contemporary engines of 80-120hp (under 200 lbs. firewall forward). Suggested engines include the 2180 VW and 80-120hp Jabiru engines. Outstanding performance is achieved through its clean aerodynamic shape and simple, lightweight construction.

SONEX KIT BUILDERS

Wing Hardware Kit	P/N 01-00005	**$253.54**
Sonex Tri-Gear Hardware Kit	P/N 01-00006	**$50.43**
Sonex Fuselage Hardware Kit	P/N 01-00008	**$461.58**
Sonex Tail Dragger Hardware Kit	P/N 01-00009	**$17.09**
Sonex Controls Hardware Kit	P/N 01-01082	**$183.84**
Quickbuild Sonex Wing Hardware Kit	P/N 01-01234	**$135.84**
Quickbuild Sonex Fuselage Hardware Kit	P/N 01-01235	**$252.40**

XENOS BUILDERS

Xenos Fuselage Hardware Kit	P/N 01-00601	**$745.66**
Xenos Tail Hardware Kit	P/N 01-01296	**$63.66**
Xenos Control Hardwared Kit	P/N 01-01297	**$278.56**
Xenos Wing Hardware Kit	P/N 01-01298	**$621.94**

WAIEX BUILDERS

Waiex Fuselage Hardware Kit	P/N 01-01130	**$677.04**
Waiex Control Hardware Kit	P/N 01-01131	**$238.09**
Waiex Wing Hardware Kit	P/N 01-01132	**$223.95**
Waiex Taildragger Hardware Kit	P/N 01-01165	**$55.80**

ONEX BUILDERS

Onex Airframe Hardware Kit	P/N 01-01192	**$964.59**
Onex Nosewheel Hardware Kit	P/N 01-01189	**$50.89**
Onex Solid Rivet Kit	P/N 01-01190	**$27.71**
Onex Tailwheel Hardware Kit	P/N 01-01191	**$4.70**
Quickbuild Onex Airframe Kit	P/N 01-01299	**$606.23**

JSX HARDWARE KIT

Subsonex Jsx-l02 Hardware Kit	P/N 01-01479	**$12.93**
Subsonex Jsx-l01 Hardware Kit	P/N 01-01480	**$55.97**
Subsonex Jsx-c01 Hardware Kit	P/N 01-01481	**$65.40**

More information on the Sonex can be obtained by contacting:
Sonex Ltd.
P.O. Box 2521 • Oshkosh, WI 54903-2521
Phone: (920)231-8297 • Fax: (920)426-8333
sales@sonexaircraft.com • www.sonexaircraft.com

CYGNET



A Two Place Utility Aircraft with S.T.O.L. Performance and Real Load Hauling Abilities.

Specifications: • Empty Weight 585 lbs. • Gross Weight 1100 lbs. • Wing Span 30 ft. • Chord 50 In. • Airfoil NACA 3413 • Limit "G" Load • 4.0 G • Engine V.W. 1835cc • Fuel Capacity 15 Gal. U.S. • Cockpit Width 39 Inches.

Performance: • Stall Speed 48 MPH • Max Speed 108 MPH • Cruise Speed@ 800 FT. 100 MPH • Cruise Fuel Burn 3.9 GPH • Cruise RPM 2950 RPM • Rate of Climb 580 FPM • T.O. 1 Land Dist. 700 Ft. Stall Speed 48 MPH • Max Speed 108 MPH • Cruise Speed@ 800 FT. 100 MPH • Cruise Fuel Burn 3.9 GPH • Cruise RPM 2950 RPM • Rate of Climb 580 FPM • T.O. 1 Land Dist. 700 Ft.

Viking Aircraft LLC
PO Box 646, Elkhorn, Wisconsin 53121-0646
Phone: (262) 949-3247 • www.vikingaircraft.com

Description	Part No.	Price
Cygnet Spruce Kit	02-04500	**$1,922.52**
Cygnet Metal Kits	01-01583	**$2,329.00**
Cygnet Plywood Foam Kit	01-01584	**$153.95**
Cygnet Hardware Kit	01-01580	**$189.95**
Cygnet Control System	01-01581	**$394.95**
Cygnet Miscellaneous	01-01582	**$508.00**
Cygnet Wheel & Brake Kit	01-01585	**$1,906.00**

Prices Subject to Change Without Notice

AIRCRAFT KITS

EVANS VP-1 VOLKSPLANE



Aircraft Spruce & Specialty is the exclusive distributor for VP-1 materials kits. The Volksplane was designed and prototyped by Bud Evans in 1968. The aircraft is inexpensive, easy to build, and fun to fly. The fuselage is all wood, with three bulkheads, four longerons, flat plywood and some vertical stiffeners. Wings are wood frames covered with fabric. The only parts requiring welding are the control stick, strut ends and stabilizer horn. The only sheet metal work is in the elevator trim tab. Over 1000 of these planes are flying. The aircraft is ideally suited for Volkswagen engines in the 1500 to 1834 cc range. Plans for the VP-1 are $59.00 and are available from Aircraft Spruce, P/N 13-11560. Aircraft Spruce can supply complete materials kits from stock. Free kit list on request.
Note: Landing gear is NCNR, may not be cancelled or returned. Lead times are always 6-8 weeks.
For further information on the Evans VP-1 contact:

Evans Aircraft
P.O. Box 231762 Encinitas, CA 92024
www.evansair.com I www.volksplane.com

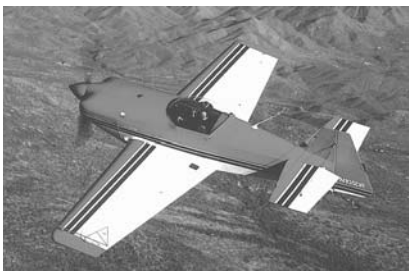
VP-1 Kits		Part No.	Price
Wood kit	(VPK-1)	01-00222	**$833.55**
Plywood kit	(VPK-2)	01-00223	**$868.03**
Metal kit	(VPK-5)	01-00224	**$294.76**
Hardware kit	(VPK-7)	01-00228	**$546.20**
Fabric kit	(VPK-8)	01-00221	**$604.19**
Fabric Coating kit	(VPK-9)	01-00226	**$515.50**
Cable Ass'y. kit	(VPK-10)	01-00227	**$1,072.21**
Wing Strut kit	(VPK-11)	01-00225	**$508.20**
Landing Gear 800 lb.	(VP-1 cable-braced)	06-00041	**$969.00**
Landing Gear 800 lb.	(VP-1 free standing)	06-04040	**$1,399.00**
Landing Gear 1100 lb.	(VP-2 free standing)	06-00043	**$1,599.00**
VP-1 Plans and Handbook		13-11560	**$59.00**

POBER (CORBEN) JUNIOR ACE TWO-PLACE



This is the famous aircraft that launched an industry as well as the Experimental Aircraft Association when plans for it were published in Popular Mechanics in the early 50's. It is lightweight, easy to build, fun to fly and requires minimal maintenance. It has been modified from the original Corben Baby Ace so that it can utilize aircraft engines. The fuselage has also been widened, the horizontal stabilizer was modified for easier construction and modern aircraft wheels and brakes are now called for. With nearly a 34' wingspan and Clark Y airfoil, the Pober Junior Ace, designed by EAA founding president Paul Poberezny, is docile in stall and landing patterns. Airframe is 4130 steel tubing, wings are all wood and the recommended powerplant is a Continental C-85. Empty weight of the Junior Ace is 750 pounds and gross capacity is 1,320 pounds. Free brochure available from **Acro Sport. Plans can be ordered from Acro Sport, Inc., Box 462, Hales Corners, WI 53130.** Order your Junior Ace materials kits form Aircraft Spruce, the approved materials supplier. Free kit list.

ONE DESIGN



Aircraft Spruce & Specialty Company offers a complete set of plans for the single seat aerobatic aircraft known as the One Design. Created by Dan Rihn as an economical answer for pilots wishing to fly Basic through Advanced aerobatics, the One Design features quick, easy construction and excellent performance. Wings for the One Design are all wood, the fuselage is steel truss, covered with aluminum sheet from the firewall to the rear of the cockpit. The turtle deck is also aluminum and the lower half of the aft fuselage is fabric covered. The tail is fabric covered. A one piece aluminum spring gear is used for the main wheels and a steerable tailwheel is used. Power for the One Design is obtained from a 0-360 and modified with an inverted oil system, high compression cylinders and fuel injection. Stressed for +/- 10 Gs, the One Design has a max. level speed of 184 mph, and cruises with a 75% power setting at 160 mph.
ONE DESIGN INFO PACK – P/N 01-06005 ..... **FREE**
ONE DESIGN PLANS - Complete construction drawings required to build the One Design aircraft from scratch or using pre-fabricated components. P/N 01-06010-C **$376.95**
Note: A signed License Agreement is required from the builder prior to shipment of plans. Include completed License Agreement with your payment.

ONE DESIGN RAW MATERIALS KITS

Kit Description	Part No.	Price
Aileron Kit	01-02305	**$350.58**
Engine Mount Kit	01-02310	**$124.40**
Elevator-Stabilizer Kit	01-02315	**$224.24**
Fin & Rudder Kit	01-02320	**$138.12**
Fuselage Kit	01-02325	**$746.12**
Wing Ribs Kit	01-02330	**$301.85**
Wing Spar & Skin Kit	01-02335	**$2,773.25**

For more information on the One Design contact:
Aircraft Spruce & Specialty Co.
225 Airport Circle, Corona, CA 92880-2527
Phone: (951) 372-9555 • Fax: (951) 372-0555

ERACER



The ERacer is a high speed, cross country aircraft designed around the proven aerodynamics of the Rutan Long EZ. It is unique in that it can utilize multiple power plants.
ERacer also has fully retractable landing gear and two place, side by side, seating.
The ERacer is only available as a plans built aircraft but a few special parts and the landing gear kit can be purchased through ERacer Aircraft. Support is also available through Shirl Dickey as well as ERacer Aircraft.
For more information on the ERacer, visit: www.eraceraircraft.com
Material Kits are available through Aircraft Spruce

Description	Part No.	Price
ERacer Fiberglass Kit	01-01462	**$3,627.50**
ERacer Epoxy Kit	01-01463	**$2,839.00**
ERacer Wood Kit	01-01464	**$139.00**
ERacer Foam Kit	01-01465	**$5,068.05**
ERacer Misc. Kit	01-36821	**$1,449.00**

VOLMER VJ-22 AMPHIBIAN



The Volmer VJ-22 "Sportsman" is a two-place, side by side, closed cabin, highwing monoplane, amphibious flying boat. The original Sportsman was completed December 1958. The rigid, corrosion proof hull is made of 1/16 inch and 3/32 inch aircraft mahogany plywood with 1/4 inch plywood at the step for maximum strength and covered with fiberglass for added protection. Numerous testing from calm water to five foot swells in the open sea have proven the design to be both extremely airworthy and seaworthy. Wings are wood spar and ribs, fabric covered. It takes off from water at sea level in about 20 seconds. The VJ-22 is powered by a Continental C-85, starter and gen. It has a cruising speed 85 mph and stalls at 45 mph

Volmer Club of America - Attn: Robert Albrecht
536 Oak Ave., Bridge City, LA. 70094 - Ph: 504-436-6248
rjaflys@aol.com • www.volmeraircraft.com

VJ-22 Spruce Wing Kit ..... P/N 02-06000 ..... **$2,438.77**
VJ-22 Sportsman Fuselage Kit ..... P/N 01-00984 ..... **$5,388.00**

AIRCRAFT KITS

ACRO SPORT



Designed by Paul Poberezny as a successor to the EAA Biplane, the Acro Sport offers performance and excellent aerobatic capability in the Sportsman and intermediate categories. Purposely uncomplicated and straight forward, the Acro Sport design has been chosen by hundreds of schools for project Schoolflight programs. It has a wide landing gear which provides superb ground handling and easy landing qualities. Builders can choose powerplants ranging from 85 hp to 200 hp. Features steel tube fuselage, spruce wing and overall fabric covering which makes the project an easy one for first time builders with average skills. Maximum speed for this diminutive biplane is 180 mph, it cruises at 130 and stalls at 50. It has a rate of climb of 3,500 ft/min and a range of 350 miles. Info packs are $10.50 and complete plans are $125.00.

Order from: Acro Sport Inc., Box 462, Hales Corners, WI 53130.
Free kit list on request.**Tech support for Acro Sport: Steve Nanweiler, 4819 Farmstead Ct., Wichita, KS 67220, (414) 529-2609**
Note: Landing gear is NCNR, may not be cancelled or returned. Lead times are always 6-8 weeks.

ACRO SPORT KITS

Complete Spruce Kit	**$784.43**	Washer Kit	**$5.13**
Spar Kit	**$735.20**	Metal Kit	**$2,527.00**
Rivet Kit	**$4.71**	Plywood Kit	**$675.00**
Misc. Hardware Kit	**$1,893.00**	Bolt Kit	**$63.02**
Nut Kit	**$70.73**	Miscellaneous Kit	**$724.00**
Landing Gear	**$1,829.00**		

Note: All additional items such as tie rods, instruments, plumbing, avionics, etc. can be found in this catalog.

POBER PIXIE - SINGLE SEAT



Few light airplanes offer builders the simplicity and payoff in fun flying that comes with the Pixie. Another superb design by founding president of the Experimental Aircraft Association, Paul Poberezny. Similar in many respects to the Heath Parasol, the Pixie is a modernization of the helmet and goggle days of the 1930's. The large wing and full span ailerons make for easy flying. With minimal taildragger experience, the Pixie is a breeze to handle on the ground. Landings are gentle affairs, visibility in cruise is outstanding and using it with skis adds another dimension of fun. The fuselage is 4130 steel tube, wings are Sitka spruce, covering is with Stits Poly-fiber. This is a beginner's project for construction, with performance that will satisfy any level of proficiency ...up to ATP! Plans are highly detailed and the cost level is low. Can be powered with a VW conversion or Continental A-65. It cruises at 83 mph, stalls at 30, and climbs at 500 fpm. The Pixie has a no-reserve range of 290 miles with and empty weight of 543 pounds, gross is 900.
An info pack is $10.50, plans are $1255.00 and both can be ordered from **Acro Sport, Inc., Box 462, Hales Corners, WI 53130. Order your Pober Pixie materials kits form the approved supplier, Aircraft Spruce. Free kit list on request.**

POBER PIXIE KITS

Pober Pixie Metals Kit	P/N 01-01135	**$2,899.55**
Pober Pixie Spruce & Plywood Kit	P/N 01-01136	**$2,058.96**
Pober Pixie Bolt, Washer, and Nut Kit	P/N 01-01137	**$266.07**
Pober Pixie Cable and Cable Hardware Kit	P/N 01-01138	**$393.28**
Pober Pixie Hardware Kit	P/N 01-01139	**$1,353.44**

ACRO SPORT II



This versatile biplane offers the outstanding opportunity to experience open cockpit flying with a friend. Excellent aerobatic trainer with responsive controls and docile straight and level flight characteristics. Powerplants can range from 108 hp to 200 hp. Cruise at 123 mph (180 hp), stall at 53 and max out at 152. The wide gear, large wheels and outstanding roll rate make the Acro Sport a dream on the ground, nimble in the air and a cinch for smooth landings. Designed by EAA founding president Paul Poberezny, the Acro II will accommodate pilots up to 6' 6" and 240 pounds. As with all Acro Sport projects, the fuselage is welded steel tube, wings are spruce and Stits Poly-fiber is used for covering. Information packages are available for $10.50 and full sets of plans run $125.00.

Order from: Acro Sport Inc., Box 462, Hales Corners, WI 53130.
Free kit list on request.**Tech support for Acro Sport: Steve Nanweiler, 4819 Farmstead Ct., Wichita, KS 67220, (414) 529-2609**

Note: Landing gear is NCNR, may not be cancelled or returned. Lead times are always 6-8 weeks.

ACRO SPORT II KITS

Metal Kit	**$4,291.16**	Clevis & Cotter Pin Kit	**$4.40**
Complete Spruce Kit	**$1,540.57**	Wood & Foam Kit	**$2,426.83**
Spar Kit	**$755.79**	Rod End Kit	**$1,315.85**
Bolt Kit	**$74.10**	Misc. Hardware Kit	**$151.70**
Nut & Nutplate Kit	**$85.12**	Miscellaneous Kit	**$1,493.00**
Washer & Rivet Kit	**$21.45**	Landing Gear	**$1,939.00**

Note: Additional items such as tie rods,plumbing,instruments,avionics, etc. can be found throughout this catalog.

POBER SUPER ACE - SINGLE SEAT



One of the many designs to come from the drawing board of EAA's founding President, Paul H. Poberezny, the Super Ace, is an ideal project for first time builders. It offers the excitement of open cockpit flying and excellent performance. With options for 85 hp to 150 hp, the Super Ace can meet a wide range of desires. The fuselage is a traditional 4130 steel tube frame that's covered with Stits Poly-fiber. The two-piece wing is made of Sitka spruce spars, ribs formed with 1/2" x 1/2" spruce caps and covering is again Stits Poly-fiber. Wing span is 27'-3 1/2", length is 18'5" and empty weight is 685 pounds with a useful load factor of 385 pounds. Using a C-85 on the prototype, cruise speed is 90 mph. Info packs on the Pober Super Ace are $8.00, plans are $125.00 and can be ordered through **Acro Sport, Inc., Box 462, Hales Corners, WI 53130. Request a free brochure on the Super Ace from Acro Sport.** Order your Pober Super Ace materials kits form Aircraft Spruce, the approved materials supplier. Free kit list on request.

For more information on the Pober Super Ace contact Classic Sport Aircraft:
19426 Campbell Creek Dr., Springville, CA 93265
Phone/Fax: (559) 539-2755 • E-mail: s18mike@ocsnet.net



MEYER'S LITTLE TOOT

Designed by George Meyer, the Little Toot was first flown in 1957 and in the same year took the top award from mechanic Illustrated for "Outstanding Achievement in a Homebuilt Aircraft" at the 1957 EAA convention in Milwaukee. "Little Toot" also won the Paul H. Poberezny Award two years in a row. Year 1999 and 2000. Today the aircraft is still popular in appearance and functionality. Little Toot is a Single Seat, Sports Biplane. The fuselage is an all-metal structure with metal-covered steel tube construction from rear of cockpit forward, and metal monocoque rear of tubular fuselage cockpit forward section. Our Plans also provide you with an alternate Tube and Fabric fuselage construction. It features all wood wings, two 1" thick spar structure with fabric covering. Fabric covered all metal full-length ailerons on lower wings only. No Flaps. Little Tot has super strong structure stressed to 10- and 10+ G's. Power Plant options include 4-cylinder engines of up to 200 hp and six cylinders up to IO-540 250 horse power.

Full Size Plans	P/N 01-01049	**$345.00**
Plans - 11 x 17 Booklet	P/N 01-01050	**$179.00**

For more info and plans contact Tommy Meyer:
Website: www.littletootbiplane.com •
Email: tommy@littletootbiplane.com • Phone: 817-269-9292

Prices Subject to Change Without Notice

AIRCRAFT KITS

AQUAJET-X



The new AQUAJET X, designed by Don James, and inspired by forthcoming warbirds F22 Raptor and X35 Joint Strike Fighter, provides the next level of flying excitement and realism between the AquaJet and a real airplane.

To provide vectored thrust via rudder pedals while creating the jet engine sound you can add an electric leaf blower (electric leaf blower is not included with the kit). Also there is a more sophisticated suspension system. Thus, the Aquajet X can climb at 30 deg., dive at 15 deg., bank, turn and spin up to three revolutions under full control of the pilot. A throttle actuates the lift cylinder - controlling takeoff, climb and descent so the stick can control pitch and landing flare.*Note: The Aqua Jet kit list includes all of the parts we can provide. Other items are required to build the Aqua Jet and many of them can be sourced at hardware stores and building centers.

For more information visit our website at www.aircraftspruce.com

Aquajet X Plans ..... P/N 01-00962 ..... **$95.00**
Aquajet X Materials Kit ..... P/N 01-00964 ..... **$1,080.99**

KR-1 AND KR-2



The KR-1 (single place) and KR-2 (two place) were designed in the early 1970's by the late Ken Rand. These popular aircraft combine composite and wood construction to produce fast, efficient aircraft that remain good sellers year after year.

Contact:
NV AERO AEROSPACE, LLC, 23052H Alicia Parkway #413,
Mission Viejo, CA 92692 • Phone: (800) 515-4811
Fax: (888) 829-3502 Email: info@nvaero.com

KR-1 Complete Spruce Kit ..... P/N 02-05400 ..... **$1,183.69**
KR-2 Complete Spruce Kit ..... P/N 02-05500 ..... **$1,381.76**
KR-2S Complete Spruce Kit ..... P/N 02-05510 ..... **$1,490.47**

SKYBOLT



The Skybolt is a 2 place fully aerobatic biplane which is also an excellent cross country aircraft. It is larger and easier to handle than smaller biplanes, and construction can be completed with hand tools by first time builders. Aircraft Spruce has provided materials for many Skybolt builders around the world for over 20 years.

Contact: Steen Aero Lab, 1451 Clearmont St NE,
Palm Bay, FL 32905 • Ph (321) 725-4160 • Fax (321) 725-3058

Complete Spruce Kit ..... P/N 02-05700 ..... **$1,644.14**
Spruce Spar Kit ..... P/N 02-07900 ..... **$1,260.18**
4130 Steel Kit ..... P/N 03-15500 ..... **$3,089.85**

OSPREY



The Osprey is a 2-place amphibian aircraft with fully retractable landing gear. The Osprey utilizes wood and steel construction and is ideal for the first time builder seeking well presented plans, ease of construction, and the versatility of an amphibian aircraft.

Complete Spruce Kit ..... P/N 02-05100 ..... **$4,545.10**
Osprey Tinted Canopy ..... P/N 05-01163 ..... **$425.00**
Picture Decal Left Black ..... P/N 09-43813 ..... **$8.99**

Osprey Aircraft
3741 El Ricon Way
Sacramento, CA 95825
Info@ospreyaircraft.com • www.ospreyaircraft.com

Wing and Aileron spars are furnished to net dimensions, not beveled.

DAISY MAE



Plans for Daisy Mae consist of 22 pages that are sized 18 by 24 with full size rib and former drawings and a hardware sheet that shows what parts you will need to fabricate while building the airplane. Each plan has a serial number and carries a copyright. Each page is dimensioned so that you will know the exact size of everything you need to build and has many 3 dimensional drawings and exploded views for ease of understanding. In addition, every plans purchase includes a CD loaded with over 280 photos taken during the construction process. You know what they say: A picture is worth a thousand words and these will make it perfectly clear how each part was fabricated. The CD is mailed directly from the plans owner following registration of the plans.

Specifications: Wing Span - 23', Empty Wt. - 780 lbs., Wing Area - 173', Normal Flying Wt. - 1100 lb., Fuselage Length - 18.5 ', Gross Wt. - 1300 lb., Fuselage Height - 7', Stall Speed - 40 Mph.

Daisy Mae Materials Kit ..... P/N 01-01160 ..... **$4,598.99**
The Making of the Daisy Mae Book ..... P/N 13-04086 ..... **$34.95**

GP-4



Designed by George Pereira, the GP-4 is a high performance two place side-by-side kit aircraft which is a fast, efficient cross country performer. Construction is primarily of wood and steel. The GP-4 is becoming the choice of many builders seeking a solid, traditionally constructed scratch built aircraft.

Complete Spruce Kit ..... P/N 02-25200 ..... **$5,063.48**
4130 Steel Kit ..... P/N 02-25210 ..... **$900.13**
Plywood Kit ..... P/N 02-00078 ..... **$3,470.40**

Osprey Aircraft
3741 El Ricon Way, Sacramento, CA 95825
info@ospreyaircraft.com
www.ospreyaircraft.com

BREEZY



Designed by Carl Unger the Breezy was first introduced in 1965, and hailed as one of the most distinctive and unusual homebuilt designs to ever attend an EAA Fly-in. Though there have been a lot other designs, particularly homebuilts, that embody the open cockpit which trademarks a Breezy, nothing can surpass it for the view and fresh air feeling. The original Breezy was designed and built to accept a set of PA-12 wings. For that reason, there are no wing drawings with the plans. It is possible to substitute PA-14, PA-18, or J-3,4, or 5 wings. It's also possible to order wing kits that replicate a J-3 wing. Power for the prototype, which now hangs in the EAA Aviation Museum in Oshkosh, WI, is a Continental C-90. The Breezy will carry a pilot and two passengers. Contact Aircraft Spruce for FREE Kit List.

Rob Unger, 8751 S. Kilbourn, Oak Lawn, IL 60456
rubreezy@msn.com • www.breezyaircraft.com

Misc Hdwe kit ..... P/N 01-30010 ..... **$736.61**
Breezy Steel Kit ..... P/N 01-30020 ..... **$3,269.64**
Breezy Aluminum Kit ..... P/N 01-30030 ..... **$188.58**

AIRCRAFT KITS

PIETENPOL AIRCAMPER



The Original 1929 Model A Powered Light Plane - Designed by Bernard H Pietenpol to get the best possible performance from a Model A motor, to be easy to fly, and to get the most flying hours for the money invested. The Pietenpol Air Camper continues to be a successful design for the same reasons homebuilders were so fascinated by the design 85 years ago. It still has graceful styling, predictable flying qualities, and easy construction. **Specifications**: • Wing Span: 28' 2"ft. • Wing Chord: 5 ft. • Wing Surface: 140 sq ft Length 17 ft. 8 in. • Height Overall: 6 ft. 6 in. • Tread: 53 in. • Empty Weight: 625 lb. • Engine: Ford Model A, Corvair, A-65, other. • Useful Load: 456 lb. • Climb Light: Load over 500 ft. first min. • Climb Full: Load over 200 ft. first min. • Take-Off Speed: 60-75 mph. • High Speed: 90 mph. • Landing Speed: 35 mph. • Fuel Capacity: 10-18 gal. • Take-off Run: 150 ft. • Landing Run: 250 ft. • Weight of Wing: Complete 95 lbs. • Weight of Body: Complete 130 lbs. • Weight of Motor with Magneto: Complete 244 lbs. • Weight of Radiator: 21 lbs. • Weight of Propeller: 21 lbs. • Total Weight of Airplane with Water: 625 lbs. • Gross Load: 1080 lbs. • Load per Square Foot: 7.7 lbs.

Plans are available from:

B.H. Pietenpol And Sons Air Camper Aircraft L.L.C.
7203 Imperial Ave S Cottage Grove, MN 55016
Phone: (651) 459-3209 · email: Andrew.Pietenpol@gmail.com
http://community.pressenter.net/~apietenp

Description	Part No.	Price
Original Pietenpol Air Camper Plans	01-01307	**$250.00**
Original Pietenpol Vertical Stab Kit	01-01301	**$52.25**
Original Pietenpol Horizontal Stab Kit	01-01302	**$122.95**
Original Pietenpol Rudder Kit	01-01303	**$75.00**
Original Pietenpol Wing Kit	01-01304	**$1,925.00**
Original Pietenpol Fuselage Kit	01-01305	**$1,095.00**
Original Pietenpol Elevator Kit	01-01306	**$113.95**

BAKENG DEUCE



The Bakeng Deuce is a two place parasol that is great for plain every day or weekend flying. It is of a basic aircraft design utilizing a steel tube fuselage. The structure is faired with plywood and aluminum formers which support spruce stingers. Wings are of basic wooden construction with solid spruce spars. The Deuce is a very easy aircraft to build with an excellent set of plans. It has a max. speed of 140 mph, cruises at 110-120 mph with a stall speed of 35-40 mph.

Bakeng Deuce Airplane Factory
9850 52nd Street, Kenosha, WI 53144
Ph: (262) 658-9286 · e-mail: acole@interaccess.com

Spruce Spar Kit ..... P/N 02-06800 ..... **$496.00**

FLY BABY



This plane is a structurally simple and easy-to-fly airplane designed to the requirements of the Experimental aircraft Association for home construction and storage in a space 7' x 8' x 20', which is equivalent to the standard home garage. Great emphasis has been placed upon safe flight characteristics and good low speed performance for takeoff and landing at some sacrifice of high speed.

Fly Baby Spruce Kit.....P/N 01-00977 ..... **$2,564.10**
Fly Baby Plywood Kit .....P/N 01-00974 ..... **$1,465.93**
Fly Baby Metals Kit .....P/N 01-00976 ..... **$915.49**
Fly Baby Hardware Kit .....P/N 01-00975 ..... **$2,305.06**

Contact David R. Bowers:
13730 Burke Road, Los Altos Hills, CA 94022-3549
ph: (605) 948-3229 · Htpp://www.bowersflybaby.com

ZENITH STOL CH-750



The two-seat all-metal STOL CH 750 has been developed as an "off-airport" short take-off and landing kit aircraft to fulfill the demanding requirements of both sport pilots and first-time builders. Designer Chris Heintz has combined the capabilities and advantages of a bush-plane with the advantages of a modern design.

With form following function, the popular STOL CH 750 design can be built from complete kits, component "buy-as-you-build" (section) kits, or it can be built from plans-only (blueprints) with common aircraft materials and tools (available from Aircraft Spruce).

For detailed info on all Zenair™ kit aircraft designs contact:
Zenith Aircraft Company
Mexico Memorial Airport, PO Box 650
Mexico, Missouri, 65265-0650 USA.
Ph: (573) 581-9000 (Mon-Fri, 8-5 Central), Fax: 573-581-0011
info@zenithair.com · www.zenithair.com

MORIN M85



Complete plans including construction license for wood or aluminum wings. Also available are plans only for streamlined wood stabilizer and wood or aluminum wings.

Description	Part No.	Price
Complete Morin M85 Plans- Aluminum Wing	01-01211	**$415.00**
Complete Morin M85 Plans- Wood Wing	01-01212	**$415.00**
Morin M85 Aluminum Wing Plans Only	01-01213	**$275.00**
Morin M85 Wood Wing Plans Only	01-01214	**$275.00**
Morin M85 Streamlined Wood Stabilizer Plans	01-01215	**$145.00**
Morin M85 11"x17" Booklet Of Complete 143 Drawings	01-01216	**$157.75**
Morin M85 4130 Tubing Kit (fuse / Vert Stab / Rudder)	01-01236	**$2,609.90**
Morin M85 4130 Tubing Kit (horizontal Stab / Elevator)	01-01237	**$439.52**

Prices Subject to Change Without Notice

COMPOSITE MATERIALS

INTRODUCTION

The use of composite materials in home built aircraft construction got its start back in 1970 when Ken Rand introduced his KR-1 and KR-2 kits. At the same time, a young designer named Burt Rutan was completing the design of his VariViggen which was awarded the Stan Dzik trophy for design contribution at Oshkosh in 1972. Although this aircraft featured some composite construction materials, it was fairly labor intensive to build and interest was modest. Taking the canard design concept a step further and simplifying construction through the use of the moldless composite technique, Burt educated thousands of builders and future designers through his plans, construction manuals, and many seminars and convinced aircraft enthusiasts worldwide that composites were indeed the future for aviation construction. Rutan Aircraft Factory followed the tremendous success of the VariEze kit program with plans for new designs such as the Long-EZ, Defiant, and Solitaire. At the same time, SCALED, Burt's new company specializing in design and prototype construction, was busy building proof-of concept aircraft such as the AD-1, Grizzly, and Beech Starship. Burt continues to operate SCALED today and remains active in designing and building the aircraft of tomorrow. We hope he will someday return to the homebuilt aircraft market, and arena that allowed him endless freedom to pursue aircraft design innovation.

During the 1980's many new designers entered the homebuilt aircraft market including Nat Puffer who introduced the popular Cozy, a side-by-side version of the Long-EZ. Aircraft Spruce & Specialty Co. became the distributor of Cozy kits as it had been for the Rutan designs since 1976. Hundreds of kits were shipped worldwide, and Aircraft Spruce grew as quickly as the composite movement. At the same time, Aircraft Spruce began supplying kits and materials to designers marketing their own new designs using the new "fast-build" pre-fabricated kit concept. This type of kit program was pioneered by Tom Jewett and Gene Sheehan of Quickie Aircraft and Tom Hamilton of Glasair fame. Many new designs followed, including Lance Niebauer's Lancair, Ken Wheeler's Express, the Cirrus and White Lightning. Aircraft Spruce has been a supplier of materials for all of these kit programs, and looks forward to working with the designers of new composite aircraft on their kit programs in the years to come. The design sophistication and ease of construction that are offered in composite aircraft kits today have provided a way for many aviation enthusiasts to build and fly higher performance aircraft at affordable prices. What an exciting time to be involved in sport aviation!

ADVANCED COMPOSITE FABRICS

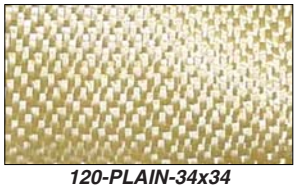
Advanced composite fabrics are those materials which have been used for a number of years in aerospace applications, replacing standard fiber-glass fabrics. Today's materials - Kevlar, graphite, S glass and ceramics - are now making the transition from aerospace to homebuilt aircraft. Kevlar is an organic fiber which is yellow in color and soft to touch. It is extremely strong and tough and about the lightest structural fabric on the market today. Kevlar is highly resistant to impact but it is rather difficult to work with for hand layup applications and its compressive strength is considered poor. Graphite fibers are created by extreme stretching and heating of rayon fibers to change their molecular structure. Graphite has very low density (weight/unit volume), is very stiff (high modulus) and very strong (high tensile). S glass uses a different chemical formulation from standard E glass fabrics, and is stronger, tougher and stiffer than E glass. One ply of S glass can replace several plies of E glass, which can result in a stronger and considerably lighter aircraft component. Ceramic fabrics are the latest innovation in advanced composites. These fabrics produce laminates approaching the qualities of S glass plus they can withstand temperatures of almost 3000° F. Ceramic cloth can produce a very lightweight and effective firewall laminate, although at this time the cost is high. These advanced composite materials are currently being used in the production of such items as aerospace components, high-performance boats and race cars, and many revolutionary homebuilt aircraft such as the Long-EZ, Solitaire, Sea Hawk and Q200. The performance of future homebuilt aircraft will most certainly be incredible with the availability of these innovative new composite materials.

	Best ←				→ Worst
Cost	E Glass	S Glass	Kevlar	Graphite	Ceramic
Weight (Density)	Kevlar	Graphite	S Glass	E Glass	Ceramic
Stiffness	Graphite	Kevlar	S Glass	Ceramic	E Glass
Heat	Ceramic	S Glass	E Glass	Kevlar	Graphite
Toughness	Kevlar	S Glass	E Glass	Ceramic	Graphite
Impact Resistance	Kevlar	S Glass	E Glass	Ceramic	Graphite

WHICH ONE DO YOU CHOOSE?

Often the choice of the materials to use for a laminate is difficult because of the required properties. One must consider the advantages of one material over another and its anticipated performance. S glass is about 30% stronger and 15% stiffer than E glass. It has 20-25% of the stiffness of graphite and is as strong, but it is also 30% heavier. S glass though, has only half the strength and stiffness of Kevlar and twice the weight. Kevlar on the other hand, is 40% stronger and 25% lighter than graphite but has only half the stiffness of graphite. Sometimes, blending different advanced composite fabrics in a laminate can achieve the proper balance of stiffness, strength and weight. Use the following six parameters listed here, from a best to a worst case, to help you decide which advanced composite fabric(s) is best for your application.

KEVLAR FABRIC STYLES



120-PLAIN-34x34

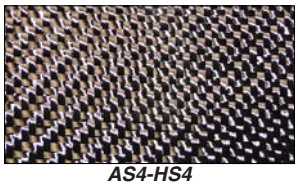


281-PLAIN-17x17

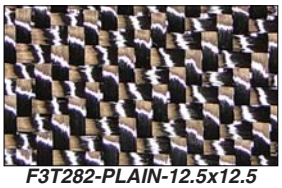


285-CROW FOOT-17x17

GRAPHITE FABRIC STYLES



AS4-HS4



F3T282-PLAIN-12.5x12.5



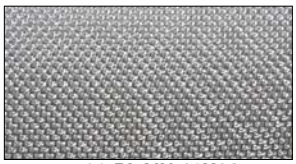
F3C716-PLAIN-16x24

CERAMIC FABRIC



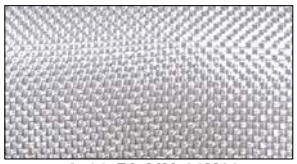
XC568-5H5-48X47

E-GLASS



7500-PLAIN-16X14

S-GLASS



4533-PLAIN-18X18

HELPFUL HINTS AND PRECAUTIONS

It is important to have the entire work area including tables, foam, tools and working materials thoroughly warm before commencing. This may take 3-4 hours. An electric hair dryer may be used to warm local areas, being careful not to overheat the part or epoxy. When, due to cool temperatures, a part is slow to wet out, a few quick passes with a hair dryer will greatly speed the layup time. Do not use a hair dryer to heat a cup of epoxy. This can give local hot spots and ruin pot life.

The epoxy system components should be stored at room temperature. Never keep resin or hardeners in a cold place, even for long-term storage. If the resin appears to crystallize and settle out it should be returned to its normal state as soon as possible, even if prompt usage is not anticipated. Placing the container of resin in hot (160-190°F.) water for several hours will usually decrystallize it and return it to a clear state. Mild agitation will accelerate the process. Leaving the resin hot for 3-5 hours after it clears will reduce its susceptibility to recrystallize. Securely close containers after use.

Never attempt any layup below 70°F. since the higher viscosity of the resin will make it more difficult to wet out the cloth. Ideal working temperature is 85°F. Keep epoxy at 75° to 85°F. Never work outside in sunlight. It's acceptable to work in a shop with radiant heaters, as long as:

1.) The heat is diffused and the heat source does not become much hotter than the ambient.
2.) The heat is not provided by a source that generates particulates or aerosol hydrocarbons.

Never make a glass layup over a core that is not straight and smooth. The glass panel cannot take the loads if it has bumps or depressions in excess of the allowable values. A wrinkle, depression or bump in a layup which is greater than 1/16" high or low and which is more than 20% of the chord length or 20% of the spar chord is not acceptable and requires repair. A depression can usually be repaired by filling with flox to level and laying over the entire depression the amount of glass that is underneath, lapping outside the depression a distance equal to one inch per ply. Care should be taken not to lay up a depression or bump in the thick main spar caps. The transition of the spar caps into the wing fittings must be smooth and without joggles. These precautions apply only to the flying surfaces. The fuselage and fuel tanks can have relatively large depressions or bumps without affecting structural safety. Care should be taken in the finishing process not to sand through more than one ply on the structure.

Joining foam blocks - (1) Paint a coat of epoxy (no micro) on the joining surfaces. (2) Trowel a wedge of dry micro on the center of one surface. (3) Squeeze the joining surfaces together, wiggling them back and forth to obtain a thin micro joint less than 1/16" thick. It is desirable to have the micro about 3/8" low in the joint (not squeezed out). The low joint is filled with micro before glass is laid over the joint allowing a wet bond between the micro and the glass. If some does squeeze out, wipe the joint low with a mixing stick. Do not try to fill large voids with micro, as there is a possibility of exotherm damage. For a void larger than about 0.1", fill with a sliver of foam with micro on each side.

- A paper cutter is excellent for measuring and cutting the many little squares of glass cloth.
- Epoxy should be removed from metal tools or parts with acetone, MEK or soap and water before it cures.
- Micro slurry should not be applied to glass surfaces being bonded. This weakens the joint.
- Do not use Bondo on styrofoam, It has a polyester base which will dissolve the foam. Bondo will not attack urethane or PVC.

Precaution - Be sure layups are not dry, with air present (small flecks of white). Inspect thoroughly before leaving a wet layup. A cured layup that is too dry must be rejected.

Make sure that ample micro slurry is applied over the foam, particularly the urethane. Inadequate slurry allows air to remain under the first ply, decreasing laminate peel strength and surface durability.

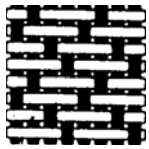
Hot wire cutting - A good method to use for judging wire temperatures is the appearance of the cut foam surface. A cratered or rutted surface indicates the wire is too hot. A very light "hair" of plastic strands on the surface is just right. Always adjust the temperature so that the wire will cut one inch in 4 to 6 seconds with light pressure.

Exotherm foam damage - Care must be taken to avoid heavy buildups of epoxy/micro down inside a joint that is insulated by foam, such as the assembly of the wing cores. The gap to be filled by micro when assembling any foam cores should not be thicker than 1/16". In filling a gap greater than 0.1", excessive weight is added and, more importantly, the large mass of epoxy/micro insulated by the foam can exotherm. Heat resulting from the exotherm can be as high as 450°F., which will melt away the foam locally and destroy the joint. White is the recommended color for composite aircraft since it absorbs very little of the sun's heat (10%) while a black surface will heat up tremendously (95% absorption). Trim colors in noncritical areas are acceptable. Any good quality automotive enamel, lacquer, acrylic or polyurethane is acceptable. A primer-surfacer with an ultra-violet radiation barrier is recommended as an undercoating.

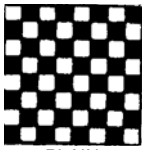
Caution: Do not ever wipe paint thinners on any part of the structure. Minute pin holes in the epoxy/glass skin can allow the thinners to penetrate down to the styrofoam,which dissolves in thinners.

QUALITY CONTROL

One of the unique features of the glass-foam-glass composite construction technique is the ability to visually inspect the structure from the outside. The transparency of the glass/epoxy material makes it possible to see all the way through the skins and even through the spar caps. Defects in the layup take four basic forms: (1) resin lean areas, (2) delaminations, (3) wrinkles or bumps in the fibers and (4) damage due to sanding structure away in finishing. Resin lean areas are white in appearance due to incomplete wetting of the glass cloth with epoxy during layup. The presence of minor white (lean) areas up to about 2 inches in diameter is not cause for rejection of the piece. Delaminations in a new layup may be due to small air bubbles trapped between plies during the layup. Small delaminations or bubbles up to 2" diameter may be filled by drilling a small hole into the bubble and filling the void with epoxy. Major wrinkles or bumps along more than 2" of chord are cause for rejection in the wings, canard and winglet on the VE, particularity on the top. In most cases the rejected part can be repaired by following the basic rule: Remove the damaged area and fair back the area at a slope of at least one inch per ply with a sanding block in all directions. Count the number of plies removed while sanding and replace with same, plus one more ply of BID over the entire patch.



CROW FOOT WEAVE



PLAIN WEAVE

WEAVE PATTERNS

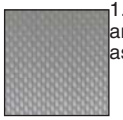
The weave pattern describes the manner in which the warp yarns and the filling yarns are interlaced in the fabric. Plain Weave consists of one warp end woven over and under one filling pick. Plain weave is generally characterized by fabric stability with minimum pliability except at low fabric counts.

Crowfoot Weaves are constructed with one warp end weaving over three and under one filling pick. It is characterized as being more pliable than either plain or basket weaves, having conformability to complex or compound curved surfaces and making possible the weaving of higher counts than plain or basket weaves.

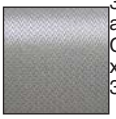
COMPOSITE MATERIALS

STANDARD E-GLASS FIBERGLASS CLOTH

Fiberglass cloth is exactly what the name says - glass. Fine fibers are spun from molten glass marbles, gathered into yarn and woven into a strong, supple glass fabric. It can be folded, rolled or draped, like any other loosely woven fabric - but it can be chemically transformed into solid sheets of tremendous strength. All the fiberglass fabrics listed below are volan treated for maximum strength and resistance to moisture and abrasion. They feature a weave that is tight enough for high strength, yet open enough for thorough wetting by resins.



1.45 oz./sq. yd. Lightweight Industrial Cloth used in Osprey and other designs. Widely used by model builders, known as "Deck Cloth" , Thread Count 60 x 47.
#1080 (P/N 1080-50) 50" Width..... **$6.60 yd**



3.16 oz./sq. yd. Lightweight Industrial Cloth with aerospace applications. Excellent for model building. Only .004" thick. Crowfoot weave, which contours nicely. Thread Count 60 x 58. Breaking Strength 125 x 120 lb./in. Finished Weight 3.08 oz./sq. yd.
#120 (P/N 120-38) 38" Width..... **$8.50 yd**



3.74 oz./sq. yd. Light weight Boat or Tooling Cloth. Tight plain weave. Thread Count 24 x 22. Breaking Strength. 160 x 135 lb./in. Finished Weight 3.60 oz./sq. yd. Thickness .0055"
#1522 (P/N 1522-50) 50" Width..... **$5.35 yd**



5.79 oz./sq. yd. Lightweight Boat Cloth. Flat weave, not twisted. Thread Count 18 x 18. Breaking Strength 250 x 225 lb./in. Finished Weight 5.85 oz./sq. yd. Thickness .010".
#3733 (P/N 3733-60) 60" Width..... **$5.80 yd**



5.85 oz./sq. yd. Lightweight Boat or Tooling Cloth. Plain Weave. Thread Count 18 x 18. Breaking Strength 250 x 250 lb./in. Finished Weight 5.64 oz./sq. yd. Thickness .009" as used on KR Aircraft.
#7533 (P/N 7533-60) 60" /Width..... **$9.65 yd**



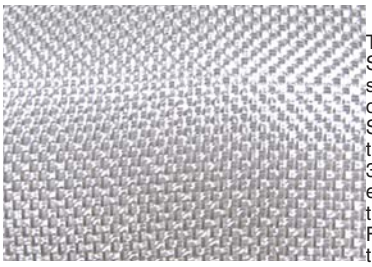
8.5 oz./sq. yd. Lightweight boat or tooling cloth. Threads per inch: 18L x 18W. Used in Osprey aircraft and other homebuilts.
#7520 (P/N 7520-50) 50" width ..... **$10.60 yd**



8.95 oz/yd² Medium Weight Standard Industrial Cloth. 8 Harness Satin. Thread Count 57 x 54. Breaking Strength 350 x 330 lb./in. Finished Weight 8.95 oz./yd² Thickness .009 mils. Sold by the yard.
#7781 50"" Width (P/N 7781-50) ..... **$8.65 yd**
#7781 60" Width (P/N 7781-60)..... **$10.90 yd**



9.66 oz./sq. yd. Heavy Weight Boat or Tooling Cloth. Plain Weave. Thread Count 16 x 14. Breaking Strength 450 x 410 lb./in. Finished Weight 9.40 oz./sq. yd. Thickness .014".
#7500 (P/N 7500-60) 60" Width..... **$9.80 yd**



S-GLASS

The chemical formulation of S-glass differs from that of standard E-glass. Examples of E-glass are found in the Standard Fiberglass Cloth section of this catalog. S-glass is 30% stronger and 15% stiffer than E-glass and retains these properties up to 1500° F. S-glass is also considerably tougher than an equivalent E-glass. Other styles are available on request. Sold by the yard.

Style	Part No.	Weight oz./ Sq.Yd.	Width	Thick-ness	W x F	Weave	Price Per Lineal Yd.
4533	4533-60	5.8	60"	.009"	18 x 18	Plain	**$19.85**



GLASS MAT

100% Fiberglass in a non-woven state. It is used for bulk "build-up" in molding and fabricating components. Also useful for filling holes and badly damaged parts. 1.5 Oz. Weight. 38" Width.
P/N 01-06500.....**$3.35/Yd**

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KNITTED E-GLASS FABRIC

Knitted fabrics are a relatively new format in composites. The performance of the glass is greatly enhanced by removing the interstices of the woven fabric and the crimped condition. E-glass in woven goods normally has 22,000 psi tensile strength. Layered nonwoven goods give 27,000 psi which is about a 20% improvement. Knitted glass offers greater ease of fabric orientation and saves time over multi-layered wet lay-ups.

Part No.	Weight/sq yd	Width	Ply Thickness	Price/yd
Biaxial - Double Bias +/-45°				
01-00640	17.6 oz	50"	17.0 mm	**$10.95**
Uni-Directional				
01-00650	13.4 oz.	50"	.021 mm	**$5.99**



NOMEX HONEYCOMB

AHN 7800 is an Commercial Grade Nomex honeycomb particularly suited for use where resistance to corrosive attack and moisture are important. This material exhibits good strength characteristics and is fire resistant. It is available in a variety of cell sizes and densities to suit most purposes. Typical applications include lightweight non-structural bulkheads for ships, joiner panels, shelters, antennas, and auto body panels. This material is not intended for aircraft or aerospace applications. This material also exhibits good thermal insulation properties and also has good dielectric properties. This honeycomb is easily machined, formed, and shaped and well suited to adhesive bonding.

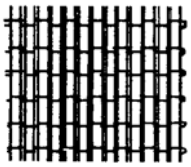
Description	Part No.	Price
Honeycomb 1/8" Thick, 1/8" Cell 4' x 8'	01-00487	**$205.95**
Honeycomb 1/8" Thick, 1/8" Cell 4' x 4'	01-00489	**$102.98**
Honeycomb 1/4" Thick, 1/8" Cell 4' x 8'	01-01052	**$312.00**
Honeycomb 1/4" thick, 1/8" Cell, 4' x 4'	01-01564	**$150.95**
Honeycomb 1/8" Thick, 3/16" Cell, 39" x 108"	01-01572	**$165.75**
Honeycomb 1/8" Thick, 3/16" Cell, 39" x 54"	01-01573	**$82.00**
Honeycomb 1/8" Thick, 1/4" Cell, 39" x 108"	01-01574	**$246.95**
Honeycomb 1/8" Thick, 1/4" Cell, 39" x 54"	01-01575	**$124.95**

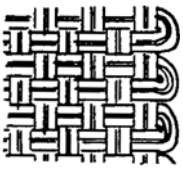
COMPOSITE MATERIALS

RUTAN FIBERGLASS CLOTHS

The most basic structural material in building a composite aircraft is glass cloth. The use of glass in aircraft structures, particularly structural sandwich composites, is a recent development. Glass cloth is available commercially in hundreds of different weights, weaves, strengths and working properties. Very few of these, however, are compatible with aircraft requirements for high strength and light weight. Even fewer are suitable for the hand-layup techniques developed by Burt Rutan for the homebuilder. The glass cloth featured here has been specifically selected for the optimum combination of workability, strength and weight. Two types of glass cloth, a bi-directional cloth (RA7725BID) and a uni-directional cloth(RA7715 UND) are used. BID cloth has half of the fibers woven parallel to the selvage edge of the cloth and the other half at right angles to the selvage, giving the cloth the same strength in both directions. UND cloth has 95% of the glass fibers woven parallel to the selvage, giving exceptional strength in that direction and very little at right angles to it. BID is generally used for pieces which are cut at a 45° angle to the selvage, a bias cut, which enables the builder to lay BID into contours with very little effort and provides the needed shear and torsion stiffness for flying surfaces. UND is used in areas where the primary loads are in one direction, such as wing skins and spar caps. Multiple layers of glass cloth are laminated together to form the aircraft structure. Each layer of cloth is called a “ply”.

UNIDIRECTIONAL P/N RA7715
7 Oz. 38” Width Threads per inch:
80L x 18W **$10.65** Lineal Yd.

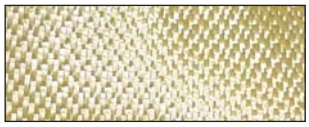




BIDIRECTIONAL P/N RA7725
8.8 Oz. 38” Width Threads/inch:
54L x 48W **$7.75** Lineal Yd.

Quantity Discount: 15% on 500 Yds or more. Yardage must be on one fabric for discount, not combined. Discount on larger quantities quoted on request

BIDIRECTIONAL WOVEN KEVLAR


STYLE 120


STYLE 281


STYLE 285

“Kevlar” 49 aramid fiber was introduced commercially in 1972 and is the Du Pont registered trademark for its new high strength, high modulus organic fiber. It combines high tensile strength (43,000 PSI) and high modulus (19 million PSI) with light weight and toughness superior to other reinforcing fibers for plastics. It is available in yarns and rovings which meet all FAA requirements for flammability. It shows no degradation in jet fuel, lubricating oils, water, salt water or high humidity. At cryogenic temperatures (-320°F.) performance is excellent with essentially no embrittlement or degradation of fiber properties. Kevlar 49 can offer both a significant weight saving and improved stiffness versus glass in addition to superior vibration damping and good impact resistance. A kayak made with Kevlar 49, for example, weighs about 18 pounds while the weight of a comparable boat made with glass would be over 30 pounds. The advantages over glass in small aircraft are similar - weight savings and improved impact resistance. Kevlar 49 is used in a number of parts on the Lockheed L-1011 because of weight savings of up to 30% compared to similar parts made of glass. One unusual benefit of Kevlar is its “quietness”. A cowling made of Kevlar will be quieter and less sensitive to engine vibrations than its glass or graphite counterpart.
Although all of the processes used in combining resins with glass fiber are adaptable to Kevlar 49 with little or no modification. The vinyl estertype system is compatible, but the use of polyesters is not recommended because of poor bonding with Kevlar. The epoxy resin systems featured in this catalog are compatible with Kevlar 49 and have good wetting characteristics.
Kevlar 49 is stocked in three different fabric styles. Kevlar #120 is a very lightweight fabric, while #281 and #285 are identical except for the weaving pattern. Other weights and weaves of Kevlar are available on a special order basis. Be sure to specify the Kevlar style when ordering.

Style	Part No.	Oz./ Sq.Yd	Weight Width	Thickness	W x F	Weave	Breaking Strength Lbs/Inch Warp	Breaking Strength Lbs/Inch Fill	Price Per Lineal Yd
120	01-38100	1.8	38”	.0035”	34 x 34	Plain	260	250	**$27.85**
281	281-38	5.0	38”	.010”	17 x 17	Plain	625	650	**$25.60**
285	285-38	5.0	38”	.010”	17 x 17	Crow	630	650	**$25.85**

Quantity Discount: 10% on 25-50 Yds. %; 15% on 50-100 Yds.; 20% on over 100 Yds.

PRECISION SCISSORS



Straight-edge blades easily slide through the fabric and are sharpened to the tip for smaller or appliqué cuts. Grabs the fabric and cuts cleanly, with no material folding over the blades - even when cutting left-handed. Blades fully extend into the handles for durability and better cutting stability and pressure distribution. Exceptional accuracy and retains smooth blade movement, even in heavy-use environments. Straight blades made of stainless steel (Blades are not serrated). Good for cutting stitchwork, thread, cloth, leather, fabrics, films, sign and graphics material, vehicle wraps, and more. .....P/N 01-01186.....**$18.95**

INDUSTRIAL FABRIC SHEARS



Wiss No. 20W heavy-duty shears, ideal for cutting fiberglass cloth and all fabrics. Hot drop-forged steel.

Right Hand Shears.....P/N 01-00397 ..... **$32.75**
Left Hand Shears.....P/N 01-00398 ..... **$32.75**

OFFSET KEVLAR CUTTING SHEARS



Although Kevlar has many advantages over conventional fiberglass weaves, it is very difficult to cut. Special scissors have been developed to facilitate cutting. These scissors have a wear resistant coating which is metallurgically bonded to the steel substrate. The coating will not chip or peel off and can be sharpened. Model WR-10E-4 Shears.
P/N 01-00341 .....**$85.75**

FEATHERWEIGHT SCISSORS

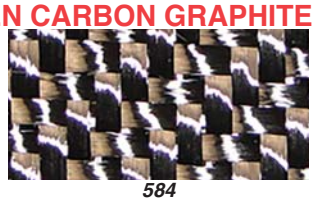


Lightweight, durable, and reliable GINGHER® Scissors are lightweight, extremely sharp and comfortable. These 2-1/2 oz. scissors are perfect for use during the lay-up for a variety of purposes and can be soaked in acetone for easy clean up. We recommend saving one pair for only cutting Kevlar® and keeping a second pair for general use. P/N 01-00342.....**$47.85**

BIDIRECTIONAL WOVEN CARBON GRAPHITE



282



584

Woven graphite is a fabric introduced in recent years which has become an excellent alternative to fiberglass and Kevlar - only mils thick with great strength. In addition to its great strength, graphite fabric also has very low density and is very stiff. Although it is quite costly, the material saving is appreciable since only one course of graphite is required for 3 or 4 of fiberglass. It cuts considerably easier than Kevlar. Graphite The excellent qualities of the graphite fabric itself give it an immediate waiting market in the aircraft building field.
Graphite fabric is stocked in the three different styles shown below. Other weights and weaves of graphite are available on a special order basis. Be sure to specify the graphite style when ordering. These carbon graphite cloths are not pre-preg fabrics.
**** Warning folding for shipment can damage the filaments in the fabric. Folding will be done at customers risk and request only.***

CARBON FIBER								
Style	Part No.	Weight Oz./Sq Yd.	Width	Thick-ness	W x F	Weave	Tensile Strength (KSI)	Price /yd.
282	01-00971	5.8	50”	.007”	12.5x12.5	Plain	675	**$29.50**
282	01-28260	5.8	60”	.007”	12.5x12.5	Plain	675	**$35.90**

TWILL 2 X 2 WEAVE								
Style	Part No.	Weight Oz./Sq Yd.	W	Thick-ness	W x F	Weave	Tensile Strength (KSI)	Price /yd.
284	01-00602	5.7	50"	.007	12X12	2/2 Twill 3K	675	**$29.95**
284	01-01232	5.8	60”	.007	12X12	2/2 Twill 3K	675	**$35.50**
384	01-01529	-	50	.007	12X12	2/2 Twill	-	**-**



STANDARD E-GLASS & FIBERGLASS TAPES

Tapes are woven from 8.7 oz./sq. yd. fiberglass cloth, .012” thick, into narrow widths with non-raveling selvage. Perfect for glassing seams, corners, edges fan for repair jobs. Sold in 50 yd. rolls.

1” Width 26 Warp, 17 Fill ..... P/N 01-06610..... Roll **$20.50**
2” Width 40 Warp, 17 Fill ..... P/N 01-06600..... Roll **$26.50**
3” Width 58 Warp, 17 Fill ..... P/N 01-06700..... Roll **$33.75**
4” Width 76 Warp, 17 Fill ..... P/N 01-06705..... Roll **$42.60**
6” Width 106 Warp, 17 Fill ..... P/N 01-06710..... Roll **$64.90**
12” Width 218 Warp, 17 Fill ..... P/N 01-06720..... Roll **$87.75**

UNIDIRECTIONAL FIBERGLASS TAPE



This is a fibrous glass reinforcement designed to furnish exceptionally high directional strength. Manufactured from parallel strands of glass roving which are held together by a fine woven cross thread. The placement of the cross thread is such that the parallel rovings do not wander or have a tendency to cross over each other. This 100% unidirectional tape can be used instead of unidirectional fabric for spar caps, wings and elevators. Contours well and cuts building time considerably. Wt. 22 oz./sq. yd., 0.025” thick. May be used with either polyester or epoxy systems. Used on Polliwagen. Long-EZ, Cozy. Adventure and applicable to all composites.

2.5”-3” Wide..... P/N 01-06800.....**$2.45 Yd.**

UNIDIRECTIONAL CARBON 175



Construction is such that the fibers are oriented in a straight or linear manner with no twist and are able to be maintained in that condition while being impregnated by hand. The fabric is formed from rovings or “tows” of fibers similar to that used in making woven fabric. These fibers are locked into position by very fine fill (or cross machine direction) fibers.
For hand lay-ups, resin may be applied by spray, brush, or by pouring action. A short napped paint roller is recommended for spreading the resin. Excess resin should always be rolled out in a direction parallel to the graphite fibers. Satisfactory for use with epoxies, polyesters, vinyl esters, and other resins. Care and cleanliness should be practiced when working with Graphite materials. Unattached graphite fibers are easily airborne. A filter mask should be worn when cutting and fabricating. Itching and irritation caused by broken filaments becoming embedded in the skin can result from filament breakage during handling. Sold by the yard Style: 715. Weight: 5.37 oz./sq. yd. Width: 53.5 in. Thickness: 6.69 mils.
****Warning folding for shipment can damage the filaments in the fabric. Folding will be done at customer’s risk and request only**

P/N 09-04023.....**$45.95**



UNIDIRECTIONAL CARBON FIBERGLASS 44”

Unidirectional Carbon Fiber. 44-TWCO-007 44”. 170GSM PW Uncert 3K/75 1/0 44”.

P/N 09-04685.....**$37.95**

UNIDIRECTIONAL CARBON FIBER 50



Intermediate Modulus Hexcel IM7 UNI Directional Carbon Fiber Fabric/Cloth 50” 12k 5.7oz/193gsm. This fabric has a width of 50”, tow size of 12k and is a UNI Directional Fabric. This Hexcel IM7 12k Intermediate Modulus Fiber has a yard that is smaller in size than a standard 12k yarn and visually replicates the look of a standard strength 6k carbon fiber yarn while offering over a 60% increase in tensile strength and reducing the weight in almost half.

P/N 01-01606.....**$24.80**

UNIDIRECTIONAL CARBON TAPES



These carbon fiber tapes are used to add stiffness and tensile strength in one direction without adding significant thickness or weight. These West System tapes have 12 carbon fiber bundles per inch of tape width. The bundles are held together with a polyester fill thread making the tape easy to handle. These tapes are compatible with epoxies but not with vinylester or polyester resins. #702 tape is 1.5” wide and #703 tape is 3” wide.

Style No.	Width (in.)	Length	Part No.	Price/.roll
702	1.5”	12 ft.roll	01-00238	**$59.85**
702	1.5”	50 ft.roll	01-00239	**$157.77**
703	3”	12 ft.roll	01-00240	**$76.56**
703	3”	50 ft.roll	01-00241	**$206.40**

CARBON FIBER TUBING



Aircraft Spruce offers structural tubing and structural torsion tubing, engineered and built to meet your exact specifications and tolerances. Structural Tortion Tubing, in continuous lengths up to 40’, is manufactured with the computer-controlled, fully-automated Helical Winding Process. We offer a broad array of Fiber Options and tubing wall thickness and diameter is determined on a case-by-case basis to suit your application. ***Special Order Sold in 10 ft. lengths only (can cut for UPS shipment).***

* The image shows two types of finish on this product. The standing tube is sanded and painted with a gloss finish. This is available for an additional cost of **$249.00**. The tube lying on its side is a rough surface, which will be received when product is purchased.

D of Tube	Wall Thickness	Length	Part No.	Price
0.5”	.100	10’	03-00171	**$428.95**
0.75”	.100	10’	03-00172	**$428.95**
1.00”	.120”	10’	03-00173	**$357.95**
1.25”	.120”	10’	03-00174	**$515.00**
1.5”	.120”	10’	03-00175	**$414.95**
1.75”	.120”	10’	03-00176	**$565.00**
2”	.120”	10’	03-00177	**$464.95**
2.5”	.120”	10’	03-00178	**$572.00**
3”	.120”	10’	03-00179	**$689.99**

GRAPHITE – LAMINATING EPOXIES

CARBON GRAPHITE YARN TOW



High strength (470,000 PSI) carbon fibers are used as reinforcement in high performance structural composites for aircraft applications, recreational and industrial products. Carbon fiber filaments are finer than a human hair. These filaments are bundled together to make a fiber of 3,000, 6,000 or 12,000 filaments which is called a "tow". The tow is sized with an epoxy compatible material to improve the handling characteristics. It is then wound on a cardboard core holding from 4 to 6 pounds of fiber. 1 Lb. spool.

Actual Size	Part No.	Approx. Yield	Roll Size	Price/Spool
3K Tow	01-00343	2470 Yd./Lb.	4 Lb.	**$394.00**
6K Tow	01-00307	1229 Yd./Lb.	1 Lb.	**$79.65**
12K Tow	01-00004	621 Yd./Lb.	2 Lb.	**$149.95**
12K Tow	01-00345	621 Yd./Lb.	4 Lb.	**$298.95**

It appears that the 6K tow will prove most practical for homebuilding applications. This size will be available in the small units shown. The 3K and 12K sizes are offered in full spools only. The 3K tow is used primarily by weavers. The 12K is difficult to wet out but can be done by diligent brushing.

UNIDIRECTIONAL ARAMID - TWARON ROVING



Material: 1500 denier Twaron (aramid), 5 ends (7500 denier total). Type: 1000. Yield: 567 yards/pound (0.588 lbs/1000ft). Elongation: 3.5%* (each end). Break: 79 lb. +- 6.25%* (each end) Packaging. Tube length: 5.25". Inner diameter: 5/8". Yards/package: 300

300 Ft . Roll ..... P/N 968 ..... **$46.50**

SYSTEM THREE QUIKFAIR EPOXY FAIRING PUTTY



Lightweight, micro ballooned filled, fast curing 2-part epoxy fairing putty with excellent moisture resistance. Use on both fiberglass and wood epoxy structures above or below the waterline. At 70° F it is sufficiently cured to be hand sanded in 3 hours or machine sanded in 4 hours. This allows you to apply 3 coats in a standard 8 hour shift or 6 in a round the clock basis. Complete a fairing or filleting job in a day rather than 3 or 4 days. NOTE: QuikFairs warm butter-like consistency makes it easy to measure by weight. Use care when measuring by volume as QuikFair does not self-level and may trap air pockets. As QuikFair is fast curing the working time is short. Mix no more than can be applied within 10 minutes.

24 oz. Kit ..... P/N 01-00404 ..... **$29.50**
1-1/2 qt. Kit ..... P/N 01-00405 ..... **$44.65**

EPOXY PREMIUM PIGMENTS



These Premium Pigments are a paste to tint polyester, vinyl ester, epoxy resin, and polyurethane. Add about 6% to 8% of pigment by weight or 1/2 pint of pigment per gal. of resin.

White - 1 oz. ..... P/N 01-45308 ..... **$5.95**
White - 8 oz. ..... P/N 01-45501 ..... **$19.95**
Black - 1 oz. ..... P/N 01-45319 ..... **$6.50**
Black - 8 oz. ..... P/N 01-45512 ..... **$20.50**

IMPACT RESISTANT LAMINATING EPOXY



DLRH-3212 is an unfilled, clean epoxy resin system with a long pot life. DLRH-3212 is a tough, strong, impact resistant resin with chemical resistance. It has excellent wetting quality on kevlar, carbon graphite and fiberglass cloth. Used extensively in construction of aircraft, race cars, motorcycles, helmets and sports equipment. Mixing Ratio by Wt: 100:30; Pot Life (200 Gm MASS) 60 Min; Tensile Strength @ 25 C 12,500; Flexural Modulus @ 25 C 40,900; Heat Deflection 325 F; Thermal Shock 72°F–125°F; Shore "D": 80, Density: Resin: 9.7, Hardener: 7.9, Mixed: 9.1; Shelf Life: Resin/ Hardener 1 Year.

Qt Kit ..... P/N 01-00430 ..... **$61.85**
Gal Kit ..... P/N 01-00431 ..... **$169.95**
5 Gal Kit ..... P/N 01-00432 ..... **$835.00**

JEFFCO EPOXY LAMINATING SYSTEM



1307 Low Viscosity Resin / 3102 Fast Hardener - 100% solids 2-component epoxy laminating system with excellent wet out, low viscosity and high strength. Very low odor and toxicity. Easy to use, 4:1 weight or volumetric mixing, safe, fast curing products for a variety of use applications. Used for fast curing, penetrating wood coatings, adhesives and sealers, fiberglass laminating and microsphere filled fairing compounds. Excellent cold temperature cures down to 40°F. No solvents or VOC's. Non-hazardous, non-corrosive hardener.

3176 30-minute Medium R/T Epoxy Hardener - Fast setting, even in thin films. Good low temperature cure. Fast wetting of fiberglass reinforcements. Easy to use 4:1 mix ratio. High HDT at room temp, increasing with post cure. Low toxicity, very low odor. Non-hazmat.

Low Viscosity Laminating Resin

1307 LV, Pail (40 lbs) ..... P/N 01-07917 ..... **$337.00**
1307 LV, Gallon (8 lbs) ..... P/N 01-07914 ..... **$72.85**

Fast Hardener

3102, Pail (40 lbs) ..... P/N 01-07920 ... **$418.00**
3102, Gallon (8 lbs) ..... P/N 01-07918 ..... **$87.50**
3102, Quart (2 lbs) ..... P/N 01-07915 ..... **$23.50**

Medium Hardener

3176, Pail (40 lbs) ..... P/N 01-07921 ... **$390.00**
3176, Gallon (8 lbs) ..... P/N 01-07922 ..... **$90.00**
3176, Quart (2 lbs) ..... P/N 01-07923 ..... **$25.60**

KITS - Jeffco Epoxy, 1 gal. kit, fast ..... P/N 01-07916 ..... **$96.00**
Jeffco Epoxy, 5 gal. kit, fast ..... P/N 01-07919 ... **$474.95**
Jeffco Epoxy, 1 gal. kit, medium .... P/N 01-07924 ..... **$94.75**
Jeffco Epoxy, 5 gal. kit, medium .... P/N 01-07925 ... **$475.95**

AEROPOXY PT2712 VACUUM INFUSION EPOXY

PT2712 is a low viscosity epoxy system designed for the fabrication of parts and structures by the resin infusion method. This system flows extremely well, and produces dense, void-free laminates routinely. The cured properties of this system are very high, so it produces items with good strength and toughness with excellent long-term stability. Three hardeners are available for use with this resin, which provide a range of working times. The hardeners have gel times of approximately 1 hour, 2 hours and 3 hours, so, by proper selection between the three, it is possible to easily infuse any size structure. The three hardeners are identical except for reaction time, so no matter which hardener is chosen, the user can expect the same high performance properties. The mixed viscosity with all three hardeners is just over 300 centipoise, so the material flows very well, even in thin walled areas. It penetrates heavy fabric sections and wets out quickly for further ease of production.

Description	Quantity	Pot Life	Part No.	Price
PT2712 with Part B	1 Gallon	70 Minutes	01-01587	**$115.95**
PT2712 with Part B	5 Gallons	70 Minutes	01-01590	**$395.00**
PT2712 with Part B1	1 Gallon	122 Minutes	01-01588	**$118.85**
PT2712 with Part B1	5 Gallons	122 Minutes	01-01591	**$395.00**
PT2712 with Part B2	1 Gallon	175 Minutes	01-01589	**$115.95**
PT2712 with Part B2	5 Gallons	175 Minutes	01-01592	**$395.00**
PT2712 with Part B3	1 Gallon	40 Minutes	01-01593	**$120.75**
PT2712 with Part B3	5 Gallons	40 Minutes	01-01594	**$409.00**

FIRE RETARDANT LAMINATING EPOXY KITS

The epoxy systems in this group are highly engineered products designed to meet or exceed the requirements of the various flame retardant specifications for which they were developed. They are filled laminating compounds that have good handling characteristics and provide very high physical properties in addition to their excellent fire retardant capabilities. They are well suited to a wide variety of production and tooling applications where the combination of very good physical properties and outstanding flame retardant abilities will provide durable parts and tools. PT2475 is a filled, off-white epoxy laminating system designed for use in constructing fire retardant laminates for parts or reinforcements. PT2475 meets the requirements of the FAR 25.853 Specification. This system has a 1 hour pot life at normal ambient temperatures, which will allow the construction of larger laminated than would be possible with a faster material. The system cures well at room temperature, and the cure can be accelerated with the addition of mild heat if desired.

Gallon ..... P/N 01-01517 ..... **$165.80**
5 Gallon ..... P/N 01-01518 ..... **$587.00**

Prices Subject to Change Without Notice



POLY EPOXY
STRUCTURAL EPOXY SYSTEM

Poly Epoxy is a true high-performance epoxy resin with unmatched tensile, compressive, and flex strengths. It also has unbeatable peel, shear, and fatigue resistance, as well as impact strength and fracture behavior. It's great for wings, canards, fuselages, tail feathers, and landing gear. Use it in molds or moldless construction. It parts easily and works beautifully in vacuum bagging. (Avoid silicone-treated peel ply.) It has TWO cure phases, while all other resins—epoxy, polyester, or vinylester—have just one. The two phases occur all by themselves during the curing process. The resulting bond is tougher and stronger than any other.

Poly Epoxy Kit, quart ..... P/N 01-07905 ..... **$30.00**
Poly Epoxy Kit, gallon..... P/N 01-07906 ..... **$102.95**
Poly-poxy Resin Gallon ..... 01-07934 ..... **$74.75**
Poly-poxy Hardener Quart ..... 01-07935 ..... **$34.60**
Poly-poxy Hardener 40 Gl ..... 01-07933 ..... **$2,591.00**

POLY EPOXY TECHNICAL DATA

Mechanical Properties:	**w/Post Cure**	**w/o Post Cure**
Tensile Strength, psi	9600	8800
Elongation at Break, %	7.5	3.6
Tensile Modulus, psi	470,000	460,000
Flexural Strength, psi	19,000	14,500
Flexural Modulus, psi	515,000	500,000
Compressive Strength, psi	32,000	33,000
Shore D Hardness	82	70
Glass Transition Temp., °C	72	62
Heat Distortion Temp., °C	64	50
Water Immersion Weight Gain, % (140 °F, 30 days)	2.8	2.9

Rheology: Mixing Ratio:3 parts Resin to 1 part Converter by Weight 10 parts Resin to 4 parts Converter by Volume

Kinetics:

Pot Life, 100 grams ..... 105 mins 1 quart .....75 mins
Mold Open Time.....3-4 hrs Tack Free Time.....5-6 hrs

AVAILABLE EXCLUSIVELY FROM AIRCRAFT SPRUCE

ALPHA POXY
NON-STRUCTURAL EPOXY SYSTEM



AlphaPoxy is a low-cost flexible epoxy system that is ideal for laying up non-structural parts like wheel pants, or fairings. Because it is flexible, we don't recommend it for structural applications, such as fabricating load-bearing structural aircraft parts. Use PolyEpoxy for these applications. This is a low-viscosity system specifically formulated for filling with microballoons, cotton flox, or milled glass fibers to make slurries. It was designed for maximum sandibility; when cured, it is soft enough to be easily cut with sandpaper smoothing a breeze. AlphaPoxy is also excellent when used as a final filler resin over structural parts when an epoxy gel coat is called for. You can use it in place of polyester resins for a much more durable part at a very attractive price. AlphaPoxy uses a non-MDA hardener that allows us to ship it as non-hazardous material.

AlphaPoxy Kit, 1-1/4 gallon ..... P/N 01-07911 ..... **$86.00**
AlphaPoxy Hardener, gallon..... P/N 01-07909 ..... **$61.80**
AlphaPoxy Resin, 7/8 gallon ..... P/N 01-07912 ..... **$54.75**
AlphaPoxy Hardener, 5 gal. pail..... P/N 01-07910 ..... **$275.00**
AlphaPoxy Hardener, 3/8 gallon ..... P/N 01-07908 ..... **$32.75**
AlphaPoxy Resin, 5 gal. pail ..... P/N 01-07913 ..... **$250.95**

Rheology: Mixing Ratio:
2 parts Resin to 1 part Hardener by Weight

AVAILABLE EXCLUSIVELY FROM AIRCRAFT SPRUCE

AEROPOXY PT1105 EPOXY SURFACE COAT



PT1105 is a white, general purpose room temperature epoxy surface coat resin. The creamy,smooth consistency of the mixed material allows easy application to the model surface with minimum drag. The thixotropic properties of PT1105 permits good coverage on points and sharp cor ners, and application to vertical surfaces without sagging. Due to the non-galling nature of PT1105, it will give good service in a variety of metal forming applications. When used with Part B hardener, the PT1105 system will cure quickly, and can be sanded or filed in 10 to 12 hours. The cured material is tough, with good chip resistance on edges and sharp details. PT1105 works very well in the fabrication of plastic faced plaster patterns when used with PT1105 B1 hardener.

Quart Kit ..... P/N 09-05263 ..... **$39.85**
Gallon Kit..... P/N 09-05264 ..... **$134.75**
Gallon Pail Kit..... P/N 09-05265 ..... **$484.00**



E-Z POXY
EPOXY LAMINATING SYSTEMS

In early 1996, Composite Design Co. developed E-Z Poxy to provide a replacement epoxy system for Epolite (Safe-T-Poxy) which is no longer produced by Hexcel. The E-Z Poxy series of laminating systems utilizes one resin and your choice of three hardeners for varying pot life and viscosity requirements. The E-Z Poxy systems offer the same handling and physical properties as the discontinued Epolite systems including ease of use, long pot life, rapid cure for demold or process continuation, and superior room temperature curing properties. Excellent for use in sport aviation, marine, and industrial applications.

E-Z 83 hardener is equivalent to Safe-T-Poxy standard hardener, E-Z 84 is equivalent to Safe-T-Poxy II hardener, and E-Z 87 is equivalent to Safe-T-Poxy slow hardener. E-Z Poxy products should not be mixed with materials produced by other epoxy manufacturers.

E-Z POXY PRICE LIST

Description	Part No.	Price
E-Z Poxy 1-1/2 gal. kit* EZ 83 Hardener	01-07850	**$207.95**
E-Z Poxy 5 gal. kit** EZ 83 Hardener	01-07950	**$931.00**
E-Z Poxy 1-1/2 qt. kit EZ 83 Hardener	01-08050	**$59.00**
E-Z Poxy II 1-1/2 gal. kit* EZ 84 Hardener	01-08850	**$207.95**
E-Z Poxy II 5 gal. kit** EZ 84 Hardener	01-08950	**$787.00**
E-Z Poxy 1 gal. resin	01-00245	**$109.75**
E-Z Poxy 5 gal. resin	01-00246	**$439.00**
E-Z Poxy 1/2 gal. Hardener	01-00247	**$98.75**
E-Z Poxy II 1/2 gal. Hardener	01-00248	**$98.75**
E-Z Poxy 2-1/2 gal. Hardener	01-00249	**$359.00**
E-Z Poxy II 2-1/2 gal. Hardener	01-00250	**$348.00**
E-Z Poxy 5 gal. Hardener	01-00251	**$652.00**
E-Z Poxy II 5 gal. Hardener	01-00252	**$485.00**
E-Z Poxy slow 1/2 gal. Hardener	01-00253	**$87.90**

**** 8 lbs. resin, 3.5 lbs hardener ** 40 lbs. resin, 18 lbs. hardener***

E-Z POXY TECHNICAL DATA
E-Z POXY RESIN SYSTEMS FROM COMPOSITE POLYMER DESIGN

E-Z 10 Epoxy Resin **E-Z 84 Aromatic Amine Hardener**
E-Z 83 Aromatic Amine Hardener **E-Z Aromatic Amine Hardener**

E-Z 10 Resin (Viscosity* 1500 cps @ 77F with:

Hardener	EZ 83	EZ 84	EZ 87
Mixed Properties:			
Mixed Viscosity cps @ 77F*	1300	800	1500
Viscosity Hardener cps @ 77F*	410	140	830
Pot Life @ 77F	2 hrs.	2 hrs.	5 hrs.
Tack Free @ 77F	4 hrs.	8 hrs.	8 hrs.
Cure Time @ 77F	24 hrs.	3 days	3 days
Mix Ratio by Volume	100/47	100/47	100/47
Mix Ratio by Weight	100/44	100/44	100/44
Physical Properties Tg (F):			
R/T	151	151	142
P/C*	196	196	196
Elongation %	3.5	3.5	3.9
Specific Gravity	1.14	1.13	1.14
Linear Shrinkage @ 23C (4 days %)	.10	.10	.10
Tensile Strength PSI			
R/T	8,200	8,100	8,400
P/C	10,000	10,000	10,000
Tensile Modulus (PSI x 10 -5)	4.8	4.2	4.0

* Viscosity may vary +/- 10%
*Post Cure for 2 hrs. @ 150F

E-Z Poxy systems provide excellent room temperature curing systems for hand layup of composite parts and tooling. The systems are designed to provide ample working time with the varied pot life options while providing a rapid finish cure. Post curing these systems will increase their physical properties as designated in the above data, however, post cure is not required.

EPOXY LAMINATING SYSTEMS

POLYESTER RESINS



Polyester resins are hygroscopic (they draw moisture from the air). There are two types of resin, and one or both types may be required, depending on the application. Type "A" resin has a small amount of wax in it, which comes to the surface and forms a barrier against the moisture. This permits the resin to cure completely and the surface is hard and easily sanded. Bond Coat "B" resin does not have any wax content. As a result the surface stays a little tacky, as the surface cure is being inhibited by moisture. This tacky surface provides excellent adhesion between coats. Bond Coat resin is therefore recommended for the first coat of resin to fill the weave of the glass cloth, for bonding fiberglass cloth to plywood or other surfaces and for multi-layers of glass cloth.

TYPE "A" RESIN - #1520-5 is a general purpose ortho surfacing resin intended for the finishing coat applied over the Bond Coat #1063-5, or for single coat application. A second coat may be applied after full cure and thorough sanding but is not recommended.

Polyester Resin #692 Quart ..... P/N 01-00346 ..... **$28.95**
1 Gal. #1520-5 with 1 Oz. Catalyst ..... P/N 01-00347 ..... **$56.75**
5 Gal. #1520-5 with 4 Oz. Catalyst ..... P/N 01-00348 .... **$318.95**
Additional catalyst may be required. 1 Oz. .... P/N 01-06900 ..... **$5.45**

TYPE "B" RESIN - #L253T-20 is a general purpose bond coat ortho resin for use in making multi laminates. It will not cure to a high gloss finish. Use 1520-5 for finish coat to obtain smooth, hard gloss finish. Replaces #1063-5.

1 Gal. #L253T-20 with 1 Oz. Catalyst ..... P/N 01-00349 ..... **$50.45**
5 Gal. #L253T-20 with 4 Oz. Catalyst ..... P/N 01-00350 ... **$214.95**
Additional catalyst may be required.
Same catalyst used for #1520-5 and #L253T-20.
Note: Use #1520-5 finish coating over #L253T-20 but never use #L253T-20 over #1520-5.
Above resins are not for use in making fuel tanks. For fuel tanks (except those for gasohol) use #6060-5 Isophthalic Resin.*

1 Gal. #6060-5 with 1 Oz. Catalyst ..... P/N 01-00351 ..... **$56.50**
5 Gal. #6060-5 with 4 Oz. Catalyst ..... P/N 01-00352 ... **$191.95**
Additional catalyst may be required.
Catalyst same as for resins listed above.
* Iso Resin is highly flexible. Has excellent adhesion to metal, wood, concrete, fiberglass and other "hard-to-adhere" surfaces. Compatible with most fuels. Iso is a wax-free resin and must be over-coated with Type "A" Surfacing Resin to obtain a surface cure.
SURFACE CURING AGENT is used in polyester resin to improve sanding properties. Added to #1063-5 Bond Coat or #6060-5 Isophthalic, it will provide same sanding properties as in Type "A" Surfacing Resin. Use in proportions of 2 oz. per gallon of resin. Surface Curing Agent is used in addition to catalyst.

4 Oz. in Polyethylene Dispenser Bottle ..... P/N 01-07100 ..... **$14.85**
Pint (16 Oz.) in Polyethylene Dispenser Bottle P/N 01-07200 ..... **$27.65**
Gallon (128 Oz.) ..... P/N 01-07300 ..... **$61.75**

MEKP NORAC CATALYST



MEKP Norac Catalyst is the catalyst added to polyester resins and vinyl ester resins. As the catalyst mixes with the resin, a chemical reaction occurs, creating heat which cures the resin. Use approx. 1/2 oz per quart of resin. We recommend the use of our MEKP Catalyst Dispenser for accurate measuring and pouring of catalyst.2 oz. P/N 01-01119 ..... **$4.95**

MGS EPOXY RESINS



MGS epoxy resins are approved for the production of certificated aircraft parts. The 335 and 285 systems are especially suited for homebuilders because of their long shelf lives, excellent workability, physiological friendliness, adjustable cure rates and excellent static and dynamic strength characteristics. The 285 system is available with fast and slow hardeners which can be blended with each other in any proportion to provide the desired working life and cure cycle. Pot lives and working times can be adjusted from fifteen minutes, using the fast hardeners, to six hours, when the slow hardeners are employed. Once the hardeners have been blended, the specified resin to hardener mixing ratio must be maintained. The 335 System is available only with fast hardener. Components of the 335 system should not be mixed with those of the 285 system. With both systems, if only the slowest hardener is used, the cure times should be extended to a few days, otherwise some brittleness may be noted. While room temperature curing results in good properties when the faster hardener combinations are used, some curing at elevated temperatures or post curing will result in the highest achievable strength and Tg, with the slower blends. Even unfavorable low temperature and high humidity conditions in the work environment will not affect the quality of the product and high gloss, uncontaminated, tack free surfaces are achievable every time. The resins do not contain any unreactive dilutants which with many systems result in de-gassing and bubbling of the painted finish. The MGS resins do NOT contain aromatic amines. While proper processing practices should be maintained, the physiological friendliness of these systems have been demonstrated by many years of production experience. The 285 system has slightly higher physicals than the 335 and will also achieve a higher maximum Tg after post curing. While the 335 is more viscous than the 285, after mixing with the appropriate hardeners, their viscosities are comparable. MGS systems are used in the construction of the Cozy, Diamond, Cirrus and other aircraft.

System 285 (Max. Tg 105 C - 110 C; 195 F - 230 F)		
Mixing ratio Resin:Hdnr	**Pot life**	**Mixed Viscosity@20C**
100:50 by volume	H285-F 40 min	300-500 cp
100:40 by weight	H287-S 4 hours	
	H285 : H287	
	40 : 60 2 hours	

System 285 Prices

L285 Resin (1 Gal.) ..... P/N 01-41000 ... **$142.50**
H285F Hardener (.25 gal/1 qt.) ..... P/N 01-41005 ..... **$35.75**
H287S Hardener (.25 gal/1 qt.)* ..... P/N 01-41006 ..... **$39.85**

****Important Shipping Information- H287S Hardener can be shipped UPS ground only. A $25 hazardous fee, and a $45 box fee applies (per quart). Can also be shipped truck collect.***

System 335 (Max. Tg 75 C - 80 C; 160 F - 180 F)		
Mixing ratio Resin:Hdnr	**Pot life**	**Mixed Viscosity@20C**
100:45 by volume	H335-F 15 min	800 cp
100:38 by weight	H340-S 6 hours	400 cp
	H335 : H340	
	50 : 50 1.5 hours	
	20 : 80 4 hours	

System 335 Prices

L335 Resin (Gal.) ..... P/N 01-41100 ..... **$99.75**
H335F Hardener (.225 gal/0.9 qt.) ..... P/N 01-41105 ..... **$35.75**
H340S Hardener (Slow) ..... P/N 01-41106 ..... **$33.85**

Two units of hardener are required for each gallon of resin

VINYL ESTER RESIN

*****Note: 3 month shelf life from date of manufacture.***
We suggest ordering when you are ready to use.**



Dow Chemical's Derakane 411-350 PA Vinyl Ester Resin is an epoxy-based Vinyl ester designed to provide superior toughness and high corrosion resistance. Many leading kit aircraft manufacturers use vinyl ester resins extensively due to its quality and ease of fabrication. We furnish medium "promoted" vinyl ester 411-350 PA resin which includes CONAP, DMA the resin is cured by adding the MEKP which is furnished with the kit. Gel times vary according to the amount of MEKP added and the ambient temperature. Shelf life of promoted vinyl ester resin is short at only a few months.

MEDIUM PROMOTED: Includes CONAP, DMA and other additives. Add MEKP for complete cure:

Quart ..... P/N 01-01076 ..... **$57.75**
Gallon ..... P/N 01-07350 ..... **$82.75**

MEKP Clear Catalyst 1oz. ..... P/N 01-01110 ..... **$2.85**
MEKP NORAC Catalyst Only (4 oz.) ..... P/N 01-07325 ..... **$5.50**
Vinyl Ester Resin 411-350PA - Quart Kit.. ..... P/N 01-01109 ..... **$59.75**
Vinyl Ester 1-Gal. Kit (Resin & Catalyst) ..... P/N 01-07355 ..... **$88.25**

Typical room-temperature properties of clear castings made with DERAKANE 411 resins

Property	**DERAKANE 411-350PA**
Tensile Strength, psi	11-12,000
Tensile Modulus, units 105 psi	4.9
Elongation, %	5-6
(DERAKANE 411-350)	(7-8)
Flexural Strength, psi	16-18,000
Flexural Modulus, units 105 psi	4.5
Compressive Strength, psi	16-17,000
Compressive Modulus, units 105 psi	3.5
Compressive Deformation at Yield, %	6.5-7.8
Specific Gravity	1.12
Heat Distortion Temp.,°F	210-220
Barcol Hardness	35

CATALYST LARGE QUANTITY CHART

Catalyst Concentration	Resin Quantity		
	Quart	Gallon	5 Gallon
1/2%	1/16 oz.	2/3 oz.	1-1/3 oz.
3/4%	1/4 oz.	1 oz.	5 oz.
1%	1/3 oz.	1-1/3 oz.	6-2/3 oz.
1-1/2%	1/2 oz.	2 oz.	10 oz.

WARNING: Mekp Catalyst is very dangerous to the eyes. Always wear full goggle protection and have running water at hand when working with Mekp.

CATALYST SMALL QUANTITY CHART

(20 -30 minute pot life at 2% mix ratio)

Catalyst Concentration	Resin Quantity - 30 drops = 1 cc				
	2 oz.	4 oz.	8 oz.	12 oz.	16 oz.
1/2%	9 drops	18 drops	36 drops	1.8 cc	2.5 cc
3/4%	14 drops	27 drops	2 cc	3 cc	4 cc
1%	18 drops	36 drops	2.5 cc	3.75 cc	5 cc
1-1/2%	27 drops	2 cc	4 cc	6 cc	8 cc
2%	36 drops	2.5 cc	5 cc	7.5 cc	10 cc

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Prices Subject to Change Without Notice

EPOXY LAMINATING SYSTEMS

AEROPOXY FROM PTM&W INDUSTRIES



PR2032 is a medium viscosity, unfilled, light amber laminating resin that is designed for structural production applications. 3 hardeners are available for use with PR2032. PH3660, has a 1-hour pot life. When used with either of these hardeners, the system gives excellent wet-out of fiberglass, carbon and aramid fibers. e. AEROPOXY contains no MDA (a known liver toxin and carcinogen) and meets or exceeds current OSHA requirements for safe use. Hardener PH3665 has a longer pot life than PH3660, 2 hours, that is useful for vacuum bagging larger parts before the resin has gelled. Hardener PH3630 is intended for smaller laminates, fast repairs or additions to a primary structure. PH3630 pot life is 30 min.
Hardener PH3663 is the standard production hardener for fabricating composite parts. PH3663 a 90 minute working time provides more time for construction. This hardener provides similar mixed viscosities, so handling will be basically the same, except for the different working times.

Part No.	Description	Wt. (lbs.)	Price
01-42125	1 quart PR2032 Resin	2.25	$37.50
01-42130	1 pint PH3660 Hardener	.66	$15.70
01-42135	PR2032/PH3660 Quart Kit	2.91	$52.75
01-42140	3/4 gallon PR2032 Resin	7.5	$99.75
01-42145	1 quart PH3660 Hardener	2.0	$42.50
01-42150	PR2032/PH3660 Gallon Kit	9.5	$141.95
01-42155	5 gallon PR2032 Resin	48	$494.00
01-42160	2 gallon PH3660 Hardener	13	$199.85
01-42165	PR2032/PH3660 Pail Kit	61	$692.00
01-00160	1 pint PH3630 Hardener (fast)	--	$15.80
01-00161	1 quart PH3630 Hardener (fast)	--	$43.50
01-00162	1 pint PH3665 Hardener (slow)	--	$15.80
01-00163	1 quart PH3665 Hardener (slow)	--	$41.85
09-05266	1 Pint PH3663 Hardener	--	$14.50
09-05267	1 Quart PH3663 Hardener	--	$42.50
09-05268	1 2.5 Gallon Pail PH3663 Hardener	--	$157.75
09-05269	1 30 Gallon Drum PH3663 Hardener	--	$1,485.00

Aeropoxy mixing ratio — 100:27 by weight, 3:1 by volume.

WEST SYSTEM EPOXY



WEST SYSTEM brand resins and hardeners, form a two-part epoxy system developed by Gougeon Brothers specifically for wood and composite boat construction. Rutan Aircraft Factory now recommends WEST SYSTEM epoxy for certain homebuilt aircraft applications, particularly where a moisture resistant epoxy is desired. 105 Resin is the base material on which all of the WEST SYSTEM epoxy systems are built. The resin is a clear, light amber, low-viscosity liquid. It is designed specifically to wet out wood fiber. With roller applications, it possesses excellent thin film characteristics in flowing out and is self-leveling without fish-eyeing. Its relatively high flash point makes it safer to work with than polyesters. It can be cured in a wide temperature range, then sanded and shaped. It cures quite clear so that the natural finish shines through. 205 Fast Hardener, when mixed with the 105 Resin in a ratio of 5 parts Resin to 1 part Hardener, yields a high-strength, rigid solid with excellent cohesive properties and provides an excellent moisture vapor barrier. The 105 Resin/205 Fast Hardener has a pot life of 10-15 minutes at 70°F. It is also recommended in coating applications where natural finishing is desired. Partial cure time at 70°F is 5-7 hours. 206 Slow Hardener is a low-viscosity mixture of polyamines. The 105 Resin/206 Slow Hardener has a pot life of 30-40 minutes at 70°F. It is normally used when extended time is needed for large coating and bonding applications. It is especially well suited to working in warmer climates. Partial cure time is 9 hours at 70°F.

WEST EPOXY KITS / WEST COMPONENTS

Kit No.	Kit Size	Part No.	#105 Resin	Hardener		Kit Price	Resin		Fast Hardener		Slow Hardener	
				#205 Fast	#206 Slow		Part No.	Price	Part No.	Price	Part No.	Price
A-1	1.2 Qt	01-08100	32 Oz	7 Oz	------	$59.95	01-00353	$44.22	01-00356	$21.96	01-00359	$21.96
A-2	1.2 Qt	01-08200	32 Oz	------	7 Oz	$62.00	32 Oz	-----	7 Oz	------	7 Oz	-----
B-1	1.2 Gal	01-08300	126 Oz	27 Oz	------	$140.95	01-00354	$99.73	01-00357	$47.44	01-00360	$47.44
B-2	1.2 Gal	01-08400	126 Oz	------	27 Oz	$140.95	126 Oz	-----	27 Oz	------	27 Oz	------
C-1	5.25 Gal	01-08500	4.35 Gal	121 Oz	------	$535.00	01-00355	$374.00	01-00358	$162.75	01-00361	$175.75
C-2	5.25 Gal	01-08600	4.35 Gal	------	121 Oz	$548.00	4.35 Gal	-----	121 Oz	------	121Oz	------

ORDER 301/303 PUMP PACKS SEPERATELY.

207 SPECIAL COATING HARDENER



This hardener is used where a very clear, moisture resistant natural wood finish is needed. Can be used to laminate veneers where joints will be subjected to sunlight. Improves sun resistance. Pot life: 20 min., cure solid in 9-12 hours, and maximum strength within 7 days.
.66 pint.....P/N 207-SA **$42.11**
.33 gal.....P/N 207-SB **$88.21**
1.45 gal.....P/N 207-SC **$270.52**

209 TROPICAL HARDENER



This hardener is used for bonding applications in warm or humid weather or when extended working time is needed. Provides twice the working time as 206 hardener. Forms a clear, amber solid when cured. Pot life is 40 minutes, solid state in 24 hours, and maximum strength in 5-9 days.
.66 pint ..... P/N 01-00362..... **$37.38**
.33 gallon ..... P/N 01-00364..... **$82.12**
1.45 gal. ..... P/N 01-00363..... **$254.64**

PRO-SET 125 RESIN & 229 HARDENER

Mixing: 125 Resin: 229 Hardener - By weight, 100:30 & By volume, 100:35. Pot life: 65°–83 min, 72°–77 min, 85°–27 min.

For PROFESSIONAL use only.

Physical Property	Test Method	Room Temp (2 wks.)
Compression Yield (psi)	ASTM-D-695	14,500
Tensile Strength (psi)	ASTM-D-638	7,550
Annular Shear Fatigue(lb)@100,000 cycles	GBI Method	11,641

GAL.#125 Resin ..... P/N 01-01221..... **$119.75**
GAL.#229 Hardener ..... P/N 01-01222..... **$86.75**

PRO-SET 135 RESIN & 226/237 HARDENERS

135 Resin: LAM-135 Medium Viscosity Laminating Resin. **226 Hardener:** LAM-226 Medium Laminating Hardener. Medium viscosity for good wet out of all synthetic composite fabrics and core materials. Medium cure speed hardener provides 2 to 3 hours of working time at 77°F (25°C). A typical laminate will be gelled in 4 to 5 hours. **237 Hardener:** LAM-237 Extra Slow Laminating Hardener. Medium viscosity for good wet out of all synthetic composite fabrics and core materials. Extra Slow cure speed hardener provides 7 to 8 hours of working time at 77°F (25°C). A typical laminate will be gelled in 12 to 14 hours.
135 Resin ..... P/N 01-01223..... **$96.75**
226 Hardener ..... P/N 01-01224..... **$74.75**
237 Hardener ..... P/N 01-01210..... **$245.95**

WEST SYSTEM ACCESSORY PRODUCTS

- West System User Manual..... P/N 01-08750 ..... **FREE**
  West System 101 Handy Repair Pack - Contains 105 resin & 205 hardener plus accessories needed for small repairs
  P/N 01-08760 ..... **$15.90**
- West System 501 White Pigment - use this epoxy based pigment to provide a neutral white base for the final coloring system. Mix at ratio of 1 teaspoon to 8 oz. of epoxy. 8 oz. can..... P/N 01-08775 ..... **$18.31**
- West System 410 Microlight an excellent filler which provides easy workability for a variety of applications. Easy to sand and cures to a neutral tan color.
  1.7 oz., 01-08780 ..... **$17.65** 4.3 oz., 01-08785..... **$35.12**

WEST SYSTEM FIBERGLASS REPAIR KIT



Useful for a wide variety of fiberglass repairs, including repair of cracks, scrapes, loose hardware, gelcoat blisters, delaminated cored panels, holes, keel damage, and more. Kit contains eight pre-measured packets of 105 Epoxy Resin and 205 Fast Hardener (19.2g mixed), adhesive filler, fairing filler, mixing cups, fiberglass fabric, reusable mixing stick/applicator, syringe, two coating brushes, three pairs disposable neoprene gloves and complete handling and repair instructions. Kit 105-k.
P/N 01-01521 ..... **$33.35**

423 GRAPHITE POWDER



423 Graphite Powder can be mixed with WEST SYSTEM epoxy to produce a low friction coating with increased scuff resistance and durability. 423 is often used as a bearing surface, and as a coating on the bottoms of racing craft that are dry sailed. P/N 09-00315 ..... **$20.99**

301/303 PUMP PACK



Using Mini Pumps helps ensure accurate metering of resin/hardener mixture. Pumps mount directly on resin and hardener containers. One stroke from each pump delivers proper ratio of resin to hardener. Kit consists of 3 pumps for A, B, and C epoxy kits.
P/N 01-00318..... **$17.50**

ECOPOXY UVPOXY



Our UVPoxy Kit is high performance two part system that is commonly used for table tops, bars, wood finishes, see-through clear casting, art work, layup, and other applications requiring a clear, strong coating. It cures to a crystal clear, high build, long lasting, glass-like finish, and will not blush or sweat under high humidity conditions. UVpoxy is designed to resist yellowing caused by the sun and other ultra violet light sources.

Specifications: • Color: Clear (Visual) • Mix Ratio: 1:1 • Pot Life: 25-30 Minutes

Description (Metric / Approx. US)	Size	Part No.	Price
EcoPoxy UVPoxy Kit	500 mL / 1 Pt	09-04095	**$44.00**
EcoPoxy UVPoxy Kit	1 L / 1 Qt	09-04096	**$63.95**
EcoPoxy UVPoxy Kit	2 L / 2 Qt	09-04097	**$98.75**
EcoPoxy UVPoxy Kit	4 L / 1 Gal	09-04098	**$143.85**

ECOPOXY CLEAR



Our Clear Kits are ideal for sealing / clear-coating surfaces such as concrete and wood, as well as for wetting fabrics that require a clear, waterproof finish. Odourless and non-toxic, It can be applied indoors or outdoors without masks or ventilation. This self-leveling kit is applies at approximately 10 mils finish thickness. It provides a durable, light reflective floor with excellent adhesion qualities. It's easily roller applied.

Specifications:: • Color: Clear (Visual) • Mix Ratio: 2:1 • Pot Life: 15-20 Minutes

Description	Size	Part No.	Price
EcoPoxy Clear Kit	750 mL / 1.6 Pt	09-04099	**$31.75**
EcoPoxy Clear Kit	1.5 L / 1.6 Qt	09-04101	**$47.50**
EcoPoxy Clear Kit	3 L / 3.2 Qt	09-04102	**$97.50**
EcoPoxy Clear Kit	6 L / 1.6 Gal	09-04103	**$134.75**

POLYESTER GEL COATS



These polyester gel coats can be used as the surface of new fiberglass parts layed up in molds or used in the repair of gel coat surfaces on fiberglass parts. On surface repairs, the gel coat must be sealed to fully cure. PVA can be used to seal the gel coat.

Color	Size	Part No.	Price
Black	Pint	09-01668	**$21.65**
	Quart	09-01666	**$31.75**
	Gallon	09-01667	**$62.75**
White	Pint	09-01669	**$19.95**
	Quart	09-01664	**$34.50**
	Gallon	09-01665	**$68.50**
Dark Blue	Pint	09-01670	**$35.50**
	Quart	09-01671	**$53.00**
	Gallon	09-01672	**$103.95**

Color	Size	Part No.	Price
Red	Pint	09-01673	**$39.60**
	Quart	09-01674	**$58.75**
	Gallon	09-01675	**$98.75**
Clear	Pint	09-02159	**$26.50**
	Quart	09-02160	**$52.75**
	Gallon	09-02161	**$108.75**

ECOPOXY PIGMENT COLOR SETS



Add some color to your epoxies. These are used to tint epoxy resins used as coatings, paints, gelcoats, laminating, casting or self-leveling resins. EcoPoxy epoxy concentrated pigment consist of pigments suspended in epoxy resin which allows them to blend thoroughly into epoxy resins to make very uniform colors. They are used to tint epoxy resins used as coatings, paints, gelcoats, laminating, casting or self-leveling resins. The high tinting properties enable the use of little quantities of pigment. The quantity to be used depends on the color chosen as some colors cover better than other (yellows for example need higher quantities than other colors). ECOPOXY color pigments mix easily.

60ml. ..... P/N 09-05349 ..... **$79.95**
120ml. ..... P/N 09-04718 ..... **$118.95**
240ml. ..... P/N 09-05351 ..... **$177.75**

V-NOTCHED ECOPOXY SPREADER



The perfect tool for evenly spreading EcoPoxy on large, flat surfaces. This tool gives you 3 V-notched spreading options and a flat side for scraping and cleaning. P/N 09-05355 ..... **$1.25**

ECOPOXY SLOW



Our Slow Kit is typically used to fabricate larger, more complicated composite parts. It has a longer 2.5 - 3.5 hour working time, and can be used for vacuum bagging larger parts before the resin has gelled.* It can also be used for and for repairs or additions to a primary structure. It is compatible with most fabrication techniques, such as lay-up and filament winding. It features excellent wet-out and chemical adhesion of fiberglass, carbon and aramid fibers.

Specifications: • Color: Yellow (Visual) • Mix Ratio: 2:1 • Pot Life: 2.5-3.5 hours

Description (Metric / Approx US)	Size	Part No.	Price
EcoPoxy Slow Kit	750 mL / 1.6 Pt	09-04104	**$37.95**
EcoPoxy Slow Kit	1.5 L / 1.6 Qt	09-04105	**$58.75**
EcoPoxy Slow Kit	3 L / 3.2 Qt	09-04106	**$79.85**
EcoPoxy Slow Kit	6 L / 1.6 Gal	09-04107	**$154.75**

ECOPOXY MEDIUM



Our Medium Kit is typically used to fabricate high performance composite parts. It has a 20 minute working time and can be used for all sizes of parts, and for repairs or additions to a primary structure. The vacuum bagging technique can be used for smaller parts*. It is compatible with most fabrication techniques, such as lay-up and filament winding. It features excellent wet-out and chemical adhesion of fiberglass, carbon and aramid fibers. **Specifications**: • Color: Yellow (Visual) • Mix Ratio: 4:1 • Pot Life: 15-20 Minutes

Description	Size	Part No.	Price
EcoPoxy Medium Kit	1.25 L / 1.33 Qt	09-04108	**$51.75**
EcoPoxy Medium Kit	2.5 L / 2.65 Qt	09-04109	**$82.75**
EcoPoxy Medium Kit	5 L / 1.32 Gal	09-04111	**$139.95**

ECOPOXY FAST



Our Fast Kit is most commonly used as an adhesive or in an injection box for pultrusion. It has a pot time of just 2-3 minutes, and features a high-strength, waterproof bond to a variety of materials including wood, fiberglass, metal, glass, tile, and more. **Specifications**: • Color: Yellow (Visual) • Mix Ratio: 2:1 • Pot Life: 2.5-3 Minutes

Description	Size	Part No.	Price
EcoPoxy Fast Kit	750 mL / 1.6 Pt	09-04113	**$38.80**
EcoPoxy Fast Kit	1.5 L / 1.6 Qt	09-04114	**$59.95**
EcoPoxy Fast Kit	3 L / 3.2 Qt	09-04115	**$81.75**
EcoPoxy Fast Kit	6 L / 1.6 Gal	09-04116	**$118.85**

ECOPOXY LIQUID PLASTIC KIT



The Liquid Plastic kit cures to a clear, UV resistant, plastic-like finish that resists scratching and yellowing. This product will not blush or sweat under high humidity conditions. EcoPoxy® is a Plant based, 100% solid, waterproof, non-toxic, non-solvent, non-conductive, epoxy system that is Certified "GREEN".

P/N 09-04567 ..... **$42.50**

ECOPOXY ECOTROWEL MULTI-PACKS



EcoTrowel is a high performance epoxy filler and profiling product formulated for surface repair and preparation. It is easy to mix and spread, and has a peanut-butter like consistency (contains no peanuts!). EcoTrowel is lightweight and suitable for an infinite variety of composite, architectural, industrial and art-related applications. It can be applied to wood, concrete - even canvas - to a thickness of 1/2" without sagging or slumping. It can be easily sanded, shaped, drilled, tapped, machined, routered & remains durable for life.

25g. ..... P/N 09-05353 ..... **$47.95**
100g. ..... P/N 09-05354 ..... **$95.95**

ECOPOXY GLOPOXY KITS



GloPoxy is a glow-in-the-dark epoxy made with high-grade photo luminescent ingredients to maximize glow brightness and duration. The formula absorbs bright light as energy and releases the absorbed energy when placed in the dark. This charge cycle can be performed endlessly and with any light source. GloPoxy is formulated to glow-in-the-dark for hours and contains no fillers or impurities to interfere with the glow. GloPoxy is durable, UV stable, and chemical, water & abrasion resistant. It can be used indoor and outdoor, and can be applied to virtually any surface. It's a perfect solution for both safety and novelty applications.

Green ..... P/N 09-05347 ..... **$43.75**
Blue ..... P/N 09-05348 ..... **$43.75**

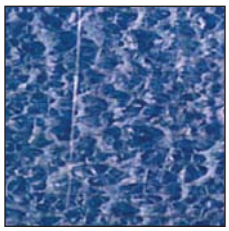
STYROFOAM – SMALL CELL



STYROFOAM FB – Low density (2 lb./ft3). Tight closed cell structure leaves no voids between the cells. The result is high compressive strength and unequaled resistance to water penetration. Has excellent resistance to bases, salts, alcohols and most acids but not to petroleum based solvents. Not for structural use.

Foam Type	Density	Thickness	Sheet Size	Part No.	Price/Sheet
Styrofoam (Blue) Small Cell	2 Lb/Ft^3	1/2”	24” x 48”	01-09400	**$9.48**
		1/2”	24” x 96”	01-09500	**$18.95**
		3/4”	24” x 96”	01-09600	**$21.70**
		1”	24” x 48”	01-09700	**$14.75**
		1”	24” x 96”	01-09800	**$29.50**
		1-1/2”	24” x 96”	01-09900	**$43.85**
		2”	24” x 48”	01-10000	**$36.88**
		2”	24” x 96”	01-10100	**$73.75**
		4”	24” x 48”	01-10200	**$57.50**

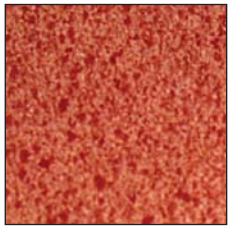
POLYSTYRENE – LARGE CELL



POLYSTYRENE – LARGE CELL This blue large cell expanded foam is 2 lb. per cubic feet density and cuts easily using a hot wire to airfoil shapes. Compatible with most adhesives, but should be used only with epoxies, not polyester resins. Will dissolve in fuels and solvents. Cuts smoothly with hot wire and airfoil shapes. Used in the construction of VariEze, Long-EZ, Cozy, and other composite aircraft.

Foam Type	Density	Thickness	Sheet Size	Part No.	Price/Sheet
Styrofoam FB (Blue) Large Cell		8”	16” x 4”	01-37600	**$8.95**
		8”	16” x 25”	01-01166	**$52.75**
		8”	16” x 42”	01-10600	**$86.75**
		8”	16” x 67”	01-10800	**$134.50**
		8”	16” x 109”	01-10900	**$218.50**

POLYURETHANE FOAM



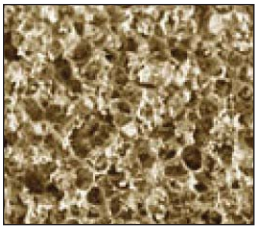
CAUTION

DO NOT USE HOT WIRE!

URETHANE – This foam is easily contoured using a large knife, and then sands well to final form. Excellent for producing the fuselage, wing tips, and other curved parts. It is fuel resistant and can be used for fuel cells. Compatible with most adhesives. Do not hot wire polyurethane foam. Available in tan or green.

Foam Type	Density	Thickness	Sheet Size	Part No.	Price/Sheet
Urethane (Tan or Green)	2 Lb/Ft^3	1/2”	24” x 48”	01-11300	**$10.50**
		1/2”	48” x 48”	01-11400	**$19.85**
		3/4”	24” x 48”	01-12150	**$13.95**
		3/4”	24” x 96”	01-12160	**$29.85**
		1”	24” x 48”	01-11500	**$18.75**
		1”	24” x 96”	01-11600	**$39.70**
		1”	48” x 96”	01-11700	**$63.75**
		2”	24” x 48”	01-11900	**$37.50**
		2”	24” x 96”	01-12000	**$73.85**
		2”	48” x 96”	01-12100	**$124.75**

DIVINYCELL FOAM



CAUTION

DO NOT USE HOT WIRE!

DIVINYCELL – A closed cell medium to high density foam which has high compression strength, durability, and excellent fire resistance. Can be vacuum formed to compound shapes and can be bent using heat. Compatible with polyester, vinylester, and epoxy resins.

Foam Type	Density	Thickness	Sheet Size	Part No.	Price/Sheet
Divinycell PVC (Tan) Type H45	3 Lb/Ft^3	1/8”	32” x 48”	01-00158	**$20.80**
		1/4”	32” x 48”	01-12300	**$21.75**
		3/8”	32” x 48”	01-12400	**$37.50**
		5/8”	24” x 47”	01-12500	**$61.75**
		3/4”	15” x 26”	01-12600	**$17.94**
		3/4”	32” x 48”	01-12700	**$64.85**
		3/4”	32” x 24”	01-01197	**$35.88**
		1”	32” x 48”	01-12800	**$79.95**
		1-3/4”	32” x 48”	01-12900	**$125.85**
		2”	48” x 96”	01-12920	**$467.00**
		2”	24” x 48”	01-12910	**$116.25**
		3”	48” x 96”	01-12940	**$598.00**
		3”	24” x 48”	01-12930	**$149.50**
Divinycell PVC (Tan) Type H100	6 Lb/Ft^3	1/4”	37” x 37.5”	01-13000	**$48.50**
		1”	6” x 10”	01-13100	**$11.65**
		1”	10” x 12”	01-13200	**$22.85**
Divinycell PVC Type H250	15.6 Lb./Ft^3	1/4”	24.8” x 27.75”	01-13300	**$175.85**

LAST-A-FOAM



CAUTION

DO NOT USE HOT WIRE!

LAST-A-FOAM – Rigid, Polyether Polyurethane foam with fine closed-cell structure, light cream-yellow color. LAST-A-FOAM® is wonderfully versatile for sandwich-core applications. It cuts and shapes easily with common woodworking tools, and bonds to itself and other materials with most epoxy, polyester, or urethane-type adhesives. LAST-A-FOAM® is unaffected by water, fuels and most solvents, and paint finishes are easily applied. It is frequently used in regular molds after the gel-coat and first two layers of glass are installed; the LAST-A-FOAM® is added and another layer of glass applied for a strong, light-weight sandwich.

Foam Type	Density	Thickness	Sheet Size	Part No.	Price/Sheet
Last-A-Foam Urethane/Polyester (Yellow) 275° F	4.5 Lb/Cu. Ft.	10mm	24” x 96”	01-13400	**$60.75**
		1/4”	24” x 48”	01-13550	**$19.93**
		3/8”	24” x 96”	01-13600	**$44.75**
		1/2”	24” x 96”	01-13700	**$63.75**
		3/4”	24” x 96”	01-14000	**$83.65**
		3/4”	24” x 48”	01-01195	**$41.83**
Last-A-Foam Urethane/Polyester (Yellow) 275° F	6Lb/Cu. Ft.	1/4”	24” x 48”	01-14100	**$19.90**
		3/8”	24” x 48”	01-14200	**$28.50**
		3/4”	24” x 48”	01-14250	**$49.70**
Last-A-Foam Urethane/Polyester (Yellow) 275°F	8 Lb/Cu. Ft.	1”	16” x 24”	01-01048	**$36.90**
Last-A-Foam Urethane/Polyester (Yellow) 275° F	18 Lb/Cu. Ft.	0.200”	12” x 48”	01-14400	**$38.85**
		1/4”	12” x 48”	01-14500	**$37.55**

LIQUID "X-30" FOAM
(TWO-COMPONENT POLYURETHANE FOAM)



This system consists of two components - "X-30" Resin and "X-30" Catalyst. When the resin and catalyst are mixed in equal volumes they expand into a rigid closed-cell foam of 2 pound density. Thorough mixing of the two components is essential. "X-30" Foam expands approximately 40 times its liquid volume. Small-batch mixes are recommended. Cured foams can be easily trimmed, cut and shaped with common woodworking tools. Use toluene or MEK for cleanup. "X-30" Foam contains a highly reactive agent and is classified as a toxic material. It is combustible, a strong skin sensitizer and eye irritant. Avoid contact with the skin. Use rubber gloves when handling. Used for: Flotation, thermal and acoustical insulation reinforcement and miscellaneous void filling. Most small pleasure boats can be made "sink-proof" with approximately two gallons of "X-30". Data sheet available. "X-30" Foam contains a volatile fluorocarbon and should be stored at 70°F. or lower. "X-30" is used on the Osprey II bottom hull, canopy, nose cone, etc., requiring about four gallons of material (2 gallons of each). Shelf life at least 6 months. Users have reported "more than 2 years shelf life".

Kit Size	Part No.	Approx. Foamed Vol. (Cu.Ft.)	Weight Lbs.	Price/Kit
1 Quart Kit (1 Pt. ea component)	01-08800	1-1/4	3	**$43.75**
2 Quart Kit (1 Qt. ea component)	01-08900	2-1/2	6	**$68.75**
2 Gallon Kit (1 Gal. ea component)	01-09000	10	22	**$212.95**
10 Gallon Kit (5 Gal ea component)	01-09100	50	110	**$633.00**

X-30 is the original polyurethane foam. Do not accept substitutes!

COMPOSITE MATERIALS PRACTICE KIT



All designers highly recommend that builders who are considering a composite project purchase this practice kit. It contains the excellent 26 page 11" x 17" manual by Burt Rutan entitled MOLDLESS COMPOSITE SANDWICH HOMEBUILT/ AIRCRAFT CONSTRUCTION ($14.50) plus the assorted foams, epoxy, fiberglass, filler materials and supplies with which to work. Everything needed to practice the technique of composite building before venturing into a complete aircraft project.

Practice Kit with Manual ..... P/N 01-15000 ..... **$118.95**
Practice Kit without Manual ..... P/N 01-15100 ..... **$99.95**
International Practice Kit with Manual ..... P/N 01-15050 ..... **$59.50**
Same as Practice kit with the manual, but excludes the epoxy for International shipping.

ECONOMICAL MULTI-PURPOSE SEALANT TAPE



AT-200Y is an economical multi-purpose sealant tape with high tack. It removes easily from metal or composite tools. Suitable for cure applications up to 400°F (204°C).

Specifications: • Color: Yellow • Base material: Synthetic rubber • Maximum use temperature: 400°F (204°C) • Shelf life: 12 months from date of manufacture • Storage conditions: Tape must be stored flat in original packaging at 72°F (22°C) / Do not refrigerate • Dimensions: 1/8 inch x 1/2 inch x 25 feet (3 mm x 12 mm x 7.5 m)

Benefits: • Economical vacuum tape reduces the cost of vacuum bagging. • Multi-purpose tape can be used on metal and composite tooling. • Easy clean up reduces cost of tool cleaning.

P/N 01-01602 ..... **$6.45**

SPRAY CONTACT ADHESIVE



Airtac 2 is a spray rubber adhesive designed for temporary bonds. Airtac 2 can be used on materials needing extra tack for placement on vertical or difficult surface areas. This product is ideally suited for tool shop applications such as temporary placement of details and pattern fabrication.

Specifications: • Solvent characteristics: Non CFC • Shelf life: 12 months from date of shipment when stored in original packaging at 22°C P/N 01-01601 ..... **$22.60**

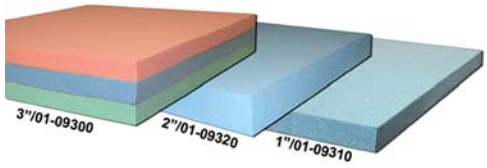
BACKSAVER FOAM



Backsaver foam is temperature sensitive, softening when it comes in contact with a warm surface; Thus, in a seat cushion, the foam softens and conforms to the person's body. This provides even pressure distribution and unconstricted blood circulation, significantly reducing discomfort, even over long periods. In addition, Backsaver foam has excellent energy absorption properties, which have made it excellent for use in the U. S. space shuttle program and in military aircraft and helicopters. Pilots find that Backsaver cushions reduce their discomfort and fatigue, even on missions of 8 hours or more. Aircraft Spruce now makes Backsaver foam available to the homebuilt and general aviation market.

16" x 18" x 1" sheet ..... P/N 01-09325 ..... **$92.50 ea.**
36" x 80" x 1" sheet ..... P/N 01-09330 ..... **$541.00 ea.**

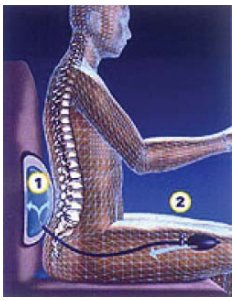
CONFOR FOAM SEAT CUSHION



Confor Form (formerly called Temperfoam) is the conforming foam cushion that was developed for the "Astronaut's Couch" back in the Apollo space program. Confor Foam has the capability of absorbing a tremendous amount of impact shock compared to common polyfoam and it is flame resistant. It is an excellent product that will give your seats enduring comfort that you never thought possible. Adapts to you for pressure point-free comfort that is really incredible. The best universal cushion for aircraft use is a 3" CF42/CF45/CF47 laminate. Confor Foam meets FAR 25.853, FAR 25.855, and CAL 117 burn specifications making it excellent for certified aircraft or homebuilts. Some special sizes in 1", 2", or 3" thicknesses are available on special request.

1" x 16" x 18" ..... P/N 01-09310 ..... **$27.50 ea.**
2" x 16" x 18" ..... P/N 01-09320 ..... **$52.75 ea.**
3" x 16" x 18" ..... P/N 01-09300 ..... **$89.95 ea.**

INFLATABLE LUMBAR SUPPORT



The inflatable air pillow can be installed just under the seat material and will give you the customized support where you need it. A convenient palm-size pump and a release valve control the firmness of the lumbar support. The In-Flight Back Support is made of a heavy-duty self-extinguishing neoprene rubber, specially designed to pass FAR 23.853 flame-test requirements.

One inflatable lumbar support ..... P/N 13-01501 ..... **$49.75**
Two Inflatable lumbar supports ..... P/N 13-01821 ..... **$81.95**

WEST SYSTEMS FIBERGLASS REPAIR KITS



Here is everything you need to complete small repairs around the boat, shop or home.

Part # 01-08760 Contains: • #101 Handy Repair Pack - Convenient kit contains enough material to complete one repair. • Two 16g. packets of #105 Resin • Two 3.2g. packets of #205 Hardener • 3.5g. High Density Filler • 1 application brush • Ground Shipping Only • #101-6 Maxi Repair Pack - This kit is large enough to tackle a multitude of repair jobs.

101 Handy Repair Pack ..... P/N 01-08760 ..... **$15.90**

VACUUM BAGGING SUPPLIES

VACUUM BAGGING TECHNIQUES BOOK - P/N 01-14803 ..... **$5.05/ea.**

VACUUM BAGGING FILM - #7400 film is a high grade nylon 6 film. It is transparent green in color and heat stabilized for long term, 350°F cures. Film is soft & pliable and ideal for high temperature composites, metalbond, and any function requiring heat & pressure.

54" Width .....P/N 01-14805 ..... **$1.55/Yd.**
60" Width .....P/N 01-01603 ..... **$2.75/Yd.**
72" Width .....P/N 01-01604 ..... **$2.25/Yd.**

4.5 OZ. BREATHER/BLEEDER PLY - #3450 is a 4.5 oz./sq. yd. non-woven polyester breather system used for even volatile evacuation from vacuum bags. It can be used at pressures up to 85 psi (5.8 bars). Multi-directional conformability make it a very efficient breather. This breather does not contain any binders which could seal the air flow. Width: 60".

P/N 01-14810 ..... **$1.95/Lin.Yd.**

STRETCHLON VACUUM BAG FILM 60" - Modified urethane film with incredibly high elongation, Can be reused. .0015 x 60" x 200 ft (38µ x 1.52m x 62m) Maximum temperature use 250°F (122°C). 120" wide (3.04m). Perfect for compaction. Not affected by low humidity, always stays soft with no cracking. Can be heat seamed to custom shapes .

P/N 01-01080..... **$4.80/Lin.Yd.**

10 OZ. BREATHER/BLEEDER PLY - #3100 is a 10 oz./sq. yd. nonwoven polyester breather system used for even volatile evacuation from vacuum bags. It can be used at pressures up to 200 PSI (13.8 bars). Multi-directional conformability makes it a very efficient breather. This breather does not contain any binders which could cause seal-off of air flow. Width: 60". P/N 01-14815..... **$4.75/Lin.Yd.**

2 OZ. NYLON RELEASE PLY - #5201 SRB is a smooth nylon fabric which has been scoured and heat set so that it is contaminate free and will not shrink during the laminate cure cycle. It is then coated with a special release blend. The peel ply may be used for composite manufacturing and metal bonding, but is not recommended for use with resin systems containing phenolic. Thickness: .005". Color: Blue. Width 60".

P/N 01-14820 ..... **$8.65/Lin.Yd.**

3 OZ. POLYESTER RELEASE PLY - #5252SRB is a medium coarse weave polyester peel ply that leaves a surface with a rougher texture. It has been scoured and heat set to eliminate shrinkage during use and then coated with a special release blend. It can be used on all composite and metal bonding systems and is not affected by resin systems containing phenolic. #5252 provides protection of the laminate surface between primary & secondary processing. Thickness: .006". Color: Blue. Width: 60". P/N 01-14825..... **$9.75/Lin.Yd.**

POROUS TEFLON COATED RELEASE FILM - #7025 is used where a medium weight porous release fabric is required on the surface of a part. During the cure of the assembly it will allow excess resin and all of the air and volatiles to pass into the bleed/breather ply (CFM Airflow 70). At completion of the cure the fabric will release cleanly from the assembly. Color: Brown. Width: 37.5". 10 yard min. order.

P/N 01-14835 ..... **$8.50/Lin.Yd.**

2410 RELEASE FILM - Release Film - 2410 material is the most economical release film available that can be used at temperatures over 350° F. The film has handling qualities similar to the lowest priced halohydrocarbon film. 54" wide, .002" thick.

Blue ..... P/N 01-01427..... **$3.40**

NON-POROUS TEFLON COATED RELEASE FABRIC - #7039 is a light weight extra smooth TFE coated glass fabric. Will leave little or no fabric imprint on most composite lay-ups. It is used as a release fabric where there is no requirement for bleeding or breathing resin or volatiles from the composite lay-up. It is mainly used for protecting caul sheets from resin contamination and as a release media on tool surfaces. Thickness: .003". Color: Brown. Width: 37.5". P/N 01-14840..... **$13.95/Lin.Yd.**

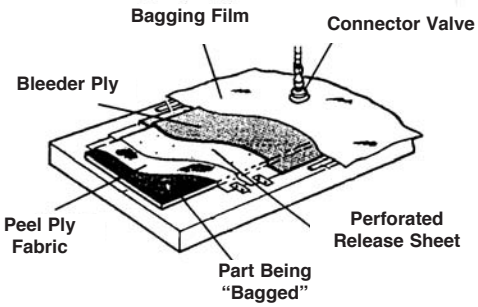
PERFORATED RELEASE SHEET E2760 - E 2760 is a red tinted, co-polymer, high elongation, low temperature release film with excellent conformability. An excellent release film for use on highly contoured parts for cure temperatures up to 250ºF. E 2760 offers good release properties in the curing temperature range where release films are required. The colored film provides for easy identification and removal from parts.

P/N 01-01194..... **$4.90**

FLASH TAPE - #6045-02 is a polyester backing film with a fully cured silicone adhesive. This tape is very tough and ideal for resin or adhesive flash removal. Color.: Blue. Thickness: .002". Roll size: 1" wide x 72 yds. P/N 01-14845..... **$16.90/roll**

400° F RESISTANT SEALANT TAPE - #4401 is a grey vacuum bag sealant tape that removes cleanly from the tool surface at the completion of the cure cycle. It can be used at any temperature up to 400° F. It can be used on any tool surface now in use and has been a standard of the industry for many years. It has high initial tack and is very easy to apply to prevent leaks between the bag and tool. It works well for composites, metalbond, or any function that requires temperature and/or pressure up to 400° F. Color: Grey. Size: 1/8" x 1/2" x 25 ft.

P/N 01-14850 ..... **$11.50/roll**



VACUUM VALVE - TWO PIECE - #8112 is a two-piece vacuum valve which requires one quarter turn to lock in place. Service temperature to 500° F. This valve is an industry standard The base is anodized and is red in color. Inside Diameter: 1/4" standard. Threads: 1/4" NPT.

P/N 01-14855 ..... **$28.50/ea.**

OVEN VACUUM HOSE - #8020 is a thick walled, flexible silicone hose. It is normally used for debulking and oven cures using vacuum only. Furnished in standard 10 foot lengths. Other lengths available on special order. Hose size: 1/4" ID. P/N 01-14860 ..... **$109.95/ea.**

HIGH TEMPERATURE QUICK DISCONNECT SET - #8432 is a two-piece quick disconnect both male and female for use to 500° F at pressures up to 200 psi (13.8 bars). Sold as a set of male & female components.

P/N 01-14865 ..... **$24.85/set**

SHRINK TAPE - #9010 is an oriented polyester film designed to shrink as the laminate approaches cure temperature. The applied pressure is maintained during cure. It is used extensively where the shape of the assembly makes conventional bagging too labor-intensive. If excess resin needs to be released during cure, perforating the shrink tape after the assembly has been wrapped with a porcupine roller will reduce the resin content as well as permitting air and volatiles to escape. Thickness: .002". Width: 1-1/4", Roll length: 100 yds.

P/N 01-14870 ..... **$16.50/roll**

GREENFLOW 75 - Greenflow 75 is designed to efficiently distribute resin with little waste due to the low profile, tight construction. Greenflow 75 can be used with polyester vinlyester and epoxy resins. Color: Green. Thickness: .035± .003 (.89mm±75µm). Melt Point (Method:DSC): 230°F (161°C). Configuration of Net: Rhombic

P/N 01-01081 ..... **$3.90/Lin. Yd.**

SEALANT TAPE ROLLER - #9050 is a plastic roller designed to assist in applying sealant tape between the bag and the tool. It assists the operator in applying maximum pressure to make a leak-proof, smooth seal. The unit is lightweight and easy to use, and the plastic roller helps prevent damage to the film. Roller width: 1-3/16". Roller Diameter: 1-3/8".

P/N 01-14875 ..... **$24.50/ea.**

PORCUPINE ROLLER - #9060 is a steel roller with a wood handle designed to perforate films to allow air, volatiles, and some resin to flow through the film. The amount of resin flow can be controlled by the depth of the pin penetration. Also useful on foam to give the bonding adhesive a better grip on the foam surface. P/N 01-14880 ..... **$91.75/ea.**

VACUUM GAUGE - a dial faced vacuum gauge capable of displaying vacuum from 0" to 30" Hg. It is 2" in diameter and can be used on the vacuum pump line, holding tank, or with a vacuum valve to determine vacuum in specific areas of a bagged assembly. Fitting size: 1/4" NPT.

P/N 01-14885 ..... **$17.50/ea.**

STANDARD MODEL VACUUM PUMP/AIR COMPRESSOR - Thomas Oil-less WOB-L Piston Compressor / Vacuum Pump

P/N 01-01569 ..... **$357.00**

VACUUM PUMP KIT - Includes vacuum pump, gauge, valve, fittings, and hose. P/N 01-00164 ..... **$424.95**

HIGH VOLUME AIR COMPRESSOR / VACUUM PUMP - Unit features rugged flexible piston cup and shaded-pole motor with high-torque start windings. Corrosion-resistant sandwich valve stops foreign particles from lodging on valve seats. Aluminum cylinder heads and pistons.

P/N 01-01570 ..... **$959.00**

VACUUM RELIEF VALVE - P/N 52763..... **$16.50**

BAGGING SUPPLIES STARTER KIT - Includes 10 yards of Vacuum Bagging Film #7400, 10 yards of 4.5oz. Breather Bleeder #3, 1 roll 400° resistant Sealant Tape (25 ft/roll), 10 yards Dacron Fabric 1.8oz.x 60", & 10 yards 60" x .001 Perforated Release Sheet.

P/N 01-14894 ..... **$138.95**

ECONOMY VACUUM GENERATOR - a low cost and reliable method of generating a vacuum for those who already own an air compressor. The generator will create 27" of Hg vacuum/pressure when coupled in-line to an air compressor capable of producing 2.2 cfm. Larger air compressors are advisable for continuous use applications. Suitable for parts up to 80 ft2. P/N 12-11148 ..... **$192.75**

AIRCRAFT PLASTIC REPAIR – FILLERS

CM

A complete line of plastic repair and refinishing products, as well as instructional materials, which make plastic repair easy and effective. Why spend a lot of money on aftermarket aircraft parts, when quality repairs can easily be made on the originals? The materials listed below are specifically engineered to be used on plastics and can be used to repair and refinish the following: Cracked or broken instrument panels, wingtips, fairings, yokes, wheel pants, all types of plastic fairings, strut and landing gear fillets, headset housings, antenna housings, stripped threads and cracked mounting holes in plastic components and more! These materials can also be used to fabricate missing sections of your existing component or to create small parts.



1000-A SUPER CLEAN PLASTIC CLEANER (19 FL.OZ.)

Before doing any sort of plastic repair, use Super Clean plastic cleaner to maximize the durability of your repair. Super Clean removes mold release agents, wax, grease, silicone, tar, bugs, sealers and other contaminants from painted or unpainted plastic or metal surfaces. It's simple to use, just spray it on and wipe it off with a clean, lint-free cloth.

P/N 01-00533.....**$13.60**

2020-T SMC HARD-SET FILLER (2-5OZ. TUBES)



SMC Hard-set Filler is a 2-part epoxy system that is very rigid when fully cured. It works on ABS, SMC, fiberglass, polycarbonate and on any other repair application that requires a rigid, high impact resistant repair material. It has a working time of 3 to 4 minutes and is ready to sand in 15 minutes.

P/N 01-00534.....**$21.60**



2045W STAINLESS STEEL REINFORCING MESH (50 SQ.IN.-5"X10")

Reinforcing Wire Mesh is designed to be used to reinforce any repair made with an airless plastic welder. We recommend that the mesh be used to when a tear goes to the edge of the plastic. Since it is stainless steel, it is 5 times stronger than aluminum wire screen and is virtually impervious to oxidation under normal conditions. You can also use the mesh to fabricate tabs, fill holes and provide reinforcement in any meltable plastic.

P/N 01-00536.....**$5.45**

2303-3 INSTA-WELD ACTIVATOR (2FL. OZ. W/SPRAYER)



Our quick spray activator causes instant curing of all Insta-Weld adhesives. Actovator may be used before or after adhesive is applied. Come in plastic bottles and include sprayer.

P/N 01-00541 .....**$12.50**

POLY FILLER

POLY FILLER HT is a two component polyester filler paste system that provides the user both unique ease of handling and high performance characteristics when cured. POLY FILLER HT is formulated to provide a smooth creamy handling consistency and a dry tack-free surface when cured. A significant advantage of POLY FILLER HT over other materials of this type is its very low cured shrinkage. This feature allows faster application and repairs than with other filler pastes, which usually must be applied in several layers because of their high shrink age rate! The creamy texture of POLY FILLER HT allows for easier applying and spreading. POLY FILLER HT can be troweled to a feather edge without rolling or skipping. It can be used to fill tiny pin holes with out lifting. The dry, tack-free nature of the cured POLY FILLER HT paste provides for easier working with tools and prevents sand paper from becoming gummy.

Once applied and cured, POLY FILLER HT will bond quite well to most surfaces such as aluminum, copper, fiber glass, epoxy, steel, plaster, graphite and kevlar laminates. It will also accept all types of enamel, epoxy, lacquer and paint stains as a surface finish.

POLY FILLER HT utilizes an excel lent high temperature resin base, and therefore the cured paste can be subjected to service temperatures in excess of 400ºF.

Black Quart ..... P/N 09-04569..... **$26.50**
Black Gallon..... P/N 09-04571..... **$85.75**
Gray Quart ..... P/N 09-04570..... **$26.50**
Gray Gallon..... P/N 09-04572..... **$84.75**



PLASTIFIX REPAIR KITS

Plastifix repairs virtually any rigid plastic and works exceptionally well on ABS. Repair cracks, fill gaps, reinforce repairs, rebuild broken tabs, fix stripped threads, and more. PlastiFix's most unique feature is the FlexMold molding bar which allows you to create a mold and cast missing pieces. No other plastic repair is more versatile. the 30 gram kits are enough to complete approximately 24"+ of cracked plastic repair. The large kits will do about 24 feet. **Kit Includes:** 253X Plastifix Powder 30G, 2520 Plastifix Liquid 50ML, 2542 Dropper Bottle Assembly, 2543 Power Application Cup, 2548 Transfer Pipette, 2550 Applicator Needle Qty: 2, 2560 Flexmold Molding Bar 10CC.

2501-PlastiFix Repair Kit (30g, white)..... P/N 01-00542 ..... **$29.95**
2503-PlastiFix Repair Kit (30g, black)..... P/N 01-00543 ..... **$29.95**
2504-PlastiFix Repair Kit (30g, clear) ..... P/N 01-00544 ..... **$29.95**
2502-**Large Kit includes:** 2531-L Plastifix Power 150G (WHITE), 2532-L Plastifix Power 150G (BLACK), 2520 Plastifix Liquid 250ML, 2542 Dropper Bottle Assembly QTY 2, 2543 Power Application Cup QTY 2 2548 Large Transfer Pipette, 2550 Applicator Needle QTY 4

P/N 01-00545 ..... **$92.75**

3800-4 FLEX-TEX FLEXIBLE TEXTURE MATERIAL (QUART)



Flex-Tex is a unique blend of materials designed to be used for re-texturing repaired areas on instrument panels, consoles, etc. A wide variety of pebble-grained textures can be achieved with this product by varying the air pressure, distance from work, and speed of pass. Apply with a regular spray gun or a PreVal sprayer. Dries flat black. Must be top-coated with color for durability and appearance. P/N 01-00546.....**$28.50**

BUMPER & CLADDING COAT (PINT)



Permanently recolor faded, scuffed, marred, or discolored plastics. Sticks to plastic without adhesion promter or primer. Just clean the plastic with Super Clean Plastic Cleaner & spray the paint. No mixing required! Gives satiny, OEM look when dry.

Black (pint) ..... P/N 01-00548 ..... **$35.00**
3601-4 Light Gray (quart)..... P/N 01-00552 ..... **$79.85**
3602-4 Dark Gray (quart)..... P/N 01-00553 ..... **$59.85**

CS100 CLEAN SHEETS



Clean Sheets are great to have around the shop. They allow you to keep your epoxy mixes clean and smooth while saving time by always having a clean surface to mix on. No more cutting cardboard to mix epoxy. 100 sheets per board.

P/N 01-00550 .....**$32.50**



2043-U UNI-CLOTH FIBERGLASS CLOTH (9 SQ.FT.)

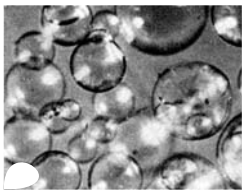
Uni-Cloth is a quality fiberglass cloth that is well suited for reinforcing plastic repairs as well as any other application requiring fiberglass reinforcement.

P/N 01-00535.....**$16.50**

Plastics Repair Instructional Book - P/N 01-00554 .....**$29.60**
Plastics Repair Instructional DVD - P/N 01-00555 ..... **$14.95**

Prices Subject to Change Without Notice

GLASS BUBBLES



These bubbles are actually hollow glass spheres. Because the high-quality glass is very crush resistant, the foam is much stronger, stiffer and water-resistant than any foam made by chemical foaming. These foams displace 4-6 times their weight in most resins and improve the handling characteristics of the base resin. They have a low bulk density and are nontoxic. Mix resin and hardener as directed, then fold in the glass bubbles. Upon cure, a strong, low-density product results which is easy to sand and file. May be shaped to form compound angles and curves. The term "micro" was applied to the mixture of microspheres and epoxy early in the development of composite structures. Although microspheres have been replaced by glass bubbles the word "micro" is still commonly used to reference the mixture. "Micro' is used to fill voids and low areas, to glue foam blocks together and as a bond between foams and glass cloth. Micro is used in three consistencies - (1) a "slurry" which is a one-to-one by volume mix of epoxy and glass bubbles, (2) "wet micro" which is about two to four parts glass bubbles by volume to one part epoxy, and (3) "dry micro" which is a mix of epoxy with enough glass bubbles to obtain a paste which will not sag or run (about five parts to one by volume). In all instances glass bubbles are added to completely mixed epoxy resin and hardener. Wet micro is used to join foam blocks and is much thicker than slurry (it has the consistency of honey) but can be brushed. Dry micro is used to fill low spots and voids and is mixed so that it is a dry paste and will not sag. Apply with a putty knife. Never use micro between glass layers.

CAUTION - When mixing epoxy and glass bubbles, wear a dust mask and keep your face away from the balloons that may float up into the air. Although glass balloons are inert, they can lodge in your eyes or in your lungs and cause problems. Handle with care.

One Pound Bag (Approx. 1 Gal.)..... P/N 01-14600..... **$8.75** Five Pound Bag (Approx. 5 Gal.)..... P/N 01-14700 ..... **$42.85**

DISPOSABLE ICING BAGS



These 12" disposable icing bags are ideal for applying beads of any size of micro epoxy or flox epoxy to all surfaces. Great for close-outs and are real time savers. Simply fill, cut end to desired bead size and squeeze. Never breaks down from epoxy. Sold in packs of 100 icing bags.Pack of 100 bags P/N 01-14710 ..... **$14.75**

CAB-O-SIL



Cab-O-Sil is a fumed lightweight silica thickener used to reduce the flow of epoxies on vertical surfaces, as well as filling pinholes with its smooth texture.

1 gallon bag..... P/N 01-04711..... **$13.75**

FLOCKED COTTON FIBER



A structural resin filler. The mixture of cotton fiber and epoxy is referred to as "flox". The mixture is used in structural joints and in areas where a very hard, durable buildup is required. Flox is mixed in much the same way as dry micro but only about two parts flock to one part epoxy is required. Mix in just enough flock to make the mixture stand up. If "wet flox" is called out, mix it so it will sag or run. Flox is often used to reinforce a sharp corner. Paint a light coat of pure epoxy inside the corner, trowel flox in to make a triangular support. The flox corner is done just before one glass surface is applied for a wet bond to one surface.

1 Lb. Bag ..... P/N 01-14800..... **$4.65**
5 Lb. Bag ..... P/N 01-14900..... **$19.65**

MILLED GLASS FIBERS



As the name implies, this material is made by milling fiberglass into a very thin consistency. This material is used in preparing a structural filler. This material is used in fillets that require structural integrity. Milled fiber fillers have higher strength than cotton flock but have fine particles of fiberglass that can penetrate the skin.1 Lb P/N 01-14780 ..... **$4.75**

PELOUZE DYMO DIGITAL SCALE



Ultra-compact design for super portability. Features an LCD screen with easy-to-read digital readout. Convenient "hold" feature locks weight display for ten seconds after item is removed. Digital postal rates. Rates update with Internet download. Operates on: 3 AAA Batteries (included)..... P/N 12-01580..... **$39.70**



3M™ #77 SPRAY ADHESIVE

This aerosol spray adhesive works well to laminate styrofoam sheets together. Laminations cut well with a hot wire. Net wt. 16.75 oz.

24 fl. oz. Aerosol Spray Can ..... P/N 09-28330..... **$15.90**

PUTTY FLEX FILLER



Urethane Supply Company's 1047 Putty Flex is a premium polyester finishing glaze that provides superior adhesion with excellent flexibility on plastics. Putty Flex produces excellent feather edge results on plastic, metal, SMC, fiberglass, cured primer and paint. Use to fill pinholes, dings, scrapes, sanding scratches and more! Putty Flex sands easily and resists clogging sandpaper.

P/N 01-00961 ..... **$27.50**

ECONOMY DIGITAL SCALE



LCD display that shows ounces, pounds or grams. "Tare" feature lets you "zero-out" container's weight. Sealed buttons prevent damage from spills. Maximum capacity of 176 ounces (11 lbs. or 5000 grams) Automatic 40 second shutoff saves batteries. Not for commercial use. Uses four AA batteries, not included. Overall dimensions: 9-1/2" L x 6-3/4" W x 1-1/2" H P/N 12-02585 ..... **$29.85**

HI BUILD POLYESTER SANDING PRIMERS



* Quick Build Primer * Quickly fills uneven surfaces, and major imperfections * Easy sanding prep for surface primer, top coats * Low VOC product * Perfect Primer for prestec topcoats or any other surface coatings desired * Fairly Hi-Build to 120mils

Color	Size	Part No.	Price	Color	Size	Part No.	Price
Gray	Quart	09-02162	**$34.85**	Gray	Gallon	09-02163	**$82.75**
Black	Quart	09-02164	**$34.25**	Black	Gallon	09-02165	**$82.75**
White	Quart	09-02166	**$33.85**	White	Gallon	09-02167	**$82.75**

Requires Catalyst P/N 01-01119.



DYNALITE

A formulation of polyester resin, talcs and Microspheres used as a lightweight filler on metal and fiberglass. Works easily, sands faster. Only 7.5 lbs. per gallon as compared to 12 lbs. per gallon for conventional fillers.

494 Gallon .....P/N 01-00368 ..... **$28.99**
492 Quart.....P/N 01-01072 ..... **$14.80**

FIX-IT



A universal repair compound. It is excellent for rebuilding or fabricating parts and as an all purpose adhesive for wood, metals, ceramic, glass, and many plastics. Fix-it can be tapped or drilled, sanded, filed or painted. Patch holes and cracks and seals leaks. Sets rock hard overnight. Fix-It Metal is the same as standard Fix-It except it is loaded with aluminum metal to match the strength, weight, and use for each project. Fix-It is non-toxic, non-hazardous, and impervious to fuels and liquids.

Fit-It 1/4 Lb kit..... P/N 01-14770..... **$12.95**
Fit-It 1 Lb kit..... P/N 01-14775..... **$24.95**
Fit-It Metal 1/4 Lb kit... P/N 01-14790..... **$12.95**
Fit-It Metal 1 Lb kit..... P/N 01-14795..... **$24.95**

FILLERS – PRIMERS

SUPERFIL BY POLY-FIBER



An ultra-light, corrosion-inhibiting filler for aircraft, marine and automotive use. Adheres to composites, bare aluminum, steel and bare or varnished wood. Easy to mix & apply: mix 2 parts A:1 part B by weight: apply with squeegee; let dry overnight. Excellent sanding qualities. More consistent than hand-mixed micros. Wt: less than 5 lbs/gal. **Hazardous**.

1 Quart Kit (20oz. Resin/12oz Hdnr).....P/N 09-28250 .....**$22.90**
3 Gal Kit (2 gal.Resin/1 gal. Hdnr).....P/N 09-28260 .....**$204.60**

UV SMOOTH PRIME FILLER/PRIMER



The pinhole killer! Waterborne polyurethane primer plus UV blocker applied with a foam roller or spray gun. Fills pinholes in layups or molded parts. White color. Once UV Smooth Prime has dried for 7 days, spray white two-part catalyzed Epoxy Primer to seal the surface and provide moisture and chemical resistance prior to spraying top coat paint. Dry sand for a smooth, pinhole-free surface. Dries in 20 minutes, sand in two hours. Clean up with water. Use Poly-Fiber Gun Cleaner to clean your spray gun after each day's spraying. NON-HAZMAT. Three gallons required for most composite aircraft. ***CROSSLINKING NO LONGER REQUIRED.***

1 qt. w/16 Crosslinker.....P/N 09-28280 .....**$58.20**
1 gal. w/64 Crosslinker.....P/N 09-28290 ....**$176.00**

FEATHER FILL



A sprayable polyester filler/primer used for filling of minor surface irregularities such as scratches, blemishes and exposed fiberglass threads before final sanding and painting. It adheres to bare metal, plastic filler and fiberglass with minimal surface preparation. Cures ready to sand and paint in 45 - 60 minutes. Any type of finish - lacquer, enamel, acrylics - can be applied over Feather Fill with excellent adhesion. Quart kit includes catalyst and instructions. Approximately six quarts are required for finishing a Vari-Eze. ***DO NOT WET SAND.***

#401 (1 Qt.).....P/N 01-00369 .....**$56.75**
#391 (1 Gal.).....P/N 01-00370 .....**$157.75**

RUST DEFENDER SANDABLE FILLER



A one step finishing material from bare metal, body filler plastic, wood, aluminum, or fiberglass to a surface ready to accept any type of paint without concern about penetration of solvents or moisture. Provides fast build-up and fill, is non-shrinking, easy sanding, wet sandable and waterproof, and self-etching. Can be sprayed or brushed on and can be built up like Bondo or Featherfill. Ready to sand in one hour, and it does not clog up your sandpaper. Pot life and cure time are about one hour at 70 degrees Fahrenheit. Versatile polyester filler.

Quart.....P/N 01-00558 .....**$78.65**
Gallon.....P/N 01-00559 .....**$189.75**

FILL BOND PUTTY



Fill Bond aerospace putty from Sherwin-Williams Aerospace Coatings has been created specifically for aerospace use. Designed to fill rivets, seams and small spot-repair areas on the exterior of aircraft fuselage and wings, this high-build body filler is now available in a convenient epoxy version. Fill Bond putty is extremely flexible, offers direct-to-metal adhesion (with properly pretreated aluminum), provides excellent spread ability and offers a long, workable pot life to give users the amount of time to apply material on a variety of aircraft surfaces, including aluminum and composites. The epoxy putty dries quickly for a fast sand - in just two to six hours. A specially-designed Fill Bond dispensing gun enables users to apply putty exactly where it is needed without requiring additional tools. There's minimal waste following application. Users apply only as much product as they need and then can put the cap back on the convenient cartridge containers for later user, saving on material and disposal costs.

Fill Bond Cartridge 750ML.....P/N 01-01124 .....**$138.75**
Fill Bond Cartridge 375ML.....P/N 01-01125 .....**$112.00**
Manual Dispensing Gun 370ML.....P/N 01-01126 .....**$194.75**
Manual Dispensing Gun 750ML.....P/N 01-01127 .....**$255.95**
Static Mixer Element.....P/N 01-01128 .....**$8.85**

TR MOLD RELEASE SEALER & WAXES



Model	Description	Part No.	Price
TR102	A firm carnauba based mold release paste wax blended with other synthetic waxes for use in various thermo-set composite molding applications.	01-01598	**$18.95**
TR104	A firm mold release paste wax based on the highest quality refined Carnauba Wax blended with other high temperature synthetic ingredients and petroleum distillates.	01-01597	**$18.95**
TR-103	A high-gloss seal for negative forms with a cleaning, polishing and sealing effect. It closes the pores of the mold and thus creates the best conditions for optimum molding quality.	01-01599	**$48.85**

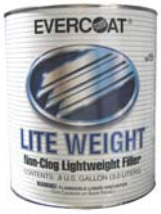
HYSOL EPOXY PATCH KITS



EPL0151 is a clear two part resin / hardener which is ideal for bonding fiberglass, PVC, and graphite. Cure time is 6-8 hours. EPK1C is a white 2-part resin / hardener epoxy system which is used to bond aluminum and ceramics.

EPK0151 Kit, 3.35 oz. (fiberglass) ..... P/N 01-15875..... **$16.50**
EPK1C Kit 4.0 oz kit (aluminum)..... P/N 01-15880..... **$13.60**

LITE WEIGHT FILLER



Lite Weight autobody filler is a very versatile filler which is excellent for holding jig blocks in place during composite construction. Applies evenly and allows sanding within minutes. Cures well even in humid climates. Creme hardener is included.

.....Quart.....P/N 01-00243 **$19.65**
.....Gallon.....P/N 01-00244 **$31.90**

WEST SYSTEM 410 MICROLIGHT



An excellent filler which provides easy workability for a variety of applications. Easy to sand and cures to a neutral tan color.

1.7 Oz ..... P/N 01-08780..... **$17.65**
4.3 Oz. ..... P/N 01-08785..... **$35.12**

EPOXY SURFACE COAT



#1099 is a white, thickened epoxy material used to create the durable surface coat on room temperature epoxy molds. This surface coat can be brushed on as thick as 1/8" at a time without developing runs or sags. It is specially formulated to provide strong interlaminar bonds with the reinforcing materials, even if it is left unsupported overnight. #1099 readily accepts all our pigments, resists chipping and cracking, and retains its high gloss. Mix Ratio by Weight – 100:11.

3.33 lb. Quart kit ..... P/N 09-01099..... **$86.75**
Case..... P/N 09-01099-1..... **$544.00**

PRIME COAT PRIMER / FILLER



Prime Coat is a sandable, quick-drying aerosol primer which fills pin holes and scratches caused by sanding on fiberglass, wood, metals and many plastics. Prime Coat will prepare the surface of materials for the finish coat and provides an effective corrosion barrier as well. Prime Coat is yellow and can be used under lacquer, enamel, acrylic or epoxy finish coats. 11 oz. can.

P/N 01-00305 ..... **$14.70**

Prices Subject to Change Without Notice

PEEL PLY



A layer of 2.7 oz. Dacron fabric strips or tape laminated into a layup as if it were an extra ply of glass. The peel coat wets out with epoxy like glass cloth and cures along with the rest of the layup. However, the Dacron does not adhere structurally to the glass and when peeled away it leaves a surface ready for glass-to-glass bonding without sanding.
Requirements for Small Aircraft:
• 3 Rolls of 1" x 50 Yds. Tape • 2 Rolls of 2" x 50 Yds. Tape • 1 Roll of 3" x 50 Yds. Tape • 1 Roll of 4" x 50 Yds. Tape

Width	Smooth Edge		Pinked	
50 Yd Roll	P/N 09-	Price/ Roll	P/N 09-	Price/ Roll
1"	15000	$6.75	15450	$6.75
2"	15100	$13.50	15500	$13.50
3"	15200	$21.75	15600	$19.50
4"	15300	$28.50	15700	$29.00
6"	15400	$44.50	15800	$41.50

Discount Schedule for Dacron Tapes: Less 10% for 12 Rolls (assorted) • Less 15% for 25 Rolls (assorted). Request quote on larger quantities.

FULL WIDTH PEEL PLY



Poly/Dacron blend is excellent as peel ply for composite lay-ups.
Full Width Peel Ply 2.7OZ, 64-66" #604
(Sold by the Yard)..... P/N 09-00300 ..... **$5.35**

Full Width Peel Ply 1.8 oz. X 64" #611
(Sold by the Yard)..... P/N 09-00100 ..... **$4.35**

Full Width Peel Ply 2.97 oz. X 62" #605
(Sold By the Yard)..... P/N 09-00500 ..... **$4.35**

MOLD RELEASE AGENTS



POL-EASE ® 2300 MOLD RELEASE

Provides superior release with minimum buildup on mold surfaces for casting urethane elastomers, epoxy, polyester, and rubber compounds. Molded parts are easily cleaned for finishing operations. It is effective on aluminum, steel, epoxy, polyester, and elastomeric molds; it does not distort intricate patterns. P/N 01-31749 ..... **$28.85**

MAXIMUM MOLD RELEASE WAX



Meguiar's® Mold Release Wax is a blend of imported waxes specially formulated to provide a maximum number of releases per application.
P/N 01-09415 ..... **$14.50**



MOLD RELEASE WAX

High-temperature paste wax. 14 oz.
P/N 01-00177 **$19.50**

FIBERGLASS MOLD RELEASE



Plastilease 512B, a film-forming, water soluble parting agent, assures clean release of fiberglass parts from molds. For application by brush or spray.
P/N 01-30600..... **$30.75/Qt.**

LPS MRX SILICONE MOLD RELEASE



Excellent for releasing molded parts in high temperature and extreme pressure environments. MRX Silicone Spray Mold Release provides maximum releases and superior value for the end-user. This non-staining, non-corrosive mold release is heat stable up to 500°F. It is a nonflammable product and contains no class I or II ozone depleting chemicals. Like all LPS MR-series mold releases, MRX Silicone Spray Mold Release doesn't use Methylene Chloride.
16 oz. aerosol can .....P/N 09-00271 ..... **$11.85**

PVA RELEASE FILM



PVA (Polyvinyl Alcohol) should be used with #1016 Wax to aid in the release of parts form a mold. It should be applied in 3 thin mist coats over nonporous, waxed mold surfaces.After the final wax coat has dried, begin by spraying a light tack coat of PVA. Typically, within 5 mins. the final heavier coats can be added. The PVA dries to form a smooth, glassy film. After part release, the residual film can be removed with water. We recommend using an inexpensive automotive siphon spray gun and 70-90 psi for application, although airbrushes will work on hobby size projects. PVA can also be sprayed over any polyester repair to provide an airless tack-free cure. For use with epoxies.
P/N 01-14813A **$22.85/qt**

ZOLATONE COCKPIT PAINT



Used to paint cockpit interiors, excellent on fiberglass. Gives a coarse, durable, professional finish. 1 gallon required for Long-EZ cockpit. See instructions for proper primer use on all surfaces in question. Color chart available on request. Order Color Chart P/N 01-15815.

Color	Use Primer	Part No.	Price
White/White	White	20-02	$166.95
Apollo Gray	-	20-11	$167.75
Hamlet Black	-	20-42	$165.75
Camille White	White	20-54	$166.95
Lilith Charcoal	Black	20-59	$166.95
Gray Stone	Gray	20-64	$167.75
Onyx Black	-	20-71	$166.95
Silver Gray	Gray	20-72	$166.95
Bright Blue	-	20-77	$166.95
Desert Camo	Black	20-80	$166.95

HI GLOSS CLEAR POLYESTER TOP COAT



Features: * Super Clear - Glass like appearance * Scratch Resistant * Buffs to a Super Hi-Gloss Finish * Refinishes to Original Hi-Gloss * Practically a Walk-A-Way Gloss Finish **Product Applications:** * Exotic wood coating * Gel coat additive for air cure application * Musical instrument wood coating * Top coat over clear primers * Top coat over pigmented colors for clear depth * Automotive interior composite parts clear coating * Architectural wood crafts
Quart .....P/N 09-02168 ..... **$36.50**
Gallon.....P/N 09-02169 ..... **$104.50**
Requires Catalyst P/N 01-01119.



DISPOSABLE RESPIRATOR REPLACEMENT PARTS

Dusts, Mists, & Fumes Pre-Filter
P/N 01-00382..... **$1.65**
Fit/Check Filter Cover
P/N 7500-27..... **$2.30**

GROOVED LAMINATING ROLLERS



These are the standard laminated rollers for wetting out woven roving and mat with polyester resin. Use with epoxy resin for applying tape into corners and for spreading thickened epoxy over large areas for gluing and fairing.

1"x 3"	P/N 01-01054	$9.50
1"x 6"	P/N 01-00396	$12.50
1"x 9"	P/N 01-00383	$16.85
2"x 3"	P/N 01-00384	$14.50
2"x 6"	P/N 01-00385	$16.65
2"x 9"	P/N 01-00386	$23.70
1/4" Corner Roller	P/N 01-00387	$10.95
1/2" Corner Roller	P/N 01-00388	$10.95
1/2"x 3" Detail Roller	P/N 01-00389	$8.65
3/4"x 3" Detail Roller	P/N 01-00390	$7.95



EPOXY LAYUP ROLLERS

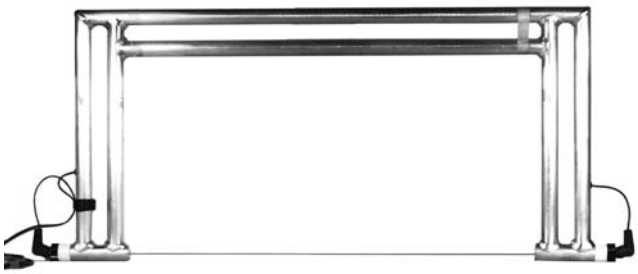
3" wide roller with stipple adhesive cover. Has excellent stippling action for working out air bubbles in layups and has no tendency to lift the cloth. Use on all major layups. Order frame and cover separately.
Roller Frame Only ..... P/N 01-24902..... **$6.75**
Cover Only..... P/N 01-24903..... **$4.35**

COMPOSITE TOOLS

AIRCRAFT DESIGNER APPROVED TOOLS

The tools offered in this section have been selected by professional aircraft designers and builders as being either necessary or highly desirable for working with composite structures.

KUT-MASTER FOAM CUTTING FRAME



These custom-built foam cutting frames can help produce professional results in foam cutting for the amateur builder. Constructed of 1-1/8" O.D. aluminum tubing, the heli-arc welded frame is lightweight yet extremely durable. The frames come completely pre-wired and ready to attach to the voltage controls shown below, and a tensioning system maintains uniform wire tension throughout the cutting process. The frames are stocked in 3 standard lengths, and custom frames are available on request (send sketch). Cutting depth is 11". Weight- 5 lbs.

2 Ft. Frame ..... P/N 01-15200 ..... **$197.00**
3 Ft Frame ..... P/N 01-15300 ..... **$218.00**
4 Ft Frame ..... P/N 01-15400 ..... **$234.00**

HOMEBUILDERS SPECIAL HOTWIRE KIT



An excellent new hot wire system consisting of a controller and transformer. Recommended by Rutan Aircraft Factory as a good system at a very economical price .
P/N 01-15600 ..... **$49.95**

SAFETY WIRE



Type 302 stainless steel safety wire, for hot wire cutter. This is superior to nichrome wire, which is brittle and breaks easily. Specify .032" or .041" diameter wire.

.032" Dia. Wire, 25 Ft. Coil..... P/N 01-15725..... **$1.11**
.041" Dia. Wire, 25 Ft. Coil..... P/N 01-15825..... **$1.11**
1 Lb. Spool ..... P/N 05-02687..... **$8.50**

INCONEL 600 HOT WIRE



Does not stretch. Excellent for hotwiring polystyrene foam.
.032" Dia. Wire ..... P/N 01-15805..... **$0.35 ft.**
.041" Dia. Wire ..... P/N 01-15810..... **$0.24 ft.**

MUSIC WIRE



Music wire is high carbon steel and although very high in tensile strength, must be capable of wrapping around itself without showing signs of cracking. 156 ft. of .049" dia. wire per lb., 46 ft. of .090" dia. wire, per lb. 22 Ga. **Price is per pound.**
.049" Dia. (1 lbs.)..... P/N 03-49500....**$6.50**
.090" Dia.(32Ga.,1lbs.)..... P/N 03-49600....**$4.45**



TYPE 302 STAINLESS SPRING WIRE

062" Dia. ..... P/N 03-49610..... **$0.27 ft**



MICHAEL ENGINEERING EPOXY RATIO PUMPS

This highly recommended pump, aptly called "Sticky-Stuff Dispenser", will save about $50 in epoxy in building a VE type aircraft, plus time, mess, dermatitis, temper and risk of bad batches. Used by individual craftsmen and professionals alike, it is a practical engineering tool especially designed to eliminate the sticky, messy, costly hand proportioning of epoxy resins. It is well built and should last through the construction of dozens of aircraft. The Sticky-Stuff Dispenser assures accurate measurement of low-viscosity (under 3,500 centipoises) unfilled epoxy resin. The standard Model A dispenser pump delivers a ratio of 100 parts of resin to 44 parts of hardener.

Adjustable Ratio Pump ..... P/N 01-16010.. **$319.00**
Rebuild Kit for 45:100 pump ..... P/N 01-00504 ... **$78.75**
Small round replacement container (qt)..... P/N 01-15920 .... **$12.50**
Large square replacement container (gal).. P/N 01-15910 .... **$18.65**
Stainless Steel Check Valve (Use with Jeffco epoxies)
P/N 01-00258 .... **$59.75**

CALRAD VARIABLE VOLTAGE CONTROL



A fine quality control to supply the electrical current for hot-wire cutting of styrofoam and PVC foam. One unit can serve to build many aircraft. Input 115 volts AC Output variable from 0 to 130 volts AC at 5 amps Caution - fuse should be inserted in the secondary to protect the control in the event of a short circuit.

Input: 117V AC 60Hz 3-Prong AC cord. Output: 0-130V AC Adj 60Hz; volt meter, power jack. Fuse Protection AGC: 5 Amp. Max: 500VA

P/N 01-01294 ..... **$174.75**

COMPOSITE TOOL KIT



This kit includes an assortment of many of the commonly required tools used in composite construction.

QTY.	PART NO.	DESCRIPTION
1	20W	Glass Shears
1 box	01-25800	500 Mixing Sticks
2 boxes	01-25700	12 oz. Mixing Cups
2 boxes	01-25710	16 oz. Mixing Cups
10	01-24899	3" Plastic Squeegee
10	09-21200	1" Disposable Brushes
10	09-21300	2" Disposable Brushes
1	12-01580	Electronic Scale
2 boxes	01-36550	Latex Gloves
1	GLR123D	1/2" x 3" Laminating Roller
1	GLR12C	1/2" Corner Roller
1	GLR26	2" x 6" Plastic Grooved Roller

Kit - P/N 01-00166 ..... $208.95

STANLEY TAPE MEASURE



This 12 foot steel tape measure, with 1/2" blade, is graduated in tenths and hundredths of inches and also in fractions of inches (32nds). Very handy for all aircraft construction. A "must" for composite construction.
No. 33-272..... P/N 33-272 .....**$23.75**

STANLEY UTILITY KNIFE



Aluminum, die-cast in two sections - provides blade storage. Has handy hang hole. Furnished with No. 11-921 blade and blade guard.
No. 10-099 ..... P/N 10-099.....**$7.80**

KNIFE BLADE



Heavy-duty pointed razor-type utility knife blade for No. 10-099 knife and most other makes of utility knives.
No. 11-921 (Pkg. of 5 Blades)
P/N 11-921..... **$2.45**

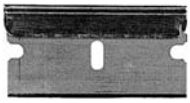
HOOK BLADE



For use with No. 10-099 knife and most other makes of utility knives to cut linoleum, roofing material, cartons, etc., without damage. The razor-sharp hooked ends cut to full thickness in one stroke.

No. 11-961Pkg. of 5 Blades ..... P/N 11-961 ..... **$6.20**

SINGLE-EDGE RAZOR BLADES



Used for trimming rough edges of laminates.
P/N 01-24904 .....**$0.15/ea.**
Box of 100 30% Discount.

SPRING CLAMPS



Heavy-gauge steel clamps with vinyl grips and tips to prevent marring work. Jaws specially formed to hold flat or round objects. Two sizes available:
No. 3202-HT – Jaw Opening 2", Length 6"
P/N 12-03778.....**$3.45**

X-ACTO TOOLS



NO. 5282 KNIFE SET -
Nos . 1, 2 and 5 knives plus 10 assorted extra blades Handy, fitted chest.
P/N 01-17300..... **$29.75**

NO. 5083 KNIFE SET -
Nos . 1, 2 and 6 knives plus 14 assorted extra blades in beautiful wooden chest.
P/N 01-17400..... **$52.80**





X-ACTO BLADE NO. 11 - Classic fine point blade. A general purpose blade. Package of 5. P/N 01-16500 ..... **$6.50**

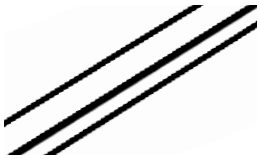


X-ACTO BLADE NO. 18 - X-Acto Blade #18. For deep wood chiseling. 1/2" surface. Package of 5
P/N 01-16600 ..... **$2.95**
Other X-Acto items also available. Call for pricing.

DOVETAIL SAW



Cuts a true, smooth and narrow kerf. Comfortable hardwood handle provides positive grip. Professional quality.
No. 15-022 ..... P/N 15-140.....**$27.90**



STRAIGHT EDGE

A 6-ft. long kiln-dried spruce board, 7/8" to 1" thick and 3" to 4" wide, used for checking the straightness of flying surfaces during composite construction.
P/N 01-25900..... **$24.50**



6" STEEL RULER

Flexible stainless steel rule graduated in l0ths and l00ths on one side and in quick-reading 32nds and 64ths on the other side.
6 inch ..... P/N 616..... **$5.35**
12 inch ..... P/N 12-02062.. **$8.95**

FELT TIP MARKERS



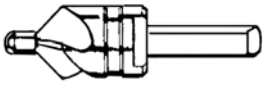
Used for marking locations on fiberglass throughout construction.
P/N 01-26000..... **$0.45**

12" LONG DRILL BITS



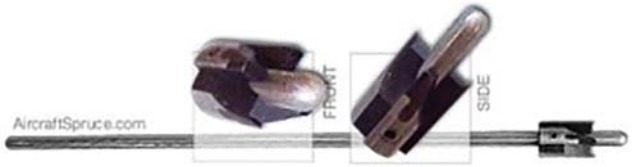
For use with standard electric drill for hard-to-reach jobs.
#10 (.1935" Dia.) ..... P/N 12-05500.....**$7.75**
1/4" Dia. ..... P/N 12-05600.....**$8.50**

COUNTERSINKS



This assembly consists of a 1/2" dia. AT418E-4 100° cutter, a 1/4" dia. AT416- pilot and an AT409-1 adapter with 1/4" dia. shank for use with a hand drill. The adapter has a collet-like shaft to securely hold the replaceable pilot. Add pilot dash number to AT409. To complete part number see tool section for complete selection of pilots.Complete Assemblies in the Tools Section

COUNTERBORE



A 5/8" diameter boring tool, with 1/4" diameter pilot. 10" threaded extension is used for boring holes in hard to reach places. Used in the installation of the landing gear on the LongEZ and Cozy aircraft. 3/4" bore does not have 1/4" pilot and must use the pilot received with the 5/8" boring tool.
5/8" diameter w/pilot ..... P/N 12-00219 .....**$55.75**
3/4" diameter without pilot ..... P/N 12-00220 .....**$49.85**

RUBBER SEALANT



No. 732 RTV general-purpose, clear, one-part silicone rubber. Cures to a firm silicone rubber in 24 hours at room temperature.

4.7 Oz. Tube ..... P/N 09-27800..... **$8.50**



JIFFY MIXER

This is a very effective 2-1/2" diameter stainless steel mixer on a 15" shaft. Attach to an air drill for fast, efficient mixing of larger batches. It will not dig into or gouge the sides or bottom of your mixing container.
P/N 01-00395 ..... **$22.60**

COMPOSITE TOOLS

ROTARY ("PIZZA") CUTTER



Makes clean cuts on fiberglass fabrics and other materials. The disc blade is made of high quality tungsten steel which is very sharp. Used by high-volume composite shops. Use with wooden backing board and handle knife with caution.

RTY-2 Cutter ..... P/N 01-00299 ..... **$15.75**
Replacement Blade ..... P/N 01-00300 ..... **$6.95**
Blades (5 Pack) ..... P/N 01-00301 ..... **$27.75**
Replacement Pinking Blade ..... P/N 12-01709 ..... **$9.75**

ALUMINUM ROTARY CUTTER FOR COMPOSITE WORK



This all aluminum cutter however, will not "melt" when exposed to acetone, methylene chloride and other chemicals used to clean the cutters after use on wet layups. After use the aluminum rotary cutter is cleaned by simply leaving it in a can filled with acetone.

Aluminum Rotary Cutter ..... P/N 09-24906 ..... **$38.85**

90 DEGREE ALUMINUM ROTARY CUTTER FOR COMPOSITE WORK



This cutter handle is all aluminum with special stainless hardware for easy assembly when changing out rotary cutter blade. Will not melt when exposed to acetone, methylene chloride, and other chemicals. Good for wet layups. To clean, just drop in small container of acetone. .... P/N 01-01047 ..... **$36.50**

PAINT BRUSHES



Natural, undyed bristle brushes with smooth, unpainted wooden handles. Unaffected by paints, dopes, resins, thinners or solvents.

1" Wide Brush ..... P/N 09-21200 ..... **$0.45**
2" Wide Brush ..... P/N 09-21300 ..... **$0.59**

RUBBER SQUEEGEE



Developed especially for working with epoxies, this 6", or 36" wide hard rubber squeegee is superior to the plastic types. Can be easily cleaned & reused many times.

6" Squeegee ..... P/N 01-24901 ..... **$3.95 ea**
36" Squeegee ..... P/N 01-00012 ..... **$24.60ea**

NOTCHED SPREADER



This plastic spreader is excellent for spreading epoxy at a steady rate to provide an even surface. Measures 4" x 4" and is notched on three sides in increments of 1/8", 3/16", 1/4".

P/N 01-24909 ..... **$1.30 ea**

DISPENSER FOR MEKP CATALYST



Perfect to measure and pour catalyst. The bottle will hold 16 oz. of catalyst and dispenses liquid safely and accurately from 2.5 to 35 cc. Measurements are instantly repeatable.

P/N 01-08503 ..... **$12.65**

POST CURE KIT



This kit consists of one post cure thermometer (P/N 01-00394) and 1 regulating thermostat (P/N 08-12148) that allows control of electrical devices for heating. Snap Disc Fan Control 3/4 inch SPST Flanged Airstream Mount, Open On Rise, 180°F Cut-Out Temperature, 40°F Differential. Therm-O-Disc Style 60T11, Type 610013

P/N 01-00393 ..... **$22.00**

GRADUATED TAPER-TIP APPLICATOR



This graduated 2 oz. syringe is ideal for measuring and dispensing precise amounts of resins and other liquids. **Note:** The ink used for the graduation lines are not solvent resistant. They will rub off if contacted with a solvent.

Without Cap ..... P/N 01-25635 ..... **$4.85**

DISPENSER BOTTLE



Polyethylene bottle with Yorker (applicator) cap.

4 Oz. Bottle ..... P/N 01-24905 ..... **$0.60**
16 Oz. (1 Pint) Bottle ..... P/N 01-24906 ..... **$1.50**

INDUSTRIAL SYRINGE

Made of hi-impact polyethylene with seamless body and special safety-grip plunger. Capacity 10 cc. Tapered dispensing nozzle can be clipped with scissors at proper diameter to govern output. Excellent epoxy dispenser.



P/N 01-25000 ..... **$4.45**

MIL GAUGES



These color-coded mil gauges are solid anodized aluminum for long life and come in four sizes for a variety of FRP applications. Machined to close tolerances (0.0001") for accuracy and available in mils (inches) and microns (metric).

3-18 mils ..... P/N 01-00411 ..... **$5.25**
10-35 mils ..... P/N 01-00412 ..... **$5.75**
40-65 mils ..... P/N 01-00413 ..... **$5.35**

MULTI-MEASURE PLASTIC CONTAINERS



Use again and again for liquid ingredient accuracy. A must-have item when mixing resins. Seal the liquid in the container with the matching sized plastic lid.

1 Qt. mix cup
P/N 01-00915 ..... **$1.35**
1 Qt. lid
P/N 01-00926 ..... **$0.54**
2.5 Qt. mixing cup
P/N 01-00330 ..... **$2.25**
2.5 Qt. lid
P/N 01-00331 ..... **$1.07**

EPOXY MIXING CUPS



Unwaxed, flat bottom paper cups in three convenient sizes for small mixes.

3 Oz..... (100 Cups) ..... P/N 01-25600 ..... **$7.50**
8 Oz..... (50 Cups) ..... P/N 01-00416 ..... **$10.75**
12 Oz... (60 Cups) ..... P/N 01-25700 ..... **$15.50**
16 Oz... (24 Cups) ..... P/N 01-00324 ..... **$7.75**

MIXING STICKS



These mixing sticks are medical tongue depressors which work well for mixing small batches of epoxy. Size: 3/4" x 6".

Box of 500 ..... P/N 01-25800 ..... **$11.50**

TAPERED OFFSET SPATULA



This tapered spatula is stainless steel with wood handle. Ideal for making 3/8" radii on bulkheads, ribs, or anywhere a uniform radius is required.

P/N 01-24915 ..... **$3.45 ea.**

Prices Subject to Change Without Notice

COMPOSITE TOOLS

DREMEL TOOLS



MODEL 100 MOTOTOOL - The Dremel 100 Series rotary tool offers single speed convenience for full-speed applications like routing, cutting, drilling and sanding applications. Its single speed setting is perfect for all-the-time high speed use. Ideal when one speed is all you need or for shaping, hollowing, grooving, slotting, inlaying and making tapered holes in soft metals, plastics and woods especially on curved surfaces. Constant Speed: 35,000 RPM. Cool-running ball bearing construction. Amperage: 1.15.....P/N 01-18600.....**$49.50**

MODEL 395 MOTOTOOL - Variable Speed: 5,000-32,000 RPM with 100% ball bearing construction for long life, smooth operation. External caps allow for easy replacement of motor brushes. Amperage: 1.2

P/N 01-18700.....**$79.75**



DREMEL TWO SPEED ROTARY TOOL KIT - Multipurpose Cutting Guide attachment. Ideal for multiple applications on a variety of materials and includes 21 genuine Dremel accessories. Model Number: 200-1/21. Amperage: 1.15. Cord length: 6. Speed: 15,000 or 35,000 RPM. Voltage: 120 AC, 50-60 Hz. Warranty: Limited 3 Years.

P/N 01-01145.....**$84.95**

DREMEL MOTO TOOL KIT #200-1/15

Moto-tool features smooth running, two-speed permanently lubricated bronze sleeve bearing motor. Amperage: 1.15 Amps. Cord Length: 6ft. Speed: 15,000 or 35,000 rpm. Voltage: 120 AC, 50-60 HZ. Warranty: 3 Years

P/N 01-01129 .....**$72.50**



NO. 402 MANDREL – The 402 mandrel is used primarily with cut-off wheels but is used with the following Dremel accessories: 409, 411, 412, 413, 420, 423, 425, 426, 456, 511, 512, 540 and 541. Shank Diameter 1/8 , 3,2 mm



P/N 01-22000.....**$2.45**



CARBON MOTOR BRUSH - One pair of motor brushes for use with Dremel rotary tool model(s): 100, 200, 275, 285, 300, 395 and 595 (Type 4, 5 and 6) and Dremel contour sander 6000 (Type 1 and 2). P/N 01-01180.....**$3.45**



MULTIPRO CHUCK - The Dremel MultiPro chuck allows you to quickly and easily change accessories on your Dremel MultiPro rotary tools without changing collets. Will accept accessories with 1/32" - 1/8" shanks. Use only with corded MultiPro tool models 275, 285, 395, 595.

P/N 01-00131.....**$9.50**



NO. 407 1/2" DRUM SANDER - Ideal for rough shaping of wood and smoothing of fiberglass. Sander bands are replaceable. Furnished w/ one band. 1/8" shank

P/N 01-19000 .....**$3.35**

NO. 408 DRUM SANDER BANDS - 1/2" Diameter, Coarse grit.

P/N 01-19100 .....**$2.45**



DREMEL 543 CUTTING / SHAPING WHEEL - For cutting and shaping on soft and hard woods, fiberglass, plastics and laminates (not metal.) This versatile wheel is coated with tungsten carbide grit for long life. It is coated on both sides, so it cuts and finishes in one operation.

P/N 01-01056 ..... **$17.50**

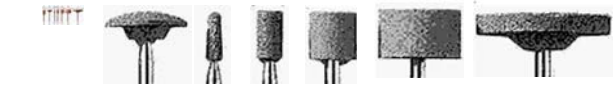
ALUMINUM OXIDE GRINDING STONES

Use on metals, castings, welded joints, rivets and rust. Ideal for sharpening, deburring and general purpose grinding of most materials.



903 911 921 932 941 945 952 953

Cutter	Size	Part No.	Price	Cutter	Size	Part No.	Price
#911	7/16"	01-00135	$2.45	#945	3/16"	01-00138	$2.45
#932	3/8"	01-00137	$2.45	#952	3/8"	01-00139	$2.45
#941	5/8"	01-00132	$2.45	#953	1/4"	01-00140	$3.65



954 971 997 8153 8175 8193 8215

Cutter	Size	Part No.	Price	Cutter	Size	Part No.	Price
#971	5/8"	01-00142	$2.45	#8175	3/8"	01-00145	$2.45
#997	3/32"	01-00143	$2.45	#8193	5/8"	01-00146	$2.45
#8153	3/16"	01-00144	$2.45	#8215	1"	01-00147	$2.45

STRUCTURED TOOTH TUNGSTEN CARBIDE CUTTERS



Fast cutting sharp teeth for greater material removal. Use on fiberglass, wood, plastic, epoxy, rubber, laminates, particle board, soft metals, ceramic tile.

9933 9931 9934 9935 9936

Cutter	Size	Part No.	Price	Cutter	Size	Part No.	Price
#9931	1/4"	01-00148	$12.75	#9934	5/16"	01-00152	$12.75
#9933	1/4"	01-00151	$12.75	#9935	5/16"	01-00153	$12.75
				#9936	3/4"	01-00154	$12.75

HIGH SPEED CUTTERS

High Speed Cutters can be used for shaping, hollowing, grooving, slotting, making tapered holes in soft metals, plastics and woods. Number 198 and 199 cutters can be used to make small slits.



100 114 115 116 117 118 121 124 125 131



134 144 190 191 192 193 194 196 198 199

Cutter	Size	Part No.	Price	Cutter	Size	Part No.	Price
#100	1/4"	01-19200	$4.90	#134	5/16"	01-19800	$4.90
#114	5/16"	01-19300	$4.90	#144	5/16"	01-20000	$5.95
#115	5/16"	01-20800	$7.50	#190	3/32"	01-20200	$4.95
#116	1/4"	01-20900	$4.90	#191	1/8"	01-20300	$4.90
#117	1/4"	01-21000	$7.50	#193	5/64"	01-20500	$4.95
#118	1/8"	01-21200	$4.90	#194	1/8"	01-20600	$6.95
#121	1/4"	01-19400	$4.90	#192	3/16"	01-20400	$7.50
#124	5/16"	01-19600	$4.90	#196	7/32"	01-20700	$7.50
#125	1/4"	01-21300	$7.50	#199	3/8"	01-21700	$4.95

SANDING TOOLS

SANDING BLOCK



A hard rubber tool which comfortably fits the hand for scratch- to finish-sanding. Used by professionals for years in all sanding operations. Simply cut a piece of sandpaper 2-3/4" x 9" and insert each end into the sanding block. Paper is held securely by nail retainers. Makes the sanding operation much easier.

Model No. 100.....P/N 01-26400..... **$10.50**



SANDPAPER

The weights and grits listed have been found to be the most effective for sanding fiberglass/epoxy surfaces. Sheet Size: 9" x 11".

Sandpaper Type		Part No.	Price /Sheet Less than 50 Sheets
Aluminum Oxide 36 Grit	Open Coat "D" Weight	01-26200	**$1.75**

SANDPAPER 3M™

Wet or dry Tri-M-Ite (3M) is a silicon carbide abrasive paper made especially for producing satin-smooth finishes on metal and other doped, lacquered or enameled surfaces. Wet or dry performs best when used with water or oil, but can also be used dry. Sheet size 9" x 11". Available in 220-A, 280-A, 320-A or 400-A grit.

(Type A paper has an especially light, flexible backing).



Sandpaper Grit Size	Part No.	Price/ Sheet
120-A	09-20550	**$1.95**
220-A	09-20600	**$1.25**
280-A	09-20700	**$1.18**
320-A	09-20800	**$1.25**
400-A	09-20900	**$1.23**

CURVED TOOTH FILE



Milled files designed for smooth, fast work on annealed steels, hard plastics and composite materials. 14" length, 1-11/32x5/16 sections, 8 teeth per inch. P/N 01-00392.....**$49.95**

SANDING DETAILER KITS



The Sanding Detailer is ideal for finishing those hard to reach areas. The abrasive belt can be indexed. The Sanding Detailer is spring loaded to put tension on the abrasive belt. After the abrasive belt is used up, the user can simply compress the tool and replace the abrasive belt with a fresh one. They are color coded for easy identification of grit. The replacement belts are color coded on the inside.

The Standard Kit includes (shown in picture):

• 1 Gray 80 Grit • 1 Red 120 Grit • 1 Orange 180 Grit • 1 Blue 240 Grit • Grit tool along with 5 Replacement Belts of each grit

The Finishing Kit includes: • 1 Blue 240 Grit • 1 Green 320 Grit • 1 Yellow 400 Grit • 1 Black 500 Grit • Grit tool along with 5 Replacement Belts of each grit

Description	Part No.	Price
Standard Kit, Coarser Grits	01-01411	**$26.50**
Finishing Kit, Finer Grits	01-01412	**$26.50**
80 Grit Belt- Replacements	01-01413	**$4.95**
120 Grit Belts- Replacements	01-01414	**$4.95**
180 Grit Belts- Replacements	01-01416	**$4.95**
240 Grit Belts- Replacements	01-01417	**$4.95**
320 Grit Belts- Replacements	01-01418	**$4.95**
400 Grit Belts- Replacements	01-01419	**$4.95**
500 Grit Belts- Replacements	01-01422	**$4.95**

PREPPIN' WEAPON SANDING BLOCK



Preppin' Weapon is a handy sanding block made of Styrofoam core and high impact ABS that won't break when dropped. Easy to grip for wet or dry sanding. Contoured to fit the shape of a hand and is sized to fit a 1/4" sheet of plain backed 8 x 11 sandpaper or a 2 3/4" wide file paper. It's coil spring design holds single or multiple sheets equally tight and saves reloading time by stacking up to 4 sheets and tearing them away as the abrasive wears out. Save reloading time by using colors to indicate grits. Excellent for builders of aircraft, boats, cars, etc.

Yellow .....P/N 12-00505 ..... **$20.50**
Red .....P/N 12-00506 ..... **$19.85**
Green .....P/N 12-00507 ..... **$19.95**

MINI-SANDER



A unique sanding tool which uses a 1-1/2" wide strip of sandpaper formed to make a belt. Locked taut by a patented mechanism that snaps into place with a finger pull. Its knife edge sides and padded body sand close to right angle fittings & fit into small concave recesses. Sander body is 7/8"h x 4"l and made of high impact plastic. Buy ready-made belts or make your own (6 belts from standard sheet).

Mini-Sander..... P/N 01-26800.....**$7.95**
Wet or dry Mini-Strips, 3 - #500, 3 - #320, 3 - #220
Pkg. of 9 Strips..... P/N 01-26900.....**$4.35**
New Continuous Belts (load free) Aluminum Oxide #120
Package of 3..... P/N 01-26910.....**$8.85**
New Continuous Belts (load free) Aluminum Oxide #220
Package of 3..... P/N 01-26915.....**$8.85**

PERMA-GRIT CONTOUR SANDING BLOCKS



These user friendly sanding blocks are made from extruded, anodized aluminum. The 32mm (1.25") Radius Curve is covered on the external and internal radius with Tungsten Carbide abrasive sheets. The Contour Blocks come in either the Coarse (60US grit approx.) or Fine (120US grit approx.) Small block is 5.5" long and large block is 11" long.

Benefits:

- Shape and sand curves, grooves, etc. quickly and easily
- Great for fillets, leading edges, under cambers, etc.
- Extremely tough, will not wear out like normal sandpaper
- Will last for years without having to change the sheets
- Does not clog easily (brush or knock out)
- Easy to remove glues, resins, paint, epoxy etc. w/ paint remover

140MM Contour Block (COURSE).....P/N 01-00591 .....**$25.99**
140MM Contour Block (FINE).....P/N 01-00592 .....**$25.99**
280MM Contour Block (COURSE).....P/N 01-00593 .....**$38.70**
280MM Contour Block (FINE).....P/N 01-00594 .....**$38.70**

Prices Subject to Change Without Notice

PERMA-GRIT HAND TOOLS

HAND TOOLS

Perma-Grit Tools are made of Tungsten Carbide Grit, one of the hardest elements available, second only to diamonds. They are specifically designed and developed for aircraft builders, woodworkers, and modelers. These tools will cut, sand and shape tough composite materials, saving homebuilders hours of building time. Ideal for fuselage shaping and wing building, these tools are highly recommended by several kitplane manufacturers. Available in coarse (180) & fine (320) grit.



Model No.	Part No.	Description	Price
F-101	12-00040	230mm x 38mm Flat Fine File	$12.50
F-102	12-00041	230mm x 38mm Flat Coarse	$12.50
R-200F	12-00042	230mm x 26mm / 36mm diameter Fine	$12.50
R-200C	12-00043	230mm x 26mm / 36mm diameter Coarse	$12.50
R-201C	12-00044	230mm x 38mm Tangent Coarse	$12.50
R-201F	12-00045	230mm x 38mm Tangent Fine	$12.50
R-202C	12-00046	18mm diameter tube Coarse	$12.50
R-202F	12-00047	18mm diameter tube Fine	$13.50
R-203C	12-00048	12mm diameter tube Coarse	$12.50
R-203F	12-00049	12mm diameter tube Fine	$12.50
R-204C	12-00050	6 mm round Coarse grit	$12.50
R-204F	12-00051	6 mm round Fine grit	$12.50
S-204C	12-00052	6 mm square Coarse grit	$12.50
S-204F	12-00053	6 mm square Fine grit	$12.50
R-101	12-00054	230mm x 38mm diameter Internal Fine grit	$13.50
R-102	12-00055	230mm x 38mm diameter Internal Coarse grit	$12.50
Set 8C	12-00056	contains: 8 popular shapes in Tool Roll F-101, F102, R-200C, R-201C, R-202C, R-203C, R-204C, S-204C	$83.85
Set 8F	12-00057	contains: 8 popular shapes in Tool Roll F-101, F102, R-200F, R-201F, R-202F, R-203F, R-204F, S-204F	$83.85
TR1	12-00058	Tool Roll - Holds 8 tools, red plastic w/velcro fastener	$7.50

ROTARY FILES

Supplied with a 3mm integral arbor so they may be used in reversible drive drills and hobby drills. These files are well balanced and run smoothly, and cur a wide range of materials with little need for secondary finishing. Available in coarse and fine grit.



Model No.	Part No.	Description	Price
RF1C	12-00070	Narrow Cone coarse	$15.55
RF1F	12-00071	Narrow Cone fine	$15.55
RF2C	12-00072	Wide Cone Coarse	$15.55
RF2F	12-00073	Wide Cone Fine	$14.85
RF3C	12-00074	Drum Coarse	$15.55
RF3F	12-00075	Drum Fine	$15.50
RF4C	12-00076	Pancake Coarse	$15.55
RF4F	12-00077	Pancake Fine	$15.55
RF5C	12-00078	Domehead Coarse	$15.50
RF5F	12-00079	Domehead Fine	$15.50
RF6C	12-00080	1/8 diameter Rod Coarse	$15.55
RF6F	12-02247	1/8 diameter Rod Fine	$14.80

SANDING BLOCKS & FLEXI-STRIPS



These verstile sanding blocks are ideal for sanding large areas, creating straight edges, producing dihedral angles, profiling leading edges, feathering trailing edges, and more. The sanding blocks are coarse grit on one side and fine grit on the opposing side. The flexible grit strips can be cut and shaped to any form, external or internal.

Model #	Part No.	Description	Price
SB140	12-00064	140mm x 51mm Coarse one side, fine opp.	$26.50
SB280	12-00065	280mm x 51mm Coarse one side, fine opp.	$36.50
SB560	12-00066	560mm x 51mm Coarse one side, fine opp.	$53.75
FXT-103	12-00060	51mm x 280mm Fine Grit Strip	$12.50
FXT-104	12-00061	51mm x 280mm Coarse Grit Strip	$12.50
FXT-106	12-00062	51mm x 140mm Fine Grit Strip	$10.50
FXT-107	12-00063	51mm x 140mm Coarse Grit Strip	$9.85

ROTARY CUTTING DISCS



These durable cutting discs are abailable in two sizes (19mm and 32mm) and come complete with a 3mm steel arbor to fit hobby drills. Will cut all woods, piano wire, composites, ceramics, stone, etc.

Model No.	Part No.	Description	Price
RD1	12-00067	19mm diameter disc with arbor	$13.50
RD2	12-00068	32mm disc with arbor	$14.50
RD3	12-00069	19 & 32mm disc with arbor	$23.65

NEEDLE FILES

These extremely versatile tools are excellent for shaping and finishing. They will cut in any direction and do not clog easily. Our needle files cut quickly and leave an excellent finish. Very popular for detail work. Furnished in Medium 280 grit.



Model No.	Part No.	Description	Price
NF1H	12-00081	Set of 5 needle files w/ Handle	$50.95
NF1	12-00082	Set of 5 needle files w/o Handle	$47.80
NF-F	12-00083	Flat needle file	$12.50
NF-K	12-00084	Knife needle file only	$11.75
NF-R	12-00085	Round needle file only	$12.50
NF-S	12-00086	Square needle file only	$12.50
NF-T	12-00087	Triangle needle file only	$11.70
RIF-1	12-00088	HSet of 5 Riffler files w/ Handle	$52.75
RIF1	12-00089	Set of 5 Riffler files w/o Handle	$47.50
RIF-F	12-00090	Flat Riffler file only	$11.70
RIF-H	12-00091	Half-round Riffler file only	$12.50
RIF-R	12-00092	Round Riffler file only	$11.70
RIF-S	12-00093	Square Riffler file only	$12.50
RIF-T	12-00094	Triangle Riffler file only	$12.50
LNF-1	12-00095	Set of 5 Large needle files / no handle	$53.75
LNF-F	12-00096	Flat Large needle file only	$14.50
LNF-H	12-00097	Half-Round Large needle file only	$14.50
LNF-R	12-00098	Round Large needle file only	$14.50
LNF-S	12-00099	Square Large needle file only	$14.50
LNF-T	12-00100	Triangle Large needle file only	$14.50
NFH	12-00101	Needle File handle only	$4.55

3/8" INCH NEEDLE FILE KIT WITH HANDLE



Set of 5 files: Hand, Round, Halfround, Square and 3-Square Extremely versatile tools, popular for detailed work.These file cuts in any direction and does not clog easily. Cuts quickly leaving an excellent finish.

P/N 12-01752.....**$57.75**

LARGE NEEDLE FILE HANDLE



Comfortable plastic handle with brass collet to accept all large (18cms) needle files.Overall length 115mm. Collect 5mm

PN 12-00166.....**$4.50**

COMPOSITE SAFETY EQUIPMENT



INVISIBLE GLOVES #1211

Invisible Gloves #1211 are a soft paste-like substance that when applied to hands provide protection against caustic and carcinogenic chemical products including hydraulic fluid, paints, ink, MEK, zinc chromate, jet fuel, graphite, engine exhaust by-products, adhesives and much more. Invisible Gloves meets military and industrial safety standards and can protect any area of the body (hands, arms, face, legs, etc...) exposed to hazardous products. Especially useful in working with materials used in composite aircraft construction. One pint yields 100 pair of gloves. Invisible Gloves #1211 are easily removed with water. Allows complete freedom of hand and finger movement. Hands will not heat up and tools will not slip. ..... P/N 12-15800 ..... **$8.85/pint**



GLOVES IN A BOTTLE

Protect your hands with a protective skin lotion called Gloves in a Bottle. Perfect for homebuilders, particularly those who work with composite aircraft, it binds with skin, forming an invisible pair of gloves to help protect against machinery and chemicals. It also protects against cracking and drying due to cold weather. 8 oz. ..... P/N 01-00656 ..... **$15.65**



RAVEN GLOVES

Powder-Free Nitrile. Superior Puncture & Abrasion Resistance. Latex-Free Textured Grip Beaded Cuff Ambidextrous. 6 mil Nitrile. Sold in boxes of 100 gloves.

Medium ..... P/N 01-01402 ..... **$13.50**
Large ..... P/N 01-01403 ..... **$12.90**
X-Large ..... P/N 01-01404 ..... **$13.50**
XX-Large ..... P/N 01-01406 ..... **$12.90**



THICKSTER GLOVES

Lightly Powdered Exam Grade Latex. Extra Thick Latex Protection. 12" Length for Added Protection. Textured Grip. Beaded Cuff. Ambidextrous. 14 mil Latex. Sold in boxes of 50 gloves.

Medium ..... P/N 01-01394 ..... **$15.75**
Large ..... P/N 01-01395 ..... **$16.50**
X-Large ..... P/N 01-01396 ..... **$16.50**
XX-Large ..... P/N 01-01397 ..... **$15.75**

SERIES 8 WASH-OFF HAND PROTECTION



SERIES 8 - A less expensive "clone" of the famous PR88 hand creme developed in Europe, Series 8 is highly recommended by Rutan Aircraft Factory for working with epoxies. It protects hands from most epoxies, grease, oil paint, paste, gasoline, tar, lacquer, acetone, styrene, fiberglass and many more substances. It helps prevent chapping, cracking and drying of hands, and is an excellent aid to persons with sensitive skin. No soap is needed for cleanup - hands wash clean with water alone.

32 Oz. (Qt.) Plastic Jar ..... P/N 13-38306 ..... **$19.65**

PLY NO. 9 PROTECTIVE HAND GEL



Provides a thin, invisible, flexible film which is an excellent barrier to epoxy resins, rubber adhesives, vinyl plasticizers, polyester resins and glass fibers. Epoxy and gel wash off easily in soap and water.

One-Lb. Jar ..... P/N 01-36100 ..... **$10.60**



DENATURED ALCOHOL

Can be mixed with soap and water. Is harmless to rubber. Use as a solvent for thinning, removing and cleaning epoxy, brushes, and equipment.

Gallon ..... P/N 01-00399 ..... **$13.80**

REPLACETONE



Cleans polyester and epoxy resins from tools and hands without the hazards associated with chemical cleaning solvents. It is a non-volatile, non-flammable, and a biodegradable replacement for acetone and MEK solvents. Replacetone separates resins to the bottom of the cleaning container, but it does not dissolve them. Pour off non-emulsified Replacetone and use again.

Quart ..... P/N 01-08823 ..... **$15.85**
Gallon ..... P/N 01-08834 ..... **$39.75**

LATEX GLOVES



Disposable but reusable gloves which resist tearing. Large size. Fits right or left hand. Box of 100.

P/N 01-36550 ..... **$10.85**



COTTON GLOVES

Lightweight liners - wear under latex gloves. More comfort, improved sensitivity.

P/N 01-36600 ..... **$0.95/Pair**

BUTYL GLOVES



These gloves are resistant to the permeation of epoxy resins and curing agents and have been found to offer by far the best protection of any glove available.

P/N 01-36700 ..... **$24.75**



HEAVY DUTY LATEX GLOVES

Heavy Duty Gloves: Resistant to abrasions and tears. Fully textured grip. Powder free. Great for automotive, motorcycle, marine, and aviation technicians. 14 Mil thick. Twelve inch cuff length. Textured grip with maximum tear resistance. Size: Large. ..... P/N 01-00598 ..... **$19.50**

ASTRO GRIP™ NITRILE DISPOSABLE GLOVES



Astro-Grip™ Dual-Sided Scale Grip Disposable. Powder-free nitrile. Thickness: 6 mil. Dual-sided scale textured surface for superior grip. High visibility safety orange color. Non-latex. Exceptional chemical and puncture resistance. Maximum comfort for extended wear. 100 gloves per box.

Medium ..... P/N 01-01532 ..... **$14.65**
Large ..... P/N 01-01533 ..... **$14.65**
X-Large ..... P/N 01-01534 ..... **$14.90**
XX-Large ..... P/N 01-01536 ..... **$14.65**



WORX DISPOSABLE LATEX GLOVES

5mil Latex powder free Industrial gloves. General Purpose Lite Duty Gloves. Excellent Dexterity. Pack of 100. P/N 01-01586 **$10.85**



TYVEK SUITS

These are the tough, full-body suits with hoods that professional painters use. Available in extra large or extra extra large.

X-Large ..... P/N 01-36800 ..... **$7.95**
XX-Large ..... P/N 01-36805 ..... **$8.75**

MAXSHIELD DISPOSABLE PROTECTIVE CLOTHINGS



RECYCLED TYVEK® APRONS - The Better-Than-Plastic Apron. A regular throw-away plastic apron might be good enough for small jobs. But for complete protection from food splashes, hot oil, dangerous chemicals, and other big messes, the serious professional chooses a Tyvek® apron. Features: • Bib style for full protection. • 28" x 36" in size. • Serged seams for strength. • Long ties to customize the fit,

PN 12-01824 ..... **$2.75**



TYVEK® DISPOSABLE SHOE COVERS - Boot Covers High top boot covers w/elastic top.

PN 12-01825 ..... **$2.03**



TYVEK® DISPOSABLE - Shoe Covers, Boot Covers With a Tyvek® disposable shoe covers you don't have to compromise. That's because Tyvek® disposable shoe covers deliver the best balance of protection, durability and comfort. Color: White.

PN 12-01995 ..... **$1.79**

SPRUCE SPARS – CAPSTRIP – STRINGERS

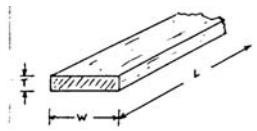
GENERAL ORDERING INFORMATION

Aircraft spruce spars are available either S2S (surfaced 2 sides, top & bottom, with rough edges in 4" & 6" nominal width) or S4S (surfaced all 4 sides to thickness & width). Prices in table below are for S4S spars. If S2S is desired so builder can trim to exact width, specify S2S and use 4" or 6" width prices from table. Request quote on spar widths wider than 6". Spars for certificated aircraft such as Aeronca, Stearman, Taylorcraft and Piper are available and may be priced from the table. Since many of these early aircraft were "handmade", the spars are often not uniform in size for a particular model. Therefore, the finished net dimensions should be specified when ordering replacement spars. Please price to nearest fraction.

Thousands of feet of S2S aircraft quality spruce are stocked in our Corona, CA. and Peachtree City, GA. warehouses. Orders for spars, spruce kits and capstrip can usually be shipped within three weeks after receipt of order. Spars wider than 6" must be milled from 8" specially selected stock which requires a long and indefinite lead time. Prices on request.

For additional technical information refer to a complete reprint of spruce specification MIL-S-6073 and plywood specification MIL-P-6070.
P/N 13-14900..... **$5.95**

When ordering either spars or capstrip, designate the thickness first, then the width and length.
Examples: 3/4"T x 4-1/4"W x 14'L spar; 1/4"T x 1/2"W x 5'L capstrip.



Faster delivery can be assured if guidelines regarding minimum acceptable lengths are provided. Orders are often delayed awaiting delivery of lumber to the even footage specified whereas shipment could be made if the minimum usable lengths were indicated. Example: 3/4" nominal 6" x 12' (131-1/2" min.).

Spruce and tubing kits may be combined with plywood and other building supplies for a single truck delivery charge.



BARGAIN BAG OF SPRUCE

Assortment of at least ten pieces, in random lengths from 1 ft. to 5 ft., of rough, S2S or S4S remnants and cutoffs. A usable selection is assured. Approx. wt. 20 lbs. P/N 02-03600 ..... **$37.50**

METRIC SIZES - ***Spruce can be cut to metric sizes upon request only as special order, non cancelable and non refundable.***
Using our current part numbers please select one size greater than desired and at check out in "Special Instructions" advise exact metric dimensions needed.

SPRUCE SPAR STOCK—MIL SPEC. MIL-S-6073

PRICE PER LINEAL FOOT*

THICKNESS (Inches)	WIDTH (Inches)													
	2-3/4	3	3-1/4	3-1/2	3-3/4	4	4-1/4	4-1/2	4-3/4	5	5-1/4	5-1/2	5-3/4	6
1/8	$3.80	$3.80	$3.80	$3.80	$3.80	$4.75	$4.75	$4.75	$4.75	$5.50	$5.50	$5.50	$5.50	$6.50
3/16	$3.80	$3.80	$3.80	$3.80	$3.80	$4.75	$4.75	$4.75	$4.75	$5.50	$5.50	$5.50	$5.50	$6.50
1/4	$3.80	$3.80	$3.80	$3.80	$3.80	$4.75	$4.75	$4.75	$4.75	$5.50	$5.50	$5.50	$5.50	$6.50
5/16	$7.50	$7.50	$7.50	$7.50	$7.50	$9.50	$9.50	$9.50	$9.50	$11.50	$11.50	$11.50	$11.50	$13.25
3/8	$7.50	$7.50	$7.50	$7.50	$7.50	$9.50	$9.50	$9.50	$9.50	$11.50	$11.50	$11.50	$11.50	$13.25
1/2	$7.50	$7.50	$7.50	$7.50	$7.50	$9.50	$9.50	$9.50	$9.50	$11.50	$11.50	$11.50	$11.50	$13.25
5/8	$7.50	$7.50	$7.50	$7.50	$7.50	$9.50	$9.50	$9.50	$9.50	$11.50	$11.50	$11.50	$11.50	$13.25
11/16	$7.50	$7.50	$7.50	$7.50	$7.50	$9.50	$9.50	$9.50	$9.50	$11.50	$11.50	$11.50	$11.50	$13.25
3/4	$7.50	$7.50	$7.50	$7.50	$7.50	$9.50	$9.50	$9.50	$9.50	$11.50	$11.50	$11.50	$11.50	$13.25
13/16	$9.50	$9.50	$9.50	$9.50	$9.50	$11.75	$11.75	$11.75	$11.75	$14.00	$14.00	$14.00	$14.00	$16.75
7/8	$9.50	$9.50	$9.50	$9.50	$9.50	$11.75	$11.75	$11.75	$11.75	$14.00	$14.00	$14.00	$14.00	$16.75
15/16	$9.50	$9.50	$9.50	$9.50	$9.50	$11.75	$11.75	$11.75	$11.75	$14.25	$14.25	$14.25	$14.25	$16.75
1	$9.50	$9.50	$9.50	$9.50	$9.50	$11.75	$11.75	$11.75	$11.75	$14.25	$14.25	$14.25	$14.25	$16.75
1-1/8	$11.50	$11.50	$11.50	$11.50	$11.50	$14.25	$14.25	$14.25	$14.25	$17.00	$17.00	$17.00	$17.00	$20.00
1-1/4	$11.50	$11.50	$11.50	$11.50	$11.50	$14.25	$14.25	$14.25	$14.25	$17.00	$17.00	$17.00	$17.00	$17.25
1-1/2	$9.50	$9.50	---	$9.50	$9.50	$12.00	--	--	---	$14.75	---	---	---	$17.25
1-5/8	---	$11.80	---	---	$13.50	---	---	---	---	---	---	---	$17.75	$29.50

***** Please order by part number and also state exact thickness, width and length to verify part number. Spruce part numbers begin with "02" and finish with thickness and width. Examples: 3/4"T x 5-1/4"W is P/N 02-34514; 1-1/4"T x 6"w is P/N 02-1146. Provide part number and footage required of each size. Specify any particular lengths required. Thicker & wider sizes subject to availability. Request quotation.

FOR SPARS 6-1/4" TO 9" WIDE, SEE OUR WEBSITE AT WWW.AIRCRAFTSPRUCE.COM

FINISHED CAPSTRIP, LONGERONS, STRINGERS

PRICE PER LINEAL FOOT*

THICKNESS (Inches)	WIDTH (Inches)															
	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2	1-3/4	2	2-1/4	2-1/2
1/8	$0.34	$0.34	$0.38	$0.40	$0.49	$0.52	$0.57	$0.72	$0.80	$0.92	$1.17	$1.39	$1.64	$1.87	$2.05	$2.25
3/16	$0.34	$0.34	$0.38	$0.40	$0.49	$0.53	$0.57	$0.70	$0.80	$0.92	$1.17	$1.39	$1.64	$1.87	$2.05	$2.25
1/4		$0.33	$0.37	$0.40	$0.50	$0.52	$0.57	$0.70	$0.80	$0.90	$1.17	$1.39	$1.64	$1.87	$2.05	$2.25
5/16			$0.42	$0.49	$0.72	$0.81	$0.85	$0.90	$0.95	$1.05	$1.39	$1.72	$1.87	$2.10	$2.50	$2.75
3/8				$0.72	$0.84	$0.98	$1.23	$1.48	$1.74	$1.95	$2.45	$2.95	$3.45	$3.55	$4.50	$4.90
1/2						$1.12	$1.35	$1.62	$1.87	$2.05	$2.70	$3.25	$3.75	$4.40	$4.75	$5.25
5/8							$1.62	$1.89	$2.15	$2.35	$2.80	$3.55	$3.90	$4.70	$5.00	$5.25
3/4								$1.95	$2.20	$2.50	$3.05	$3.75	$4.05	$4.85	$5.25	$5.75
7/8									$2.50	$2.80	$3.40	$4.05	$4.65	$5.00	$5.75	$6.25
1										$4.00	$4.00	$4.75	$5.00	$5.50	$6.25	$6.75

Please order by part number and also state exact thickness and width. Begin part number with "02", then thickness & width.
Example: 1/4"T x 3/8"W is P/N 02-1438. Capstrip is furnished in lengths as specified by customer.

SPRUCE KITS – BALSA – NAILS

COMPLETE SPRUCE KITS

Acro Sport	02-03700	**$784.43**
Acro Sport II	02-03800	**$1,540.57**
Baby Great Lakes	02-03900	**$982.44**
Bobcat	02-25100	**$1,071.00**
Christavia MK 1	01-39880	**$1,355.00**
Christavia MK 4	01-39910	**$2,169.84**
Corby Starlet CJ-1 (less spars)	02-04300	**$1,227.99**
Cvjetkovic CA-65	02-04400	**$2,330.75**
Cygnet	02-04500	**$1,922.52**
EAA Bi-Plane (Original Wing)	02-00223	**$1,450.00**
EAA Bi-Plane (P-Wing)	02-04600	**$1,356.00**
Fly Baby Spruce Kit	01-00977	**$2,564.10**
GN-1 Aircamper **	02-04700	**$2,427.52**
GP-4	02-25200	**$5,063.48**
Hatz Bi-Plane	02-04800	**$2,088.68**
Kelly-D	02-04900	**$804.00**
Mitchell B-10	02-05000	**$669.00**
One Design	***See Page 15 for Kits***	
Osprey II **	02-05100	**$4,545.10**
Original Pietenpol Aircamper	**See Page 18 for Kits**	
Pitts Special (Basic) M-6 or S-1D	02-05200	**$1,378.50**
Pober Pixie (spruce & plywood)	01-01136	**$2,058.96**
Rand KR-1 **	02-05400	**$1,183.69**
Rand KR-2 **	02-05500	**$1,381.76**
Rand KR-2S	02-05510	**$1,490.47**
Skybolt	02-05700	**$1,644.14**
Smith Miniplane	02-05800	**$753.99**
VP-1	01-00222	**$833.55**
VP-2	02-08800	**$921.60**
Volmer Sportsman VJ-22 (less wings)	02-06000	**$2,438.77**
War Aircraft Corsair	02-06100	**$1,528.53**
War Aircraft P-47	02-06200	**$684.05**
War Aircraft FW-190	02-06300	**$1,534.00**
War Aircraft Sea Fury	02-06400	**$564.00**
Wittman Tailwind**	02-06500	**$1,296.00**

***** Wing & aileron spars finished to net dimensions. Not beveled.***

SPAR KITS

Acro Sport	02-06600	**$735.20**
Acro Sport II	02-03810	**$755.79**
Baby Great Lakes	02-06700	**$588.40**
Bakeng Duce	02-06800	**$496.00**
Barracuda	02-06900	**$956.03**
Bowers Fly Baby (Spars)	02-07000	**$591.50**
Bowers Complete Wing Kit	02-07100	**$1,493.87**
Christavia MK 4	01-39980	**$2,169.84**
Corby Starlet (Two Piece Wing Spar Kit)	02-09000	**$464.07**
Cvjetkovic CA-65	02-07300	**$1,613.00**
EAA Bi-Plane (Original Wing)	02-07400	**$944.00**
EAA Bi-Plane (P- Wing)	02-00222	**$878.00**
Hatz Bi-Plane	02-07500	**$1,238.00**
Kelly-D	02-07600	**$1,061.00**
Marquart Charger	02-07700	**$1,082.50**
Pitts Special M-6 or S-1D	02-07800	**$657.90**
One Design	***See Page 15 for Kits***	
Sauser P6E	02-02000	**$1,264.90**
Skybolt	02-07900	**$1,260.18**
Smith Miniplane	02-08000	**$410.75**
Stolp Starduster Single Place	02-08200	**$718.35**
Starduster "Too"	02-08300	**$1,051.25**
Starlet	02-08400	**$447.95**
Wittman Tailwind	02-08500	**$621.50**
Wittman "V"	02-08600	**$343.95**

SPRUCE KITS FOR UNLISTED DESIGNS CAN BE FURNISHED IF A MATERIALS LIST IS SUBMITTED.

TYPICAL WEIGHTS OF SPRUCE KITS

EAA Bi-Plane Complete Kit	**99 Lbs.**
Pitts Special Complete Kit	**73 Lbs.**
Pitts Special Spar Kit Only	**35 Lbs.**
Miniplane Complete Kit	**49 Lbs.**
Fly Baby Complete Kit	**132 Lbs.**
KR-1 Complete Kit	**61 Lbs.**

NOTE: Our spruce kits are produced from materials lists which are believed to be accurate. However, since designers may modify certain dimensions after the original plans are released, we urge the builder to verify sizes and current price before ordering.

WE CHARGE NO PACKING CHARGES ON SPRUCE



TRIANGULAR CORNER BLOCKING

90° Corner Blocking
Order by the foot.

Size	Price Part No.	Per Ft.	Size	Part No.	Price
1/4"	02-17600	**$0.57**	1/2"	02-18000	**$1.09**
5/16"	02-17700	**$0.74**	5/8"	02-18100	**$1.15**
3/8"	02-17800	**$0.47**	3/4"	02-18200	**$2.05**
7/16"	02-17900	**$0.79**	7/8"	02-18300	**$2.20**



"T" STRINGER STOCK

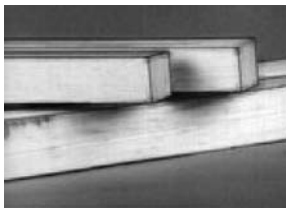
Standard Spruce stringer material finished to the dimensions illustrated. Lengths over 8 feet require truck shipment.
Lengths to 8 Ft.
P/N 02-18400 ..... **$1.45/ft.**

Add 20% for lengths over 8 feet.



AIRCRAFT SPRUCE AND PLYWOOD REFERENCE MANUAL

Reprint of Government Specifications MIL-S-6073 and MIL-P-6070.
P/N 13-14900 ..... **$5.95**



BALSA WOOD

Balsa is the lightest commercial wood in the world, weighing less than 10 lbs./cu.ft. Pound for pound, it is one of the strongest - both its stiffness and bending strength exceed White Spruce, Western Yellow Pine, Douglas Fir, White Oak and many other commercially used woods. It is easily cut, turned, carved, shaped, glued, sanded and finished, all with ordinary wood working tools and techniques. It can be shaped with abrasive wheels either wet or dry. It can be cut into extremely thin veneers. Almost any kind of coating will adhere to it. Meets specifications MIL-B-2747 and MIL-S-7998.
Furnished as 2" thick boards, 3 ft. long from 3"-6" wide. Material which may be glued together by the builder to make the required size pieces.
2" x 4" x 3 ft Pc..... P/N 02-03500 ..... **$19.65/ea.**

ACTUAL SIZES OF BOARDS CAN VARY

AIRCRAFT NAILS

Flat, bonderized steel nails, brass plated to prevent rusting and cement coated to improve holding power. Manufactured to Federal Specification FF-N-105 (formerly AN301). Order by part no.



Part No.	Size		Price		
	Length	Gauge	1/4 Lb.	1/2 Lb.	1 Lb
AN301-20-2	1/4"	20	$4.38	$8.75	$17.50
AN301-20-3	3/8"	20	$5.46	$10.93	$21.85
AN301-20-4	1/2"	20	$4.14	$8.28	$16.55
AN301-20-5	5/8"	20	$2.70	$5.40	$10.80
AN301-20-6	3/4"	20	$5.24	$10.48	$20.95
AN301-20-8	1"	20	$5.88	$11.75	$23.50

There are approximately 9,000 3/8" x 20 steel nails per pound.

PLYWOOD



DOMESTIC MIL-P-6070 AIRCRAFT PLYWOOD

American-made structural aircraft-grade plywood is made of imported African Mahogany or American Birch veneers laminated in a hot press to hardwood cores of Poplar or Bass wood with waterproof glue. Will meet all requirements of specification MIL-P-6070, which calls for shear testing after immersion in boiling water for 3 hours. Far superior to many plywoods in which all plies are 1/16" thick and laminated in a cold press to make up the total thickness. Tests should be made on cold-press plywoods before use in aerobatic aircraft.

Thickness In.		Thickness Approx. MM.	No. of Plies	90° Mahogany Approx. Wt. 4' x 8' Sheet	90° Mahogany Part No.**	90° Mahogany 4' x 8' Sheet	90° Birch Approx. Wt. 4' x 8' Sheet	90° Birch Part No.**	90° Birch 4' x 8' Sheet
1/16	(.070)	1.5	3	6 Lbs.	02-189--	$116.75	7 Lbs.	02-243--	$89.90
3/32	(.100)	2.5	3	10 Lbs.	02-191--	$139.75	12 Lbs.	02-244--	$95.25
1/8	(.125)	3.2	3	12 Lbs.	02-193--	$139.95	15 Lbs.	02-245--	$97.50
3/16	(.190)	4.8	3-5	20 Lbs.	02-195--	$208.95	24 Lbs.	02-246--	$215.95
1/4	(.250)	6.4	5	25 Lbs.	02-197--	$267.95	30 Lbs.	02-247--	$259.95
5/16	(.312)	7.9	5	Lbs.	02-198--	$284.95	30 Lbs.	02-251--	$269.95
3/8	(.375)	9.5	5	Lbs.	02-199--	$299.95	30 Lbs.	02-266--	$309.00
7/16	(.437)	11.1	7	Lbs.	02-120--	$289.95	30 Lbs.	02-267--	$378.00
1/2	(.500)	12.7	7	Lbs.	02-121--	$364.00	30 Lbs.	02-260--	$321.95
				45° Mahogany			45° Birch		
1/16	(.070)	1.5	3	6 Lbs.	02-188--	$227.95	7 Lbs.	02-248--	$212.95
3/32	(.100)	2.5	3	10 Lbs.	02-190--	$252.95	12 Lbs.	02-249--	$227.95
1/8	(.125)	3.2	3	12 Lbs.	02-192--	$258.95	15 Lbs.	02-250--	$227.95
1/4	(.250)	6.4	5	---	---	---	30 Lbs.	02-271--	$420.95

*Domestic plywood is sold only in 2'x4' (8 Sq.Ft.), 4'x4' (16 Sq.Ft.), 2'x8' (16 Sq.Ft.), and full 4' x 8' sheets. If ordering less than full sheet, compute cost based on price/sq.ft. shown in above table.
** The part numbers of full 4' x 8' sheets end with "80". For less than full sheets, the last two digits will change according to the size ordered. Change the last two digits in the part number to "10" for 4' x 4', "20" for 2' x 8' and "30 for 2' x 4'. Example: 1/16" mahogany 90° is 02-18980 (4' x 8'), 02-18910 (4' x4'), 02-18920 (2' x 8') and 02-18930 (2' x4').



FINNISH BIRCH AIRCRAFT PLYWOOD (METRIC)

Note: Full sheets are 4' x 4' and half sheets are 2' x 4', with the exception of 02-00236 which are furnished in 61" x 61" full sheets.

Quality Birch Aircraft grade plywood produced to AB/B grade on all thicknesses. Finnish birch plywood is furnished in 48" x 48" sheets, depending on current availability. Prices fluctuate with changes in sheet sizes. Full sheets require truck shipment unless cut in half for UPS. **Color may vary. Attention: 2' x 4' Plywood are cut with grain. If cross cut required, specify at time of order.**

Thickness Nom. Inch.	mm	Plies	Half Sheet 2'x4' Part No.	Half Sheet 2'x4' Price	Full Sheet 4'x4' Part No.	Full Sheet 4'x4' Price
1/64	0.4	3	02-20250	$29.38	02-20200	$58.75
1/32	0.8	3	02-20350	$16.25	02-20300	$32.50
3/64	1.0	3	02-50050	$19.95	02-50000	$39.90
1/16	1.5	3	02-20450	$19.33	02-20400	$38.65
3/32	2.5	5	02-20550	$31.38	02-20500	$62.75
1/8	3	5	02-20650	$33.88	02-20600	$67.75
5/32	4	8	02-00237	$57.98	02-00236	$115.95
3/16	5	10	02-20750	$71.95	02-20700	$143.90
1/4	6	12	02-20850	$56.38	02-20800	$112.75

Corby Starlet 2MM x 48" x 48"..... P/N 02-28050 ..... **$49.90**
1/4 Birch/Poplar 5ply, 45°..... P/N 02-27180 ..... **$420.95**



OKOUME PLYWOOD

Okoume (o-KUE-me), also referred to as Gaboon, is an African hardwood widely used in Europe over the past century. Light pinkish brown in color, sometimes lustrous with variable interlocking grain, the rotary cut panel can be painted or finished bright. The natural durability of this species is extremely low and care must be taken to finish all surfaces, face and edges. Often recommended for use with epoxy saturation systems, the panel exhibits high strength to weight ratios. Face veneers are made from 1.3 mm thick A/B grade rotary cut veneer. Cores and crossbands are solid-joined and the panel glued with waterproof glue. Okoume panels are extensively used by race class boat builders, rowing shell builders and in various applications. Where its lighter weight, good bending properties and ease of finishing are a value, 5/32" thickness is used in the One Design Kit Aircraft and applicable to a wide variety of Homebuilt Aircraft, sold in 4'x8' sheets. Wt. of 5/32" sheet is 8.8 lb. Wt. of 1/4" sheet is 28 lbs. Thickness varies from 4mm to 6mm. Can be cut down for shipping. Certified bs1088

4mm thick x 4' x 8' sheet..... P/N 02-20100..... **$69.50**
6mm thick x 4' x 8' sheet..... P/N 02-00076..... **$99.85**



LITE PLY PLYWOOD

The beautiful, pliable answer to shaped and curved construction problems. Lite Ply ® is distinguished by its even grain, virtually snow white appearance and unusual resilience. It is a true "white wood, " poplar and finishes uniformly, whether stained or painted.

Supplied for over 50 years, Lite Ply ® has proven to be an excellent wood for industries where weight is a concern. Lite Ply ® has been proven to be a cost effective alternative to other light weight panels.

4' X 8' Sheet 1/8" 3MM..... P/N 02-00115..... **$36.50**
4' X 8' Sheet 1/4" 6MM..... P/N 02-00116..... **$56.50**



ROYAL MARINE A-B FIR PLYWOOD

First quality marine plywood that meets or exceeds requirements of specifications PSI-74. All are Douglas Fir.

Thickness	No. of Plies	Part No.*	Price 2'x2'	Price 2'x4'	Price 4'x4'	Price 4'x8'
1/4"	3	02-210--	$12.84	$24.69	$49.38	$98.75
3/8"	4	02-211--	$10.37	$19.94	$39.88	$79.75
1/2"	5	02-212--	$11.25	$22.00	$44.75	$79.50
5/8"	7	02-213--	$12.84	$24.69	$49.38	$98.75
3/4"	7	02-214--	$12.70	$24.41	$48.83	$97.65
1"	7	02-215--	$17.00	$33.00	$66.50	$133.75

$4.00 packing charge for less than 3 sheets unless cut to 2'x4' pieces for UPS shipment.

Please order by part number, note thickness & size for verification. The part numbers for full 4'x8' sheets end with "80". For less than full sheets, the last 2 digits of the part number. will change according to size ordered. Change last 2 digits of the part no to "20" for 2'x2', "40" for 2'x4' & "60" for 4'x4'. Example: 1/4" 2'x4' is 02-21040.



BASSWOOD MIL-P-6070 AIRCRAFT PLYWOOD

Basswood meets MIL-P-6070 but is lighter and has more flexibility than Mahogany & Birch plywood, but has slightly less structural strength.

Thickness	No. of Plies	Part No.*	Price 2'x2'	Price 2'x4'	Price 4'x4'	Price 4'x8'
1/16"	3	02-253--	$15.75	$30.50	$61.50	$123.95
3/32"	3	02-254--	$15.99	$31.99	$63.98	$127.95
1/8"	3	02-255--	$16.87	$32.44	$64.88	$129.75
3/16"	3	02-256--	$18.00	$35.00	$70.50	$139.75
1/4"	5	02-257--	$30.75	$48.50	$97.50	$195.95
5/16'	5	02-258--	$24.50	$49.71	$99.43	$223.95
3/8"	5	02-261--	$27.75	$53.50	$106.95	$215.95
7/16"	7	02-262--	$32.75	$126.95	$126.95	$274.95
1/2"	7	02-263--	$38.25	$74.00	$147.95	$316.00
5/8"	9	02-265--	$42.00	$81.00	$192.95	$384.95
3/4"	9	02-264--	$57.50	$110.95	$221.95	$444.95

NOTE: All sheets 4'x8'. All plies are basswood. Grain is 90°. Part nos for full 4'x8' sheets end with "80". For less than full sheets, the last 2 digits will change according to the size ordered. Change the last 2 digits in the part no to "60" for 4'x4', "20" for 2'x2' and "40" for 2'x4'. See example in domestic plywood table.



5/16" 5 PLY BIRCH/ BASSWOOD PLYWOOD

2X2..... P/N 02-27220 ..... **$36.00**
2X4..... P/N 02-27240 ..... **$69.50**
4X4..... P/N 02-27260 ..... **$138.95**
4X8..... P/N 02-27280 ..... **$298.65**
4X8 90° ..... P/N 02-25880 ..... **$223.95**

ATTENTION - ***90° 2' x 4' Plywood are cut with grain. If cross cut required, specify at time of order***

INSTANT GLUES – POLYFIX™ GLUES

INSTANT GLUES



These American made Instant Glue products were used extensively in construction of the "Around the World Non-stop" Voyager aircraft and are highly recommended for many homebuilt aircraft applications by Voyager Aircraft, Inc. and Rutan Aircraft Factory. They create a fast, permanent bond on many similar and dissimilar materials such as woods, metals and composite materials.

HOT STUFF™ - Odorless THIN have a consistency resembling that of water, used mainly for bonding parts which fit very well. 2oz
P/N 01-35500 .....**$10.75**

SUPER 'T'™ - A consistency similar to that of syrup and has the ability to fill small gaps between parts which don't fit perfectly. SUPER 'T'™ cures at a slower rate than HOT STUFF™, (10-25 seconds depending on the material). 2oz. P/N 01-35600 .....**$10.75**

SPECIAL 'T'™ - Special 'T'™ and new UFO™ Odorless THICK are very thick cyanoacrylates with a consistency resembling cold honey. SPECIAL 'T'™ and UFO™ Odorless THICK have greater gap-filling ability than SUPER 'T'™ and more positioning time after contact of parts. The rate of cure is slow enough, (usually 50-60 seconds depending on the material), to allow precise alignment of parts, after assembly. 2oz.
P/N 01-01039 .....**$11.75**

NCF QUICK™ - Used with HOT STUFF, UFO Odorless THIN, SUPER T, and UFO Odorless THICK., and with it you can do almost magical things. NCF Quick works in three ways to make HOT STUFF , SUPER 'T' and SPECIAL 'T' Easier, Faster, Stronger and able to bond some of the most unusual materials you can think of. 6 oz.
P/N 01-00689 .....**$12.95**

SUPER SOLVENT™ - Super Solvent™ is a remarkable debonder and cleaner for any instant glue. Use it for hand clean-up, removes instant glue from most clothing and surfaces. Some fabric, colorings or materials may be affected, so test-patch on an inconspicuous place. Add 2oz.
P/N 01-35800 .....**$9.75**

3M SCOTCH-WELD DP190 TRANSLUCENT EPOXY ADHESIVE 200 ML



3M™ Scotch-Weld™ Epoxy Adhesive DP190 - Translucent is a two-part epoxy adhesive that delivers exceptional performance with high shear and peel strength. This epoxy adhesive is formulated to bond to a wide range of materials, such as metals, ceramics, wood, fiberboard, glass, rubber and many plastics. With an 80-minute work-life, this epoxy adhesive allows for an extended period of time for adjustment and precise application. 3M™ Scotch-Weld™ Epoxy Adhesive DP190 reaches handling strength in approximately 10 hours and full cure in 14 days at room temperature. This epoxy adhesive has low viscosity and a 1:1 mix ratio. Additionally, we engineered 3M™ Scotch-Weld™ Epoxy Adhesive DP190 — Translucent to exhibit good environmental aging properties, delivering long-term durability. Volume: 200 ml
P/N 09-04777 .....**$54.85**



POLYFIX 7000 EXTRA THICK

This non clog bottle will take care of the problems of plugged up tips. This Extra Thick C.A. polyfix works on ceramics, glass, metal, rubber laminating, soft wood, hard wood and is also water resistant. This C.A. can be carved with a knife or razor blade and can be sanded with foam which leaves an indistinguishable finish from plastic.
P/N 01-01217 .....**$19.95**



POLYFIX 8000 HIGH VISCOSITY GAP FILLING

This non clog bottle will take care of the problems of plugged up tips. This High Viscosity gap filling C.A. polyfix works on ceramics, glass, metal, rubber laminating, soft wood, hard wood and is also water resistant. This C.A. can be carved with a knife or razor blade and can be sanded with foam which leaves an indistinguishable finish from plastic.
P/N 01-01218 .....**$19.95**



POLYFIX 15000 THIN INDUSTRIAL

This non clog bottle will take care of the problems of plugged up tips. This thin industrial C.A. polyfix works on ceramics, glass, metal, rubber laminating, soft wood, hard wood and is also water resistant. This C.A. can be carved with a knife or razor blade and can be sanded with foam which leaves an indistinguishable finish from plastic.
P/N 01-01219 .....**$19.95**



POLYFIX™ 11000 GAP FILLING CYANOACRYLATE

This is a higher viscosity ca for loose fitting joints in which the adhesive must bridge gaps. Normally, the thicker ca is applied to one surface and then the parts are held tightly together for about 5 to 15 seconds. For large surface areas including those with close fitting joints such as lamination Polyfix™ 11000 gap filling should be used. To prevent premature curing, don't spread the glue into a thin film, lay down a serpentine bead with about 1" separation on one surface, then assemble the parts, letting the pressure spread the ca out. MIL SPEC-A-46050-C. (CAS NO. 7085-85-0)

Description	Part No.	Price
Polyfix™ 11000 Gap Fill 1/2 oz	01-01016	$6.50
Polyfix™ 11000 Gap Fill 1/2 oz. Brush on	01-01238	$6.65
Polyfix™ 11000 Gap Fill 1 oz	01-01017	$7.95
Polyfix™ 11000 Gap Fill 2 oz	01-01018	$12.75
Polyfix™ 11000 Gap Fill 8 oz	01-01019	$36.75



POLYFIX™ 4000 INDUSTRIAL FLEXIBLE THIN

This low odor flexible thin ca is ideal for many applications. Low odor flexible does not turn brittle and remains clear, even if Accelerator. With Polyfix™ 10000 Accelerator it has superior shock resistance and still has good penetrating qualities and its application can be easier to control for ca and has a different, less irritating odor compared to regular ca's, but still can prove to be superior when bonding anodized aluminum. 1 fl. oz. MIL SPEC-A-46050-C. (CAS NO. 6606-65-1) P/N 01-01020 .....**$15.85**



POLYFIX™ 3000 CLEAR FLEXIBLE RUBBER GAP FILLING

Flex gap clear rubber toughened can be used in applications where you do not want the adhesive to be seen it is still superior to standard ca.'s when aesthetics are important and a flexible bond is required this product is your best choice. It forms to soft urethane and vinyl plastic, and shock resistant bonds. MIL SPEC-A-46050-C. (CAS NO. 7085-85-0)

Description	Part No.	Price
Polyfix™ 3000 Rubber Fill 1 OZ	01-01021	$6.75
Polyfix™ 3000 Rubber Fill 2 OZ	01-01022	$12.50



POLYFIX NON-CLOG CYANOACRYLATE APPLICATOR

Reach in a small area where you need to do a repair. Can reach 5-1/2" or if you need to control small drops. Sold in boxes of 24.

Description	Part No.	Price
Non-Clog Applicator Regular Tip	01-01006	$15.50
Non-Clog Applicator Fine Tip	01-01007	$15.50

POLYFIX™ GLUES AND ADHESIVES

POLYFIX™ 17000 INDUSTRIAL ODORLESS THIN



This has a water thin viscosity that wicks deep into joints by capillary action and curses in a matter of a few seconds. Surface to be bonded must be tight fitting and should be bonded must be tight fitting and should be held together while applying the ca around the edges of the seams, at the moment ca's cure eliminates the irritating fumes from the evaporating monomer that makes repeated of ca's unpleasant at times. MIL SPEC-A-46050-C (CAS NO. 27816-23-5)

Description	Part No.	Price
Polyfix™ 17000 Industrial Thin 1/2 oz	01-01023	$9.25
Polyfix™ 17000 Industrial Thin 1 oz	01-01024	$16.95
Polyfix™ 17000 Industrial Thin 2 oz	01-01025	$28.95

POLYFIX™ 17500 PLUS INDUSTRIAL ODORLESS GAP FILLING



Apply a light fog of Polyfix™ 10000 accelerator and apply Polyfix™ 17500+ gap filling. Cures to a more flexible consistence for better shock absorption, when ever a larger amount of ca is to be used in such applications as saturating fiberglass or kevlar. Polyfix™ 17500+ gap filling eliminates the irritating fumes from the evaporation monomer that makes repeated use of ca unpleasant at times. MIL SPEC-A-46050-C. (CAS NO. 27816-23-5)

Description	Part No.	Price
Polyfix™ 17500 Industrial Gap Fill 1/2 oz	01-01026	$9.95
Polyfix™ 17500 Industrial Gap Fill 1 oz	01-01027	$19.50
Polyfix™ 17500 Industrial Gap Fill 2 oz.	01-01028	$30.95

POLYFIX™ 64000 INDUSTRIAL CARBON GAP CYANOACRYLATE



Polyfix™ 64000 carbon extra strength ca is a carbon toughened cyanoacrylate that forms superior shock resistant bonds on non-porous surface the black colored ca has added flexibility for the bonding carbonfiber and other advanced materials as graphite, polycarbon with honeycomb, normax aramid, graphite with aluminum honeycomb. MIL SPEC-A-46050-C (CAS NO. 7085-85-0)

Description	Part No.	Price
Polyfix™ 64000 Carbon Gap Cyanoacrylate 1/2 oz	01-01029	$5.95
Polyfix™ 64000 Carbon Gap Cyanoacrylate 1 oz	01-01030	$11.50
Polyfix™ 64000 Carbon Gap Cyanoacrylate 16 oz	01-01031	$173.95

POLYFIX™ POLYDUST CATALYTIC



The patented Thermal Process Catciyticaily (I.C. chemically) generates heat to 142 degrees fahrenheit and actually thermal sets or fuses the repair to the Patent material. POLYFIX™ 10000 Accelerator POLYFIX™ 14000 Thin Cyanoacrylate (PJ 33) POLYDUST Catalytic filler By using these three products that was certified by Cessna Aircraft, U.S. Army Aviation Systems, Boeing Aircraft. (CAS NO. 601-35-4)

Warning: If you use any other products with the POLYFIX™ polydust catalytic, AIRCRAFT SPRUCE AND SPECIALTY INC. AND REDAM/RB INC. WILL NOT BE RESPONSIBLE FOR ANY ACCIDENTS

Description	Part No.	Price
Polyfix™ Polydust Catalytic 10M/MG	01-01032	$5.90
Polyfix™ Polydust Catalytic 1/2 PT	01-01033	$39.95
Polyfix™ Polydust Catalytic 1 PT	01-01034	$68.75

POLYFIX™ 10000 ACCELERATOR IN PLASTIC BOTTLES



Non-flammable and less than 10% degrade when applied on ca's comparing to methanol and acetone accelerator that has 13/15% degrade. This accelerator allows ca's to quickly cure by enhancing the alkaline conditions during polymerization. POLYFIX™ 10000 in a spray bottle is normally used to cure the ca that flows from joints or cracks when parts are pressed together. Apply an additional bead of thick ca along seam and then curing with POLYFIX™ significantly enhances a crack's strength. For difficult to bond material, POLYFIX™ 10000 can be applied to one surface and ca to the opposite surface. When brought together, they will bond instantly. MIL SPEC-A-4605-C-TYPE II A OR III A. (CAS NO. 99-97-8). (CAS NO. 64742-48-9)

Description	Part No.	Price
Polyfix™ 10000 Accelerator 2 oz.	01-01035	$11.75
Polyfix™ 10000 Accelerator Refill 8 oz	01-01036	$18.50

POLYFIX™ 6000 DEBONDER



Will soften cured ca. If parts are bonded incorrectly or your fingers are stuck together a few drops of POLYFIX™ 6000 debonder. Will dissolve the ca in about a minute. Apply on bonded skin and roll apart fingers. Once unstuck, use Acetone to clean off softened ca then wash off with soap and water POLYFIX™ 6000 debonder will easily remove the adhesive residue. 1 fl. oz. (CAS NO. 68-12-2) P/N 01-01037 ..... **$4.50**

POLYFIX 14000 THIN CYANOACRYLATE



Polyfix™ 14000 Thin Cyanoacrylate has a super thin viscosity that penetrate deep into cracks by capillary action and cures in a matter of a few seconds. Surfaces to be bonded must be tight fitting and should be held together while you apply the ca around the edges of the seams at the moment ca's cure they give off a vapor that can irritate the nose and eyes, so be prepared. Thin ca's work very well on any type of material, form more than just a surface bond. MIL SPEC-A-46050-C. (CAS NO. 7085-85-0)

Description	Part No.	Price
Polyfix™ 14000 Thin Cyanoacrylate 1/2 oz	01-01008	$3.95
Polyfix™ 14000 Thin Cyanoacrylate 1 oz	01-01009	$7.95
Polyfix™ 14000 Thin Cyanoacrylate 2 oz	01-01010	$12.95
Polyfix™ 14000 Thin Cyanoacrylate 8 oz	01-01011	$34.95

POLYFIX 9000 EXTRA THICK



It's all a round ca for ceramics, glass, metal, rubber laminating, soft wood, hard wood. Water resistant. This ca is the best for most clear plastic including GE's Lexan when used with Polyfix™ 10000 Accelerator it will fill most voids it can be carved with a knife or razor blade and sanded to foam a finish indistinguishable from plastic its extra thick. Thickness makes it easy to work with most applications. MIL SPEC-A-46050-C (CAS NO. 7085-85-0)

Description	Part No.	Price
Polyfix™ 9000 Extra Thick 1/2 oz	01-01012	$4.45
Polyfix™ 9000 Extra Thick 1 oz	01-01013	$7.90
Polyfix™ 9000 Extra Thick 2 oz	01-01014	$12.85
Polyfix™ 9000 Extra Thick 8 oz	01-01015	$34.95

POLYFIX™ PLASTIC REPAIR KITS



Polyfix™ Thermal Fusion is a 3-part system that uses chemical reaction to heat the repair to 142°F, fusing it to the parent part. This system repairs ABS, royalite, graphite, lexan, polycarbon, Kevlar, plexiglass, fiberglass and many other materials. The system combines Industrial cyanoacrylate glue, a catalytic filler, and an accelerator. May be used on speed fairings, wing tips, cowlings, glare shields, and more. Kits include Polyfix™ Industrial chemical, polydust, gloves, finger cots, fiberglass mat, protection hand cream, no mixing tools, and an easy to follow instruction manual. Zero Shrinkage.

PLASTIC REPAIR KIT (SMALL)- Size: 1/4" x 1/8" x 30". 1/2oz. 14000 CA. Thin. 1/2oz 10000 Accelerator. 2 M/Grams Catalytic. 1-3" x 8" Fiberglass. 1/2oz Hand Cream. 1-Pair Latex Gloves. 6 Finger Cots. 1 Manual (33 Page w/words/Pictures) MIL SPEC-A-46050-C. (CAS NO. 7085-85-0). (CAS NO. 601-35-4). MIL-A-46050-C TYPE II A OR III A. (CAS NO. 90-97-8). (CAS NO. 64742-48-9) P/N 01-01045 ..... **$24.50**

PLASTIC REPAIR KIT (MEDIUM) - Size: 1/4" x 1/8" x 60". 1 Manual (33 Page w/words/Pictures). 1oz 14000 CA. Thin. 4 M/Grams Catalytic. 1/2oz. Hand Cream. 1oz 10000 Accelerator. 1-3 x 12" Fiberglass. 1 Pair Latex Gloves. 10 Fingercots. G.S.A NATIONAL STOCK NO. POLYFIX. 1-LB 1800 NUMBER 8040-01-364-799. MIL SPEC-A-46050-C. (CAS NO. 7085-85-0). (CAS NO. 601-35-4). MIL-A-46050-C TYPE II A OR III A. (CAS NO. 90-97-8). (CAS NO. 64742-48-9)
P/N 01-00235 ..... **$34.75**

PLASTIC REPAIR KIT (LARGE) - Size: 1/4" x 1/8" x 120". 1 Manual (33 Page w/words/Pictures). 2oz. 14000 CA THIN. 2oz 10000 Accelerator. 8 M/Grams Catalytic. 10" x 10" Fiberglass (mat). 1/2oz Hand Cream. 2 Pairs latex Gloves. 20 Fingercots. MIL SPEC-A-46050-C. (CAS NO. 7085-85-0). (CAS NO. 601-35-4). MIL-A-46050-C TYPE II A OR III A. (CAS NO. 99-97-8). (CAS NO. 64742-48-9)
P/N 01-00236 ..... **$59.80**

PLASTIC REPAIR KIT (X-LARGE) - Size: 1/4" x 1/8" x 600". 1 Manual (33 Page w/words/Pictures). 10 oz. 14000 CA Thin. 50 M/Grams Catalytic. 1oz. Debonder. 12 Pair Latex Gloves. 10 Piece Assortment of Sandpaper. 1 Pair Scissors. 10oz 10000 Accelerator. 18" x 18" Fiberglass. 1oz. Hand Cream. 50 Fingercots. 1 Sanding Block. MIL SPEC-A-46050-C. (CAS NO. 7085-85-0). (CAS NO. 601-35-4). MIL-A-46050-C TYPE II A OR III A. (CAS NO. 99-97-8). (CAS NO. 64742-48-9). (CAS NO. 68-12-2). P/N 01-00237 ..... **$354.00**

INSTANT GLUES & ADHESIVES

WP



BSI QUIK-CURE 5 MINUTE EPOXY

QUIK-CURE™ 5 min. epoxy cures to a slightly flexible consistency. This lack of brittleness allows it to form a lasting bond in areas subjected to high vibration or stress. QUIK-CURE™ shouldn't be used in areas that are subject to long-term immersion in water; however, it works fine for the internal structure of wood framed boats. QUIKCURE™ is our only epoxy on which you can apply polyester resins. It can be mixed with microballoons to form a quick setting putty. Items bonded with QUIK-CURE™ can be handled after 15 minutes. Full strength is reached in 1 hour.

P/N 01-01443 ..... **$13.80**



BSI SLOW-CURE 30 MINUTE EPOXY

SLOW-CURE™ 30 min. epoxy works best for forming reinforcing fillets on joints. It has the highest strength of our epoxies. It is waterproof and more heat resistant. SLOW-CURE™ can be used for bonding if you're willing to wait overnight. Fillers such as microballoons can be mixed with SLOW-CURE™ and FINISH-CURE™ to form a putty-like consistency. Such fillers will usually decrease the working time by about 25%. Bonded objects can be handled after 8 hours and the cured epoxy reaches full strength within 24 hours. P/N 01-01444 ..... **$13.90**



BSI INSTA-CURE SUPER THIN CYANOACRYLATE

INSTA-CURE™ has a water-thin viscosity that wicks deep into joints by capillary action and cures in a matter of a few seconds. Surfaces to be bonded must be tight fitting and should be held together while you apply the CA around the edges of the seam. At the moment CAs cure, they give off a vapor that can irritate the nose and eyes, so be prepared. Thin CAs work very well on balsa since they penetrate into the wood and form more than just a surface bond.

1 oz. .....P/N 01-01460 ..... **$5.35**
2 oz. .....P/N 01-01447 ..... **$8.65**



BSI INSTA-CURE GAP FILLING CYANOACRYLATE

INSTA-CURE+™ is a higher viscosity CA for loose fitting joints in which the adhesive must bridge gaps. Normally, the thicker CA is applied to one surface and then the parts are held tightly together for about 5 to 15 seconds. For large surface areas, including those with close fitting joints such as laminations, INSTA-CURE+ ™ should also be used. To prevent premature curing, don't spread the glue into a thin film. Lay down a serpentine bead with about 1" separations on one surface, then assemble the parts, letting the pressure spread the CA out.

1 oz. .....P/N 01-01461 ..... **$5.35**
2 oz. .....P/N 01-01448 ..... **$8.65**
8 oz. Refill .....P/N 01-01458 ..... **$26.50**



BSI MAXI-CURE EXTRA THICK CYANOACRYLATE

MAXI-CURE™ extra thick CA is the best CA for most plastics, including GE's Lexan MAXI-CURE™ is the best choice for plastic model assembly. When used with INSTA-SET™, it works better than any putty for modifying or filling voids. It can be carved with a knife or razor blade and sanded and feathered to form a finish indistinguishable from plastic.

1 oz. .....P/N 01-01459 ..... **$5.35**
2 oz. .....P/N 01-01449 ..... **$8.70**



INSTA-WELD 2 THICK

Urethane Supply Company's Insta-Weld 2 thick glue works well when you need to fill a gap. Insta-Weld 2 has about the consistency of 30 weight oil. To use, apply Insta-Weld 2 and then spray with Insta-Weld Activator (sold separately) for quick curing. Insta-Weld 2 will cure without the Insta-Weld Activator (sold separately) but it will take MUCH longer. Try Insta-Weld on everything. It will either work, or not work, instantly. Does NOT work on olefin based plastics like polyethylene, polypropylene, TPO and TEO. 2 fl. oz. (59 ml) bottle.....P/N 01-01434 ..... **$21.50**



BSI SUPER-GOLD+ GAP FILLING ODORLESS FOAM SAFE

SUPER-GOLD+™ are odorless INSTA-CURE CAs. They are non-frosting and take only 2 or 3 seconds longer to bond. There are no fumes that irritate the nose and eyes. Do not attack white foam; therefore, they can be used in the building of foam core wings and the assembly and repair of plastic and foam ARF's. They will not fog clear plastic. Ideal for attaching clear canopies in plastic model kits; however, MAXI-CURE™ is still recommended for assembling the rest of plastic kits. Wood can be bonded to white foam with SUPER-GOLD +™ in less than fifteen seconds.

P/N 01-01450 ..... **$13.90**



BSI INSTA-CURE+ POCKET CYANOACRYLATES GAP FILLING

BSI has added a 4 oz. size to go along with the 3/4 oz. cyanoacrylates. These Pocket CAs feature a new top that has a pin built into the cap that covers the nozzle. This pin seals the bottle so that if it is tipped over, the bottle will not leak. Has a the blunt nozzle which makes it more difficult to apply small amounts of the CA, especially in tight places. Over 70% prefer our standard top for general bonding purposes. P/N 01-01451 ..... **$15.50**



BSI INSTA-SET CYANOACRYLATES ACCELERATOR

INSTA-SET™ is a catalyst which acts as an accelerator that allows CAs to quickly cure in thick layers by enhancing the alkaline conditions during polymerization. INSTA-SET™ in a spray bottle is normally used to cure the CA that flows from joints when parts are pressed together. Applying an additional bead of thick CA along a seam and then curing it with INSTA-SET™ significantly enhances a joint's strength. For difficult to bond materials, INSTA-SET™ can be applied to one surface and CA to the opposite surface. When brought together, they will bond instantly. INSTA-SET™ is formulated with a strawberry scent and activates CA in 6 to 8 seconds without any degrading of the CAs strength. Compatible with all surfaces, even clear plastic and white foam.

Description	Part No.	Price
Spray Bottle	01-01453	$5.35
Spray Bottle Refill	01-01454	$10.60
Aerosol	01-01455	$10.60



BSI UN-CURE CYANOACRYLATE DEBONDER

QUIK-CURE™ 5 min. epoxy cures to a slightly flexible consistency. This lack of brittleness allows it to form a lasting bond in areas subjected to high vibration or stress. QUIK-CURE™ shouldn't be used in areas that are subject to long-term immersion in water; however, it works fine for the internal structure of wood framed boats. QUIKCURE™ is our only debonder on which you can apply polyester resins. It can be mixed with microballoons to form a quick setting putty. Items bonded with QUIK-CURE™ can be handled after 15 minutes. Full strength is reached in 1 hour. .....P/N 01-01456 ..... **$3.80**



BSI IC-LOC BLUE MEDIUM STRENGTH THREAD LOCKER

C-Loc™ Blue is a medium thickness, medium strength threadlock that is applied to the threads of fasteners before assembly. Once the IC-Loc Blue™ is cured, the fasteners can be disassembled with standard hand tools if required.

P/N 01-01457 ..... **$5.35**

Prices Subject to Change Without Notice

CASCOPHEN



A Resorcinol Formaldehyde Adhesive capable of curing at room temperature and providing strong, durable, waterproof bonds. Comes in two parts, a liquid resin (part A) and a powered catalyst (part B). The liquid resin is an alcohol-water solution of a partially condensed resorcinol-formaldehyde resin containing a suitable reinforcing cellulosic filler. The hardener is a tan powder formulated from paraformaldehyde and a suitable cellulosic filler. Produces a cured glue line which is resistant to fresh water or salt water, most acids and organic solvents, and lubricating oils and greases. Being thermoset, the bond is resistant to elevated temps. and conversely, no loss in bond strength occurs at temperatures as low as -40°F. Surfaes include treated woods, many plastics, natural and synthetic rubber, primed metal, leather, textiles, paper and fiber boards.

Pint Kit (Pint A, 1/4lb B) .....P/N 02-00036 ..... **$26.50**
Quart Kit (Qt A, 1/2lb B).....P/N 02-00037 ..... **$44.50**
Gallon Kit (Gal A, 2lbs B).....P/N 02-00038 ..... **$154.95**

FPL-16A HUGHES GLUE



This is an exceptionally fine two-part white epoxy glue for homebuilt and experimental aircraft. Not only for wood but for many other applications such as a metal to wood adhesive, metal to metal, just about anything with the exception of some plastics. It has been used by builders for many years with universal acceptance. Its low viscosity makes it very easy to work. Shelf life: Resin - more than 1 yr. Hardener - Indefinite.

Qt Kit (1 qt. resin, 4oz hardener, Wt 4 lbs) ..... P/N 02-23400 .... **$52.50**

HYSOL EA-9430 GLUE



Replaces the EA-9410-2 glue. EA-9430 has the same characteristics as the EA-9410, but has a 50 minute pot life instead of the 30 minute pot life of the EA-9410 at 77°F. Used extensively in the Strojnik S2A sailplane and many other homebuilts.

P/N 02-18600 ..... **$96.75**

WEST SYSTEM SIX10 THICKENED EPOXY ADHESIVE



Six10 Adhesive gives you the strength and reliability of a two-part WEST SYSTEM epoxy with the convenience of a single part product. Six10 is dispensed with a standard caulking gun. Non-sagging Six10 bonds tenaciously to wood, metals, fiberglass and concrete. It cures in temperatures as low as 50°F. Working time is 42 minutes at 72°F. Cures to a solid in 5–6 hours and will take high loads in 24 hours. Cure time is faster at warm temperatures and slower in cool temperatures. Dispense mixed 2 part epoxy adhesive using a standard caulking gun. The efficient internal geometry of the 600 Mixer thoroughly blends resin and hardener in a short mixing length for good application control and a minimum of waste. Additional 600 Static-Mixers are available in packages of two or twelve.

Part No.	Description	Unit Size	Price
01-01069	Epoxy Adhesive Cartridge	190 ml	$22.97
01-01071	Static Mixers	2 ea	$4.35

FASTWELD 10 A/B HIGH SETTING EPOXY



Fastweld 10 A/B epoxy adhesive is a rapid-setting, two-component paste offering a convenient one-to-one mixing ratio by volume or weight. Fastweld 10 A/B epoxy adhesive produces strong bonds in a very short period. It is especially suited for bonding small parts and for repair work. Pot life: 3-4 minutes at 77° F, Cure Time: 4 hours. Shelf life: 3 years. .....P/N 09-03454 .... **$24.60**

3M™ EPX Pneumatic Mix Nozzle 9742
P/N 09-01372 ..... **$2.67**



FASTWELD 10 A/B HIGH SETTING EXPOXY GUN

Dual cartridge dispenser gun designed for use with 50ml style adhesive cartridges.

P/N 09-03455 .... **$73.75**

GORILLA GLUE
TOUGHEST GLUE ON EARTH



Gorilla Glue is known as the toughest glue on planet Earth. A high strength adhesive that quickly bonds wood, metals, stones, ceramics, and more. Gorilla Glue is a versatile, interior/exterior adhesive ideal for building projects. 8 oz. bottle.

Benefits: • 100% Waterproof • Incredibly Strong and Versatile • Stainable and Paintable • Easily Sanded • More Coverage • A Long Open Working Time • Dries Light Tan • Non-toxic • Acid-Free 8oz. .....P/N 02-00101 .....**$12.85**

Single use (4 tubes) .....P/N 02-00225 .....**$4.95**

T-88 STRUCTURAL ADHESIVE



T-88 is a non-brittle structural adhesive which gives superior finished results even when used under adverse working conditions. T-88 will cure in temperatures as low as 35°F which makes it an excellent choice for homebuilders living in colder climates. It is recommended by the builders of many types of homebuilt aircraft and is excellent for bonding aluminum, steel or wood. When fully cured, it is not affected by water, oil, gasoline and most other chemicals.

1/2 Pt Kit.. P/N 02-00046.....**$19.50** Pt. Kit..... P/N 02-00047 ....**$24.75**
Qt. Kit ..... P/N 02-00048.....**$38.70** Gal. Kit.... P/N 02-00049 ..**$109.80**

T-88 UNIVERSAL CARTRIDGES



With the Universal Cartridge any medium to high quality caulking gun will work just fine. When you evaluate the Universal Cartridge notice that without a mixture tip it is perfect for accurately measuring small batches of adhesive. This is something that is very hard to do in a mixing cup without generating a lot of waste. Of course when the cartridge is used with the mixing tip you get both accurate measuring and thorough mixing making large, continuous gluing jobs much easier with flawless products performance. Note: Cartridge includes one mixing tube. Extra mixing tubes and caps are sold separately. P/N 02-00103 .....**$21.50**

REDI-MIX MIXER TUBE



The static mixer tube attaches to the cartridge with a retaining nut which screws on securely to the REDIMIX gun. The mixer tip tapers to 1/8" but may be cut back to about 1/4". Very small quantities of epoxy may be prepared in this manner without any waste or added cost. P/N 02-90030.....**$2.85**

WELDWOOD GLUE



A powdered, urea formaldehyde wood glue activated by mixing with water. Forms a bond stronger than the wood itself. Mets Fed. Spec. A-A-3052. Low VOC.

1 Lb .....P/N 0203 ..... **$17.60**
4.5 Lb .....P/N 0204 ..... **$62.95**

SCOTCH WELD 3M™ STRUCTURAL ADHESIVE



Commonly known as "Scotch Weld", this two part epoxy structural adhesive will bond wood, metal, plastics and rubber. It has a pot life of nearly 2 hours after mixing, and a 24 month shelf life. Forms flexible yet very strong bonds. Color:Gray.

2 oz. kit.....P/N 02-00045 ..... **$52.75**

QUIK FIX EPOXY PUTTY STICKS



Quikfix BC 101 is a hand mixable, fast curing, general purpose epoxy putty stick that mixes in just one minute to provide fast repairs to many surfaces including metals, wood, glass, concrete, ceramics and numerous plastics. One hour after mixing, QuikFix BC 101 can be drilled, sawed, sanded, filed, tapped, machined, or painted. Color: Gray (after cure).

3.5" stick..... P/N 01-00333 ..... **$11.95**
7" stick..... P/N 01-00332 ..... **$13.95**

BOND-AIDE WOOD EPOXY PUTTY



Bond-Aide P-1500W is a wood epoxy putty compound that cures in minutes to form permanent repairs on woods, plaster, ceramics and many plastics with no shrinkage. Excellent for bonding wood to wood, wood to metal, and wood to glass or ceramics. P-1500W has a multitude of uses in aircraft restoration, rebuilding, and repair.

1 tube 2-part Bond-Aide P-1500W.....P/N 02-18650.....**$14.75/ea**

G/FLEX EPOXY ADHESIVE



A toughened, versatile, liquid epoxy for permanent waterproof bonding of fiberglass, ceramics, metals, plastics, damp and difficult-to-bond woods. Modulus of elasticity of 150,000 PSI. Can absorb the stress of expansion, contraction, shock and vibration. Can be modified with West System fillers and additives, and used to wet-out fiberglass tapes and fabrics. Mixed at a 1:1 ratio, G/flex gives you 45 minutes of working time at room temperature. It reaches an initial cure in 7 to 10 hrs and full cure in 24 hrs.

Epoxy Adhesive.....P/N 01-01162..... **$22.94**

650-K Epoxy Kit - Contains 4 fl. oz. G/flex 650 resin, 4 fl. oz. G/flex 650 hardener (8 fl. oz. mixed epoxy), 2 reusable mixing stick/applicators, 2 12-cc syringes, 4 grams Adhesive Filler, 4 mixing cups, 1 pair disposable neoprene gloves, 4 alcohol cleaning pads and complete handling and repair instructions. .....P/N 01-01161 ..... **$33.35**

655-K Epoxy Repair Kit - Contains 4.5 fl. oz. G/flex 655 resin, 4.5 fl. oz. G/flex 655 hardener (9 fl. oz. of mixed epoxy), 2 reusable mixing stick/applicators, 4 alcohol cleaning pads, 1 pair disposable neoprene gloves, 10 mixing palettes and complete handling and repair instructions.

P/N 01-01163..... **$33.35**

PTM&W ES6279 AEROPOXY EPOXY ADHESIVE



Manufactured by PTM & W Industries, Inc. ES6279 is a light grayish-tan two part adhesive that was developed specifically for difficult bonding problems involving similar or dissimilar materials. ES6279 provides excellent adhesion to a wide variety of materials such as aluminum, steel, brass, glass, ceramics, and wood. The mix ratio of 1 to 1 by weight or volume allows easy measuring, and the creamy, smooth viscosity allows easy, uniform application. The cured material has excellent strength as well as good resistance to weak acids, moisture, and weather. ES6279 has been used successfully for many years in a variety of general bonding uses as well as numerous production applications.

Part No.	Description	Wt. (lbs.)	Price
02-30015	1/2 quart part A only	3.0	**$45.75**
02-30020	1/2 quart part B only	3.0	**$41.70**
02-30025	ES6279 QUART KIT	6.0	**$87.00**
02-30030	1/2 gallon part A only	12.0	**$129.75**
02-30035	1/2 gallon part B only	12.0	**$132.75**
02-30040	ES6279 GALLON KIT	24.0	**$261.95**
02-30045	1/2 pail part A only	60.0	**$466.95**
02-30050	1/2 pail part B only	60.0	**$418.95**
02-30055	ES6279 PAIL KIT	120.0	**$884.00**

PTM&W ES6209 AEROPOXY STRUCTURAL ADHESIVE



ES6209 is a translucent, straw colored two component epoxy adhesive with a thick, liquid consistency. ES6209 is an excellent structural adhesive for use when good flow and surface wetting are required. Though pourable it has a controlled flow viscosity to minimize run-out from the adhesive joint. The 1 to 1 combining ratio by weight or volume makes it easy to measure and mix. The working time of over an hour provides plenty of time to coat and assemble the materials to be bonded. ES6209 has excellent adhesion to composite and metal parts typically used in kitplane construction. It bonds rigid foam, wood, ceramics, fiberglass and most metals with ease. When cured ES6209 provides tough, durable structural joints. Mix Ratio: 1 to 1 by weight or volume; Color: Translucent Amber, Mixed Viscosity: 45,000-55,000cps; Pot Life 4fl. oz. Mass: 60-90 min @ 77°F; Cure Time @ 77°F 18-24 hrs, @ 140°F 2-3 hrs.

Quart Kit .....P/N 01-00295 ..... **$56.75**

ES6247 HIGH PEEL STRENGTH EPOXY ADHESIVE KITS

ES6247 is a two component toughened epoxy adhesive with very good cured properties that provides excellent bonds to a variety of substrates. Its blend of high lap shear and T-Peel values allow superior performance in demanding bonding applications. ES6247 adheres very well to wood, metal, composites and some plastics. The bonded components exhibit tough and durable performance for long term stability in use. Viscosity: Non-Sag Paste. Specific Gravity, gms./cc: 1.11. Mix Ratio: 100 : 50 By Weight or Volume. Pot Life, 4 fl.oz. Mass @ 77°F: 90 minutes.

Qt. Kit .....P/N 01-01595 ..... **$77.85**
Gal. Kit .....P/N -01-01596 ..... **$264.95**

METAL SET A4 ALUMINUM FILLED EPOXY ADHESIVE



Metalset A4® is a powerful epoxy adhesive that has been used for years by all branches of the U.S. Military as well as every major airline and auto manufacturer in the world. A4 is used for hundreds of industrial bonding applications and offers excellent adhesion to porous or non-porous surfaces. It can be applied to vertical surfaces without sagging and cures overnight with negligible shrinking. Once cured, A4 offers good machining qualities (sanding, drilling, tapping), and resists alkalies, dilute acids and solvents. Applications include stopping leaks in pipes, valves and tanks (i.e. car gas tanks), bonding like and unlike surfaces, filling metal joints, dents, etc., anchoring bolts in wood, concrete, and repairing metal surfaces.

6 oz tube - 16 hour cure time..... P/N 02-00220..... **$14.70**
11 oz tube ..... P/N 02-00233..... **$22.50**

PTM&W ES6228 METAL BONDING ADHESIVE



ES6228 is a thin paste viscosity epoxy adhesive designed to provide good bonds to metal surfaces. A unique feature of ES6228 is its ability to bond to slightly oily metal surfaces. This is useful in situations where the complete removal of residual mill oil on metal surfaces is not possible. The thin paste consistency of ES6228 wets the metal surface well, for good adhesion. This viscosity also provides some gap filling capabilities, so "close-fitting" joints are adequate, and matched-metal joints are not required. ES6228 has a 1:1 mix ratio, by weight or volume, for easy measuring. The white resin and black hardener combine to a smooth gray system that is easy to mix and apply, The cured material has very good properties, with high bond strength and elongation, for tough durable assemblies.

Quart Kit (4.5 lbs) ..... P/N 01-00415..... **$72.75**
Gallon Kit (18 lbs)..... P/N 01-00414..... **$227.95**

Product Specifications	ES6228-A Resin	ES6228-B Hardener	Test Method
Color	White	Black	Visual
Viscosity,cps	Thin Paste	Thin Paste	ASTM D2393
Specific Gravity	1.32	1.30	ASTM D1475
Density Lb./cu.in.	.0477	.0470	ASTM D792
Mix ratio	100:100 by weight or volume		PTM & W

SYSTEM THREE ROTFIX



Rotfix is an easy-to-use, low viscosity epoxy wood restoration system for consolidation of rotted, deteriorated, dried out, or spongy wood. It creates a strong water-resistant base for repair and restoration. Penetrates deep into wood for maximum strength. Use with Sculpwood for permanent structural repair or severely damaged wood. Kit includes 16 oz measuring/application bottle.

1.5 pint (24 oz) Kit ..... P/N 02-90050..... **$44.65/ea**

SYSTEM THREE SCULPWOOD



Sculpwood is a moldable, carvable, sandable epoxy putty for replacement of damaged wood. It forms a strong, permanent bond to most rigid surfaces and can be sawed, nailed, carved, machined, sanded, stained, painted, and screwed. Porous, rotted, or deteriorate wood should first be treated with RotFix.

2 pint (32 oz) Kit.....P/N 02-90055 ..... **$44.50/ea**

SYSTEM THREE QUICK CURE EPOXY



Quick Cure is a 5 min. epoxy from System Three which bonds wood, metals, fiberglass, ceramics, plastics and glass. Excellent for making quick repairs, as it hardens in 5 minutes at room temperature. Mixing ratio: 1 to 1. Not recommended for applications in excess of 200°F.

Pint Kit.....P/N 02-30060 ..... **$29.95**
Quart Kit.....P/N 02-30065 ..... **$53.85**

SCIGRIP 4SC LOW VOC ACRYLIC PLASTIC CEMENT



SCIGRIP 4SC is a water thin, somewhat flammable, cement formulated to quickly develop very clear and high strength bonds for many thermoplastic substrates. It will also bond with other thermoplastics such as polystyrene, CAB (cellulose acetate butyrate), and polycarbonate to themselves. It is not recommended for cross-linked acrylic.

P/N 03-00243 ..... **$23.50**

GORILLA SUPER GLUE



Its high strength and quick set time make Gorilla Super Glue the go-to for a variety of household projects. Developed for long-lasting repairs in an instant, Gorilla Super Glue is formulated with tiny rubber particles for increased impact resistance. We call it Impact-Tough® because it stands up to wear and tear unlike any other instant glue. Gorilla Super Glue Gel is an easy-to-use, thicker and more controlled formula great for multiple surfaces and vertical applications.

Super Glue .....P/N 09-04093 ..... **$3.95**
Super Glue Gel .....P/N 09-04094 ..... **$3.95**

METLWELD EPOXY ADHESIVE



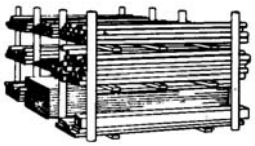
MetlWeld is a 2-part, equal volume ratio, room temperature curing epoxy adhesive. MetlWeld develops strength earlier than other comparable 1:1 systems and may be used at temps. as low as 50˚F. Metal to be bonded should be freshly sanded and clean from grease, wax, oil and other contaminants. Allow 48 hours min. to cure and develop strength at 77˚F (longer at cooler temps.) before subjecting to stress. Bonds plain & anodized aluminum, glazed & unglazed ceramic; concrete; copper; glass; galvanized and stainless steel; neoprene rubber and most porous materials. Does not bond acrylic, polyethylene, polypropylene, polystyrene or vinyl plastics.

1/2 Pint Kit ..... P/N 01-00406..... **$21.99**
Pint Kit ..... P/N 01-00407..... **$33.50**
Quart Kit ..... P/N 01-00408..... **$46.95**

Prices Subject to Change Without Notice

4130 STRUCTURAL TUBING

4130 ALLOY STEEL ROUND SEAMLESS TUBING MIL-T-6736 NORMALIZED /ANNEALED



4130 is a chromium-molybdenum general purpose alloy steel tubing that is weldable and is capable of developing good strength. It has been for years the standard of the aircraft industry. Tensile Strength: 90,000 PSI. The stock sizes listed below can be furnished in lengths from 1 foot to 12 feet. Large orders are filled in random lengths from 10 to 12 feet unless specific lengths are requested. No charge is made for cutting stock sizes of tubing to mailable length. Quotations furnished on unlisted sizes.

IF MFG TEST REPORTS ARE REQUIRED THERE IS A $15.00 CHARGE PER ORDER. PLEASE INDICATE AT TIME OF ORDER

O.D. (In.)	Wall Thickness	I.D. (In.)	Wt. Per Ft.	Part No.	Price Per Ft.
3/16	.035	.131	.0478	03-00183	$5.50
1/4	.028	.194	.0672	03-00250	$6.50
	.035	.180	.0804	03-00300	$3.60
	.049	.152	.1052	03-00400	$5.65
	.058	.134	.1189	03-00500	$13.50
	.065	.120	.1284	03-00510	$8.55
5/16	.028	.256	.0852	03-00600	$7.75
	.035	.243	.1039	03-00700	$5.35
	.049	.215	.1382	03-00800	$6.95
	.058	.196	.1580	03-00810	$6.50
	.065	.182	.1722	03-00900	$7.90
	.095	.123	.2212	03-01000	$6.94
3/8	.028	.319	.1038	03-01100	$5.25
	.035	.305	.1271	03-01200	$4.35
	.049	.277	.1706	03-01300	$4.50
	.058	.259	.1964	03-01400	$4.35
	.065	.249	.2152	03-01500	$4.20
	.083	.209	.2588	03-01600	$7.50
	.095	.185	.2841	03-01610	$5.99
7/16	.035	.367	.1506	03-01700	$4.45
	.049	.340	.2036	03-01800	$5.70
	.058	.125	.236	03-00067	$6.50
	.065	.307	.2589	03-02000	$5.25
	.095	.247	.3480	03-02100	$7.50
	.120	.197	.4075	03-02200	$7.55
1/2	.028	.444	.1411	03-02300	$4.80
	.035	.430	.1738	03-02400	$3.85
	.049	.402	.2360	03-02500	$4.35
	.058	.384	.2738	03-02600	$3.50
	.065	.370	.3020	03-02700	$5.45
	.083	.334	.3696	03-02710	$4.90
	.095	.310	.4109	03-02800	$7.50
	.120	.260	.4870	03-02900	$5.97
9/16	.035	.492	.1974	03-03000	$8.25
	.049	.464	.2690	03-03100	$5.60
	.065	.432	.3457	03-03200	$9.25
	.120	.322	.5677	03-03400	$8.96
5/8	.028	.569	.1785	03-03500	$5.35
	.035	.555	.2205	03-03600	$2.94
	.049	.527	.3014	03-03700	$3.95
	.058	.509	.3512	03-03800	$3.99
	.065	.495	.3888	03-03900	$4.45
	.095	.435	.5377	03-04000	$7.90
	.120	.385	.6472	03-04100	$5.35
	.156	.313	.7814	03-04110	$9.89
3/4	.028	.694	.2159	03-04250	$5.75
	.035	.680	.2673	03-04300	$3.65
	.049	.652	.3668	03-04400	$3.35
	.058	.634	.4287	03-04500	$3.35
	.065	.620	.4755	03-04600	$4.35
	.095	.560	.6646	03-04700	$7.50
	.120	.510	.8074	03-04800	$5.95
	.156	.437	.9897	03-04900	$7.50
	.188	.375	1.128	03-05000	$10.55
7/8	.035	.805	.3140	03-05300	$3.90
	.049	.777	.4323	03-05400	$4.75
	.058	.759	.5061	03-05500	$4.55
	.065	.745	.5623	03-05600	$5.15
	.083	.709	.7021	03-05700	$4.95
	.095	.685	.7914	03-05800	$6.25
	.120	.635	.9676	03-05900	$7.55
	.188	.500	1.379	03-06000	$12.50

O.D. (In.)	Wall Thickness	I.D. (In.)	Wt. Per Ft.	Part No.	Price Per Ft.
1	.028	.944	.2907	03-06110	$6.75
	.035	.930	.3607	03-06100	$3.95
	.049	.902	.4977	03-06200	$3.75
	.058	.884	.5835	03-06300	$3.70
	.065	.870	.6491	03-06400	$3.75
	.083	.834	1.0	03-06450	$5.75
	.095	.810	.9182	03-06500	$4.40
	.120	.760	1.128	03-06600	$7.50
	.156	.687	1.406	03-06700	$10.50
	.188	.625	1.630	03-06800	$12.75
1-1/8	.035	1.055	.4074	03-06900	$7.90
	.049	1.027	.5631	03-07000	$5.35
	.058	1.009	.6609	03-07100	$4.45
	.065	.995	.7359	03-07200	$5.35
	.095	.935	1.045	03-07300	$6.75
	.120	.885	1.288	03-07400	$11.80
1-1/4	.035	1.180	.4542	03-07500	$5.60
	.049	1.152	.6285	03-07600	$5.25
	.058	1.134	.7384	03-07700	$4.25
	.065	1.120	.8226	03-07800	$4.65
	.083	1.084	2.132	03-07810	$5.35
	.095	1.060	1.172	03-07900	$5.85
	.120	1.010	1.448	03-08000	$6.85
	.156	.938	1.823	03-08100	$14.55
1-3/8	.035	1.305	.5009	03-08210	$5.90
	.049	1.277	.6939	03-08200	$6.85
	.058	1.259	.8158	03-08300	$5.35
	.065	1.245	.9094	03-08400	$4.55
	.095	1.185	1.299	03-08500	$5.75
	.120	1.135	1.609	03-08600	$9.70
	.188	1.000	2.383	03-08700	$12.90
1-1/2	.035	1.430	.5476	03-08800	$6.75
	.049	1.402	.7593	03-08900	$5.70
	.058	1.384	.8932	03-09000	$4.95
	.065	1.370	.9962	03-09100	$4.95
	.083	1.334	1.256	03-09110	$6.60
	.095	1.310	1.426	03-09200	$6.75
	.120	1.260	1.769	03-09300	$7.75
	.188	1.125	2.634	03-09400	$13.90
1-5/8	.058	1.509	.9707	03-09600	$10.50
	.065	1.495	1.083	03-09700	$7.50
	.083	1.459	1.10	03-00042	$6.75
	.095	1.435	1.552	03-09800	$9.60
	.120	1.385	1.929	03-09900	$11.70
	.156	1.312	2.447	03-10000	$13.90
	.188	1.250	2.885	03-10100	$14.50
1-3/4	.049	1.652	.8902	03-10200	$7.85
	.058	1.634	1.048	03-10210	$8.98
	.065	1.620	1.170	03-10300	$8.00
	.095	1.560	1.679	03-10400	$6.95
	.120	1.510	2.089	03-10500	$9.85
	.188	1.375	3.136	03-10510	$15.70
1-7/8	.250	1.375	2.249	03-10600	$20.50
2	.049	1.902	1.021	03-10710	$12.50
	.065	1.870	1.343	03-10800	$8.50
	.095	1.810	1.933	03-10900	$11.50
	.120	1.760	2.409	03-11000	$11.50
	.188	1.625	3.638	03-00193	$18.75
2-1/4	.120	2.010	2.730	03-11100	$15.50
2-1/2	.095	1.81	1.933	03-11150	$17.50
	.250	2.000	6.008	03-11206	$24.70
	.120	2.260	3.050	03-11200	$14.90
	.125	2.510	3.370	03-11210	$30.60

Please call for price on any unlisted size.
Discount of 10% for 100 ft. or more of the same part number.

Ordering tubing/bar by the foot.
Add a dash number after part number to indicate length of tubing required.
Ex: 3 ft required add -3, 03-00100-3.

4130 TUBING KITS

We furnish complete 4130 tubing kits for a variety of aircraft designs including the Skybolt, Pitts Special, Acro Sport, Starduster, Osprey, and many more. The kits contain sufficient round, square, & streamline tubing to produce the pieces shown on our materials list for each design. We urge the builder to verify his own materials list against ours. Request kit list you require & current quotation. Enjoy big savings by purchasing a complete tubing kit for your aircraft at one time.

TUBE SEAL (LINE OIL)

Prevents rust and corrosion inside aircraft tubing structures. Will climb tubing wall and spread over entire surface. Will penetrate and reveal small pin holes in a weld and in time, due to exposure, will congeal and seal the hole. Directions on label. One quart will treat two light aircraft fuselages. Quart.....P/N 03-14000.....**$26.00**

BARGAIN BAG 4130 TUBING

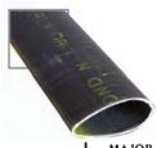
Starter Kit - An assortment of 4130 tubing, rod and bar in short lengths to practice welding. At least 15 ft. of tubing in assorted sizes and wall thicknesses. Furnished subject to availability of cutoffs.

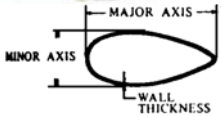
P/N 03-15900 .....**$27.85**

STEEL TUBING & ROD

ME

4130 STREAMLINE TUBING MIL-T6736 NORMALIZED





The prices for streamline tubing have increased sharply. The only manufacturer of streamline tubing, Columbia Summerill, have encountered problems with cracking on the trailing edge intermittently for many years and it has been a worrisome problem for builders. In an effort to control the situation, Columbia Summerill have installed sophisticated inspection equipment in their plant to assure that no cracked tubing gets into the field again. The cost of the equipment is reflected in the prices for the tubing which must be shared by all.

Major Axis	Minor Axis	Wall	Equivalent Round Tension	Equivalent Tubing Compr.	Wt./ Ft.	Part No.	Price Per Ft
1.150	.745	.035	7/8	7/16	0.314	03-00232	**$15.75**
1.180	.500	.035	7/8”	7/16”	.3140	03-11400	**$19.90**
1.30	.600	.049	1	5/8	0.498	03-00233	**$12.50**
1.349	.571	.049	1”	5/8”	.4977	03-11500	**$14.95**
1.645	.740	.049	1-1/4	3/4	0.629	03-00234	**$14.85**
1.685	.714	.049	1-1/4”	3/4”	.6285	03-11600	**$18.95**
1.990	.870	.049	1-1/2	1	0.759	03-00235	**$17.50**
2.023	.857	.049	1-1/2”	1”	.7593	03-11700	**$20.75**
2.360	.960	.049	1-3/4	1-1/8	0.890	03-00236	**$23.95**
2.360	1.000	.049	1-3/4”	1-1/8”	.8902	03-11800	**$25.50**
2.665	1.140	.065	2	1-1/2	1.343	03-00237	**$27.50**
2.697	1.143	.065	2”	1-1/4”	1.021	03-00192	**$39.95**
3.372	1.429	.049	2-1/2”	1-1/2”	1.283	03-12000	**$48.65**

4130 AIRFRAME SQUARE & RECTANGULAR TUBING MIL-T-6736 NORMALIZED



O.D. (In.)	Wall (In.)	Weight Per Ft.	Part No.	Price Per Ft.
1/2 x 1/2	.035	.2213	03-12200	$8.95
1/2 x 1	.065	.6055	03-12350	$11.50
5/8 x 5/8	.035	.2808	03-12400	$9.60
	.049	.4234	03-12500	$10.50
	.065	.388	03-12600	$10.78
3/4 x 3/4	.035	.3403	03-12700	$9.50
	.049	.4671	03-12800	$11.55
	.065	.6055	03-13000	$11.90
	.065	.7160	03-13300	$16.95
1 x 1	.035	.4593	03-13400	$10.50
	.049	.6337	03-13500	$11.50
	.065	.8265	03-13700	$12.50
3/4 x 1-1/2	.049	.9057	03-13900	$12.60
1 x 1-3/4	.065	1.158	03-13950	$16.75

E-4340 ROUND STEEL ROD

SPEC. MIL-S-8503 COLD FINISHED ANNEALED



E4340 rod has high fatigue strength and maintains its hardness and strength qualities even at high temperatures. Excellent for use in highly stressed parts. Meets AMS2032 and is furnished normalized and tempered cold finished.

Dia. (In.)	Wt./Ft. (Lbs.)	Part No.	Price / Ft.
1	2.67	03-26700	$44.50
1-1/4	4.173	03-26850	$29.99
1-3/8	5.049	03-26900	$35.55
2	11.20	03-26950	$77.80

STAINLESS STEEL ROD TYPE 304 CD



3/16” Diameter type 304 CD stainless steel rod. Used in “new canard” for Long-EZ as specified by RAF.

P/N 03-26600 ..... **$3.00/ft.**



STAINLESS STEEL TUBING

Tubing Type	O D.	Wall	Part No.	Price/Ft.
304 Welded	3/8”	.028”	03-16100	$6.75
321 Welded	1-1/2”	.035”	03-16300	$20.90
321 Welded	1- 3/4”	.035”	03-16400	$22.93
321 Welded	2”	.035”	03-16500	$24.85
304 Seamless	1/8	.020”	03-00148	$11.78
304 Seamless	1/8”	.035”	03-16010	$3.95
304 Seamless	3/16”	.035”	03-16020	$4.97
304 Seamless	1/4”	.035”	03-16030	$2.96
304 Seamless	5/16”	.035”	03-16040	$5.75
304 Seamless	3/8”	.035”	03-16045	$3.20
304 Seamless	1/2”	.035”	03-16050	$7.97
304 Seamless	5/8”	.035”	03-16060	$5.85
321 Seamless	1-1/4”	.028”	03-16540	$22.50
321 Seamless	1-1/2”	.035”	03-16560	$28.60

BUSHING STOCK 1015/1020 STEEL

Seamless mechanical tubing may be used either statically or dynamically. Its close tolerance, good finish and dense structure make it ideal for parts such as shafts, bushings, bearings, etc. Tensile strength 80,000 PSI. Drill or ream for proper bolt fit.

SPECIFY CUTTING INSTRUCTIONS FOR SHIPMENT

O.D.	I.D.	Wall	Part No.	Price/Ft.
3/8”	1/4”	.065”	03-16700	$2.44
1/2”	3/8”	.065”	03-16900	$1.88
5/8”	1/2”	.065”	03-17100	$2.16

ROUND BRASS SEAMLESS TUBING

O.D.	I.D	Wall	Part No.	Price / Ft.
1 /4”	3/16”	.032”	03-17300	$1.78
5 /16”	3/16”	.065”	03-17400	$5.60
7 / 16”	5/16”	.065”	03-17600	$8.70
1/ 2”	3/8”	.065”	03-17800	$10.55



4130 ROUND STEEL ROD COLD FINISHED

SPEC. MLL-S-6758A-NORMALIZED

Dia (In.)	Wt./Ft.	Part No.	Price / Ft.
1/8	.042	03-20100	$1.10
3/16	.092	03-20200	$1.84
1/4	.167	03-20300	$2.06
5/16	.261	03-20400	$2.82
3/8	.376	03-20500	$5.40
7/16	.511	03-20600	$1.77
1/2	.668	03-20700	$6.50
9/16	.845	03-20800	$3.35
5/8	1.043	03-20900	$2.78
3/4	1.502	03-21000	$5.40
7/8	2.044	03-21100	$13.60
1	2.670	03-21200	$9.50
1-1/4	4.173	03-21300	$11.70
1-3/8	5.049	03-21400	$35.50
1-1/2	6.008	03-21500	$24.50
1-3/4	8.178	03-21600	$30.85

Ordering tubing/bar by the foot. Add a dash number after part number to indicate length of tubing required. Ex: 3 ft required add -3, 03-00100-3.



3/8” PIPER CHANNEL

Available in mild steel. 0.020” thick.
6-ft. length ..... P/N 05-04564 ..... **$10.80**

IF MFG TEST REPORTS ARE REQUIRED THERE IS A $15.00 CHARGE PER ORDER. PLEASE INDICATE AT TIME OF ORDER

4130 SHEET



4130 STEEL SHEETS & STRIPS MIL-S-6345A NORMALIZED

This chromium-molybdenum alloy is one of the most widely used aircraft steels because of its combination of weldability, ease of fabrication and mild hardenability. It will respond to heat treatment to high strength levels and yet, in the annealed condition, it has adequate strength for many applications. Used for the manufacture of parts and components. Tensile strength 75,000-85,000 PSI. Furnished cold-rolled and oiled in sheet thicknesses of .025-.125 inch. Sheets of .190-.250 inch and greater thickness are hot-rolled, pickled and oiled. Sheared to sheet and strip sizes listed below. Subject to availability of normalized sheet, annealed 4130 sheet may be substituted.

4130 STEEL SHEET

Thickness (In.)	Price per Piece												
	6" x 12'		9" x 9"		9" x 18"		18" x 18"		18" x 36"		18" x 72"		Wt.**
	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	(Lbs.)
.025	03-21800	**$1.58**	03-21850	**$2.84**	03-21900	**$5.04**	03-22000	**$11.25**	03-22100	**$22.50**	03-22150	**$45.00**	2.30
.032	03-22510	**$4.75**	03-22515	**$5.50**	03-22520	**$10.75**	03-22525	**$21.25**	03-22530	**$42.25**	03-22535	**$83.75**	---
.040	03-22600	**$3.35**	03-22650	**$3.77**	03-22700	**$7.75**	03-22800	**$14.96**	03-22900	**$29.93**	03-22950	**$59.85**	3.75
.050	03-23000	**$1.94**	03-23050	**$4.35**	03-23100	**$8.75**	03-23200	**$17.46**	03-23300	**$34.93**	03-23350	**$69.85**	4.80
.063	03-23400	**$5.25**	03-23450	**$6.75**	03-23500	**$11.75**	03-23600	**$21.75**	03-23700	**$42.65**	03-23750	**$83.75**	5.85
.071	03-23800	**$6.75**	03-23850	**$7.75**	03-23900	**$14.85**	03-24000	**$29.85**	03-24100	**$59.60**	03-24150	**$119.95**	6.55
.080	03-24200	**$6.25**	03-24250	**$8.50**	03-24300	**$14.75**	03-24400	**$26.75**	03-24500	**$51.75**	03-24550	**$103.95**	7.15
.090	03-24600	**$8.75**	03-55500	**$9.25**	03-24700	**$18.25**	03-24800	**$36.25**	03-24900	**$72.25**	03-24950	**$144.95**	8.15
.100	03-25000	**$8.39**	---	**---**	03-25100	**$18.72**	03-25200	**$37.44**	03-25300	**$74.88**	03-25350	**$149.75**	10.45
.125	03-55300	**$9.95**	03-25370	**$13.25**	03-25400	**$22.75**	03-25500	**$42.50**	03-25600	**$82.00**	---	**---**	11.25
.190	---	**--**	03-25660	**$18.70**	03-25700	**$34.00**	03-25750	**$71.50**	03-26025	**$136.95**	---	**---**	17.50
.250	---	**---**	03-25850	**$21.78**	03-25900	**$44.65**	03-25950	**$87.25**	03-26050	**$174.50**	03-00106	**$349.00**	94.00

***** Wt. per 18" x 18" sheet.***

Less 10% discount on 6 sheets 18" x 36" or 3 sheets of 18" x 72" per part number.

4130 STEEL STRIPS

Thickness	Size	Part No.	Price*
.025	5/8" x 72"	03-18000-6	**$1.58**
.025	1" x 72"	03-18100-6	**$2.52**
.032	5/8" x 72"	03-18110-6	**$2.95**
.032	1" x 72"	03-18120-6	**$4.75**
.032	2" x 72"	03-18130-6	**$9.50**
.032	3" x 72"	03-18140-6	**$13.50**
.040	5/8" x 72	03-18200-6	**$2.10**
.040	1" x 72"	03-18300-6	**$3.35**
.040	2" x 72"	03-18310-6	**$6.64**
.040	3" x 72"	03-18320-6	**$9.90**
.050	1" x 72"	03-18400-6	**$4.19**
.050	2" x 72"	03-18410-6	**$8.38**
.050	3" x 72"	03-18420-6	**$11.88**
.063	5/8" x 72"	03-18500-6	**$3.35**
.063	3/4" x 72"	03-18600-6	**$3.35**
.063	1" x 72"	03-18700-6	**$4.95**
.063	1-1/4" x 72"	03-18800-6	**$6.75**
.063	1-1/2" x 72"	03-18900-6	**$6.75**
.063	2" x 72"	03-19000-6	**$9.95**
.063	3" x 72"	03-19100-6	**$13.50**
.071	5/8" x 72"	03-19180-6	**$4.20**
.071	1" x 72"	03-19200-6	**$6.75**
.071	2" x 72"	03-19210-6	**$13.50**
.071	3" x 72"	03-19220-6	**$19.92**
.080	5/8" x 72"	03-19280-6	**$4.20**
.080	1" x 72"	03-19290-6	**$6.25**
.080	2" x 72"	03-19300-6	**$11.75**
.090	1" x 72"	03-19400-6	**$8.75**
.090	1-1/2" x 72"	03-19500-6	**$12.25**
.090	2" x 72"	03-19520-6	**$17.50**
.090	3" x 72"	03-19600-6	**$24.25**
.100	1" x 72"	03-19610-6	**$8.39**
.100	1-1/2" x 72"	03-19620-6	**$12.58**
.100	3" x 72"	03-19630-6	**$25.01**
.125	1" x 72"	03-19700-6	**$9.93**
.125	1-1/2" x 72"	03-19800-6	**$13.25**
.125	2" x 72"	03-19820-6	**$19.50**
.125	3" x 72"	03-19900-6	**$26.00**
.250	1-1/4" x 18"	03-20000	**$6.90**

**** 3-Ft. lengths available at the half price of 6' lengths.***

6 ft. lengths are subject to UPS oversize charges. Consider 3 ft. lengths which ship at cheaper rates

4130 STEEL SHEET

(As Used in Christavia Kits)

Thickness	Size	Part No.	Price
.040	8" x8"	03-56302	**$2.95**
.040	12" x 12"	03-56304	**$6.64**
.040	12" x 20"	03-56316	**$11.13**
.040	10" x 26'	03-56312	**$12.35**
.040	12" x 24"	03-56306	**$13.65**
.040	14" x 30"	03-56308	**$19.40**
.040	18" x30"	03-56310	**$24.90**
.040	24" x 24"	03-56314	**---**
.050	4" x 24"	03-56320	**$5.17**
.050	12" x 12"	03-56318	**$7.76**
.050	8" x 24"	03-56322	**$10.50**
.050	12" x 24"	03-56324	**$15.65**
.063	10" x 10"	03-56326	**$6.75**
.063	10" x 14"	03-56332	**$8.50**
.063	12" x 12"	03-56328	**$9.93**
.063	12" x 24"	03-56330	**$18.50**
.071	4" x 4"	03-56334	**$1.44**
.071	12" x 12"	03-56336	**$13.50**
.071	12" x 24"	03-56338	**$19.90**
.080	2" x 10"	03-56354	**$2.10**
.080	12" x 24"	03-56340	**$22.50**
.090	2" x 10"	03-56344	**$2.25**
.090	6" x 8"	03-56342	**$10.70**
.090	12" x 24"	03-56346	**$32.25**
.125	10" x 24"	03-56348	**$29.25**
.125	12" x 24"	03-56350	**$35.70**

E4340 RECTANGULAR FLAT STEEL

SPEC. MIL-S-5000 ANNEALED

This chromium-nickel-molybdenum alloy, "king" of the hardening grades of alloy steels, possesses much deeper hardenability than the 4100 series. The fatigue-tensile ratio makes it ideal for highly stressed parts such as landing gear legs, and is often referred to as "spring steel". Tensile strength is about 110,000 PSI. It is difficult to weld but can be welded by any of the common welding processes providing the section is preheated and stress relieved after welding.

Size (In.)	Wt./Ft (Lbs.)	Part No.	Price/Ft.
1/4 x 1-1/2	1.275	03-26100	**$20.50**
1/4 x 2	1.702	03-26150	**$18.00**
3/8 x 2	2.550	03-26200	**$38.50**
1/2 x 3	5.100	03-26300	**$34.60**
1/2 x 4	6.800	03-26400	**$54.75**

VACUUM MELTED LOW ALLOY 4130 STEEL WELDING WIRE

This high quality welding rod is produced from vacuum melted material. This material has ultra-low levels of oxygen, hydrogen, and nitrogen and is extremely low in trace elements. This rod is cleaner than standard rods and is the best available for 4130 welding. .062 dia. 36" long. Appro. 32 units per pound.

P/N 03-27600.....**$66.75/lb.**

BRASS BRAZING ROD

1/16" ..... P/N 03-27625 .....**$12.50/lb.**
3/32" ..... P/N 03-00118 .....**$11.50/lb.**

WELDING ROD NO. 7



For big-strength welds in steel plate, sheet, structural shapes, pipe and steel castings. Supplied in 36" lengths in sizes 1/16", 3/32" and 1/8".

NO. 32CMS – Recommended for 4130 steel structures for most satisfactory results. This rod is heat-treatable after welding.

1/16" Dia .....P/N 03-27000 ..... **$9.95/lb.**
3/32" Dia .....P/N 03-27100 ... **$18.50/lb.**
1/8" Dia. .....P/N 03-27200 ..... **$9.85/lb.**

NO. 7 – Used in general commercial welding and by many mechanics for non-heat-treated airframe repairs.

1/16" Dia.....P/N 03-27300 ....**$14.50/lb.**
3/32" Dia.....P/N 03-27400 .....**$8.45/lb.**
1/8" Dia.....P/N 03-27500 ....**$13.60/lb.**

WELD BRUSH



Stainless steel bristles set in curved wooden handle. Just right for cleaning welds. 1/2" Wide x 8" Long.

P/N 03-26500 .....**$2.25**

For Alumium Welding Rod, see page 56. For Welding Equipment Tools Section.

IF MFG TEST REPORTS ARE REQUIRED THERE IS A $15.00 CHARGE PER ORDER. PLEASE INDICATE AT TIME OF ORDER

ALUMINUM – THE MOST COMMON GRADES

ME

1100 This grade is commercially pure aluminum. It is soft and ductile and has excellent workability. It is ideal for applications involving intricate forming because it work hardens more slowly than other alloys. It is the most weldable of aluminum alloys, by any method. It is non heat-treatable. It has excellent resistance to corrosion and is widely used in the chemical and food processing industries. It responds well to decorative finishes which make it suitable for giftware.

2011 This is the most free-machining of the common aluminum alloys. It also has excellent mechanical properties. Thus, it is widely used for automatic screw machine products in parts requiring extensive machining.

2014 & 2017 The 2017 alloy combines excellent machinability and high strength with the result that it is one of the most widely used alloys for automatic screw machine work. It is a tough, ductile alloy suitable for heavy-duty structural parts. Its strength is slightly less than that of 2014.

2024 This is one of the best known of the high strength aluminum alloys. With its high strength and excellent fatigue resistance, it is used to advantage on structures and parts where good strength-to-weight ratio is desired. It is readily machined to a high finish. It is readily formed in the annealed condition and may be subsequently heat treated. Arc or gas welding is generally not recommended, although this alloy may be spot, seam or flash welded. Since corrosion resistance is relatively low, 2024 is commonly used with an anodized finish or in clad form ("Alclad") with a thin surface layer of high purity aluminum. Applications: aircraft structural components, aircraft fittings, hardware, truck wheels and parts for the transportation industry.

3003 This is the most widely used of all aluminum alloys. It is essentially commercially pure aluminum with the addition of manganese which increases the strength some 20% over the 1100 grade. Thus, it has all the excellent characteristics of 1100 with higher strength. It has excellent corrosion resistance. It has excellent workability and it may be deep drawn or spun, welded or brazed. It is non heat treatable. Applications: cooking utensils, decorative trim, awnings, siding, storage tanks, chemical equipment.

5005 This alloy is generally considered to be an improved version of 3003. It has the same general mechanical properties as 3003 but appears to stand up better in actual service. It is readily workable. It can be deep drawn or spun, welded or brazed. It has excellent corrosion resistance. It is non heat-treatable. It is well suited for anodizing and has less tendency to streak or discolor. Applications same as 3003.

5052 This is the highest strength alloy of the more common non heat-treatable grades. Fatigue strength is higher than most aluminum alloys.In addition this grade has particularly good resistance to marine atmosphere and salt water corrosion. It has excellent workability. It may be drawn or formed into intricate shapes and its slightly greater strength in the annealed condition minimizes tearing that occurs in 1100 and 3003. Applications: Used in a wide variety of applications from aircraft components to home appliances, marine and transportation industry parts, heavy duty cooking utensils and equipment for bulk processing of food.

5083 & 5086 For many years there has been a need for aluminum sheet and plate alloys that would offer, for high strength welded applications, several distinct benefits over such alloys as 5052 and 6061. Some of the benefits fabricators have been seeking are greater design efficiency, better welding characteristics, good forming properties, excellent resistance to corrosion and the same economy as in other non heat-treatable alloys. Metallurgical research has developed 5083 and 5086 as superior weldable alloys which fill these needs. Both alloys have virtually the same characteristics with 5083 having slightly higher mechanical properties due to the increased manganese content over 5086. Applications: unfired pressure vessels, missile containers, heavy-duty truck and trailer assemblies, boat hulls and superstructures.

6061 This is the least expensive and most versatile of the heat-treatable aluminum alloys. It has most of the good qualities of aluminum. It offers a range of good mechanical properties and good corrosion resistance. It can be fabricated by most of the commonly used techniques. In the annealed condition it has good workability. In the T4 condition fairly severe forming operations may be accomplished. The full T6 properties may be obtained by artificial aging. It is welded by all methods and can be furnace brazed. It is available in the clad form ("Alclad") with a thin surface layer of high purity aluminum to improve both appearance and corrosion resistance. Applications: This grade is used for a wide variety of products and applications from truck bodies and frames to screw machine parts and structural components. 6061 is used where appearance and better corrosion resistance with good strength are required.

6063 This grade is commonly referred to as the architectural alloy. It was developed as an extrusion alloy with relatively high tensile properties, excellent finishing characteristics and a high degree of resistance to corrosion. This alloy is most often found in various interior and exterior architectural applications, such as windows, doors, store fronts and assorted trim items. It is the alloy best suited for anodizing applications - either plain or in a variety of colors.

7075 This is one of the highest strength aluminum alloys available. Its strength-to weight ratio is excellent and it is ideally used for highly stressed parts. It may be formed in the annealed condition and subsequently heat treated. Spot or flash welding can be used, although arc and gas welding are not recommended. It is available in the clad ("Alclad") form to improve the corrosion resistance with the over-all high strength being only moderately affected. Applications: Used where highest strength is needed.

Prices Subject to Change Without Notice

ALUMINUM ALLOY DESIGNATIONS

The aluminum industry uses a four-digit index system for the designation of its wrought aluminum alloys.

As outlined below, the first digit indicates the alloy group according to the major alloying elements.

1XXX SERIES

In this group. minimum aluminum content is 99%. and there is no major alloying element.

The second digit indicates modifications in impurity limits. If the second digit is zero, there is no special control on individual impurities. Digits 1 through 9, which are assigned consecutively as needed, indicate special control of one or more individual impurities.

The last two digits indicate specific minimum aluminum content. Although the absolute minimum aluminum content in this group is 99% the minimum for certain grades is higher than 99%, and the last two digits represent the hundredths of a per cent over 99.

Thus, 1030 would indicate 99.30% minimum aluminum. without special control on individual impurities. The designations 1130, 1230, 1330, etc.. indicate the same purity with special control on one or more impurities. Likewise. 1100 indicates minimum aluminum content of 99.00% with individual impurity control.

2XXX THROUGH 9XXX SERIES

The major alloying elements are indicated by the first digit, as follows:

2xxx	Copper
3xxx	Manganese
4xxx	Silicon
5xxx	Magnesium
6xxx	Magnesium and silicon
7xxx	Zinc
8xxx	Other element
9xxx	Unused series

The second digit indicates alloy modification. If the second digit is zero. it indicates the original alloy: digits 1 through 9, which are assigned consecutively, indicate alloy modifications. The last two digits have no special significance, serving only to identify the different alloys in the group.

EXPERIMENTAL ALLOYS

Experimental alloys are designated according to the four digit system, but they are prefixed by the letter X. The prefix is dropped when the alloy becomes standard. During development, and before they are designated as experimental, new alloys are identified by serial numbers assigned by their originators. Use of the serial number is discontinued when the X number is assigned.

ALUMINUM TEMPER DESIGNATIONS

Temper designations of wrought aluminum alloys consist of suffixes to the numeric alloy designations. For example, in 3003-H14, 3003 denotes the alloy and “H14” denotes the temper, or degree of hardness. The temper designation also reveals the method by which the hardness was obtained. Temper designations differ between non heat-treatable alloys and heat-treatable alloys. and their meanings are given below:

NON HEAT-TREATABLE ALLOYS

The letter “H” is always followed by 2 or 3 digits. The first digit indicates the particular method used to obtain the temper. as follows:

— Hl means strain hardened only.

— H2 means strain hardened, then partially annealed.

— H3 means strain hardened, then stabilized.

The temper is indicated by the second digit as follows:

2	1/4 hard
4	l/2 hard
6	3/4 hard
8	full hard
9	extra hard

Added digits indicate modification of standard practice.

HEAT-TREATABLE ALLOYS

-F	As fabricated
-O	Annealed
-T	Heat treated

The letter “T” is always followed by one or more digits. These digits indicate the method used to produce the stable tempers, as follows:

-T3	Solution heat treated, then cold worked.
-T351	Solution heat treated, stress-relieved stretched, then cold worked.
-T36	Solution heat treated, then cold worked (controlled).
-T4	Solution heat treated, then naturally aged.
-T451	Solution heat treated, then stress relieved stretched.
-T5	Artificially aged only.
-T6	Solution heat treated, then artificially aged.
-T61	Solution heat treated (boiling water quench), then artificially aged.
-T651	Solution heat treated, stress-relieved stretched, then artificially aged (precipitation heat treatment).
-T652	Solution heat treated, stress relieved by compression. then artificially aged.
-T7	Solution heat treated, then stabilized.
-T8	Solution heat treated, cold worked, then artificially aged.
-T81	Solution heat treated, cold worked (controlled), then artificially aged.
-T851	Solution heat treated, cold worked, stress-relieved stretched, then artificially aged.
-T9	Solution heat treated, artificially aged, then cold worked.
-T10	Artificially aged, then cold worked.
	Added digits indicate modification of standard practice.

COMPARISON OF MODERN & OLD SYSTEMS OF ALUMINUM ALLOY DESIGNATION

Although the old system of aluminum identification has been obsolete for many years, stock with the old markings is still occasionally found. The following comparison is presented as an aid in identifying such materials in terms of the modern system.

In the old system, alloy composition was indicated by a one- or two-digit number followed by the letter “S” to indicate that it was a wrought alloy, i.e., an alloy that could be shaped by rolling, drawing or forging. Any variation in the basic composition was indicated by a letter preceding the numerical alloy designation. For example, A17S was a modification of the basic alloy 17S. In modern terminology these two alloys are designated 2117S and 2017S, respectively. Temper was designated by a second letter: “O” for soft (annealed), “H”for strain hardness of non heat-treatable alloys, and “T”for hardness of heat-treatable alloys. Degree of hardness of non heat-treatable alloys was indicated by a fraction preceding the letter “H”. For example, 3S1/4H would be quarter-hard 3S alloy.

The following Table gives examples of the old and modern designations of some common aluminum alloys.

Modern System	*Old System*
1100	2S
3003	3S
3003-0	3SO
2014	14S
2017	17S
2117	A17S
2018	18S
2218	B18S
2024T	24ST
5052	52S
7075T6	75ST6

ALUMINUM PLATE & SHEET DATA

ALUMINUM ALLOY CHARACTERISTICS

Alloy		Temper	Gen'l. Availability: Flat Sheet	Coil Sheet	Cut to Length Sheet	Plate	Typical Characteristics*: Corrosion Resistance	Cold Workability	Machinability	Brazability	Weldability: Gas	Arc	Resistance, spot and steam	Specified Mechanical Properties — Tensile Strength - Ksi: Ultimate Minimum	Ultimate Maximum	Yield Minimum	Yield Maximum	Elongation in 2" or 4 times diameter -percent minimum: Sheet	Plate
Non-Heat Treatable Alloys	**1100**	O	x	x	x	-	A	A	D	A	A	A	B	11	15.5	3.5[1]	-	15-30	-
		H14	X	X	X	-	A	A	C	A	A	A	A	16	21	14[1]	-	3-9	-
		F	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
	3003	O	X	X	X	-	A	A	D	A	A	A	B	14	19	5[1]	-	14-25	-
		H14	X	X	X	-	A	B	C	A	A	A	A	20	26	17[1]	-	1-7	-
		F	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
	5052	O	X	X	X	-	A	A	D	C	A	A	B	25	31	9.5[1]	-	15-20	-
		H32	X	X	X	X	A	B	C	C	A	A	A	31	38	23[1]	-	4-9	11-12
		H34	X	X	X	-	A	B	C	C	A	A	A	34	41	26[1]	-	3-7	-
Heat-Treatable Alloys	**Bare 2024**	O[3]	X	-	-	X	C	B	D	D	D	C	B	-	32	-	14	12	12
		T3	X	-	-	-	C	C	B	D	D	C	A	63-64	-	42	-	10-15	-
		T351	-	-	-	X	C	C	B	D	D	C	A	56-64	-	40-41	-	-	4-12
		T42[2]	-	-	-	-	C	C	B	D	D	C	A	58-62	-	38	-	12-15	4-12
	Alclad 2024	O[3]	X	X	-	X	A	B	D	D	D	C	B	-	30-32	-	14	10-12	12
		T3	X	-	-	-	A	D	B	D	D	C	A	58-63	-	39-40	-	10-15	-
		T351	-	-	-	X	A	D	B	D	D	C	A	56-63	-	40-41	-	-	4-8
		T42[2]	-	-	-	-	A	D	B	D	D	C	A	55-61	-	34-38	-	10-15	4-12
	6061	O[31]	X	X	-	X	A	A	D	A	A	A	B	-	22	12	12	10-18	16-18
		T4	X	-	-	-	A	C	C	A	A	A	A	30	-	16	-	10-16	-
		T6	X	-	-	-	A	C	C	A	A	A	A	42	-	35	-	4-10	-
		T651	-	-	-	X	A	C	C	A	A	A	A	40-42	-	35	-	-	6-10
		T42[2]	-	-	-	-	A	C	C	A	A	A	A	30	-	14	-	10-16	16-18
	Bare 7075	O[1]	X	-	-	-	C	D	D	D	D	D	B	-	40	-	21	10	-
		T6	X	-	-	-	C	D	B	D	D	D	B	76-77	-	65-66	-	7-8	-
		T651	-	-	-	X	C	D	B	D	D	D	B	67-77	-	53-66	-	-	2-8
	Alclad 7075	O[1]	X	X	-	-	A	B	C	D	D	D	B	-	36-39	-	20-21	9-10	-
		T6	X	-	-	-	A	D	B	D	D	D	B	68-75	-	58-64	-	5-8	-

Ratings A, B, C, D are relative in decreasing order of merit. weldability and brazability ratings are specifically defined as:

A - Generally weldable by all commercial procedures and methods.
B - Weldable with special technique or specific applications which justify preliminary trials or testing to develop welding procedure and weld performance.
C -Limited weldability because of crack sensitivity or loss on resistance to corrosion, and all mechanical properties.
D - No commonly used welding methods have so far been developed.

1 - These yield strengths not determined unless specifically requested.
2 - Although sheet and plate are not sold in this temper, material heat treated from any temper by the user should attain the mechanical properties applicable to this temper.
3 - Annealed (0 temper) material shall, upon heat treatment, be capable of developing the mechanical properties applicable to T 42 temper material.
4 - Annealed (0 temper) material shall, upon heat treatment and aging, be capable of developing the mechanical properties applicable to T 67 temper material.

APPROXIMATE MINIMUM RADII FOR 90° COLD BEND

Where range is shown, use smaller radius with extreme caution.

ALLOY	TEMPER	*RADII' For Various Thicknesses Expresses in Terms of Thickness "t"* 1/64 Inch	1/32 Inch	1/16 Inch	1/8 Inch	3/16 Inch	1/4 Inch	3/8 Inch	1/2 Inch
	-O	O	O	O	O	O	O	O	1t-2t
	-H12	O	O	O	O	O-1t	O-1t	O-1t	1t-3t
1100	-H14	O	O	O	O	O-1t	O-1t	O-1t	2t-3t
	-H16	O	O	O-1t	1/2t-1-1/2t	1t-2t	1-1/2t-3t	2-1/2t-3-1/2t	3t-4t
	-H18	O-1t	1/2-1-1/2t	1t-2t	1-1/2t-3t	2t-4t	2t-4t	3t-5t	3t-6t
Alclad	-O	O	O	O	O	O-1t	O-1t	1-1/2t-3t	3t-5t
	-T3	1t-2t	1-1/2t-3t	2t-4t	3t-5t	4t-6t	4t-6t	5t-7t	5-1/2t-8t
2014	-T4	1t-2t	1-1/2t-3t	2t-4t	3t-5t	4t-6t	4t-6t	5t-7t	5-1/2t-8t
	-T6	2t-4t	3t-5t	3t-5t	4t-6t	5t-7t	6t-10t	7t-10t	8t-11t
	-O[2]	O	O	O	O	O-1t	O-1t	1-1/2t-3t	3t-5t
	-T3[23]	1-1/2t-3t	2t-4t	3t-5t	4t-6t	4t-6t	5t-7t	6t-8t	6t-9t
2024	-36[2]	2t-4t	3t-5t	4t-6t	5t-7t	5t-7t	6t-10t	7t-10t	8t-11t
	-T42	1-1/2t-3t	2t-4t	3t-5t	4t-6t	4t-6t	5t-7t	6t-8t	6t-9t
	-T81	3-1/2t-5t	4-1/2t-6t	5t-7t	6-1/2t-8t	7t-9t	8t-10t	9t-11t	9t-12t
	-T86	4t-5-1/2t	5t-7t	6t-8t	7t-10t	8t-11t	10t-13t	10t-13t	1t-2t
	-O	O	O	O	O	O	O	O	1t-2t
	-H12	O	O	O	O	O-1t	O-1t	O-1t	1t-3t
3003	-H14	O	O	O	O-1t	O-1t	1/2t-1-1/2t	1t-2-1/2t	1-1/2t-3t
	-H16	0-1t	01t	1/2t-1-1/2t	1t-2t	1-1/2t-3t	2t-4t	1-1/2t-4t	3t-5t
	-H18	1/2t-1-1/2t	1t-2t	1-1/2t-3t	2t-4t	3t-5t	4t-6t	4t-7t	5t-8t
	-O	O	O	O	O	O-1t	O-1t	1/2t-1-1/2t	1t-2t
	-H32	O	O	O	O-1t	O-1t	1/2t-1-1/2t	1t-2t	1-1/2t-2-1/2t
5052	-H34	O	O	O-1t	1/2t-1-1/2t	1t-2t	1-1/2t-3t	2t-3t	2-1/2t-3-1/2t
	-H36	0-1t	1/2t-1-1/2t	1t-2t	1-1/2t--3t	2t-4t	2t-4t	2-1/2t-5t	3t-5-1/2t
	-H38	1/2t-1-1/2t	1t-2t	1-1/2t-3t	2t-4t	3t-5t	4t-6t	4t-7t	5t-8t
	-O	O	O	O	O	O-1t	O-1t	1/2t-2t	1t-1-1/2t
6061	-T4[2]	O-1t	O-1t	1/2t-1-1/2t	1t-2t	1-1/2t-3t	2t-4t	2-1/2t-4t	3t-5t
	-T6[2]	O-1t	1/2t-1-1/2t	1t-2t	1-1/2t-3t	2t-4t	3t-4t	3-1/2t-5-1/2t	4t-6t
7075	-O	O	O	O-1t	1/2t-1-1/2t	1t-2t	1-1/2t-3t	2-1/2t-4t	3t-5t
	-T6[2]	2t-4t	3t-5t	4t-6t	5t-7t	5t-7t	6t10t	7t-11t	7t-12t

1. Minimum permissible radius over which sheet or plate may be bent varies with nature of forming operation. type of forming equipment, and design and conditions of tools. Minimum working radius for a given material or hardest alloy and temper for a given radius can be ascertained only by actual trial under contemplated conditions of fabrication. Where range is shown, use a smaller radius with extreme caution.

2. Alclad sheet can be bent over slightly smaller radii than the corresponding tempers of the uncoated alloy.

3. Immediately after quenching, this alloy can be formed over appreciable smaller radii. 4217661360076962

ALUMINUM SHEET



Aluminum alloy sheet is sold in the thicknesses and sheet sizes shown in the table. Order by part number. No guarantee against scratches is possible due to the handling required to cut sheets to sizes shown.

CUTTING CHARGES: We can cut standard sheet sizes shown in the table to special sizes, but special order cutting charges will apply. Cutting Charges range from $20 to $50 or more depending on sizes desired and number of cuts. Special shapes are not cut, only straight edges. Request quote on Cutting Charges prior to order, as special cut pieces are not returnable.

Alloy & Temper	Surface Finish	Thickness (In.)	Wt./ Sq.Ft. (Lbs.)	Price Per Sheet									
				4' x 12'		4' x 8'		4' x 6'		4' x 4'		2' x 4'	
				Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
2024T3	Alclad	.016	.230	03-27710	$114.75	03-27720	$76.88	03-27730	$57.38	03-27740	$37.87	03-27750	$19.51
		.020	.288	03-27810	$119.85	03-27820	$80.30	03-27830	$59.93	03-27840	$39.55	03-27850	$20.38
		.025	.360	03-27910	$132.75	03-27920	$88.94	03-27930	$66.38	03-27940	$43.81	03-27950	$22.57
		.032	.461	03-28010	$169.90	03-28020	$113.83	03-28030	$84.95	03-28040	$56.07	03-28050	$28.88
		.040	.576	03-28110	$189.90	03-28120	$127.23	03-28130	$94.95	03-28140	$62.67	03-28150	$32.28
		.050	.720	03-28210	$236.95	03-28220	$158.76	03-28230	$118.48	03-28240	$78.19	03-28250	$40.28
		.063	.907	03-28310	$291.95	03-28320	$195.61	03-28330	$145.98	03-28340	$96.34	03-28350	$49.63
		.071	1.02	03-28410	$325.00	03-28420	$217.75	03-28430	$162.50	03-28440	$107.25	03-28450	$55.25
		.080	1.15	03-28510	$406.00	03-28520	$272.02	03-28530	$203.00	03-28540	$133.98	03-28550	$69.02
		.090	1.30	03-28610	$457.00	03-28620	$306.19	03-28630	$228.50	03-28640	$150.81	03-28650	$77.69
		.125	1.80	03-28710	$631.00	03-28720	$422.77	03-28730	$315.50	03-28740	$208.23	03-28750	$107.27
		.160	-	03-70010	$962.00	03-70020	$639.00	03-70030	$480.95	03-70040	$319.95	03-70050	$159.95
		.190	2.74	03-28810	$947.00	03-28820	$633.00	03-28830	$472.95	03-28840	$311.95	03-28850	$159.95
	Bare	.250	3.60	03-28910	$1,126.00	03-28920	$753.00	03-28930	$563.00	03-28940	$370.95	03-28950	$190.95
2024-0	Alclad	.032	.461	03-29010	$154.75	03-29020	$103.68	03-29030	$77.38	03-29040	$51.07	03-29050	$26.31
		.040	.576	03-29110	$178.85	03-29120	$119.83	03-29130	$89.43	03-29140	$59.02	03-29150	$30.41
6061T4	Bare	.025	.353	03-29210	$126.95	03-29220	$85.06	03-29230	$63.48	03-29240	$41.89	03-29250	$21.58
		.032	.452	03-29310	$98.90	03-29320	$66.26	03-29330	$49.45	03-29340	$32.64	03-29350	$16.81
		.040	.564	03-29410	$141.75	03-29420	$94.97	03-29430	$70.88	03-29440	$46.78	03-29450	$24.10
		.050	.706	03-29510	$229.95	03-29520	$154.07	03-29530	$114.98	03-29540	$75.88	03-29550	$39.09
		.063	.889	03-29610	$202.95	03-29620	$135.98	03-29630	$101.48	03-29640	$66.97	03-29650	$34.50
		.080	1.13	03-29710	$285.00	03-29720	$190.95	03-29730	$142.50	03-29740	$94.05	03-29750	$48.45
		.125	1.76	03-29810	$418.00	03-29820	$280.06	03-29830	$209.00	03-29840	$137.94	03-29850	$71.06
6061T6	Bare	.016	.228	03-08910	$98.75	03-08920	$65.18	03-08930	$49.38	03-08940	$32.59	03-08950	$16.79
		.020	.285	03-09910	$107.75	03-09920	$71.12	03-09930	$53.88	03-09940	$35.56	03-09950	$18.32
		.025	.353	03-29910	$127.75	03-29920	$85.59	03-29930	$63.88	03-29940	$42.16	03-29950	$21.72
		.032	.452	03-30010	$103.75	03-30020	$69.51	03-30030	$51.88	03-30040	$34.24	03-30050	$17.64
		.040	.570	03-31110	$126.75	03-31120	$84.92	03-31130	$63.38	03-31140	$41.83	03-31150	$21.04
		.050	.713	03-31210	$159.75	03-31220	$105.44	03-31230	$79.88	03-31240	$52.72	03-31250	$27.16
		.063	.889	03-30110	$199.85	03-30120	$133.90	03-30130	$99.93	03-30140	$65.95	03-30150	$33.98
		.090	1.27	03-30210	$279.95	03-30220	$187.57	03-30230	$139.98	03-30240	$92.38	03-30250	$47.59
		.125	1.76	03-30310	$398.00	03-30320	$266.66	03-30330	$199.00	03-30340	$131.34	03-30350	$67.66
		.190		03-10010	$597.00	03-10020	$398.95	03-10030	$297.95	03-10040	$196.95	0310050	$100.95
6061-0	Bare	.020	.282	03-30410	$113.75	03-30420	$76.21	03-30430	$56.88	03-30440	$37.54	03-30450	$19.34
		.040	.564	03-30510	$129.00	03-30520	$86.43	03-30530	$64.50	03-30540	$42.57	03-30550	$21.93
		.063	.889	03-30610	$198.75	03-30620	$132.85	03-30630	$99.75	03-30640	$65.75	03-30650	$33.75
		.080	1.13	03-30710	$212.95	03-30720	$142.68	03-30730	$106.48	03-30740	$70.27	03-30750	$36.20
7075T6	Alclad	.025	.364	03-60010	$184.75	03-60020	$123.23	03-60030	$92.38	03-60040	$61.52	03-60050	$31.41
		.032	.466	03-61010	$175.95	03-61020	$117.36	03-61030	$87.98	03-61040	$58.59	03-61050	$29.91
		.040	.582	03-62010	$207.95	03-62020	$138.70	03-62030	$103.98	03-62040	$69.25	03-62050	$35.35
		.050	.727	03-63010	$315.00	03-63020	$210.11	03-63030	$157.50	03-63040	$104.90	03-63050	$53.55
		.063	.916	03-64010	$327.00	03-64020	$218.11	03-64030	$163.50	03-64040	$108.89	03-64050	$55.59
		.125	1.82	03-65010	$660.00	03-65020	$440.22	03-65030	$330.00	03-65040	$219.78	03-65050	$112.20
7075-0	Alclad	.025	.364	03-66010	$140.75	03-66020	$93.88	03-66030	$70.38	03-66040	$46.87	03-66050	$23.93
		.032	.466	S10	$155.95	03-67020	$104.02	03-67030	$77.98	03-67040	$51.93	03-67050	$26.51
		.040	.582	03-68010	$189.95	03-68020	$126.70	03-68030	$94.98	03-68040	$63.25	03-68050	$32.29
		.063	.916	03-69010	$310.00	03-69020	$206.77	03-69030	$155.00	03-69040	$103.23	03-69050	$52.70

For 2'x2' piece of aluminum sheet, take 2'x4' price ÷ 2, and then add 15%. For 2'x2' piece, change last two digits of P/N to "60". Thicknesses of .016", .020", .025", .032", and .040" can be rolled to ship UPS, but will not be returnable if rolled. The softer and thicker the material, the harder it will be to return to a flat surface. Full sheets of heavier gauges or cut sheets exceeding 108" length plus girth (once down and once around) must be shipped by truck. Maximum sheet size for UPS shipment is 2' x 4'. **QUANTITY DISCOUNT SCHEDULE:** *10% on 6-10 Full Sheets; 15% on 11-15 Full Sheets. May be assorted thicknesses and alloys. Write for quotation on larger orders. Heavy gauge 2024T4 aluminum plate available in .375, . 500 and .625 thickness. Indicate sheet size required.*

3003H-14 SOFT ALUMINUM SHEET

Thick.	P/N #	4' x 12'	P/N #	4' x 8'	P/N #	4' x 6'	P/N #	4' x 4'
.020	03-31410	$105.80**	03-31420	$84.64	03-31430	$63.48	03-31440	$42.32
.025	03-32410	$65.75	03-32420	$43.40	03-32430	$32.88	03-32440	$21.70
.032	03-33410	$83.75	03-33420	$56.11	03-33430	$41.88	03-33440	$27.64
.040	03-34410	$118.75	03-34420	$78.38	03-34430	$59.38	03-34440	$39.19
.050	03-34510	$125.95	03-34520	$83.13	03-34530	$62.98	03-34540	$41.56
.063	03-34610	$156.95	03-34620	$103.59	03-34630	$78.48	03-34640	$51.79

***** Length of full sheet of .025 thickness is 10 ft.***
For 2'x4' pcs. of 3003H-14 use "45" as last 2 digits of P/N (Ex: 03-34645)



5052H-32 ALUMINUM SHEET FOR FUEL TANKS

5052H32 Aluminum alloy sheets for fabrication of fuel tanks. Available in full sheets (48"x144") & 1/2 sheets (48"x72") only, in .040 & .050 thicknesses. May be combined with other aluminum sheets for discount. See shipping specs above.

.032 Thickness	Full Sheet	P/N 03-30810	$77.75
	Half Sheet	P/N 03-30860	$38.88
.040 Thickness	Full Sheet	P/N 03-30900	$99.85
	Half Sheet	P/N 03-30950	$49.93
.050 Thickness	Full Sheet	P/N 03-31000	$125.75
	Half Sheet	P/N 03-31050	$62.88



016 ALUMINUM LEADING EDGE 2024T3

12" Wide X 12 ft. (rolled for mailing). Sold in 12 ft. lengths only. P/N 03-30800 ..... **$28.69 Ea.**

18" Wide x 12 ft. (rolled for mailing). Sold in 12 ft. lengths only. P/N 03-30850 ..... **$43.61 Ea.**

Other widths available at proportionate cost plus shearing charge.



STAINLESS STEEL & GALVANIZED FIREWALL SHEET

Material	Width	Thknes (In.)	Weight/ Lin. Ft.(Lbs)	Part No.	Price/ Lin.Ft.
301 Stainless, 1/2 Hard	36"	.016	2.016	03-31200	$18.65
304 Stainless	48"	.018	2.173	03-20010	$12.85
302/304 Stainless, Ann.*	48"	.035	4.38	03-31300	$24.50
Galvanized Sheet, 26 Ga.	48"	.022	2.718	03-31400	$4.95

**** 2B Finish***

Material	Size	Weight/Lin. Ft.(Lbs)	Part No.	Price ea.
301 SS 1/2 Hard	3' x .025"	26	03-00062	$42.00

For 03-00062 Add -1 thru -9 for desired length in feet.

IF MFG TEST REPORTS ARE REQUIRED THERE IS A $15.00 CHARGE PER ORDER.
PLEASE INDICATE AT TIME OF ORDER

ALUMINUM TUBING

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ROUND DRAWN ALUMINUM TUBING 2024T3

O.D. (In.)	I.D. (In.)	Wall Thickness	Wt./Ft. (Lb.)	Part No.	Price Per Ft.
1/4	.180	.035	.2081	03-31600	$4.45
5/16	.243	.035	.0366	03-31700	$6.75
	.215	.049	.0487	03-31800	$8.98
3/8	.305	.035	.0449	03-32000	$7.90
	.277	.049	.0602	03-32100	$8.50
	.245	.065	.0755	03-32200	$9.98
1/2	.430	.035	.0612	03-32500	$5.60
	.402	.049	.0829	03-32600	$7.95
	.384	.058	.0970	03-32700	$8.65
	.370	.065	.1061	03-32800	$8.80
5/8	.555	.035	.0775	03-32900	$10.95
	.527	.049	.1060	03-33000	$5.75
	.509	.058	.1234	03-33100	$10.55
	.495	.065	.1367	03-33200	$8.25
3/4	.680	.035	.0938	03-33300	$6.55
	.652	.049	.1288	03-33400	$6.75
	.620	.065	.1670	03-33600	$7.39
7/8	.805	.035	.1423	03-33650	$8.75
	.777	.049	.1530	03-33700	$9.60
	.759	.058	.1777	03-33800	$10.50
	.745	.065	.1979	03-33900	$6.94
	.635	.120	.3398	03-34000	$29.55
1	.930	.035	.1250	03-34100	$6.25
	.902	.049	.1754	03-34200	$6.92
	.884	.058	.2028	03-34250	$30.50
	.870	.065	.2295	03-34400	$7.60
	.834	.083	.2866	03-34500	$9.85
1-1/4	1.180	.035	.1601	03-34600	$8.95
	1.152	.049	.2213	03-34700	$9.90
	1.120	.065	.3000	03-00045	$11.90
1-3/8	1.277	.049	.2448	03-34800	$14.95
1-1/2	1.402	.049	.2683	03-34900	$12.00
	1.370	.065	.3519	03-35000	$11.92
1-3/4	1.250	.250	1.428	03-35075	$33.95
2	1.870	.065	.4743	03-35200	$19.93



ROUND ALUMINUM TUBING 6061-0

Only available in 6' or 12' lengths. We can cut to smaller pieces for shipping, but total quantity ordered must equal 6 ft, 12 ft, 18 ft, 24 ft, etc. If manufacturing test reports are required, there is a minimum $15.00 charge per order. Please indicate in the special instructions box at the time of order that certs are required.

O.D. (In.)	I.D. (In.)	Wall Thickness	Wt./Ft. (Lb.)	Part No.	6 ft.	12 ft.
1/2	.430	.035	.0612	03-38500	$15.84	$31.68
3/4	.680	.035	.0920	03-38600	$23.70	$47.40
1	.930	.035	.1250	03-38700	$27.90	$55.80
1-1/4	1.180	.035	.1601	03-38800	$41.82	$83.64

Sold in full 6-ft or 12ft lengths only. No charge for cutting to 8 ft or less for UPS shipment.



6061T6 SQUARE ALUMINUM TUBING

Size (In.)	Wall Thickness	Wt/Ft (Lb.)	Part No.	Price Per Ft.
1/2x1/2	.058	.156	03-00008	$6.50
3/4x3/4	.049	.217	03-00009	$4.47
1 X 1	.065	.300	03-38900	$6.75
2 X 2	.125	1.120	03-00141	$7.75
6061T6511 2 x2	.190	1.420	03-00205	$8.50
6063T52 2 x 2	.125	1.120	03-39000	$5.45



5052-0 ALUMINUM TUBING

Rigid 5052-0 aluminum alloy tubing is used for low and medium pressure hydraulic systems, fuel lines and oil lines. This tubing will withstand a higher pressure than 3003-0 tubing.

O.D. (In.)	I.D. (In.)	Thickness	Wt./Ft. (Lb.)	Part No.	Price Per Ft.
1/8	.069	.035	.0101	03-39100	$6.90
3/16	.132	.035	.0168	03-39200	$2.59
1/4	.152	.049	.0371	03-39250	$4.80
	.180	.035	.0281	03-39300	$1.56
5/16	.242	.035	.0360	03-39400	$2.25
3/8	.305	.035	.0449	03-39500	$1.90
	.277	.049	.0602	03-39550	$2.97
1/2	.436	.035	.0612	03-39600	$2.49
	.402	.049	.0829	03-39650	$2.60
5/8	.555	.035	.0760	03-39700	$2.50
	.527	.049	.1060	03-39750	$3.35
3/4	.680	.035	.0938	03-39800	$3.55
	.652	.049	.1288	03-39850	$3.65
1	.930	.035	.1256	03-39900	$4.70
	.902	.049	.1754	03-39950	$4.98

Sold in full 6-ft. or 12-ft. lengths only. No charge for cutting to 8 ft. or less for UPS shipment.Unlisted sizes of aluminum tubing available in full 12' lengths. No charge for cutting to 8' or less for UPS. Longer lengths shipped via truck. ***Ordering tubing/bar by the foot. Add a dash number after part number to indicate length of tubing required. Ex: 3 ft required add -3, 03-00100-3.***

ROUND ALUMINUM TUBING 6061T6

O.D. (In.)	I.D. (In.)	Wall Thickness	Wt./Ft. (Lb.)	Part No.	Price Per Ft.
3/16	.118	.035	---	03-00012	$3.75
1/4	.180	.035	.0281	03-35300	$1.45
	.152	.049	.036	03-00014	$2.98
5/16	.215	.049	.0423	03-35350	$2.25
	.197	.058	.0561	03-35400	$4.35
3/8	.305	.035	.0449	03-35500	$1.75
	.259	.058	.0694	03-35600	$2.31
	.245	.065	.0755	03-35700	$2.69
	.209	.083	.0895	03-35750	$5.60
7/16	.308	.065	.090	03-35775	$5.50
1/2	.444	.028	.0496	03-35795	$2.35
	.430	.035	.0612	03-35800	$1.50
	.402	.049	.0816	03-35850	$2.74
	.384	.058	.0962	03-35900	$2.85
	.370	.065	.1040	03-35950	$2.83
	.260	.120	.168	03-35975	$4.35
5/8	.555	.035	.0775	03-36000	$2.90
	.527	.049	.1060	03-36010	$2.90
	.509	.058	.1227	03-36050	$3.75
	.495	.065	.1367	03-36100	$3.45
3/4	.680	.035	.093	03-36150	$3.35
	.652	.049	.1288	03-36200	$3.75
	.634	.058	.1506	03-36300	$2.75
	.620	.065	.164	03-36350	$3.35
7/8	.805	.035	.109	03-36375	$3.20
	.777	.049	.150	03-36380	$5.25
	.759	.058	.1777	03-36400	$4.70
	.745	.065	.1983	03-36450	$3.95
	.635	.120	.3350	03-36500	$5.75
1	.930	.035	.1275	03-36600	$2.74
	.902	.049	.1754	03-36610	$3.60
	.884	.058	.2060	03-36700	$3.25
	.870	.065	.2295	03-36800	$3.90
	.830	.083	.281	03-36850	$4.45
	.810	.095	.3244	03-36900	$6.25
	.750	.125	.404	03-36950	$5.95
	.500	.250	.693	03-36975	$10.50
1-1/8	1.027	.049	.185	03-36980	$5.50
	1.009	.058	.2321	03-37000	$3.85
	.875	.125	.4712	03-37100	$9.90
1-1/4	1.180	.035	.1601	03-37200	$4.20
	1.152	.049	.2213	03-37210	$5.35
	1.134	.058	.2601	03-37300	$4.65
	1.120	.065	.2907	03-37400	$3.99
	1.010	.120	.510	03-37450*	$8.50
1-3/8	1.259	.058	.2865	03-37500	$4.85
1-1/2	1.430	.035	.1928	03-37550	$4.25
	1.402	.049	.2683	03-37610	$5.80
	1.384	.058	.3137	03-37710	$9.75
	1.370	.065	.3519	03-37800	$5.99
	1.260	.125	.635	03-37850	$9.50
1-5/8	1.509	.058	.3409	03-37900	$5.50
1-3/4	1.680	.035	.2264	03-37910	$7.50
	1.652	.049	.3142	03-37925	$13.50
	1.634	.058	.3703	03-37950	$9.80
	1.584	.083	.5202	03-37975	$8.85
1-7/8	1.759	.058	.3954	03-38000	$9.50
2	1.902	.049	.3601	03-38100	$6.50
	1.884	.058	.4225	03-38200	$6.95
	1.870	.065	.4743	03-38300	$7.50
2-1/4	2.152	.049	.406	03-38307	$11.65
	2.120	.065	.5328	03-38308	$9.75
	1.959	.083	.824	03-38309	$32.50
	2.000	.125	.999	03-38310	$7.96
2-1/2	2.430	.035	.3254	03-38315	$11.60
	2.402	.049	.444	03-38318	$8.50
	2.370	.065	.5803	03-38320	$8.75
3	2.930	.035	.3891	03-38330	$18.60
	2.870	.065	.7140	03-38340	$17.65
4	3.930	.035	.5205	03-38350	$42.75
	3.902	.049	.7153	03-38360	$39.80

* This item will be supplied as either .120 or .125.

3003-0 VERSATUBE

Soft aluminum tubing for instrument air and vacuum lines, fuel and oil lines, and primer lines.



Safety factor of 2
20% discount for full 50' coils of Versatube

O.D. (In.)	Wall Thickness	Max. Working Pressure* (PSI)	Part No.	Price Per Ft.
1/8	.025	1820	03-40200	$0.36
3/16	.028	880	03-40300	$0.43
1/4	.032	795	03-40400	$0.47
5/16	.035	630	03-40500	$0.68
3/8	.035	520	03-40600	$0.76
1/2	.035	390	03-40700	$0.88
5/8	.035	305	03-40800	$0.90

IF MFG TEST REPORTS ARE REQUIRED THERE IS A $15.00 CHARGE PER ORDER. PLEASE INDICATE AT TIME OF ORDER

ALUMINUM ROD – BAR – ANGLE



ROUND ALUMINUM ROD 2024T3/2024T4

Dia. (In.)	Wt./Ft. (Lb.)	Part No.	Price/Ft
1/8	.015	03-41300	**$0.30**
3/16	.033	03-41400	**$0.96**
1/4	.059	03-41500	**$1.35**
5/16	.092	03-41600	**$1.21**
3/8	.132	03-41700	**$1.35**
7/16	.1822	03-41750	**$2.40**
1/2	.235	03-41800	**$2.85**
5/8	.368	03-41900	**$4.65**
3/4	.529	03-42000	**$7.90**
7/8	.721	03-42100	**$8.65**
1	.941	03-42200	**$9.75**
1-1/8	1.205	03-42250	**$10.50**
1-1/4	1.47	03-42300	**$16.75**
1-3/8	1.800	03-42350	**$16.50**
1-1/2	2.12	03-42400	**$19.85**
2	3.76	03-42500	**$35.55**
2-1/2	5.88	03-42600	**$45.60**

No charge for cutting to 8 ft. or less for UPS shipment.
Over 8 ft. shipped via truck. Special sizes available. Full length (12 foot) only. If ordering only T3 or T4, please call 877-477-7823



ALUMINUM SQUARE & RECTANGLE BAR 2024T3/2024T4

Size (In.)	Wt./Ft. (Lb.)	Part No.	Price/Ft.
1/8 x 1	.150	03-42700	**$2.04**
1/8 x 1-1/4	.187	03-42750	**$5.50**
1/8 x 1-1/2	.225	03-42800	**$3.75**
1/8 x 2	.300	03-42900	**$4.60**
3/16 x 3/4	.169	03-43100	**$6.97**
3/16 x 1-1/4	.281	03-43200	**$21.60**
3/16 x 1-1/2	.3420	03-43250	**$6.85**
1/4 x 1/2	.147	03-00104	**$1.98**
1/4 x 3/4	.150	03-00199	**$3.65**
1/4 x 1	.300	03-43400	**$3.99**
1/4 x 1-1/4	.375	03-43500	**$10.50**
1/4 x 1-1/2	.450	03-43600	**$6.50**
1/4 x 2	.599	03-43700	**$7.55**
1/4 x 3	.900	03-43800	**$11.75**
1/4 x4	1.99	03-43850	**$13.50**
3/8 x 1	.4545	03-43875	**$7.50**
3/8 x 1-1/4	.562	03-43900	**$7.95**
3/8 x 1-1/2	.6818	03-43950	**$9.50**
3/8 x 2	.674	03-44000	**$10.99**
3/8 x 3	1.35	03-44100	**$16.90**
3/8 x 6	2.7	03-44200	**$49.50**
1/2 x 1/2	.3030	03-44250	**$3.85**
1/2 x 5/8	.375	03-44300	**$10.80**
1/2 x 1	.599	03-44400	**$7.99**
1/2 x 1-1/4	.7575	03-44450	**$9.50**
1/2 x 2	1.20	03-44500	**$14.55**
1/2 x 2-1/2	1.50	03-44600	**$16.50**
5/8 x 5/8	.468	03-44700	**$7.50**
5/8 x 1	.7575	03-44850	**$7.80**
3/4 x 3/4	.674	03-44900	**$6.55**
3/4 x 1-1/2	1.35	03-45000	**$12.70**
3/4 x 1-3/4	1.59	03-45550	**$19.50**
3/4 x 2	1.80	03-45100	**$21.60**
3/4 x 2-1/2	2.25	03-45200	**$20.50**
1 x 1	1.20	03-45300	**$14.90**
1 x 2	2.424	03-45450	**$23.70**
1 x 2-1/2	3.030	03-45475	**$29.93**
1/2 x 6	4.002	03-56000	**$34.80**

Unlisted sizes of aluminum rod and bar available in full 12 ft. lengths.
No charge for cutting to 8 ft. or less for UPS. Longer lengths shipped via truck.
If ordering only T3 or T4, please call 877-477-7823
Ordering tubing/bar by the foot. Add a dash number after part no. to indicate length of tubing req.
Example: 3 ft required add -3, 03-00100-3.



ALUMINUM ANGLE

Extruded aluminum angle is produced by forcing a heated aluminum billet through a die of the proper shape by means of a hydraulic press. Our 90° aluminum extrusions have fillet radius as illustrated.

Type	Size (In.) Wt./Ft. "A" x "B" x "T"	Part No.	Wt. Per Ft. (Lb.)	Price Per Ft
2024T3	1/2 x 1/2 x 1/16	03-46800	.070	**$3.55**
2024T3	5/8 x 5/8 x 1/16	03-46900	.095	**$4.90**
2024T3	3/4 x 3/4 x 1/16	03-47000	.109	**$2.95**
2024T3	7/8 x 7/8 x 1/8	03-47100	.238	**$11.60**
2024T3	1 x 1 x 1/16	03-47200	.154	**$3.75**
2024T3	1 x 1 x 1/8	03-47300	.282	**$4.95**
2024T3	1 x 1-1/2 x 1/8	03-47400	.354	**$7.65**
2024T3	1-1/2 x 1-1/2 x 1/16	03-47500	.229	**$6.95**
2024T3	1-1/2 x 1-1/2 x 1/8	03-47600	.432	**$7.50**
2024T3	2 x 2 x 1/8	03-47625	.581	**$9.90**
2024T3	3-1/2 x 3-1/2 x 1/4	03-47675	2.050	**$92.75**

Type	Size (In.) Wt./Ft. "A" x "B" x "T"	Part No.	Wt. Per Ft. (Lb.)	Price Per Ft
6061T6	3/4 x 3/4 x 1/16	03-00185	.106	**$3.55**
6061T6	3/4 x 3/4 x 1/8	03-47900	.200	**$1.10**
6061T6	1 x 1 x 1/16	03-00187	.150	**$3.65**
6061T6	1 x 1 x 1/8	03-48000	.270	**$1.59**
6061T6	1-1/4 x 1-1/4 x 1/8	03-00189	.350	**$6.85**
6061T6	1-1/2 x 1-1/4 x 1/8	03-48075	.390	**$19.80**
6061T6	1-1/2 x 1-1/2 x 1/8	03-48100	.430	**$1.75**
6061T6	1-1/2 x 1-1/2 x 3/16	03-48200	.625	**$2.65**
6061T6	1-1/2 x 1-1/2 x 1/4	03-48250	.831	**$3.55**
6061T6	1-1/2 x 2 x 1/8	03-48300	.506	**$3.45**
6061T6	1-3/4 x 1-3/4 x 1/8	03-48350	.490	**$4.35**
6061T6	2 x 2 x 1/8	03-48400	.470	**$2.45**
6061T6	2 x 2 x 3/16	03-48450	.850	**$3.25**
6061T6	2 x 2 x 1/4	03-48500	1.110	**$4.50**
6061T6	2 x 3 x 1/4	03-48550	1.400	**$7.90**
6061T6	2 x 2-1/2 x 1/4	03-48600	1.250	**$13.55**
6061T6	2-1/2 x 2-1/2 x 3/16	03-00007	.970	**$10.90**
6061T6	2-1/2 x 2-1/2 x 1/8	03-48650	.720	**$4.35**
6061T6	4 x 4 x 1/4	03-48680	2.28	**$13.50**

Standard lengths: 2024-12' and 20', 6061-25', 6063-16' (no fillet). No charge for cutting to 8 ft. or less for UPS. Many unlisted sizes available. Request quotation.



ALUMINUM ROUND, SQUARE AND RECTANGLE BARS, 6061T6

Size (In.)	Wt./Ft. (Lb.)	Part No.	Price/Ft.
3/16 Dia. Round	.032	03-45500	**$0.97**
1/4	.058	03-45600	**$0.62**
5/16	.090	03-45700	**$1.13**
3/8	.130	03-45800	**$2.08**
1/2	.231	03-45900	**$1.58**
5/8	.359	03-45920	**$2.34**
3/4	.519	03-46000	**$2.50**
7/8	.787	03-46010	**$3.35**
1	.923	03-46100	**$6.50**
1-1/4	1.436	03-45940	**$5.45**
1-1/2	2.068	03-45960	**$7.85**
1-3/8	1.734	03-46110	**$9.55**
1-5/8	2.44	03-46200	**$9.55**
1/4 x 1 Rect.	.294	03-46300	**$1.37**
3/4 x 3/4 Sq.	.660	03-46400	**$5.35**
3/16" x 1-1/4"	.275	03-46250	**$1.34**
1/4" x 1-1/2"	.441	03-46350	**$12.50**
1/4" x 2"	.675	03-00005	**$2.45**
1/4" x 3"	.881	03-46360	**$3.95**
1/2" x 3/4"	.441	03-46370	**$2.50**
1/2" x 1"	.587	03-46375	**$3.65**
1/2" x 1-1/4"	.734	03-46380	**$3.35**
1/2" x 2"	1.170	03-46390	**$4.85**
1" x 1"	1.170	03-46450	**$8.65**
1" x 1-1/4"	1.270	03-00006	**$6.50**
1" x 2-1/2"	1.790	03-00142	**$22.70**

IF MFG TEST REPORTS ARE REQUIRED THERE IS A $15.00 CHARGE PER ORDER. PLEASE INDICATE AT TIME OF ORDER

ME

ALUMINUM HINGE – STRINGERS

ME

PIANO HINGE



MS20257P (supersedes AN257) hinge consists of two aluminum half hinges which mate and are held together by a hinge pin. Anodized finish. MS20257C is similar to MS20257P except made in stainless steel.

MS20001P aluminum hinge is extruded. The closed hinge loops cannot be pulled apart. Furnished with hinge pin. Anodized finish.

Part No.*	Open Width	Thickness	Price/Length	
			3 Ft.*	6 Ft.*
MS20257P1	3/4”	.032”	**$5.38**	**$10.75**
MS20257P2	1-1/16”	.040”	**$6.48**	**$12.95**
MS20257P3	1-1/4”	.040”	**$5.88**	**$11.75**
MS20257P4	1-1/2”	.040”	**$5.48**	**$10.95**
MS20257P5	2”	.051”	**$8.25**	**$16.50**
MS20001P3	1-1/4”	.040”	**$32.65**	**$62.75**
MS20001P4	1-1/2”	.040”	**$28.83**	**$57.65**
MS20001P5	1-3/4”	.051”	**$35.88**	**$71.75**
MS20001P6	2”	.051”	**$33.88**	**$67.75**
MS20257C1	3/4”	.031	**$7.43**	**$14.85**
MS20257C2	1-1/16”	.037	**$7.50**	**$14.85**
MS20257C3	1-1/4”	.050	**$11.75**	**$23.50**
MS20257C4	1-1/2”	.062	**$10.43**	**$20.85**
MS20257C5	2”	.062	**$17.75**	**$35.50**

* Add “-3” to part number for 3 ft. pc. and “-6” to part number for 6 ft. pc.
Example: MS20001P6-3 is 3 ft. pc. of MS20001P6 hinge.

HINGE PIN ONLY – Stainless Steel
089” Dia. x 6’ .....P/N 03-49000 ..... **$4.70**



BARGAIN BAG OF ALUMINUM TUBING

Approximately 20 ft. Assorted sizes of 2024 and 6061 aluminum tubing, angle, rod, and bar
P/N 03-40100.....**$14.95**



6063T52 U CHANNEL

3/4”x 3/4”x1/8”.....P/N 03-38950 .....**$4.50/ft.**
1”x1”x1/8” .....P/N 03-39050 .....**$2.95/ft.**
1-1/4”x1-1/4”x1/8”.....P/N 03-39150 .....**$5.35/ft.**



TRAILING EDGE

Fabricated of .025 aluminum 3003H14 to size illustrated. Wt.12oz. per 10ft. length. Shipped via truck. ***No charge for cutting to 8 ft. or less for UPS shipment.***

10 Ft. Length.....P/N 03-48900 ..... **$24.50**

Less 20% on 12 or more lengths. Please add $2.00 carton charge for trailing edge - this box insures safe UPS shipment.



RECTANGULAR ALUMINUM STRINGERS

Rectangular stringers, 5/8” x 5/16” x .032” 3003H14 aluminum. Wt. 11 oz./12ft. length. Shipped via truck. ***No charge for cutting to 8ft. or less for UPS shipment.***
12 Ft. Length .....P/N 03-48800 ..... **$7.85**



“HAT” SECTION ALUMINUM STRINGERS

Fabricated from .020 2024T3 aluminum. Wt. 5 oz. per 8-ft. length. May be spliced to form longer stringers.
8-Ft. Length.....P/N 03-46500 ..... **$10.75**
Less 10% on orders for 12 or more.



2024T3511 2 X 1-3/4 T ALUMINUM

2024T3511 2” X 1-3/4” T extruded aluminum. Price per foot.
P/N 03-00093 .....**$78.75**

WELDING ROD FOR ALUMINUM ALUMINUM



ER4043 – A versatile alloy well suited for welding 6061T-6, 5005, and 6063. Extremely ductile.
1/16” dia. ... P/N 03-27520..**$21.85/lb.**
3/32” dia. ... P/N 03-27525..**$18.85/lb.**

ER5356 – Combination of strength and ductility for welding 5083, 5086, and 7000 series. Deposit can be anodized after welding.
1/16” dia.....P/N 03-27530 .....**$14.50/lb.**

UTP A-65 – A multi alloy wire for a wide range of base materials including stainless steel, low alloy high strength steel and especially outstanding for dissimilar metals with over 120,000 psi tensile strength and 25% elongation. Machinable. 1/16” dia.....P/N 03-27555 .....**$55.75/lb.**

BRAZING ALLOYS

UTP 1M – High strength, machinable torch rod for steel, brass, bronze and other copper alloys. Easy to apply, high strength, and versatile all purpose brazing rod. 1/8” dia.....P/N 03-27570 ..... **$21.25/lb.**

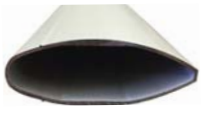
MAINTENANCE

UTP 612 – An all position mild steel coated electrode for arc welding. Operates on AC or DC current and can be welded by even the most inexperienced welder. 72,000 psi tensile strength, moisture resistant and conveniently packaged in 10 lb containers.
3/32” dia.....P/N 03-27575 .....**$14.60/lb.**
1/16” dia.....P/N 03-27580 ..... **$12.85/lb.**



EXTRUDED STREAMLINED STRUT MATERIAL

Wing strut material used on the EMG-6 electric motor glider. .006” centerline groove extruded into the profile on either side for use as a drilling guide through the exact center of the 1 inch diameter pocket. The centerline groove also acts to eliminate laminar bubble formation. • Extruded Streamlined Strut Material • 6061/T6 Aluminum • Clear Anodized Finish • 2.80” Major axis dimension • 1.18” Minor axis dimension • Trailing edge radius 0.010” • Built-in .045” internal web. • Weight .49 pounds per ft • Designed to accept 1.00” diameter tube or fitting internally. • Sold in 12ft lengths (can be cut for shipping) P/N 03-00238.....**$148.75**



STREAMLINE WING STRUT

Note: Sold and shipped in 10 ft pieces. Must ship truck freight. Supplier can cut for an additional charge to avoid truck freight fees. Note in special instructions at checkout length of cuts desired.
This Streamline Wing Strut is specifically molded for Ultralight Aircraft. It is extruded 6061 Aluminum wing strut and it already comes Clear Anodized. The inside profile allows a 1” square material to be inserted inside the profile to secure it. It also has a molded rib design into the profile that helps reduce drag. Length: 10’. Weight: 6 lbs.
P/N 06-02910.....**$88.95**

COPPER TUBING

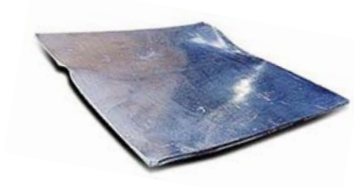
O.D. (In.)	Wall Thickness	Part No.	Price/Ft.
1/8	.030	03-40900	**$1.95**
1/4	.030	03-41000	**$2.75**
5/16	.032	03-41100	**$3.15**
3/8	.032	03-41200	**$3.75**
1/2	.032	03-41250	**$3.65**

Seamless copper tubing for primer, fuel and oil pressure lines.
20% discount for full soft coils of 50 ft. of Copper Tubing.



COPPER BUS BAR

.125 X 1/2” wide
P/N 03-40890.....**$3.80/ft.**



LEAD SHEET

Lead sheet per specification QQ-L-201, Grade B. 1/8” thick. Wt. 8 lbs./sq.ft.

P/N 03-31500..... **$74.75/ft.**

Half Sheet (24”x 36”, 48 Lbs.)
P/N 03-31520..... **$447.95**

Full Sheet (36” x48”, 96 Lbs.)
P/N 03-31540..... **$897.00**

Prices Subject to Change Without Notice

ACRYLIC – LEXAN – NYLON

ACRYLIC SHEET



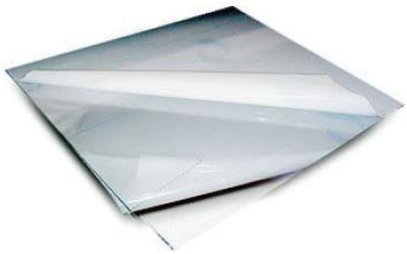
American made acrylic sheet Grade C to Specification LP-391 is unshrunk. When heated to forming temperature of 220-250°F, it will shrink about 2.2% in length and width and will increase about 4% in thickness. When heated to a pliable state it can be drilled, sawed and machined. It has excellent resistance to weathering. It is less than half as heavy as glass and has good impact resistance. .060" or .080" thickness is generally used for side windows and .118" for windshields. Both sides are paper covered for protection. Sheet size: 48"x96". Sold in 2'x2' increments only. Order by part number (see table)

Thickness Inch	Weight Lb./Sq.Ft.	Part No.***	Price Per Sq. Ft.
.060 Clear	.37	03-498—	**$2.50**
.080 Clear	.49	03-499—	**$2.75**
.118 Clear	.62	03-500—	**$2.80**
.118 Tinted*	.77	03-501—	**$4.06**
.118 Tinted**	.77	03-502—	**$4.58**

* *Smoke tint* ** *#2111 Green tint*

*** ***Order by basic part number and add last two digits according to dimensions of piece, as follows: 2'x2' (4 Sq.Ft.) add "02"; 2'x4' (8 Sq.Ft.) add "04"; 4'x4'; (16 Sq.Ft.), add "08"; 4'x8' (32 Sq.Ft.), add "10". Example: 2'x4 .080 Clear is P/N 03-49904.***

LEXAN



American made Kirex polycarbonate sheet (an equivalent to G.E. Lexan) is a very strong plastic which is guaranteed by manufacturer against breakage when used as a window for a 3 year period. It will scratch like Plexiglas, but will not break. Clear, masked both sides. Sheet size: 48"x96". Sold in 2'x2' increments only. Order by part number (see table)

Thickness Inch	Weight Lb./Sq.Ft.	Part No.*	Price Per Sq. Ft.
.060	.38	03-503—	**$2.28**
.080	.50	03-504—	**$3.15**
.093	.59	03-505—	**$3.48**
.118	.78	03-506—	**$3.88**

* ***Order by basic part number and add last two digits according to dimensions of piece, as follows: 2'x2' (4 Sq.Ft.), add "02"; 2'x4' (8 Sq.Ft.) add "04"; 4'x4' (16 Sq.Ft.), add "08"; 4'x8' (32 Sq.Ft.), add "10". Example: 4'x4' of .093 is P/N 03-50508.***



CLEAR CELLULOSE ACETATE SHEET

May be used to make inspection rings, grommets and shapes which will adhere to fabric with dope or fabric cement. Sheet size: 20" x 50". Thickness: .030".

P/N 03-50700 ..... **$59.95/Sheet**

GRAPHLITE CARBON FIBER ROD



Prepreg tape has an inherent waviness which can reduce the strength and stiffness of a laminate. Graphlite rod eliminates fiber waviness and unlike tape, it can be placed along any curved surface and retain fiber alignment. Graphlite can be used in layers to form building blocks for stiffeners, spar caps, longerons and other axially loaded parts. Components made with Graphlite offer tension strength on the lower wing surface and compression strength on the upper surface that are almost equal. In addition, a single layer of rods is as thick as 10 layers of tape, meaning fewer passes and less effort. Graphlite rods increase compression strength, reduce fabrication costs by 50%, can be laid on compound curves, and require no special storage. Available in two rod types: standard module (SM) which is 33-34 MSI and intermediate module which is 42 msi. Sold by the roll. Typical light aircraft requires minimum of 1000 ft. Graphlite rod.

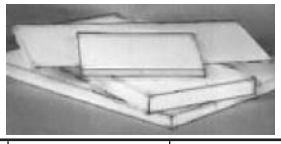
Rod Type	Rod Diameter	Tensile Strength	P/N	Price per roll
IM	0.067	503	03-50706	**$93.50 /100 ft.**
SM	0.125	503	03-50707	**$16.85 /12 ft.**
SM	0.158	503	03-50708	**$153.95 /100 ft.**
SM	0.063	785	03-50710	**$84.60 /100 ft.**



NYLON

Nylon, a polyimide resin, is a light yet tough thermoplastic material. Its density is approximately .041 lb./cu.in. It is a tough, resilient material with a low coefficient of frictionabrasion tests show that Nylon loses less material than do many metals, other plastics, and hard rubber. It can deform under load, then return to its original shape. Nylon retains its impact strength over a wide range of temperatures (-60° to 400°F). It has good resistance to most chemicals. It can be easily machined on most standard metal working machines, power hacksaws, band saws, or circular saws. It is desirable to use a saw with a coarse tooth blade.

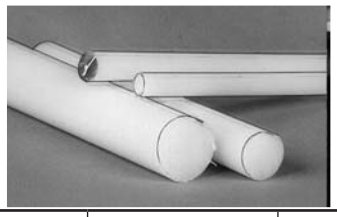
NYLON PLATE



Thickness (Inch) (Lbs.)	Wt. per Sq. Ft.	Part No.	Price/ Sq. Ft.*
1/16	.39	03-51000	**$6.65**
1/8	.77	03-51100	**$13.75**
1/4	1.54	03-51200	**$20.85**
1/2	3.07	03-51300	**$43.50**
3/4	4.61	03-51400	**$59.90**
1	6.15	03-51500	**$80.75**

**** SOLD BY THE SQUARE FOOT (12" X 12")***
Smaller pieces are available.
Order as follows:
6" x 6" = 0.25
6" x 12"= 0.50
12" x 12"= 1
12" x 24"= 2
12" x 36"=3

NYLON ROUND ROD



Diameter (In.)	Part No.	Price/ Ft.
1/8	03-51600	**$0.46**
1/4	03-51700	**$0.59**
1/2	03-51800	**$1.35**
3/4	03-51900	**$2.90**
1	03-52000	**$4.70**
1-1/4	03-52100	**$6.85**
1-1/2	03-52200	**$8.60**
2	03-52300	**$15.75**

Less 10% for 4 ft. lengths.
Less 20% for full 8 ft. lengths. Furnish cutting instructions for UPS shipment.

HIGH PRESSURE LAMINATED PHENOLIC

Commonly called "Micarta", a trademark of Westinghouse. Laminated sheets, tube and rods are produced in many grades, sizes and colors. These laminates combine a base material - canvas, linen, paper, glass cloth or Nylon cloth, with a resin- phenolic, melamine, epoxy or silicone, under high heat and pressure to produce a new material with specific characteristics. These characteristics vary with the grade and its use.



GRADE L (LINEN BASE) PHENOLIC SHEET

Used for precision machining and high strength applications. Sheet Size: 36" x 48". Sold in 6" x 6", 6" x 12", 12" x 12", etc. pieces only.

Thickness (In.)	Wt. /Sq . Ft(Lbs.)	Part No.	Price. Per Sq. Ft.
1/16	.422	03-52400	**$4.80**
1/8	. 844	03-52500	**$8.95**
3/16	1.349	03-00111	**$13.45**
1/4	1.853	03-52600	**$18.60**
3/8	2.772	03-52700	**$24.75**
1/2	3.685	03-52800	**$35.65**
3/4	5.495	03-52900	**$53.75**



GRADE L (LINEN BASE) PHENOLIC ROD

Used to provide high-strength close-tolerance bolt holes in wooden spars. Cut rod to spar thickness, drill and ream for proper bolt fit. Drill hole in spar for slip fit of rod, then bond in spar with epoxy cement. Produced in 4 ft. lengths.

5/8" dia.....P/N 03-53100 .....**$7.95 /ft.**
3/4" dia. .....P/N 03-53200 .....**$9.95 /ft.**

GRADE XXX (PAPER BASE) PHENOLIC TUBING



O.D. (In.)	I.D. (In.)	Wall (In.)	Part No.	Price Per Ft.
3/8	1/4	1/16	03-53300	**$13.50**
5/8	1/2	1/16	03-53500	**$5.75**
3/4	5/8	1/16	03-53600	**$13.90**
7/8	3/4	1/16	03-53700	**$17.50**

Other sizes and wall thicknesses available at comparable prices .



O.D. (In.)	I.D. (In.)	Wall (In.)	Part No.	Price Per Ft.
3/8	1/8	.125	03-53800	**$1.36**
1/2	1/4	.125	03-53900	**$2.75**
5/8	3/8	.125	03-54000	**$3.35**

CLEAR EXTRUDED ACRYLIC TUBING GLASS EPOXY ROD



G-10 Glass Epoxy Rod - 5/8" Dia.
P/N 03-50900 .....**$19.95 Ft.**
Other sizes available in 4-ft. lengths.

CLEAR PVC PIPE



Clear, rigid Schedule 40 PVC pipe for sight gauges. Used in Quickie as fuel level gauge. Excellent resistance to gasoline. Nominal 1/4" pipe size (0.54" O.D., 0.33" I.D.) . P/N 03-54100 ....**$1.82 Ft.**



WELD-ON ACRYLIC CEMENT

Fast Set - Clear, water thin solvent cement.
P/N 03-00107 ..... **$22.95**



UNMASK

For easy removal of stubborn masking paper from plastic sheets. This worksaver also removes adhesive residue. Quantity Discount - 15% on 10 units on this page
Quart..... P/N 03-55100.....**$8.75**
Gal..... P/N 03-55105..... **$25.50**

DELRIN® ROD



Delrin® is a thermoplastic acetal resin. The most important attributes of Delrin® are high mechanical strength and rigidity, fatigue endurance and high resistance to moisture, gasoline and solvents. This product contains Delrin® resin. Delrin® is a registered trademark of E. I. du Pont de Nemours & Co. Color: Natural. Sold by the foot.

Diameter	Part No.	Price / Ft.	Diameter	Part No.	Price/Ft.
1/8"	02-52018	**$0.59**	3/4"	02-52034	**$2.70**
3/16"	02-52316	**$0.72**	7/8"	02-52078	**$3.70**
1/4"	02-52014	**$0.52**	1"	02-52001	**$5.50**
5/16"	02-52516	**$0.66**	1-1/8"	02-52118	**$6.50**
3/8"	02-52038	**$0.88**	1-1/4"	02-52114	**$6.95**
7/16"	02-52716	**$1.15**	1-3/8"	02-52138	**$9.80**
1/2"	02-52012	**$1.25**	1-1/2"	02-52112	**$9.80**
9/16"	02-52916	**$1.80**	1-3/4"	02-52134	**$13.50**
5/8"	02-52058	**$1.80**	2""	02-52002	**$16.50**



ACRYLIC CUTTING TOOL

Cut up to 1/4" thick acrylic by scribing and breaking with this cutting tool. Complete with instructions.
P/N 03-54200 ..... **$2.94**

ACRYLIC DRILL BITS

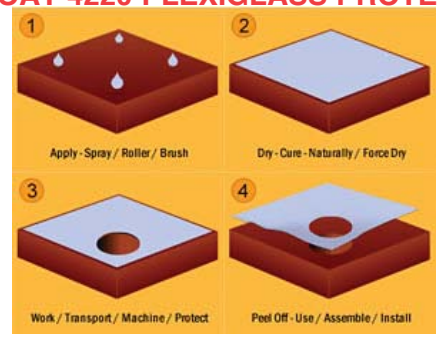


Specially ground point, 60° included tip angle, 0°rake angle, shoulder relieved, for drilling Acrylic to prevent fractures, chipping or cracking. With instructions.

Drill Size	Part No.	Price Ea.
1/8"	03-54300	**$3.95**
5/32"	03-54400	**$4.65**
3/16"	03-54500	**$5.25**
1/4"	03-54600	**$6.75**

Drill Size	Part No.	Price Ea.
5/16"	03-00114	**$8.95**
3/8"	03-54700	**$12.95**
7/16"	03-00115	**$14.85**
1/2"	03-00116	**$17.65**

DISCOAT 4220 PLEXIGLASS PROTECTOR

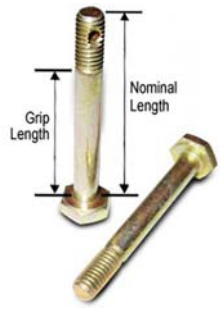


General Chemical's Disccoat 4220 is a CLEAR water resistant; water based peelable temporary protective coating for Aircraft windshields & windows which provides a long lasting durable protective layer tht protects form scratches and oxidation. Used for protecting canopies and windshields during construction. Discoat 4220 air dries quickly, leaving a tough, yet flexible coating that is easily removed and requires no other additional step. 4220 represents the ultimate in water-based removable coating technology. It is stabilized against brittleness and is not softened or penetrated by most water-based compounds.
4220 is impregnated with transparent blue dye for easy visual inspection as well as identification and is non-staining and stable to 100 degrees Celsius. Approximate coverage: 35 sq. ft. per quart. May be applied by spray or brush. Minimum of 4 coats recommended for best results.

Discoat 4220 Plexiglass Protector QT ..... P/N 03-00158.....**$23.65**
Discoat 4220 Plexiglass Protector GL..... P/N 03-00159.....**$95.50**

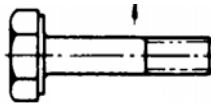
Prices Subject to Change Without Notice

AN BOLTS



Hex head aircraft bolts are made of high-strength type 4037 or 8740 alloy steel (type 8740 is most commonly used). The bolts are threaded after heat treatment. Minimum tensile strength 125,000 PSI. Cadmium plated per specification QQ-P-416, Type II, Class 3. Available with shank drilled for cotter pin or undrilled for stop nut application, and with or without drilled head for safety wire. Specify bolts to have undrilled shank by adding letter "A" after dash number. For bolts with drilled head add letter "H" after AN number. See illustrated examples. The length of AN aircraft bolts is measured from under the head to the end of the shank. The "grip" is the unthreaded portion of the shank. See table for conversion of length and/or grip to proper AN callout.

FOR UNDRILLED ADD THE LETTER "A" EXAMPLE: AN6 - 10A



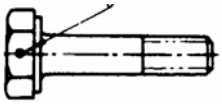
UNDRILLED

FOR DRILLED SHANK NO LETTER EXAMPLE! AN6 - 10



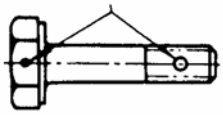
SHANK ONLY DRILLED

FOR DRILLED HEAD ADD "H" AND "A" EXAMPLE: AN6H-10A



HEAD ONLY DRILLED

FOR DRILLED HEAD AND SHANK ADD "H" ONLY EXAMPLE: AN6H-10



BOTH HEAD AND SHANK DRILLED

Bolts are sold "EACH" ALL BOLTS		AN3					AN4				
			Cadmium Plated AN3 (10-32)		Stainless AN3C (10-32)			Cadmium Plated AN4 (1/4-28)		Stainless AN4C (1/4-28)	
Dash No.	Nominal Length	Grip Length	Drilled Price	Undrilled "A" Price	Drilled Price	Undrilled "A' Price	Grip Length	Drilled Price	Undrilled "A" Price	Drilled Price	Undrilled "A" Price
-3	15/32	1/16	$0.66	$0.10	$0.82	$0.42	1/16	$0.63	$0.21	$4.35	$0.96
-4	17/32	1/8	$0.58	$0.11	$0.84	$0.48	1/16	$0.72	$0.17	$1.05	$0.56
-5	21/32	1/4	$0.54	$0.11	$1.17	$0.45	3/16	$0.59	$0.22	$1.06	$0.72
-6	25/32	3/8	$0.59	$0.12	$0.98	$0.47	5/16	$0.68	$0.22	$1.23	$0.76
-7	29/32	1/2	$0.63	$0.12	$0.99	$0.65	7/16	$0.70	$0.21	$1.22	$0.78
-10	1-1/32	5/8	$0.62	$0.14	$0.89	$0.71	9/16	$0.69	$0.23	$1.44	$0.89
-11	1-5/32	3/4	$0.74	$0.18	$0.98	$0.72	11/16	$0.68	$0.28	$1.34	$0.77
-12	1-9/32	7/8	$0.65	$0.19	$1.04	$0.76	13/16	$0.74	$0.28	$1.43	$0.94
-13	1-13/32	1	$0.70	$0.19	$0.89	$0.76	15/16	$0.72	$0.28	$1.40	$1.20
-14	1-17/32	1-1/8	$0.58	$0.18	$1.38	$0.85	1-1/16	$0.76	$0.29	$1.28	$0.94
-15	1-21/32	1-1/4	$0.77	$0.23	$1.50	$0.81	1-3/16	$0.64	$0.35	$1.86	$1.11
-16	1-25/32	1-3/8	$0.71	$0.22	-	$0.82	1-5/16	$0.79	$0.40	-	$1.08
-17	1-29/32	1-1/2	$0.75	$0.21	$2.90	$0.89	1-7/16	$1.05	$0.42	$2.90	$0.98
-20	2-1/32	1-5/8	$0.78	$0.26	$4.85	$1.08	1-9/16	$0.74	$0.38	$2.65	$1.10
-21	2-5/32	1-3/4	$0.83	$0.26	-	$0.93	1-11/16	$0.82	$0.38	-	$1.45
-22	2-9/32	1-7/8	$0.79	$0.29	-	$1.14	1-13/16	$0.87	$0.39	-	$1.08
-23	2-13/32	2	$0.75	$0.30	-	$1.40	1-15/16	$1.18	$0.46	-	$1.17
-24	2-17/32	2-1/8	$0.87	$0.33	$1.82	$1.82	2-1/16	$0.95	$0.45	-	$1.64
-25	2-21/32	2-1/4	$0.79	$0.37	-	$1.52	2-3/16	$0.99	$0.37	-	$1.52
-26	2-25/32	2-3/8	$0.83	$0.39	-	$2.80	2-5/16	$1.18	$0.58	-	$2.75
-27	2-29/32	2-1/2	$0.99	$0.45	-	$18.70	2-7/16	$1.07	$0.58	-	$3.75
-30	3-1/32	2-5/8	$0.78	$0.41	-	$1.95	2-9/16	$1.07	$0.66	-	$3.76
-31	3-5/32	2-3/4	$1.77	$0.58	-	-	2-11/16	$1.34	$0.70	-	-
-32	3-9/32	2-7/8	$0.87	$0.59	-	-	2-13/16	$1.14	$0.87	-	-
-33	3-13/32	3	$1.12	$0.64	-	-	2-15/16	$1.18	$0.88	-	-
-34	3-17/32	3-1/8	$1.12	$0.70	-	-	3-1/16	$1.14	$0.98	-	-
-35	3-21/32	3-1/4	$0.98	$1.29	-	$6.50	3-3/16	$1.26	$0.98	-	-
-36	3-25/32	3-3/8	$1.45	$0.74	-	-	3-5/16	$1.58	$0.96	-	-
-37	3-29/32	3-1/2	$1.77	$0.86	-	-	3-7/16	$1.30	$1.16	-	-
-40	4-1/32	3-5/8	$1.16	$0.94	-	-	3-9/16	$1.78	$1.25	-	-
-41	4-5/32	3-3/4	$1.42	$1.18	-	-	3-11/16	$1.72	$1.38	-	-
-42	4-9/32	3-7/8	$1.63	$1.10	-	-	3-13/16	$1.77	$1.31	-	-
-43	4-13/32	4	-	$1.16	-	-	3-15/16	$2.10	$1.44	-	-
-44	4-17/32	4-1/8	$2.50	$1.50	-	-	4-1/16	$1.83	$1.47	-	-
-45	4-21/32	4-1/4	$1.38	$1.49	-	-	4-3/16	$1.87	$1.55	-	-
-46	4-25/32	4-3/8	$1.86	$1.51	-	-	4-5/16	$1.95	$1.47	-	-
-47	4-29/32	4-1/2	$1.58	$1.46	-	-	4-7/16	$2.13	$1.51	-	-
-50	5-1/32	4-5/8	$12.95	$9.87	-	-	4-9/16	$5.50	$2.93	-	-
-51	5-5/32	4-3/4	$10.50	$9.84	-	-	4-11/16	$8.75	$5.75	-	-
-52	5-9/32	4-7/8	-	$8.75	-	-	4-13/16	$9.93	$7.90	-	-
-53	5-13/32	5	-	-	-	-	4-15/16	-	$5.85	-	-
-54	5-17/32	5-1/8	$11.50	$10.94	-	-	5-1/16	-	$9.83	-	-
-55	5-21/32	5-1/4	-	$12.50	-	-	5-3/16	$9.74	$9.75	-	-
-56	5-25/32	5-3/8	$12.25	$11.75	-	-	5-5/16	$8.97	$9.93	-	-
-57	5-29/32	5-1/2	-	$11.95	-	-	5-7/16	$9.95	$9.94	-	-
-60	6-1/32	5-5/8	$11.85	$13.75	-	-	5-9/16	$9.68	$5.35	-	-

Quantity discount on AN4 bolts - 15% discount on qty of 50-99 • 20% discount on qty of 100+

AN BOLTS



AN BOLT GAUGE

Automatically sizes all AN bolts up to 5/8" diameter and 5 inches long.

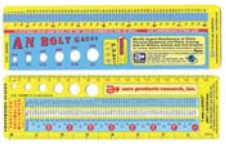
P/N 04-05400 ..... **$9.50**



AN BOLT LENGTH GAUGES

The APR AN Bolt Length Gauge accurately shows the proper length of the AN Bolt required when original bolt lengths are unknown and helps to choose the proper length for new holes drilled during installations of modifications.

4"..... P/N 11-09128 ..... **$8.50**
6"..... P/N 11-09129 ..... **$9.65**



APR AN BOLT GAUGE

AN bolt gauge deluxe heavy duty model measures diameter and length of AN bolts up to 8", 388 precision conversions. Fraction / decimal / millimeter equivalents, with 8" Inch and 20 cm metric rulers. 4 colors. Pocket size. PVC plastic 8-5/8" x 2-1/2" x .030"

P/N 11-07726 ..... **$7.75**



POCKET SIZE AN BOLT GAUGE

This pocket-size tool is manufactured with high-stress vinyl and is the only AN Bolt Gauge combined with conversion scales and rulers. Accurately measures AN Bolt sizes from 3/16" to ½" in diameter and up to 8" in length. Graphic instructions eliminate errors to help you quickly determine the correct bolt size. The conversion scales list fractions in increments of 1/6" from 0 to 1 inch (64 entries). Parallel to each fraction are the decimal and millimeter equivalents. P/N 13-06716 ..... **$5.95**

HA

AN5 BOLTS AND AN6 BOLTS

Hex head aircraft bolts are made of high-strength type 4037 or 8740 alloy steel (type 8740 is most commonly used). The bolts are centerless ground and threaded after heat treatment. Minimum tensile strength 125,000 PSI. Cadmium plated per specification QQ-P-416A, Type II, Class 3.

Bolts are sold "EACH" ALL BOLTS		AN5					AN6				
			Cadmium Plated AN5 (5/16-24)		Stainless AN5C (5/16-24)			Cadmium Plated AN6 (3/8-24)		Stainless AN6C (3/8-24)	
Dash No.	Nominal Length	Grip Length	Drilled Price	Undrilled "A" Price	Drilled Price	Undrilled "A" Price	Grip Length	Drilled Price	Undrilled "A" Price	Drilled Price	Undrilled "A" Price
-4	19/32	1/16	$0.78	$0.35	$7.65	$2.46	1/16	$0.88	$0.45	-	-
-5	23/32	3/16	$0.74	$0.37	$3.80	$1.38	1/16	$0.98	$0.47	$2.45	$3.45
-6	27/32	5/16	$0.83	$0.35	$4.50	$2.46	3/16	$0.99	$0.57	$39.95	$2.70
-7	31/32	7/16	$0.86	$0.34	$6.90	$2.15	5/16	$0.90	$0.48	$18.50	$3.40
-10	1-3/32	9/16	$0.99	$0.45	-	$1.77	7/16	$1.12	$0.56	-	$3.45
-11	1-7/32	11/16	$0.89	$0.42	-	$1.84	9/16	$1.34	$0.59	$8.50	$3.25
-12	1-11/32	13/16	$0.92	$0.49	$8.50	$2.45	11/16	$0.97	$0.56	$27.50	$3.85
-13	1-15/32	15/16	$1.10	$0.49	-	$2.43	13/16	$0.85	$0.61	-	$3.60
-14	1-19/32	1-1/16	$1.26	$0.51	-	$2.38	15/16	$0.89	$0.69	$2.40	$4.55
-15	1-23/32	1-3/16	$1.14	$0.51	-	$3.99	1-1/16	$1.13	$0.76	$11.50	$4.98
-16	1-27/32	1-5/16	$1.08	$0.49	-	-	1-3/16	$1.52	$0.73	$13.60	$2.80
-17	1-31/32	1-7/16	$1.22	$0.49	-	$2.48	1-5/16	$1.32	$0.74	-	$4.45
-20	2-3/32	1-9/16	$0.98	$0.66	-	$7.92	1-7/16	$1.06	$0.80	-	-
-21	2-7/32	1-11/16	$1.38	$0.68	-	$3.60	1-9/16	$1.20	$0.84	-	-
-22	2-11/32	1-13/16	$1.18	$0.65	-	-	1-11/16	$1.42	$0.99	-	-
-23	2-15/32	1-15/16	$1.25	$0.65	-	-	1-13/16	$0.99	$0.84	-	-
-24	2-19/32	2-1/16	$1.39	$0.78	-	-	1-15/16	$1.58	$0.98	-	-
-25	2-23/32	2-3/16	$1.19	$0.78	-	$18.50	2-1/16	$1.60	$1.03	-	-
-26	2-27/32	2-5/16	$0.98	$0.75	-	$13.80	2-3/16	$1.58	$1.10	-	-
-27	2-31/32	2-7/16	$1.18	$0.84	-	$12.60	2-5/16	$1.97	$1.14	-	-
-30	3-3/32	2-9/16	$1.50	$0.91	-	-	2-7/16	$1.82	$1.13	-	-
-31	3-7/32	2-11/16	$1.43	$0.94	-	-	2-9/16	$1.61	$1.43	-	-
-32	3-11/32	2-13/16	$1.47	$1.12	-	-	2-11/16	$2.32	$1.53	-	-
-33	3-15/32	2-15/16	$1.48	$1.08	-	-	2-13/16	$1.99	$1.47	-	-
-34	3-19/32	3-1/16	$1.64	$0.94	-	-	2-15/16	$2.25	$1.70	-	-
-35	3-23/32	3-3/16	$1.72	$1.38	-	-	3-1/16	$2.65	$1.55	-	-
-36	3-27/32	3-5/16	$1.74	$1.66	-	-	3-3/16	$1.99	$1.91	-	-
-37	3-31/32	3-7/16	$2.25	$1.57	-	-	3-5/16	$2.55	$1.59	-	-
-40	4-3/32	3-9/16	$2.15	$1.59	-	-	3-7/16	$2.26	$1.83	-	-
-41	4-7/32	3-11/16	$1.95	$1.68	-	-	3-9/16	$2.40	$2.40	-	-
-42	4-11/32	3-13/16	-	$1.89	-	-	3-11/16	$2.58	$1.94	-	-
-43	4-15/32	3-15/16	$2.40	$2.50	-	-	3-13/16	$3.85	$3.35	-	-
-44	4-19/32	4-1/16	-	$1.97	-	-	3-15/16	$3.45	$2.60	-	-
-45	4-23/32	4-3/16	$2.16	$2.55	-	-	4-1/16	$2.99	$2.80	-	-
-46	4-27/32	4-5/16	$2.17	$2.20			4-3/16	$3.55	$2.90	-	-
-47	4-31/32	4-7/16	$2.50	$2.19	-	-	4-5/16	$3.39	$5.32	-	-
-50	5-3/32	4-9/16	$8.55	$7.50	-	-	4-7/16	$11.62	$10.73	-	-
-51	5-7/32	4-11/16	$9.97	$8.75	-	-	4-9/16	$11.76	$11.38	-	-
-52	5-11/32	4-13/16	$9.98	$10.55	-	-	4-11/16	$12.50	$13.65	-	-
-53	5-15/32	4-15/16	$9.88	$10.99	-	-	4-13/16	$11.90	$11.65	-	-
-54	5-19/32	5-1/16	$8.78	$10.75	-	-	4-15/16	$11.75	$11.63	-	-
-55	5-23/32	5-3/16	$9.75	$9.69	-	-	5-1/16	$11.50	$11.87	-	-
-56	5-27/32	5-5/16	$8.86	$9.93	-	-	5-3/16	$9.97	$10.80	-	-
-57	5-31/32	5-7/16	$12.75	$16.75	-	-	5-5/16	$10.93	$11.75	-	-
-60	6-3/32	5-9/16	$10.75	$9.98	-	-	5-7/16	$11.68	$11.46	-	-

AN BOLTS

USE REFERENCE CHART

Bolt Size	AN960 Flat Washer	AN970 Lg. Area Flat Washer	AN365 Nylon Insert Locknut	AN310 Castle Nut	AN380 Cotter Pin
AN3	-10	-3	-1032	-3	-2-2 or longer
AN4	-416	-4	-428	-4	-25-2 or longer
AN5	-516	-5	-524	-5	-25-3
AN6	-616	-6	-624	-6	-3-3 or longer
AN7	-716	-7	-720	-7	-3-3 or longer
AN8	-816	-8	-820	-8	-3-4 or longer

SAMPLE PART NUMBERS

AN3-4 .....Cad-plated, drilled shank

AN3-4A..... Cad-plated, undrilled

AN3C-4.....Stainless steel, drilled shank

AN3C-4A.....Stainless steel, undrilled

TOBACCO BAGS



Cloth bags for holding hardware as it is removed from the aircraft. Set of 25.

P/N 04-05310 .....**$11.75**

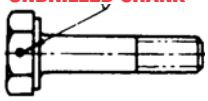
NOTICE - Aircraft Spruce & Specialty Company is committed to supplying only top quality aircraft grade hardware. We receive our hardware certified to applicable AN, MS, or NAS specifications from our suppliers, on certain items it is necessary for us to accept hardware without certifiable traceability in order to continue supplying that particular part number. These hardware items are designated as "surplus" in the product description.

AN7 AND AN8 BOLTS

Hex head aircraft bolts are made of high-strength type 4037 or 8740 alloy steel (type 8740 is most commonly used). The bolts are centerless ground and threaded after heat treatment. Minimum tensile strength 125,000 PSI. Cadmium plated per specification QQ-P-416A, Type II, Class 3.

Bolts are sold "EACH"		AN7					AN8		
ALL BOLTS			Cadmium Plated AN7 (7/16-20)		Stainless AN7C (7/16-20)			Cadmium Plated AN8 (1/2-20)	
Dash	Nominal No.	Grip Length	Drilled Price	Undrilled "A" Price	Drilled Price	Undrilled "A" Price	Grip Length	Drilled Price	Undrilled "A" Price
-5	23/32	1/16	$1.44	$1.62	-	-	-	-	-
-6	27/32	3/16	$4.99	$9.98	-	-	1/16	$4.65	$3.35
-7	31/32	5/16	--	$1.17	-	-	3/16	$5.35	$1.45
-10	1-3/32	7/16	$2.18	$1.14	-	-	5/16	--	$1.77
-11	1-7/32	9/16	--	$1.38	-	-	7/16	$2.17	$1.52
-12	1/11/32	11/16	$1.79	$1.78	-	-	9/16	$2.75	$2.06
-13	1-15/32	13/16	$2.00	$1.24	-	-	11/16	$3.30	$2.09
-14	1-19/32	15/16	$2.75	$1.22	-	-	13/16	$2.94	$1.93
-15	1-23/32	1-1/16	$2.55	$2.55	-	-	15/16	$2.80	$2.17
-16	1-27/32	1-3/16	$3.30	$1.62	-	-	1-1/16	$3.35	$2.01
-17	1-31/32	1-5/16	$2.34	$1.37	-	-	1-3/16	$3.55	$2.18
-20	2-3/32	1-7/16	$2.48	$1.43	-	-	1-5/16	$2.75	$2.42
-21	2-7/32	1-9/16	$2.20	$1.79	-	-	1-7/16	$2.90	$2.25
-22	2-11/32	1-11/16	$2.40	$1.37	-	-	1-9/16	$3.99	$2.60
-23	2-15/32	1-13/16	$2.50	$1.85	-	-	1-11/16	$3.10	$2.52
-24	2-19/32	1-15/16	$2.60	$2.15	-	-	1-13/16	$3.38	$2.24
-25	2-23/32	2-1/16	$2.85	$1.49	-	-	1-15/16	$4.40	$2.50
-26	2-27/32	2-3/16	$2.75	$1.92	-	-	2-1/16	$3.65	$2.63
-27	2-31/32	2-5/16	$2.55	$2.28	-	-	2-3/16	$2.98	$2.83
-30	3-3/32	2-7/16	--	$2.13	-	-	2-5/16	$4.35	$2.95
-31	3-7/32	2-9/16	$2.90	$2.24	-	-	2-7/16	$4.20	$2.50
-32	3-11/32	2-11/16	$2.90	$2.60	-	-	2-9/16	$3.55	$3.20
-33	3-15/32	2-13/16	$2.39	$2.65	-	-	2-11/16	$4.53	$2.94
-34	3-19/32	2-15/16	$3.28	$2.65	-	-	2-13/16	$3.99	$3.20
-35	3-23/32	3-1/16	$4.40	$2.62	-	-	2-15/16	--	$3.57
-36	3-27/32	3-3/16	$3.10	$2.86	-	-	3-1/16	$2.98	$2.60
-37	3-31/32	3-5/16	$3.85	$2.79	-	-	3-3/16	$4.43	$3.40
-40	4-3/32	3-7/16	$3.75	$3.35	-	-	3-5/16	--	$3.60
-41	4-7/32	3-9/16	--	--	-	-	3-7/16	$3.97	$3.97
-42	4-11/32	3-11/16	$4.21	$3.70	-	-	3-9/16	$4.39	--
-43	4-15/32	3-13/16	$4.85	$3.90	-	-	3-11/16	$4.75	$3.95
-44	4-19/32	3-15/16	$4.80	$4.55	-	-	3-13/16	$4.95	$6.50
-45	4-23/32	4-1/16	$4.95	$4.00	-	-	3-15/16	$5.36	$4.95
-46	4-27/32	4-3/16	$4.55	$4.75	-	-	4-1/16	--	--
-47	4-31/32	4-5/16	$4.93	$4.89	-	-	4-3/16	$7.50	--
-50	5-3/32	4-7/16	$13.78	$14.65	-	-	4-5/16	$21.55	$12.75
-51	5-7/32	4-9/16	--	--	-	-	4-7/16	--	$13.46
-52	5-11/32	4-11/16	$13.95	$13.87	-	-	4-9/16	$16.50	$16.70
-53	5-15/32	4-13/16	--	-	-	-	4-11/16	$21.80	--
-54	5-19/32	4-15/16	-	--	-	-	4-13/16	--	$17.62
-55	5-23/32	5-1/16	--	$13.75	-	-	4-15/16	$16.75	--
-56	5-27/32	5-3/16	$16.75	$14.93	-	-	5-1/16	$12.60	$16.50
-57	5-31/32	5-5/16	--	$13.87	-	-	5-3/16	$13.95	--
-60	6-3/32	5-7/16	$15.75	$13.94	-	-	5-5/16	$14.90	--

DRILLED HEAD, UNDRILLED SHANK



AN3	Ea.
H4A	$0.75
H5A	$0.69
H6A	$0.47
H10A	$0.63
H12A	$0.66
H13A	$0.76
H15A	$0.74

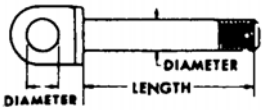
AN4	Ea.
H3A	$0.54
H4A	$0.68
H5A	$0.73
H6A	$0.69
H7A	$0.66
H12A	$0.76
H13A	$0.65
H14A	$0.71
H16A	$1.07
H21A	$0.83
H26A	$1.22
H30A	$1.50
H32A	$1.35

AN5	Ea.
H6A	$0.95
H12A	$0.86
H13A	$1.06
H16A	$1.16
H17A	$1.17
H20A	$1.19
H31A	$3.89
H33A	-------

AN6	Ea.
H11A	$0.97
H14A	$1.50
H16A	-------
H20A	$1.97
H31A	$4.98
H32A	$4.22
H34A	$2.95
H37A	$3.85
H40A	$4.45
H41A	$4.75
H43A	$5.68
H45A	$3.85
H46A	$5.75
H50A	$12.50

AN8	Ea.
H7A	$5.35

EYE BOLTS



AN42 - AN46 EYE BOLTS

Eye bolts are special purpose bolts to be used where external tension loads are to be applied. The eye is designed for attachment of such devices as a turnbuckle fork, a clevis or a cable shackle. Manufactured and plated in same manner as AN3 - AN8 bolts . Minimum tensile strength 125, 000 PSI . Eye bolts will be furnished with either drilled or undrilled shank subject to stock on hand. Add letter "A" after dash number for undrilled shank.

HA

Nominal Length	AN42B Shank 3/16" Hole 3/16" Thread 10-32					AN43B Shank 1/4" Hole 3/16" Thread 1/4-28				
	Grip Length	Drilled Part No.	Price Each	Undrilled Part No.	Price Each	Grip Length	Drilled Part No.	Price Each	Undrilled Part No.	Price Each
1/2	1/8	AN42B-4	$5.55	AN42B-4A	$4.55	1/16	AN43B-4	$8.50	AN43B-4A	$5.35
5/8	1/4	AN42B-5	$6.65	AN42B-5A	$4.85	3/16	AN43B-5	$8.50	AN43B-5A	$5.90
3/4	3/8	AN42B-6	$4.90	AN42B-6A	$5.35	5/16	AN43B-6	$8.90	AN43B-6A	$6.35
7/8	1/2	AN42B-7	$7.50	AN42B-7A	$5.40	7/16	AN43B-7	$9.50	AN43B-7A	$6.50
1	5/8	AN42B-10	$8.50	AN42B-10A	$5.95	9/16	AN43B-10	$9.70	AN43B-10A	$6.70
1-1/8	3/4	AN42B-11	$8.80	AN42B-11A	$6.50	11/16	AN43B-11	$9.65	AN43B-11A	$7.95
1-1/4	7/8	AN42B-12	$10.50	AN42B-12A	$6.75	13/16	AN43B-12	$10.80	AN43B-12A	$7.90
1-3/8	1	AN42B-13	$9.97	AN42B-13A	$6.65	15/16	AN43B-13	$8.50	AN43B-13A	$7.50
1-1/2	1-1/8	AN42B-14	$7.80	AN42B-14A	$8.50	1-1/16	AN43B-14	$8.60	AN43B-14A	$8.50
1-5/8	1-1/4	AN42B-15	$7.88	AN42B-15A	$8.35	1-3/16	AN43B-15	$8.95	AN43B-15A	$8.90
1-3/4	1-3/8	AN42B-16	$17.99	AN42B-16A	$8.70	1-5/16	AN43B-16	$19.50	AN43B-16A	$8.85
1-7/8	1-1/2	AN42B-17	$9.50	AN42B-17A	$7.99	1-7/16	AN43B-17	$9.55	AN43B-17A	$9.98
2	1-5/8	AN42B-20	$9.50	AN42B-20A	$9.60	1-9/16	AN43B-20	$9.50	AN43B-20A	$9.93
2-1/8	1-3/4	AN42B-21	$9.50	AN42B-21A	$13.60	1-11/16	AN43B-21	$23.50	AN43B-21A	$11.50
2-1/4	1-7/8	AN42B-22	$16.50	AN42B-22A	$7.75	1-13/16	AN43B-22	$11.70	AN43B-22A	$12.75
2-3/8	2	AN42B-23	$20.50	AN42B-23A	$8.90	1-15/16	AN43B-23	$17.60	AN43B-23A	$11.65
2-1/2	2-1/8	AN42B-24	$11.50	AN42B-24A	$9.55	2-1/16	AN43B-24	$13.50	AN43B-24A	$12.50
2-5/8	2-1/4	AN42B-25	$10.50	AN42B-25A	$14.55	2-3/16	AN43B-25	$21.50	AN43B-25A	$10.55
2-3/4	3-3/8	---	---	AN42B-26A	$18.50	2-5/16	AN43B-26	$16.55	AN43B-26A	$10.55
2-7/8	2-1/2	AN42B-27	---!	AN42B-27A	$9.50	2-7/16	AN43B-27	$10.40	AN43B-27A	$11.50
3	2-5/8	AN42B-30	$11.80	AN42B-30A	$12.50	2-9/16	AN43B-30	$15.50	AN43B-30A	$19.80

Nominal Length	AN44 Shank 5/16"	Hole 1/4"	Thread 5/16-24	AN44A (Undrilled) Shank 5/16"	Hole 1/4"	Thread 5/16-24	0AN450 0Shank 05/16"0	Hole 5/16"	Thread 5/16-24	AN45A (Undrilled) Shank 5/16"	Hole 5/16"	Thread 5/16-24
	Grip Length	Drilled P/N	Price Each	Grip Length	Drilled P/N	Price Each	Grip Length	Drilled P/N	Price Each	Grip Length	Drilled P/N	Price Each
	3/16	AN44-5	$9.50	3/16	AN44-5A	$8.50	1/16	AN45-4	$16.90	1/16	AN45-4A	-
7/8	7/16	AN44-7	$9.75	7/16	AN44-7A	$8.55	3/16	AN45-5	$9.85	3/16	AN45-5A	$7.50
1	9/16	AN44-10	$29.70	9/16	AN44-10A	$9.50	5/16	AN45-6	$9.65	5/16	AN45-6A	$7.90
1-1/8	11/16	AN44-11	$9.85	11/16	AN44-11A	$9.50	7/16	AN45-7	$9.90	7/16	AN45-7A	$7.45
1-1/4	13/16	AN44-12	$11.50	13/16	AN44-12A	$10.65	9/16	AN45-10	$11.50	9/16	AN45-10A	$11.75
1-3/8	15/16	AN44-13	$17.50	15/16	AN44-13A	$9.90	13/16	AN45-12	$23.50	13/16	AN45-12A	$9.55
1-1/2	1-1/16	AN44-14	$22.70	1-1/16	AN44-14A	$10.50	15/16	AN45-13	$12.50	15/16	AN45-13A	$23.50
1-5/8	1-3/16	AN44-15	$12.70	1-3/16	AN44-15A	$10.75	1-1/16	AN45-14	$11.90	1-1/16	AN45-14A	$11.50
1-3/4	1-5/16	AN44-16	$15.78	1-5/16	AN44-16A	$11.75	1-3/16	AN45-15	$30.95	1-3/16	AN45-15A	$10.65
1-7/8	1-7/16	AN44-17	$11.95	1-7/16	AN44-17A	$15.50	1-5/16	AN45-16	$12.90	1-5/16	AN45-16A	-
2	1-9/16	AN44-20	$12.50	1-9/16	AN44-20A	$12.50	1-7/16	AN45-17	$13.65	1-7/16	AN45-17A	$12.50
2-1/8	1-11/16	AN44-21	-	1-11/16	AN44-21A	$33.75	1-9/16	AN45-20	$13.50	1-9/16	AN45-20A	$11.90
2-1/4	1-13/16	AN44-22	$14.80	1-13/16	AN44-22A	$13.50	1-11/16	AN45-21	$5.20	1-11/16	AN45-21A	$12.85
2-3/8	1-15/16	AN44-23	-	1-15/16	AN44-23A	-	1-13/16	AN45-22	$12.50	1-13/16	AN45-22A	-
2-1/2	2-1/16	AN44-24	$14.60	2-1/16	AN44-24A	$22.75	1-15/16	AN45-23	$14.50	1-15/16	AN45-23A	-
2-5/8	2-3/16	AN44-25	-	2-3/16	AN44-25A	$28.75	2-1/16	AN45-24	$16.50	2-1/16	AN45-24A	$25.50
2-3/4	2-5/16	AN44-26	$15.50	2-5/16	AN44-26A	$15.50	2-3/16	AN45-25	-	2-3/16	AN45-25A	$14.95
2-7/8	2-7/16	AN44-27	-	2-7/16	AN44-27A	$13.50	2-5/16	AN45-26	$17.65	2-5/16	AN45-26A	-
3	2-9/16	AN44-30	-	2-9/16	AN44-30A	-	2-7/16	AN45-27	$46.50	2-7/16	AN45-27A	$15.50
							2-9/16	AN45-30	$20.20	2-9/16	AN45-30A	-

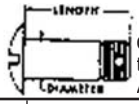
Nominal Length	AN46 Shank 3/8"	Hole 3/8"	Thread 3/8-24	AN46A (Undrilled) Shank 3/8"	Hole 3/8"	Thread 3/8-24
	Grip Length	Drilled Part No.	Price Each	Grip Length	Drilled Part No.	Price Each
5/8	1/16	AN46-5	$22.50	1/16	AN46-5A	-
3/4	3/16	AN46-6	$10.80	3/16	AN46-6A	-
7/8	5/16	AN46-7	$11.50	5/16	AN46-7A	$9.50
1	7/16	AN46-10	$19.50	7/16	AN46-10A	-
1-1/4	11/16	AN46-12	$12.90	11/16	AN46-12A	-
1-3/8	13/16	AN46-13	$31.90	13/16	AN46-13A	-
1-1/2	15/16	AN46-14	$13.90	15/16	AN46-14A	$24.65
1-5/8	1-1/16	AN46-15	$14.50	1-1/16	AN46-15A	$22.50
1-3/4	1-3/16	AN46-16	$12.65	1-3/16	AN46-16A	-
1-7/8	1-5/16	AN46-17	$21.50	1-5/16	AN46-17A	$16.90
2	1-7/16	AN46-20	$16.70	1-7/16	AN46-20A	$12.70
2-1/8	1-9/16	AN46-21	$16.50	1-9/16	AN46-21A	-
2-1/4	1-11/16	AN46-22	-	1-11/16	AN46-22A	$13.50
2-3/8	1-13/16	AN46-23	-	1-13/16	AN46-23A	$18.95
2-5/8	2-1/16	AN46-25	$22.55	2-1/16	AN46-25A	$21.50
2-3/4	2-3/16	AN46-26	$19.50	2-3/16	AN46-26A	$16.55
2-7/8	2-5/16	AN46-27	$19.75	2-5/16	AN46-27A	-
3	2-7/16	AN46-30	$20.50	2-7/16	AN46-30A	-

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CLEVIS BOLTS



AN23 - AN27 CLEVIS BOLTS

Clevis bolts have a slotted brazier type head. They are special-purpose bolts for use where a large shearing stress occurs (never in tension). Manufactured and cadmium plated in same manner as AN3 - AN8 aircraft bolts. Minimum tensile strength 125,000 PSI. Available with drilled or undrilled shank. Add letter "A" after dash number for undrilled shank. Prices fluctuate on clevis bolts.

Dash No.	AN23 (3/16")				AN24 (1/4")				AN25 (5/16")				AN26 (3/8")				AN27 (7/16")			
	Grip	Length	Drilled	Un-Drilled	Grip	Length	Drilled	Un-Drilled	Grip	Length	Drilled	Un-Drilled	Grip	Length	Drilled	Un-Drilled	Grip	Length	Drilled	Un-Drilled
8	3/16	17/32	$1.08	$0.43	3/16	17/32	----	$2.28	----	----	----	----	----	----	----	----	----	----	----	----
9	1/4	19/32	$1.16	$0.47	1/4	19/32	$4.99	$2.76	1/4	39/64	$0.60	----	l/4	39/64	----	----	----	----	----	----
10	5/16	21/32	$0.93	$0.44	5/l6	21/32	$0.99	$0.59	5/16	43/64	$8.93	----	5/16	43/64	----	----	----	----	----	----
11	3/8	23/32	$1.14	$0.49	3/8	23/32	$1.27	$0.94	3/8	47/64	---	----	3/8	47/64	----	----	----	----	----	----
12	7/l6	25/32	$0.97	$0.42	7/16	25/32	$1.09	$0.65	7/16	5l/64	----	$10.60	7/16	51/64	$6.80	----	3/8	51/64	----	----
13	1/2	27/32	$1.09	$0.52	1/2	27/32	$0.97	$0.53	1/2	55/64	$24.95	----	1/2	55/64	$12.50	----	7/16	55/64	----	----
14	9/l6	29/32	$1.38	$0.46	9/16	29/32	$1.24	$1.48	9/16	59/64	$7.75	$64.75	9/16	59/64	---	----	1/2	59/64	----	----
15	5/8	31/32	$0.99	$0.59	5/8	31/32	$1.14	----	5/8	63/64	$14.55	----	5/8	63/64	----	----	9/16	63/64	----	----
16	11/16	1-1/32	$1.10	$0.46	11/16	1-1/32	$1.14	$1.32	11/16	1-3/64	----	----	11/16	1-3/64	---	----	5/8	1-3/64	----	----
l7	3/4	1-3/32	$0.99	$0.47	3/4	1-3/32	$1.15	$2.08	3/4	1-7/64	$6.90	----	3/4	1-7/64	----	----	11/16	1-7/64	----	----
l8	13/16	1-5/32	$1.12	$0.65	13/16	1-5/32	$1.43	$2.97	13/16	1-11/64	$5.40	----	13/16	1-11/64	$14.95	----	3/4	1-11/64	----	----
l9	7/8	1-7/32	$1.08	$0.76	7/8	1-7/32	$2.10	$1.35	7/8	1-15/64	$4.20	----	7/8	1-15/64	----	----	13/16	1-15/64	----	----
20	15/16	1-9/32	$0.94	$1.99	15/16	1-9/32	$1.25	$1.10	15/16	1-19/64	----	----	15/16	1-19/64	$9.64	---	7/8	1-19/64	----	----
21	1	1-11/32	$1.50	$0.80	1	1-11/32	$2.83	$4.60	1	1-23/64	$11.95	----	1	1-23/64	$3.45	----	15/16	1-23/64	----	----
22	1-1/16	1-13/32	$1.21	$0.40	1-1/16	1-13/32	$3.40	$0.85	1-1/16	1-27/64	$10.95	$7.50	1-1/16	1-27/64	$9.25	----	1	1-27/64	----	----
23	1-1/8	1-15/32	$2.45	$0.74	1-1/8	1-15/32	$5.80	$1.10	1-1/8	1-31/64	----	----	1-1/8	1-31/64	$8.70	----	1-1/16	1-31/64	----	----
24	1-3/16	1-17/32	$3.55	$3.35	1-3/16	1-17/32	$2.38	$1.53	1-3/16	1-35/64	$10.50	----	1-3/16	1-35/64	----	----	1-1/8	1-35/64	----	----
25	1-1/4	1-19/32	$2.96	$3.60	1-1/4	1-19/32	----	----	1-1/4	1-39/64	----	----	1-1/4	1-39/64	$7.85	----	1-3/16	1-39/64	----	----
26	1-5/16	1-21/32	$4.85	---	1-5/16	1-21/32	$1.46	$2.63	1-5/16	1-43/64	----	----	1-5/16	1-43/64	$11.73	----	1-1/4	1-43/64	----	----
27	1-3/8	1-23/32	$5.80	$0.58	1-3/8	1-23/32	$3.85	$5.85	1-3/8	1-47/64	----	----	1-3/8	1-47/64	----	----	1-5/16	1-47/64	----	----
28	1-7/16	1-25/32	$2.30	$6.95	1-7/16	1-25/32	----	$1.16	1-7/16	1-51/64	----	----	1-7/16	1-51/64	----	----	1-3/8	1-51/64	----	----
29	1-1/2	1-27/32	$2.91	---	1-1/2	1-27/32	$12.90	----	1-1/2	1-55/64	$9.93	----	1-1/2	1-55/64	----	----	1-7/16	1-55/64	----	----
30	1-9/16	1-29/32	----	$1.16	1-9/16	1-29/32	----	----	1-9/16	1-59/64	----	----	1-9/16	1-59/64	----	----	1-1/2	1-59/64	----	----
31	1-5/8	1-31/32	----	$7.50	1-5/8	1-31/32	$3.40	$1.36	1-5/8	1-63/64	$11.50	----	1-5/8	1-63/64	----	----	1-9/16	1-63/64	----	----
32	1-11/16	2-1/32	$0.49	$2.65	1-11/16	2-1/32	$9.65	----	1-11/16	2-3/64	$10.50	----	1-11/16	2-3/64	----	----	1-5/8	2-3/64	----	----
34	1-13/16	2-5/32	$13.70	$5.50	1-13/16	2-5/32	$16.70	$8.65	1-13/16	2-11/64	-----	----	1-13/16	2-11/64	----	----	1-3/4	2-11/64	----	----
36	1-15/16	2-9/32	----	----	1-15/16	2-9/32	$3.75	$5.70	1-15/16	2-19/64	----	----	1-15/16	2-19/64	----	----	1-7/8	2-19/64	----	----
38	2-1/16	2-13/32	$11.95	$10.50	2-1/16	2-13/32	$3.40	----	2-1/16	2-27/64	$24.50	----	2-1/16	2-27/64	$19.90	----	2	2-27/64	----	----
40	2-3/16	2-17/32	$1.18	$6.84	2-3/16	2-17/32	----	$7.50	2-3/16	2-35/64	----	----	2-3/16	2-35/64	----	----	2-1/8	2-35/64	----	----



AN173, AN174, & AN175 CLOSE TOLERANCE BOLTS

Note: All AN173-AN175 bolts are drilled shank.
Non-corrosion-resistant cadmium-plated steel machine bolts. Manufactured to Revision 20 (April, 1990) of the military specification.

Cat. #	Dia. (inches)	Threads/ inch	Length (inches)	Grip (inches)	Price
AN173-5	.1900	32 NF-3A	.656	.250	$0.86
AN173-6			.781	.375	$0.89
AN173-7A			.906	.500	$0.68
AN173-7			.906	.500	$0.89
AN173-10			1.031	.625	$0.96
AN173-11			1.156	.750	$0.86
AN173-12			1.281	.875	$1.49
AN173-13			1.406	1.000	$0.98
AN173-14			1.531	1.125	$0.87
AN173-15			1.656	1.250	$1.22
AN173-16			1.781	1.375	$1.34
AN174-3	.2500	28 UNF-3A	.469	.062	------
AN174-4			.531	.062	------
AN174-5			.656	.188	$1.25
AN174-6			.781	.312	$0.97
AN174-7			.906	.438	$1.31
AN174-10			1.031	.562	$0.93
AN174-11			1.156	.688	$0.98
AN174-12			1.281	.812	$1.10
AN174-13			1.406	.938	$1.06
AN174-14			1.531	1.062	$1.38
AN174-15			1.656	1.188	$1.29

Cat. #	Dia. (inches)	Threads/inch	Length (inches)	Grip (inches)	Price
AN174-16	.2500	28 UNF-3A	1.781	1.312	------
AN174-17			1.906	1.438	$1.08
AN174-20			2.031	1.562	$1.14
AN174-21			2.156	1.688	------
AN174-23			2.406	1.938	$10.50
AN174-24			2.531	2.062	------
AN175-14	.3125	24 UNF-3A	1.594	1.062	------
AN175-15			1.719	1.188	$1.93
AN175-16			1.844	1.312	$2.88
AN175-17			1.969	1.438	$2.92
AN175-20			2.094	1.562	$4.93
AN175-21			2.219	1.688	$7.55
AN175-22			2.344	1.812	$3.65
AN175-23			2.469	1.938	------
AN175-24			2.594	2.062	------
AN175-25			2.719	2.188	------
AN175-26			2.844	2.312	------
AN175-27			2.969	2.438	------
AN175-30			3.094	2.562	------
AN175-31			3.219	2.688	------
AN175-32			3.344	2.812	$2.46
AN175-33			3.469	2.938	$2.95

CAT #	Nominal Length	Grip Length	Price
AN176-10A	1-3/32	7/16	$6.65
AN176-13A	1-15/32	13/16	$1.59
AN176-14A	1-19/32	15/16	$3.25
AN176-15	1-1/16	1-45/64	$13.50

NAS SHEAR BOLTS



These bolts supersede NAS1103–NAS1106 high strength bolts. Made from alloy steel with a CAD II finish.

Part numbers with "D" are for shank drilled. All others are undrilled bolts.

HA

Part Number	Thread	Grip Length	Length	Price
NAS6203-10	10-32	0.625	0.948	**$0.22**
NAS6203-10D	10-32	0.625	0.948	**$0.98**
NAS6203-11	10-32	0.688	1.011	**$0.58**
NAS6203-11D	10-32	0.688	1.011	**$1.07**
NAS6203-12	10-32	0.750	1.073	**$0.28**
NAS6203-12D	10-32	0.750	1.073	**$1.09**
NAS6203-13	10-32	0.813	1.136	**$0.30**
NAS6203-13D	10-32	0.813	1.136	**$1.06**
NAS6203-14	10-32	0.875	1.198	**$0.36**
NAS6203-14D	10-32	0.875	1.198	**$1.21**
NAS6203-15	10-32	0.938	1.261	**$0.39**
NAS6203-15D	10-32	0.938	1.261	**$1.08**
NAS6203-16	10-32	1.000	1.323	**$0.42**
NAS6203-16D	10-32	1.000	1.323	**$1.12**
NAS6203-17	10-32	1.063	1.386	**$0.59**
NAS6203-17D	10-32	1.063	1.386	**$1.59**
NAS6203-18	10-32	1.125	1.448	**$0.62**
NAS6203-18D	10-32	1.125	1.448	**$1.50**
NAS6203-19	10-32	1.188	1.511	**$0.62**
NAS6203-19D	10-32	1.188	1.511	**$1.62**
NAS6203-2	10-32	0.125	0.448	**$0.19**
NAS6203-20	10-32	1.250	1.573	**$0.64**
NAS6203-20D	10-32	1.250	1.573	**$1.12**
NAS6203-21	10-32	1.313	1.636	**$0.65**
NAS6203-21D	10-32	1.313	1.636	**$1.67**
NAS6203-22	10-32	1.375	1.698	**$0.66**
NAS6203-22D	10-32	1.375	1.698	**$1.63**
NAS6203-23	10-32	1.438	1.761	**$0.68**
NAS6203-23D	10-32	1.438	1.761	**$1.69**
NAS6203-24	10-32	1.500	1.823	**$0.76**
NAS6203-24D	10-32	1.500	1.823	**$1.70**
NAS6203-25	10-32	1.562	1.885	**$1.37**
NAS6203-2D	10-32	0.125	0.448	**$1.00**
NAS6203-3	10-32	0.188	0.511	**$0.21**
NAS6203-32	10-32	2.000	2.323	**$1.98**
NAS6203-38	10-32	2.375	2.698	**$2.25**
NAS6203-3D	10-32	0.188	0.511	**$0.65**
NAS6203-4	10-32	0.250	0.573	**$0.17**
NAS6203-4D	10-32	0.250	0.573	**$0.66**
NAS6203-5	10-32	0.313	0.636	**$0.21**
NAS6203-56	10-32	3.500	3.823	**$0.00**
NAS6203-5D	10-32	0.313	0.636	**$0.97**
NAS6203-6	10-32	0.375	0.698	**$0.21**
NAS6203-6D	10-32	0.375	0.698	**$0.85**
NAS6203-7	10-32	0.438	0.761	**$0.28**
NAS6203-7D	10-32	0.438	0.761	**$0.87**
NAS6203-8	10-32	0.500	0.823	**$0.30**
NAS6203-8D	10-32	0.500	0.823	**$0.98**
NAS6203-9	10-32	0.563	0.886	**$0.39**
NAS6203-9D	10-32	0.563	0.886	**$1.07**
NAS6204-10	1/4-28	0.625	0.995	**$0.42**
NAS6204-10D	1/4-28	0.625	0.995	**$0.99**

Part Number	Thread	Grip Length	Length	Price
NAS6204-11	1/4-28	0.688	1.058	**$0.49**
NAS6204-11D	1/4-28	0.688	1.058	**$0.99**
NAS6204-12	1/4-28	0.750	1.120	**$0.72**
NAS6204-12D	1/4-28	0.750	1.120	**$1.07**
NAS6204-13	1/4-28	0.813	1.183	**$0.72**
NAS6204-13D	1/4-28	0.813	1.183	**$1.08**
NAS6204-14	1/4-28	0.875	1.245	**$0.54**
NAS6204-14D	1/4-28	0.875	1.245	**$1.14**
NAS6204-15	1/4-28	0.938	1.308	**$0.51**
NAS6204-15D	1/4-28	0.938	1.308	**$1.12**
NAS6204-16	1/4-28	1.000	1.370	**$0.52**
NAS6204-16D	1/4-28	1.000	1.370	**$1.22**
NAS6204-17	1/4-28	1.063	1.433	**$0.97**
NAS6204-17D	1/4-28	1.063	1.433	**$1.73**
NAS6204-18	1/4-28	1.125	1.495	**$0.89**
NAS6204-18D	1/4-28	1.125	1.495	**$1.80**
NAS6204-19	1/4-28	1.188	1.558	**$0.93**
NAS6204-19D	1/4-28	1.188	1.558	**$1.89**
NAS6204-2	1/4-28	0.125	0.495	**$0.46**
NAS6204-20	1/4-28	1.250	1.620	**$0.94**
NAS6204-20D	1/4-28	1.250	1.620	**$1.91**
NAS6204-21	1/4-28	1.313	1.683	**$1.17**
NAS6204-21D	1/4-28	1.313	1.683	**$1.97**
NAS6204-22	1/4-28	1.375	1.745	**$0.99**
NAS6204-22D	1/4-28	1.375	1.745	**$2.10**
NAS6204-23	1/4-28	1.438	1.808	**$1.04**
NAS6204-23D	1/4-28	1.438	1.808	**$2.20**
NAS6204-24	1/4-28	1.500	1.870	**$1.19**
NAS6204-24D	1/4-28	1.500	1.870	**$2.30**
NAS6204-25	1/4-28	1.562	1.932	**$2.40**
NAS6204-27	1/4-28	1.688	2.058	**$2.15**
NAS6204-28	1/4-28	1.750	2.120	**$1.44**
NAS6204-3	1/4-28	0.188	0.558	**$0.38**
NAS6204-4	1/4-28	0.250	0.620	**$0.48**
NAS6204-4D	1/4-28	0.250	0.620	**$0.97**
NAS6204-5	1/4-28	0.313	0.683	**$0.35**
NAS6204-5D	1/4-28	0.313	0.683	**$2.15**
NAS6204-6	1/4-28	0.375	0.745	**$0.38**
NAS6204-6D	1/4-28	0.375	0.745	**$1.53**
NAS6204-7	1/4-28	0.438	0.808	**$0.58**
NAS6204-7D	1/4-28	0.438	0.808	**$0.99**
NAS6204-8	1/4-28	0.500	0.870	**$0.46**
NAS6204-8D	1/4-28	0.500	0.870	**$0.98**
NAS6204-9	1/4-28	0.563	0.933	**$0.47**
NAS6204-9D	1/4-28	0.563	0.933	**$0.90**
NAS6205-11	5/16-24	0.688	1.126	**$1.39**
NAS6205-11D	5/16-24	0.688	1.126	**$3.40**
NAS6205-12	5/16-24	0.750	1.188	**$1.31**
NAS6205-13D	5/16-24	0.812	1.250	**$4.75**
NAS6205-15	5/16-24	0.938	1.376	**$3.35**
NAS6205-19	5/16-24	1.188	1.626	**$4.35**
NAS6205-20	5/16-24	1.250	1.688	**$4.80**
NAS6205-20D	5/16-24	1.250	1.688	**$2.57**
NAS6205-22	5/16-24	1.375	1.813	**$3.65**
NAS6205-24D	5/16-24	1.500	1.938	**$3.35**
NAS6205-4	5/16-24	0.250	0.688	**$1.92**
NAS6205-5	5/16-24	0.312	0.750	**$0.99**
NAS6205-6	5/16-24	0.375	0.813	**$1.39**

NAS SHEAR BOLTS

Part Number	Thread	Grip Length	Length	Price
NAS6205-6D	5/16-24	0.375	0.813	**$4.60**
NAS6205-8	5/16-24	0.500	0.938	**$3.35**
NAS6205-9	5/16-24	0.562	1.000	**$2.30**
NAS6206-13	3/8-24	0.812	1.266	**$5.35**
NAS6206-14D	3/8-24	0.875	1.329	**$7.50**
NAS6206-15	3/8-24	0.938	1.392	**$7.88**
NAS6206-17	3/8-24	1.062	1.516	**$3.50**
NAS6206-21	3/8-24	1.312	1.766	**$9.97**
NAS6206-22	3/8-24	1.375	1.829	**$5.98**
NAS6206-23	3/8-24	1.438	1.892	**$7.25**
NAS6206-23D	3/8-24	1.438	1.892	**$26.80**
NAS6206-25D	3/8-24	1.562	2.016	**$9.95**
NAS6206-32	3/8-24	0.002	2.454	**$20.95**
NAS6206-8	3/8-24	0.500	0.954	**$2.15**
NAS6206-9	3/8-24	0.562	1.016	**$3.20**
NAS6206H-4	3/8-24	0.250	0.704	**$0.00**
NAS6603-1	10-32	0.063	0.408	**$0.29**
NAS6603-10	10-32	0.625	0.970	**$0.33**
NAS6603-11	10-32	0.688	1.033	**$0.31**
NAS6603-12	10-32	0.750	1.095	**$0.36**
NAS6603-13	10-32	0.813	1.158	**$0.38**
NAS6603-14	10-32	0.875	1.220	**$0.38**
NAS6603-15	10-32	0.938	1.283	**$0.39**
NAS6603-16	10-32	1.000	1.345	**$0.56**
NAS6603-17	10-32	1.063	1.408	**$0.60**
NAS6603-18	10-32	1.125	1.470	**$0.66**
NAS6603-19	10-32	1.188	1.533	**$0.66**
NAS6603-2	10-32	0.063	0.408	**$0.25**
NAS6603-20	10-32	1.250	1.595	**$0.69**
NAS6603-21	10-32	1.313	1.658	**$0.70**
NAS6603-22	10-32	1.375	1.720	**$0.70**
NAS6603-23	10-32	1.438	1.783	**$0.72**
NAS6603-24	10-32	1.500	1.845	**$0.73**
NAS6603-3	10-32	0.188	0.533	**$0.22**
NAS6603-4	10-32	0.250	0.595	**$0.25**
NAS6603-5	10-32	0.313	0.658	**$0.28**
NAS6603-6	10-32	0.375	0.720	**$0.29**
NAS6603-8	10-32	0.500	0.845	**$0.29**
NAS6603-9	10-32	0.563	0.908	**$0.29**
NAS6604-10	1/4-28	0.625	1.050	**$0.52**
NAS6604-11	1/4-28	0.688	1.113	**$0.54**
NAS6604-12	1/4-28	0.750	1.175	**$0.60**
NAS6604-13	1/4-28	0.813	1.238	**$0.55**
NAS6604-14	1/4-28	0.875	1.300	**$0.67**
NAS6604-15	1/4-28	0.938	1.363	**$0.84**
NAS6604-16	1/4-28	1.000	1.425	**$0.76**
NAS6604-17	1/4-28	1.063	1.488	**$1.13**
NAS6604-18	1/4-28	1.125	1.550	**$1.10**
NAS6604-19	1/4-28	1.188	1.613	**$1.27**
NAS6604-20	1/4-28	1.250	1.675	**$1.07**
NAS6604-21	1/4-28	1.313	1.738	**$1.14**
NAS6604-22	1/4-28	1.375	1.800	**$1.17**
NAS6604-23	1/4-28	1.438	1.863	**$1.19**
NAS6604-24	1/4-28	1.500	1.925	**$1.19**
NAS6604-3	1/4-28	0.188	0.613	**$0.42**
NAS6604-4	1/4-28	0.250	0.675	**$0.39**

Part Number	Thread	Grip Length	Length	Price
NAS6604-42D	1/4-28	2.625	2.995	**$4.73**
NAS6604-5	1/4-28	0.313	0.738	**$0.45**
NAS6604-56D	1/4-28	3.625	3.870	**$0.00**
NAS6604-7	1/4-28	0.438	0.863	**$0.44**
NAS6604-8	1/4-28	0.500	0.925	**$0.56**
NAS6604-9	1/4-28	0.563	0.988	**$0.44**
NAS6605-10	5/16-24	0.625	1.094	**$0.94**
NAS6605-11	5/16-24	0.688	1.157	**$0.93**
NAS6605-12	5/16-24	0.750	1.219	**$0.98**
NAS6605-13	5/16-24	0.813	1.282	**$0.99**
NAS6605-14	5/16-24	0.875	1.344	**$1.08**
NAS6605-15	5/16-24	0.938	1.407	**$1.08**
NAS6605-16	5/16-24	1.000	1.469	**$1.13**
NAS6605-17	5/16-24	1.063	1.532	**$1.13**
NAS6605-18	5/16-24	1.125	1.594	**$1.16**
NAS6605-20	5/16-24	1.250	1.719	**$1.24**
NAS6605-21	5/16-24	1.313	1.782	**$1.25**
NAS6605-22	5/16-24	1.375	1.844	**$1.27**
NAS6605-23	5/16-24	1.438	1.907	**$1.22**
NAS6605-24	5/16-24	1.500	1.969	**$1.33**
NAS6605-3	5/16-24	0.188	0.657	**$0.76**
NAS6605-4	5/16-24	0.250	0.719	**$0.78**
NAS6605-5	5/16-24	0.313	0.782	**$0.75**
NAS6605-6	5/16-24	0.375	0.844	**$0.79**
NAS6605-7	5/16-24	0.438	0.907	**$0.80**
NAS6605-8	5/16-24	0.500	0.969	**$0.85**
NAS6605-9	5/16-24	0.563	1.032	**$0.88**
NAS6606-10	3/8-24	0.625	1.203	**$1.78**
NAS6606-11	3/8-24	0.688	1.266	**$1.85**
NAS6606-12	3/8-24	0.750	1.328	**$1.86**
NAS6606-13	3/8-24	0.813	1.391	**$2.20**
NAS6606-14	3/8-24	0.875	1.453	**$2.20**
NAS6606-15	3/8-24	0.938	1.516	**$2.20**
NAS6606-16	3/8-24	1.000	1.578	**$2.15**
NAS6606-17	3/8-24	1.063	1.641	**$2.30**
NAS6606-18	3/8-24	1.125	1.703	**$2.35**
NAS6606-19	3/8-24	1.188	1.766	**$2.35**
NAS6606-20	3/8-24	1.250	1.828	**$2.40**
NAS6606-21	3/8-24	1.313	1.891	**$2.40**
NAS6606-22	3/8-24	1.375	1.953	**$2.40**
NAS6606-23	3/8-24	1.438	2.016	**$2.56**
NAS6606-24	3/8-24	1.500	2.078	**$2.60**
NAS6606-3	3/8-24	0.188	0.766	**$1.55**
NAS6606-4	3/8-24	0.250	0.828	**$1.47**
NAS6606-5	3/8-24	0.313	0.891	**$1.59**
NAS6606-6	3/8-24	0.375	0.953	**$1.57**
NAS6606-7	3/8-24	0.438	1.016	**$1.65**
NAS6606-8	3/8-24	0.500	1.078	**$1.69**
NAS6606-9	3/8-24	0.563	1.141	**$1.53**
NAS464P3-8	10-32	.344	.855	**$1.15**

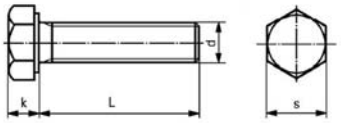
LOW PRICE GUARANTEE
WE WILL MATCH ANY COMPETITOR'S CURRENT PRICE. IF YOU FIND A LOWER PRICE, PLEASE TELL US.

ENGINE BOLTS

MS20073/MS20074 ENGINE BOLTS



BOLT 8MM X 20 COARSE



Hex head screw 8mm x 20, steel. Zinc plated.
P/N 15-05052.....**$0.22**

Part No.	Old AN	Thread	Grip	Length	Price
MS20073-03-04	AN73-4	1032 Fine Thread	0.0620	0.5940	**$1.53**
MS20073-03-05	AN73-5	1032 Fine Thread	0.1250	0.6560	**$1.55**
MS20073-03-06	AN73-6	1032 Fine Thread	0.2500	0.7810	**$1.57**
MS20073-04-03	AN74-3	1/4-28 Fine Thread	0.0620	0.4690	**$1.59**
MS20073-04-04	AN74-4	1/4-28 Fine Thread	0.0620	0.5940	**$1.61**
MS20073-04-05	AN74-5	1/4-28 Fine Thread	0.1250	0.6560	**$1.44**
MS20073-04-06	AN74-6	1/4-28 Fine Thread	0.2500	0.7810	**$1.65**
MS20073-04-07	AN74-7	1/4-28 Fine Thread	0.3750	0.9060	**$1.67**
MS20074-03-03	AN73A3	1024 Coarse Thread	0.0620	0.4690	**$1.50**
MS20074-03-04	AN73A4	1024 Coarse Thread	0.0620	0.5940	**$1.53**
MS20074-04-03	AN74A3	1/4-20 Coarse Thread	0.0620	0.4690	**$1.59**
MS20074-04-04	AN74A4	1/4-20 Coarse Thread	0.0620	0.5940	**$1.49**
MS20074-04-05	AN74A5	1/4-20 Coarse Thread	0.1250	0.6560	**$1.56**
MS20074-04-06	AN74A6	1/4-20 Coarse Thread	0.2500	0.7810	**$1.65**
MS20074-04-07	AN74A7	1/4-20 Coarse Thread	0.3750	0.9060	**$1.67**
MS20074-04-12	AN75A12	1/4-20 Coarse Thread	.7500	1.2810	**$4.60**
MS20074-04-21	AN74A21	1/4-20 Coarse Thread	1.6250	2.1560	**$4.30**
MS20074-05-06	AN75A6	5/16-18 Coarse Thread	.2500	.7970	**$5.25**
MS20074-06-06	AN76A6	3/8-16 Coarse Thread	.1250	.7970	**$4.55**

METRIC PROP BOLTS



Description	Part No.	Price
Prop Bolt 8x70mm Drilled Head For Safety Wire	15-04929	**$4.45**
Prop Bolt 8x80mm Drilled Head For Safety Wire	15-04930	**$5.95**
Prop Bolt 8x90mm Drilled Head For Safety Wire	15-04931	**$7.65**

HARDWARE KITS

BEGINNER'S BOLT KITS

UNDRILLED KIT
102 PIECES

AN3	QTY	AN4	QTY	AN5	QTY
-3A	4	-5A	6	-4A	6
-4A	6	-6A	6	-6A	6
-5A	6	-7A	6	-10A	6
-6A	6	-10A	6	-11A	6
-7A	6	-11A	6	-13A	4
-10A	6	-15A	4	-14A	6

P/N 04-00090 ..... **$27.50**

DRILLED KIT
102 PIECES

AN3	QTY	AN4	QTY	AN5	QTY
-4	6	-6	6	-6	6
-5	6	-7	6	-10	6
-6	6	-10	6	-14	6
-7	6	-12	6	-15	4
-10	6	-13	6	-16	6
-11	4	-14	4	-17	6

P/N 04-00100 ..... **$81.50**

HOMEBUILDER'S KIT

CADMIUM PLATED
629 PIECES
AN BOLTS CONTAINS 4 EACH

DRILLED		UNDRILLED	
AN3-4		AN3-4A	
AN3-5		AN3-5A	
AN3-6	AN4-6	AN3-6A	AN4-6A
AN3-7	AN4-7	AN3-7A	AN4-7A
AN3-10	AN4-10	AN3-10A	AN4-10A
AN3-11	AN4-11	AN3-11A	AN4-11A
AN3-12	AN4-12	AN3-12A	AN4-12A
AN3-13	AN4-13	AN3-13A	AN4-13A
AN3-14	AN4-14	AN3-14A	AN4-14A
AN3-15	AN4-15	AN3-15A	AN4-15A
AN3-16	AN4-16	AN3-16A	AN4-16A
AN3-17	AN4-17	AN3-17A	AN4-17A
AN3-20	AN4-20	AN3-20A	AN4-20A

Also Included:

NYLON INSERT LOCKNUTS

ITEM #	QTY.
AN365-1032	52
AN365-428	44

FLAT WASHERS

ITEM #	QTY.
AN960-10	30
AN960-10L	30
AN960-416	30
AN960-416L	30

CASTLE NUTS

ITEM #	QTY.
AN310-3	52
AN310-4	44

COTTER PINS

ITEM #	QTY.
AN380-2-2	125

P/N 04-00230 ..... **$179.95**

ADVANCED MECHANIC'S KIT

1,229 PIECES - CADMIUM PLATED

DRILLED	UNDRILLED	AN3	AN4	AN5	AN6
-4	-4A	3	3	3	3
-5	-5A	3	3	3	3
-6	-6A	3	3	3	3
-7	-7A	3	3	3	3
-10	-10A	3	3	3	3
-11	-11A	3	3	3	3
-12	-12A	3	3	3	3
-13	-13A	3	3	3	3
-15	-15A	3	3	3	3

Also Includes:

FLAT WASHERS

ITEM #	QTY.
AN960-10	100
AN960-416	100
AN960-516	100
AN960-616	100

NYLON INSERT LOCKNUTS

ITEM#	QTY.
AN365-1032	27
AN365-428	27
AN365-524	27
AN365-624	27

COTTER PINS

ITEM #	QTY.
AN380-2-3	100
AN380-25-3	200
AN380-3-3	100

CASTLE NUTS

ITEM#	QTY.
AN310-3	27
AN310-4	27
AN310-5	27
AN310-6	27

AN6-4 NOT INCLUDED

P/N 04-00240 ..... **$269.95**

DELUXE BOLT PACK

UNDRILLED KIT BOLTS
500 PIECES

AN3	QTY	AN4	QTY	AN5	QTY
-3A	10	-5A	10	-6A	10
-4A	10	-6A	10	-10A	10
-5A	10	-7A	10	-12A	10
-6A	10	-10A	10	-16A	10
-7A	10	-11A	10		
-10A	10	-12A	10		
-11A	10	-13A	10		
-12A	10	-14A	10		
-13A	10	-15A	10		
-14A	10	-16A	10		
-15A	10	-17A	10		
-16A	10	-22A	10		
-17A	10	-24A	10		
-20A	10	-26A	10		

DRILLED KIT BOLTS

AN3	QTY	AN4	QTY	AN5	QTY
-5	10	-6	10	-7	10
-6	10	-7	10	-14	10
-7	10	-10	10	-17	10
-10	10	-12	10	-24	10
-12	10	-16	10		
-15	10	-20	10		
-20	10				
-24	10				

P/N 04-00245 ..... **$231.95**

HARDWARE KITS

ECONOMY AN BOLT ASSORTMENTS

BOLT ASSORTMENT - UNDRILLED

Qty	P/N	Qty	P/N	Qty	P/N
10	AN3-3A	4	AN4-4A	4	AN5-5A
10	AN3-4A	4	AN4-5A	4	AN5-6A
10	AN3-5A	4	AN4-6A	4	AN5-7A
10	AN3-6A	4	AN4-7A	4	AN5-10A
10	AN3-7A	4	AN4-10A	4	AN5-11A
10	AN3-10A	4	AN4-11A	4	AN5-12A
4	AN3-11A	4	AN4-12A	4	AN5-13A
4	AN3-12A	4	AN4-13A	4	AN5-14A
4	AN3-13A	4	AN4-14A	4	AN5-15A
4	AN3-14A	4	AN4-15A	4	AN5-16A
4	AN3-15A	4	AN4-16A	4	AN5-17A
4	AN3-16A	4	AN4-17A	4	AN5-20A
4	AN3-17A	4	AN4-20A	4	AN5-24A
4	AN3-20A	4	AN4-24A		
4	AN3-24A				

204-piece Undrilled Assortment ..... P/N 04-00105 ..... **$56.75**
Above with 44-Drawer Cabinet ..... P/N 04-00110 ..... **$118.95**

BOLT ASSORTMENT - DRILLED

Qty	P/N	Qty	P/N	Qty	P/N
10	AN3-3	4	AN4-4	4	AN5-5
10	AN3-4	4	AN4-5	4	AN5-6
10	AN3-5	4	AN4-6	4	AN5-7
10	AN3-6	4	AN4-7	4	AN5-10
10	AN3-7	4	AN4-10	4	AN5-11
10	AN3-10	4	AN4-11	4	AN5-12
4	AN3-11	4	AN4-12	4	AN5-13
4	AN3-12	4	AN4-13	4	AN5-14
4	AN3-13	4	AN4-14	4	AN5-15
4	AN3-14	4	AN4-15	4	AN5-16
4	AN3-15	4	AN4-16	4	AN5-17
4	AN3-16	4	AN4-17	4	AN5-20
4	AN3-17	4	AN4-20	4	AN5-24
4	AN3-20	4	AN4-24	4	
1	AN3-24	4		4	

204-piece Drilled Assortment ..... P/N 04-00115 ..... **$156.95**
Above with 44-Drawer Cabinet ..... P/N 04-00120 ..... **$219.95**



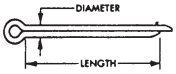
ECONOMY COMBINED AN BOLT ASSORTMENT

Both drilled and undrilled assortments shown above
P/N 04-00125 ..... **$213.95**

Both assortments shown above with 16-Drawer & 64-Drawer storage cabinets
P/N 04-00130 ..... **$312.95**



ECONOMY WASHER & COTTER PIN ASSORTMENTS



To Accompany AN Bolt Assortments Shown Above

Washers For Undrilled Assortment	Washers & Cotter Pins For Drilled Bolt Assortment	Washers & Cotter Pins For Combined Assortment
P/N 04-00135 ..... **$5.50**	P/N 04-00140 ..... **$10.75**	P/N 04-00145 ..... **$14.50**



WASHER ASSORTMENTS
1,500 PIECES - STAINLESS

Contains 100 each of the following:

- 6, 8 & 10 AN960C & AN960CL
- 6, 8 & 10 Nylon
- 6, 8 & 10 MS35333
- 6, 8 & 10 MS35338

P/N 04-00220 ..... **$46.75**



WASHER ASSORTMENTS
1,500 PIECES - CAD-PLATED

Contains 100 each of the following:

- 6, 8 & 10 AN960 & AN960L
- 6, 8 & 10 Nylon Washer
- 6, 8 & 10 MS35333
- 6, 8 & 10 MS35338

P/N 04-00215 ..... **$24.50**

HARDWARE KITS

ECONOMY SCREW PACKS





1/2" 100° 600-Piece Screw Pack

Flat Phillips - AN507C Machine Screws		Flat Phillips Sheet Metal Screws	
100	6-32 x 1/2	100	6 x 1/2B
100	8-32 x 1/2	100	8 x 1/2B
100	10-32 x 1/2	100	10 x 1/2B

Steel plated..... P/N 04-00180 ..... **$44.50**
Stainless ..... P/N 04-00185 ..... **$50.75**

1/2" 600-Piece Screw Pack

Truss Phillips - AN526C Machine Screws		Truss Phillips Sheet Metal Screws	
100	6-32 x 1/2	100	6 x 1/2A
100	8-32 x 1/2	100	8 x 1/2A
100	10-32 x 1/2	100	10 x 1/2A

Steel plated ..... P/N 04-00190 ..... **$24.50**
Stainless..... P/N 04-00195 ..... **$33.25**

1/2" 900-Piece Screw Pack

The entire contents of 600-piece pack shown above plus the following:

AN507C 100° CSK
Flat Phillips Machine Screws

100 6-32 x 1/2
100 8-32 x 1/2
100 10-32 x 1/2

Steel plated..... P/N 04-00205 ..... **$42.00**
Stainless ..... P/N 04-00210 ..... **$54.75**

SCREW KITS
LARGE ASSORTMENT 2,250 PIECES




AN526 Machine Screw, Truss Phillips

100..... 4-40 x 1/2
100..... 6-32 x 1/2
100..... 8-40 x 3/8
100..... 8-32 x 1/2
100..... 10-32 x 1/2
100..... 10-32 x 3/4

Sheet Metal Screw, Truss Phillips

100..... 4 x 1/2
100..... 6 x 1/2
100..... 8 x 1/2
100..... 8 x 1/2B
100..... 10 x 1/2

AN507 100° CSK Machine Screw, FP

100..... 6-32 x 1/2
100..... 8-32 x 1/2
100..... 10-32 x 1/2

Nylon Insert Locknuts

50..... 6-32
50..... 8-32
50..... 10-32

Flat Washer AN960

100 6
100 8
100 10

Nylon Washers

100 6
100 8
100 10

100° CSK Washers

50 8
50 10

Stainless Kit ..... P/N 04-00295 ..... **$123.95**
Steel Plated Kit..... P/N 04-00296 ..... **$123.95**



OILITE BRONZE STRAIGHT BUSHINGS

Oilite Impregnated Bronze. SAE 841.

Model No.	Part No.	Hole I.D.	Hole O.D.	Length	Price Ea.
AA304-20	05-01856	1/4	3/8	1	**$0.58**
AA309-5	05-01857	3/16	5/16	3/4	**$0.61**
B812-6	05-02098	1/2	3/4	3/4	**$1.14**
B812-7	05-02099	1/2	3/4	7/8	**$1.19**
B610-6	04-01944	3/8	5/8	3/4	**$1.27**
8363	05-04543	5/8	1	1-1/8	**$4.35**

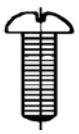


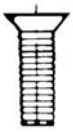
OILITE BRONZE FLANGED BUSHINGS

Oillite bronze bushings are highly heat resistant, ductile, conformable and corrosion resistant.

Model No.	Part No.	Hole I.D.	Hole O.D.	Length	Flange O.D.	Flange Thickness	Price Each
FB46-02	04-01646	1/4	3/8	1/4	1/2	3/64	**$0.35**
FB810-04	04-01647	1/2	5/8	1/2	7/8	1/8	**$0.65**
FB810-08	04-01648	1/2	5/8	1	7/8	1/8	**$1.15**
FB812-08	04-01649	1/2	3/4	1	1	1/8	**$1.62**
FB1012-04	04-01639	5/8	3/4	1/2	1	1/8	**$0.74**
FB1012-08	04-01640	5/8	3/4	1	1	1/8	**$1.45**
FB-1013-08	04-01641	.6270	.8150	1	1-1/16	5/32	**$2.15**
FB1214-06	04-01642	3/4	7/8	3/4	1-1/8	5/32	**$1.25**
FB-1620-06	04-01644	1	1-1/4	3/4	1-1/2	3/16	**$2.95**
FB1620-10	04-01645	1	1-1/4	1-1/4	1-1/2	3/16	**$5.85**
FF303-01	04-01650	3/16	5/16	3/16	7/16	1/16	**$0.25**
FF312-02	04-01651	.252	.3775	1/2	15/32	1/16	**$0.60**
FF435-1	04-01652	1/4	7/16	1/2	1/2	1/16	**$1.35**
FF512-03	04-01653	.3765	.5030	5/8	5/8	3/32	**$0.56**
FF520-10	05-02114	3/8	1/2	3/8	5/8	1/16	**$0.55**
FF520-15	FF520-15	3/8	1/2	1/4	5/8	1/16	**$0.32**
FF620-01	04-01654	.5020	.6270	1/2	7/8	1/16	**$0.80**
FF730-03	04-01655	5/8	3/4	5/8	1	3/32	**$1.28**

ECONOMY SCREW KIT
STAINLESS STEEL - 2,100 PIECES



AN526C Machine Truss Phillips

AN507C Machine 100° CSK, Flat Phillips

Sizes 6-32, 8-32, 10-32

Qty.	Length
100	1/2"
50	5/8"
25	3/4"
25	1"

Qty.	Length
100	1/2"
50	5/8"
25	3/4"
25	1"






Sheet Metal Truss Phillips

Sheet Metal 100° CSK, Flat Phillips

Sizes 6, 8, 10

Qty.	Length
100	1/2"
50	5/8"
25	3/4"
25	1"

Qty.	Length
100	1/2"

Stainless Kit ..... P/N 04-00290 ..... **$163.95**

HA

HARDWARE KITS

NUT-COTTER PIN ASSORTMENTS

CAD-PLATED COTTER PIN KIT
400 PCS



100	1/16 x 1/2”	50	1/8 x 1”
100	5/64 x 1/2”	25	5/32 x 2”
100	3/32 x 1/2”	25	3/16 x 2”

P/N 04-00155 ..... **$16.50**

STAINLESS STEEL COTTER PIN KIT
400 PCS



100	1/16 x 1/2”	50	1/8 x 1”
100	5/64 x 1/2”	25	5/32 x 2”
100	3/32 x 1/2”	25	3/16 x 2”

P/N 04-00150..... **$37.50**

CAD-PLATED COTTER PIN KIT
500 PCS



100	1/16 x 1/2”	50	1/16 x 1-1/2”
100	5/64 x 3/4”	50	5A/32 x 2”
100	3/32 x 1”	25	A3/16 x 2”
50	1/8 x 3/4”	25	3/16 x 2-1/2”

P/N 04-00165..... **$27.00**

STAINLESS STEEL COTTER PIN KIT
500 PCS



100	1/16 x 1/2”	50	1/16 x 1-1/2”
100	5/64 x 3/4”	50	5/32 x 2”
100	3/32 x 1”	25	3/16 x 2”
50	1/8 x 3/4”	25	3/16 x 2-1/2”

P/N 04-00160..... **$70.50**

DELUXE COTTER PIN KITS
850 PCS

AN380 - Cad-Plated

Dash	Size	Qty.	Dash	Size	Qty.
-1-2	1/32 x 1/2”	50	-3-4	3/32 x 1”	75
-1-4	1/32 x 1”	50	-3-6	3/32 x 1-1/2”	25
-2-2	1/16 x 1/2”	100	-3-8	3/32 x 2”	25
-2-3	1/16 x 3/4”	100	-4-3	1/8 x 3/4”	25
-2-4	1/16 x 1”	100	-4-5	1/8 x 1-1/4”	75
-25-2	5/64 x 1/2”	25	-4-8	1/8 x 2”	50
-25-3	5/64 x 3/4”	25	-4-10	1/8 x 2-1/2”	50
-3-3	3/32 x 3/4”	75			

P/N 04-00375..... **$37.25**

AN381 - Stainless

Dash	Size	Qty.	Dash	Size	Qty.
-1-8	1/16 x 1/2”	100	-3-16	3/32 x 1”	75
-2-12	1/16 x 3/4”	100	-3-24	3/32 x 1-1/2”	25
-2-16	1/16 x 1”	100	-4-12	1/8 x 3/4”	25
-2-24	1/16 x 1-1/2”	50	-4-16	1/8 x 1”	50
-25-8	5/64 x 3/4”	50	-4-24	1/8 x 1-1/2”	25
-25-12	5/64 x 1/2”	75	-4-32	1/8 x 2”	25
-3-8	3/32 x 1/2”	75	-4-40	1/8 x 2-1/2”	25
-3-12	3/32 x 3/4”	50			

P/N 04-00380 ..... **$65.00**

ECONOMY AN365 NUT PACKS



AN365C NUT KIT
Stainless

Qty.	Part No.
25	4-40
50	6-32
50	8-32
50	10-32
25	1/4-28

AN365 NUT KIT
Cad-Plated

Qty.	Part No.
50	4-40
100	6-32
100	8-32
100	10-32
50	1/4-28

Stainless Kit ..... P/N 04-00170..... **$59.95**
Cad Plated Kit ..... P/N 04-00175..... **$64.50**

LOCKNUT KIT 208 PIECES
Cad-Plated. For undrilled bolt assortment.



100 ea AN365-1032
56 ea AN365-428
52 ea AN365-524

P/N 04-00330 ..... **$24.00**

CASTLE NUT KIT 208 PIECES
Cad-Plated.
For drilled bolt assortment



100 ea..... AN310-3
56 ea..... AN310-4
52 ea..... AN310-5

P/N 04-00335 ..... **$157.95**

AN365C NUT KIT
STAINLESS 200 PIECES



50 ea	632	25 ea	428
50 ea	832	25 ea	524
50 ea	1032		

P/N 04-00340..... **$84.00**

AN365 NUT KIT
CAD-PLATED - 400 PIECES



100 ea	632	50 ea	428
100 ea	832	50 ea	524
100 ea	1032		

P/N 04-00345 ..... **$55.00**

470 PIECE COMBO NUT ASSORTMENT

Nylon Insert Locknuts

Item #	Qty.
AN365-632	15
AN365-832	50
AN365-1032	50
AN365-428	50
AN365-524	15

Castle Nuts

Item #	Qty.
AN310-3	50
AN310-4	50
AN310-5	15
AN310-6	15

Plain Hex Nuts

Item #	Qty.
AN315-3	25
AN315-4	25
AN315-5	15
AN315-6	15

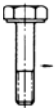
Shear Castle Nuts

Item #	Qty.
AN320-3	25
AN320-4	25
AN320-5	15
AN320-6	15

P/N 04-00350..... **$226.95**

HARDWARE KITS

DELUXE BOLT PACK



700 BOLTS - 50 Sizes, individually packaged. AN3, AN4 and AN5 bolts in lengths from 3/8" to 2-3/4" with drilled and undrilled shanks, in quantities selected to accommodate popular usage. Furnished with a 44-drawer storage cabinet. An exceptionally fine value.



P/N 04-00200 .....**$325.95**

Part No.	Qty.	Length
3/16" Dia., Undrilled Shank		
AN3-3A	10	3/8"
AN3-4A	15	1/2"
AN3-5A	25	5/8"
AN3-6A	25	3/4"
AN3-7A	12	7/8"
AN3-10A	30	1"
AN3-11A	30	1-1/8"
AN3-12A	30	1-1/4"
AN3-13A	20	1-3/8"
AN3-14A	20	1-1/2"
AN3-15A	20	1-5/8"
AN3-16A	20	1-4/3"
AN3-17A	20	1-7/8"
AN3-20A	12	2"
3/16" Dia., Drilled Shank		
AN3-5	15	5/8"
AN3-6	20	3/4"
AN3-7	20	7/8"
AN3-10	20	1"
AN3-12	10	1-1/4"
AN3-15	10	1-5/8"
AN3-20	8	2"
AN3-24	8	2-1/2"
1/4" Dia., Undrilled Shank		
AN4-5A	24	5/8"
AN4-6A	24	3/4"
AN4-7A	24	7/8"

1/4" Dia., Undrilled Shank		
AN4-10A	24	1"
AN4-11A	12	1-1/8"
AN4-12A	12	1-1/4"
AN4-13A	12	1-3/8"
AN4-14A	12	1-1/2"
AN4-15A	12	1-5/8"
AN4-16A	12	1-3/4"
AN4-17A	12	1-7/8"
AN4-22A	6	2-1/4"
AN4-24A	6	2-1/2"
AN4-26A	6	2-3/4"
1/4" Dia., Drilled Shank		
AN4-6	10	3/4"
AN4-7	10	7/8"
AN4-10	10	1"
AN4-12	10	1-1/4"
AN4-16	6	1-3/4"
AN4-20	6	2"
5/16" Dia. Undrilled Shank		
AN5-6A	6	3/4"
AN5-10A	8	1"
AN5-12A	6	1-1/8"
AN5-16A	6	1-3/4"
5/16" Dia. Drilled Shank		
AN5-7	6	7/8"
AN5-14	6	1-1/2"
AN-17	6	1-7/8"
AN5-24	6	2-1/2"

DELUXE WASHER & COTTER PIN PACK



2000 WASHERS, 700 COTTER PINS - 31 Items, individually packaged.A combination of flat washers in steel and anodized aluminum, regular and light weight, large-area washers, internal locking type, Tinnerman countersunk washers and six useful sizes of cotter pins. 26 Drawer hardware cabinet included.

P/N 04-00300 .....**$151.95**

Part No.	Qty.	Size
Steel, Regular Flat		
AN960-6	100	#6
AN960-8	100	#8
AN960-10	250	3/16"
AN960-416	200	1/4"
AN960-516	100	5/16"
Steel, Light Flat		
AN960-6L	100	#6
AN960-8L	100	#8
AN960-10L	100	3/16"
AN960-416L	100	1/4"
AN960-516L	50	5/16"
Anod. Alum. Regular Flat		
AN960PD10	50	3/16"
AN960PD416	50	1/4"
Anod. Alum. Light Flat		
AN960PD10L	50	3/16"
AN960PD416L	50	1/4"
Steel, Large Flat		
AN970-3	25	3/16"

Steel, Large Flat		
AN970-4	14	1/4"
AN970-5	11	5/16"
Steel, Internal Lock		
MS35333-37	50	#6
MS35333-38	50	#8
MS35333-39	50	#10
MS35333-40	50	1/4"
MS35333-41	50	5/16"
Tinnerman Countersunk		
A3236-012-24A	100	#6
A3135-017-24A	100	#8
A3235-028-24A	100	#10
Cotter Pins		
Part No.	**Qty.**	**Size**
MS24665-132	225	1/16" x 1/2"L
MS24665-134	200	1/16" x 3/4"L
MS24665-136	200	1/16 x 1"L
MS24665-283	50	3/32" x 3/4"L
MS24665-285	13	3/32" x 1"L
MS24665-360	12	1/8" x 2"L

ASSORTED HARDWARE KITS

HOMEBUILDERS HARDWARE KIT

Contains: • 78 AN3 (10-32 size) Undrilled bolts in 13 consecutive sizes from AN3-4A through AN3-20A •66 AN4 (1/4" dia.) Undrilled Bolts in 11 consecutive sizes from AN4-6A through AN4-20A •100 AN365-1032 Stop Nuts •100 AN365-428 Stop Nuts •100 AN960-10 Washers •100 AN960-416 Washers •100 AN380-2-2 Cotter Pins

P/N 04-00400.....**$58.75**

With 26-Drawer Storage Cabinet..... P/N 04-00500.....**$106.95**

MECHANICS HARDWARE KIT

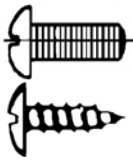
Contains: • AN3 (10-32 size) Bolts from 1/2" to 3" long • AN4 (1/4" dia.) Bolts from 1" to 4" long • AN5 (5/16" dia.) Bolts from 1" to 4" long • AN6 (3/8" dia.) Bolts from 1-3/4" to 4-1/2" long • 300 AN960 Washers • 75 AN365 Stop Nuts • 100 AN380 Cotter Pins. Bolts are furnished with drilled and undrilled shanks. The proper number, size and type of nuts, washers and cotter pins are furnished to mate with bolts. Click "Expanded Kit Components" for a complete hardware list.

P/N 04-00600..... **$235.00**

With (1) 26 & (1) 64 -Drawer Storage Cabinets

P/N 04-00700.....**$358.95**

DELUXE SCREW PACK



3500 SCREWS - 55 Items, individually packaged.A good working assortment of standard screws including truss head, 100° flat head and structural type, washer head, 100° flat head sheet metal screws for use with Tinnerman countersunk washers, truss head sheet metal screws, both sharp and blunt point, & brass instrument screws. 44-Drawer cabinet Included.

P/N 04-00800 .....**$384.95**

PART NO.	QTY.	SIZE
AN 526 Truss Hd Screw, Phillips		
AN526-632R6	100	6-32 x 3/8"
AN526-632R8	100	x 1/2"
AN526-632R10	100	x 5/8"
AN526-632R12	100	x 3/4"
AN526-832R6	100	8-32 x 3/8"
AN526-832R8	100	x 1/2"
AN526-832R10	100	x 5/8"
AN526-832R12	100	x 3/4"
AN526-1032R8	100	10-32 x 1/2"
AN526-1032R10	100	x 5/8"
AN526-1032R12	100	x 3/4"
AN526-1032R16	50	x 1"
AN507 Screws 100° C snk Flat Head Phillips		
MS2469326	100	6-32 x 3/8"
MS24693S28	100	x 1/2"
MS24693S29	100	x 5/8"
MS24693S10	100	x 3/4"
MS24693S31	100	x 7/8"
MS24693S48	100	8-32 x 3/8"
MS24693S50	100	x 1/2"
MS24693S51	100	x 5/8"
MS24693S52	100	x 3/4"
MS24693S54	50	x 1"
MS24693S58	25	x 1-1/2"
MS24693S272	100	x 1/2"
MS24693S273	100	x 5/8"
MS24693S274	100	x 3/4"
MS24693S276	50	x 1"
MS24693S280	25	x 1-1/2"
Brass Instrument Screws Round Head Phillips		
AN515B6R12	25	6-32 x 3/4"

AN509 Structural Screws 100°C snk Flat Head Phillips		
MS24694S5	25	8-32 x 1/2"
MS24694S7	25	x 5/8"
MS24694S9	25	x 3/4"
MS24694S50	25	10-32 x 1/2"
MS24694S52	25	x 5/8"
MS24694S54	25	x 3/4"
Washer Head Structural Screws		
AN525-832R8	25	8-32 x 1/2"
AN525-832R10	25	x 5/8"
AN525-1032R8	25	10-32 x 1/2"
AN525-1032R10	25	x 5/8"
AN525-1032R12	25	x 3/4"
Sheet Metal Screws 100°C snk Flat Head Phillips		
NAS548P-6	100	#6 x 3/8"
NAS548P6-8	100	x 1/2"
NAS548P6-10	100	x 5/8"
NAS548P8-8	100	#8 x 1/2"
NAS548P8-10	100	x 5/8"
Sheet Metal Screws, Truss Hd "B"		
#4R x 1/4"	100	Phillips
#4R x 3/8"	100	Blunt Point
#4R x 1/2"	100	
#6R x 3/8"	100	
#6R x 1/2"	100	
#6R x 5/8	100	
#8R x 1/2"	100	
#8R x 3/4"	100	
Sheet Metal Screws, Truss Hd "A"		
#4R x 1/2"	200	Phillips
#6R x 1/2"	200	Sharp Point

DELUXE NUT PACK



1000 NUTS - 29 Items, individually packaged. Nuts have been carefully selected to include every commonly used type in aircraft assembly - Self-locking, castle, plain hex, Pal, Tinnerman and all-metal two-lug anchor nuts not found in other hardware assortments. 26-Drawer Cabinet Included

P/N 04-00900.....**$381.95**

PART NO.	QTY.	SIZE
Elastic Stop Nuts		
AN365-632A	25	6-32
AN365-832A	25	8-32
AN365-1032A	75	10-32
AN365-428A	50	1/4 x 28
AN365-524A	25	5/16 x 24
All Metal Stop Nuts		
MS21042-3	75	10-32
MS21042-4	25	1/4 x 28
Castle Nuts		
AN310-3	50	10-32
AN310-4	50	1/4 x 28
AN310-5	14	5/16 x 24
Shear Castle Nuts		
AN320-3	12	10-32
AN320-4	12	1/4 x 28
AN320-5	12	5/16 x 24
Plain Hex Nuts		
AN315-3	25	10-32

AN315-4	25	1/4 x 28
AN315 -5	25	5/16 x 24
Check Nuts		
AN315-3	25	10-32
AN316-4	25	1/4 x 28
Palnuts		
MS27151-7	25	10-32
MS27151-13	25	1/4 x 28
MS27151-16	25	5/16 x 24
Tinnerman Nuts, Flat Type		
#1777-6Z-1	50	#6
#1778-8Z-1	50	#8
#1779-10Z-1	25	#10
Tinnerman Nuts, U Type		
#1784-6Z-1	50	#6
#A1932-8Z-1	50	#8
Two Lug Anchor Nuts		
K1000-08	50	8-32
K1000-3	50	10-32
K1000-4	25	1/4 x 28



HARDWARE CABINETS





Heavy-duty small parts organizer cabinets. The "see-thru" clear plastic drawers measure 1-1/4" x 2-3/4" x 5-3/4". The plastic cabinets are black. Furnished with adjustable drawer dividers. 16 drawer is white plastic.

CABINETS		***PORTABLE ORGANIZERS***		
16-Drawer	04-01464 **$29.99**	12-62 compartments	04-01468	**$30.70**
26-Drawer	04-01465 **$48.65**	11-46 compartments	04-01469	**$37.99**
44-Drawer	04-01466 **$62.75**	64-Drawer	04-01467	**$68.75**
Lg Dividers (25)	40-501 **$8.75**	Lg Dividers (6)	04-02039	**$7.50**
		Sm Dividers (16)	04-02037	**$13.55**

HA

AIRFRAME NUTS



AN310 CASTLE, AN320 SHEAR NUTS

Fabricated from steel & cadmium plated per QQ-P-416, Type II, Class 2. AN310 castle nuts are used with drilled-shank bolts, clevis bolts, eye bolts and studs. The slots in the nut accommodate a cotter pin for safety purposes. The thinner AN320 castellated shear nut, with half tensile rating of the AN310 nut, used with clevis bolts & threaded taper pins which are subject to shearing stress only.

AN310, AN320 Dash No.	Thread Size	Cotter Pin Size	AN310 Cad Plated Nuts Price	AN310C Stainless Nuts	AN320 Cad Plated Each	AN320C Stain-less Nuts
-3	10-32	AN380-2-2	$0.67	$1.08	$0.74	$1.10
-4	1/4-28		$0.89	$1.50	$1.08	$1.12
-5	5/16-24		$1.05	$1.56	$1.07	$1.69
-6	3/8-24	AN380-3-3	$1.31	$1.96	$1.30	$1.69
-7	7/16-20		$2.04	$3.45	$1.47	$4.85
-8	1/2-20		$2.77	$4.45	$2.01	$2.97
-9	9/16-18	AN380-4-4	$3.95	---	$2.38	---
-10	5/8-18		$2.60	---	$2.55	$9.50
-12	3/4-16	AN380-4-5	$4.43	---	$4.35	$8.50



AN315 FULL HEX, AN316 THIN CHECK NUTS

Fabricated from steel and cadmium plated per QQ-P-416, Type II, Class 2. The AN315 plain hex nut is of rugged construction and can carry the same high tension load as the AN310 castle nut. It requires an auxiliary locking device such as a check nut or lock washer. AN316 hex check nuts can carry half the tension load of the AN315 nut. They are used as a locking device for plain nuts, set screws, rod ends, etc. Order by AN number. Add R or L after dash number for right-hand or left-hand thread. ***Example:*** AN316-5L is a thin check nut with 5/16-24 left-hand thread.

AN315	Price Ea.		Thread Size	AN316	Price Ea.	
	R	L			R	L
-640	$0.38	$0.78	6-40	None	None	None
-3	$0.06	$0.45	10-32	None	None	None
-4	$0.09	$0.34	1/4-28	-4	$0.09	$0.36
-5	$0.11	$0.46	5/16-24	-5	$0.13	$0.49
-6	$0.17	$0.66	3/8-24	-6	$0.15	$0.53
-7	$0.68	$2.18	7/16-20	-7	$0.37	$0.63
-8	$0.46	---	1/2-20	-8	$0.44	$1.23
-9	$2.53	---	9/16-18	-9	$1.95	---



HEX NUT - LOW HEIGHT

Heat treated, cadmium plated steel with dry film lubricant applied. Self-locking. Standard temp. to 450°F.

Thread Size	NAS No.	Part No.	Price Ea.	Thread Size	NAS No.	Part No.	Price Ea.
6-32	679-A06	04-00143	$1.39	5/16-24	679-A5	04-00148	$1.88
8-32	679-A08	04-00144	$0.75	3/8-24	679-A6	04-00149	$3.40
10-32	679-A3	04-00146	$0.64	7/16-20	679-A7	04-00154	$9.94
1/4-28	679-A4	04-00147	$0.79				



CAP NUTS ("ACORN NUTS")

Use these solid brass cap nuts to attach instrument panels to stud-type shock mounts. Give the panel an attractive, finished appearance and do not introduce magnetic interference.

Part No.	Thread Size	Price Ea	Part No.	Thread Size	Price Ea
AC632	6-32	$0.28	AC1032	10-32	$0.48
AC832	8-32	$0.28	AC1428	1/4-28	$1.45

Surplus SS 8-32 Acorn Nut Cap..... P/N 04-01479.....$0.34



AN345 PLAIN HEX MACHINE SCREW NUT

Fine Thread Thread	Cad-Plated Cat.#	Price	Stainless Cat.#	Price
10-32	AN345-10	$0.07	AN345C10	$0.29
1/4-28	AN345-428	$0.08	AN345C428	$0.59
5/16	AN345-524	$0.16		
3/8-24	AN345-624	$0.58		



ZINC TEE NUTS

Here's an easy way to put steel threads in wood, plastic, or particleboard. Just drill a hole to fit the barrel, insert tee nut, and hammer in the locking prongs until the base of the tee nut is flush with the surface. Right-hand thread.

8-32	1/4"	04-02056	$0.19
10-32	5/16"	04-02057	$0.23
1/4-20	7/16"	04-02058	$0.26

AN340 PLAIN HEX MACHINE SCREW NUT

Coarse Thread - Use brass type for instruments.



Thread	Dash#	AN340 Cad-Plated Price	AN340C Stainless Price	AN340B Brass Price
4-40	-4	$0.11	$0.23	$0.51
6-32	-6	$0.05	$0.22	$0.29
8-32	-8	$0.05	$0.28	$0.23
10-24	-10	$0.14	$1.65	$0.64



AN350 WING NUTS

AN350 WING NUTS Fabricated from carbon steel and cadmium plated per specification QQ-P416A, Type II, Class 3. Tensile strength 50,000 PSI. A .070" hole is drilled in one wing for safety wire.

Dash No.	Thread Size	Price Each	Dash No.	Thread Size	Price Each
-632	3-32	---	-4	1/4-28	$4.97
-832	8-32	---	-5	5/16-24	---
-1032	10-32	$7.50			



MS27151 PAL NUTS

MS27151 engine nuts replace AC356 Pal nuts. They are stamped from 1050 spring steel and cadmium plated per QQ-P-416A, Type II, Class 2.

Dash No.	Thread Size	Price Each	Dash No.	Thread Size	Price Each
-13	1/4-28	$0.18	-21	7/16-20	$0.35
-16	5/16-24	$0.16	-24	1/2-20	$0.28
-19	3/8-24	$0.20			

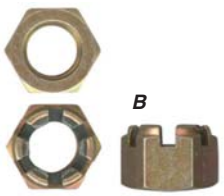
MS17825 SELF-LOCKING CASTLE NUTS

Manufactured to standard castle or shear nut specifications with a nylon insert added for positive safety. Use it throughout the control system. Should the cotter pin used with castle nuts be overlooked, the nut cannot work loose. The nylon insert will act as a stop nut.



Dash No.	Thread Size	Price Each
-3	10-32	$1.30
-4	1/4-28	$1.56
-5	5/16-24	$1.75

Dash No.	Thread Size	Price Each
-6	3/8-24	$1.98
-7	7/16-20	$2.65



MS17826 SELF LOCKING NUTS

MS17826 Nylon Hex Nut. Self-Locking Nut, Castellated, Hexagon, 250 Deg.F, Thin, Non-Metallic Insert Material- Alloy Steel, Finish - CAD Per QQ-P-416 Type II.

Model	Part No.	Steel Dash#	Thread Size	A Dim	B Dim	Price
MS17826-3	04-01367	3	10-32	.173-.203	.367-.376	$1.66
MS17826-4	04-01368	4	1/4-28		.430-.439	$1.62
MS17826-5	04-01369	5	5/16-24		.492-.502	$1.84
MS17826-6	04-01370	6	3/8-24	.204-.234	.553-.564	$2.25
MS17826-7	04-01371	7	7/16-20		.679-.690	$2.99
MS17826-8	04-01372	8	1/2-20	.235-.265	.741-.752	$3.20

EXHAUST MANIFOLD NUTS



Part No.	Thread Size	Type	Engine Application	Price Each
22022	5/16-24	Brass	Cont. A-65, (C-75 thru O-90, O-200, O-300)	$1.25
STD1410	5/16-18	Steel	Lycoming	$1.47
STD1411	1/4-20	Steel	Lycoming	$2.59

MS21042 HEX NUTS (LUBED)

These are the same as MS21042- but have a dry film lube (dark grey).

Dash No.	Thread Size	Price Each
-L04	4-40	$0.39
-L06	6-32	$0.38
-L08	8-32	$0.42

Dash No.	Thread Size	Price Each
-L3	10-32	$0.36
-L4	1/4-28	$0.28

Dash No.	Thread Size	Price Each
-L5	5/16-24	$0.67
-L6	3/8-24	$0.77

MS21043 HEX NUTS (STAINLESS STEEL)

These are the same as MS21042 but are made from A-286 stainless steel and are silver plated.

Dash No.	Thread Size	Price Each
-04	4-40	$0.87
-06	6-32	$0.61
-08	8-32	$0.74

Dash No.	Thread Size	Price Each
-3	10-32	$0.50
-4	1/4-28	$0.74

Dash No.	Thread Size	Price Each
-5	5/16-24	$1.73
-6	3/8-24	$2.75

STOP NUTS – ANCHOR NUTS



AN363
MS21045
NAS1021A



MS21042

AN363 & MS21042 ALL METAL STOP NUTS

The AN363 and MS21042 all-metal stop nuts are designed for use in high temperature installations (up to 450°F). The MS21042 nuts are shorter than the AN363 nut but develop the same tensile strength. Fabricated from carbon steel and cadmium plated per specification QQ-P-416C.

AN363 CAD Plated Dash No.	Price Each	AN363C Stainless Dash No.	Price Each	Thread Size	MS21042 Dash No.	Price Each
-632	**$0.38**	-632	**$1.47**	6-32	-06	**$0.35**
-832	**$0.35**	-832	**$1.44**	8-32	-08	**$0.24**
-1032	**$0.38**	-1032	**$1.12**	10-32	-3	**$0.22**
-428	**$0.46**	-428	**$1.83**	1/4-28	-4	**$0.30**
-524	**$0.69**	-524	**$2.40**	5/16-24	-5	**$0.92**
-624	**$0.74**	-624	**$3.35**	3/8-24	-6	**$0.68**
-720	**$2.15**	---	**---**	7/16-20	-7	**---**
-820	**$1.50**	---	**---**	1/2-20	-8	**---**
-918	**$3.40**	---	**---**	9/16-18	-9	**---**

AN364, AN365 ELASTIC STOP NUTS



AN364
MS21083
NAS1022N



AN365
MS21044
NAS1021N

These precision-made nuts are reliable and economical fastening devices. The nylon insert gives a friction grip on the threads of the bolt and holds securely. The AN364 (thin) stop nut is for use in structural applications where the bolt is loaded primarily in shear or in any application where the tensile strength of the regular height AN365 is not required. Cad stop nuts are furnished to military specifications. Insert color designates manufacturer only.

Dash No.	Thread Size	Price Ea. AN364	Price Ea. AN365	Dash No.	Thread Size	Price Ea. AN364	Price Ea. AN365
-440A	4-40	**$0.32**	-----	-524A	5/16-24	**$0.40**	**$0.16**
-440	4-40	-----	**$0.35**	-624A	3/8-24	**$0.85**	**$0.26**
-632A	6–32	**$0.32**	**$0.27**	-720A	7/16-20	**$1.42**	**$0.97**
-832A	8-32	**$0.12**	**$0.13**	-820A	1/2-20	**$1.25**	**$0.72**
-1024A	10-24	---	**$0.29**	-918A	9/16-18	**$1.94**	**$1.81**
-1032A	10-32	**$0.13**	**$0.11**	-1018A	5/8-18	**$1.58**	**$1.19**
-428A	1/4-28	**$0.13**	**$0.13**	-1216A	3/4-16	**$2.10**	**$3.55**

NSWC ELASTIC STOP NUT KIT

Contains: • AN364-428A (20 qty)• AN364-918A (4 qty) • AN364-624A(22 qty) • AN364-720A (4 qty) • AN364-820A (32 qty)

P/N 04-01729 ..... **$75.25**

AN364, AN365 STAINLESS STOP NUTS

Thread	Part No.	Price	Thread	Part No.	Price
1/4-28	AN364C-428	**$0.88**	1/4-28	AN365C-428	**$0.48**
3/8-24	AN364C-624	**$1.31**	5/16-24	AN365C-524	**$1.22**
632	AN364C-632	**$0.53**	3/8-24	AN365C-624	**$1.53**
7/16-20	AN364C-720	**$2.80**	6-32	AN365C-632	**$0.26**
1/2-20	AN364C-820	**$2.62**	7/16-20	AN365C-720	**$2.63**
8-32	AN364C-832	**$0.76**	1/2-20	AN365C-820	**$4.65**
9/16-18	AN364C-918	**$8.70**	8-32	AN365C-832	**$0.28**
5/8-18	AN364C-1018	**$4.95**	5/8-18	AN365C-1018	**$7.50**
10-32	AN364C-1032	**$0.85**	10-32	AN365C-1032	**$0.29**



MS21044 / MS21083 STAINLESS STOP NUTS

Part Number	Bolt Size	Price Ea.	Part Number	Bolt Size	Price Ea.
MS21044C04	#4	**$0.54**	MS21083C4	1/4	**$0.48**
MS21044C10	5/8	**$7.50**	MS21083C7	7/16	**$2.80**
MS21083C9	9/16	**$8.70**	MS21083C8	1/2	**$2.62**
			MS21083C10	5/8	**$4.95**

COMMERCIAL GRADE STAINLESS STOP NUTS

Dash No.	Thread Size	Price Ea. Com364	Price Ea. Com365	Dash No.	Thread Size	Price Ea. Com364	Price Ea. Com365
-440	4-40	**$0.09**	**$0.07**	-624	3/8-24	---	**$0.23**
-632	6–32	**$0.07**	**$0.06**	-720	7/16-20	---	**$0.43**
-832	8-32	**$0.09**	**$0.06**	-820	1/2-20	---	**$0.74**
-1024	10-24	---	---	-918	9/16-18	---	---
-1032	10-32	**$0.16**	**$0.07**	-1018	5/8-18	---	**$1.37**
-428	1/4-28	**$0.15**	**$0.15**	-1216	3/4-16	---	---
-524	5/16-24	---	**$0.18**				

ANCHOR NUTS

Anchor nuts are designed for blind mounted applications where it is impractical to use hex nuts or where it is desirable to have an attached nut for ease of maintenance. Use 3/32" dia. rivets with nut sizes 632, 832, 1032 and 428. Use 1/8" dia. rivets with 524 and 624.

TWO LUG ANCHOR NUTS



AN366F
NA1, MS21078, NAS1023N



K1000
MS21047,NAS680S, NAS1023A



MK1000
MS21069, NAS697N

ELASTIC-INSERT ANCHOR NUT

Part No.	Thread Size	Price Each	Part No.	Thread Size	Price Each
MS21078-06	6-32	**$13.38**	AN366F-428A	1/4-28	**$3.60**
AN366F-524A	8-32	-	AN366F-524	5/16-24	-
AN366F-1032A	10-32	**$3.60**			

ALL METAL ANCHOR NUT

Dash No.	Thread Size	K1000 (Full Size) Price Ea.	MK1000 (Miniature) Price Ea.	MS21047 Price Ea.
06	6-32	**$0.51**	**$0.60**	**$1.60**
08	8-32	**$0.46**	**$0.47**	**$0.97**
3	10-32	**$0.42**	**$0.65**	**$1.08**
-4	1/4-28	**$0.93**	**$0.73**	---
-5	5/16-24	**$1.45**	---	---
-6	3/8-24	**$2.47**	---	---

ONE LUG ANCHOR NUTS



NA17
MS21080, NAS1025N



MK2000
MS21071, NAS696A

Elastic-Insert Anchor Nut Part No.	Elastic-Insert Anchor Nut Price Each	Thread Size	All-Metal Anchor Nut Dash No.	All-Metal Anchor Nut Price Each MS21051 (Full Size)	All-Metal Anchor Nut Price Each MS21071 (Miniature)
		6-32	L06	**$0.82**	**$0.71**
		8-32	L08	**$0.72**	**$0.59**
MS21080-3	**$8.50**	10-32	L3	**$0.68**	**$0.65**
		1/4-28	L4	**$1.05**	**$1.19**



ANCHOR NUT, DIMPLED, STANDARD SIZE

Anchor Nut, Dimpled Standard Size

K1100-0 ..... 6-32 Thread ..... P/N 04-01724 ..... **$1.15**
K1100-08 ..... 8-32 Thread ..... P/N 04-01725 ..... **$0.62**

Anchor Nut, One Leg, Dimpled, Standard size

MS21053-L08 ..... 8-32 Thread ..... P/N 04-01726 ..... **$0.98**

NA5
MS21081
NAS1027N



CORNER NUTS



K3000
MS21055
NAS684A
NAS1027A

All-Metal Anchor Nut	Price Ea.	Size	Anchor Nut	Price Ea.
MS21081-3	**$20.75**	8-32	MS21055L08	**$1.20**
		10-32	MS21055L3	**$0.65**
		1/4-28	MS21055L4	**$1.65**



NA27 (AN256F)

RIGHT ANGLE FLOATING NUTS

Part No.	Thread Size	Price Ea.
22NA27-22-62	6-32	**$15.85**
22NA27-22-82	8-32	**---**



TWO LUG MINI ANCHOR NUTS

Part Number	Thread Size	Price Each
MS21075L06	6-32	**$0.89**
MS21075L08	8-32	**$0.86**
MS21075L3	10-32	**$0.58**



F5000
MS21059

ALL-METAL FLOATING ANCHOR NUTS



F2000
MS21061

Two-Lug Nut	Price Ea.	Thread Size	One-Lug Nut	Price Ea.
---	---	4-40	MS21061-04	**$2.26**
MS21059L06	**$0.64**	6-32	MS21061L06	**$1.33**
MS21059L08	**$0.78**	8-32	MS21061L08	**$0.87**
MS21059L3	**$0.53**	10-32	MS21061L3	**$0.83**
MS21059L4	**$1.08**	1/4-28	MS21061-L4	**$1.80**

HA

NAS509 DRILLED HEX NUTS



Material - 4130 Alloy Steel Per AMS-S-6758.
Finish - Cad Type II, Class 2 Per AMS-QQ-P-416.
Heat Treat- 150 KSI Min Per AMS2759.
Hardness - 34-38 HRC

Thread Dash	Thread Size	Part No.	Price
RH - 4	1/4-28 UNJF-3B	NAS509-4	**$2.40**
RH - 5	5/16-24 UNJF-3B	NAS509-5	**$2.60**
RH - 6	3/8-24 UNJF-3B	NAS509-6	**$2.80**
RH - 7	7/16-20 UNJF-3B	NAS509-7	**$3.20**
RH - 8	1/2-20 UNJF-3B	NAS509-8	**$3.30**
LH - L4	1/4-28 UNJF-3B	NAS509L4	**$2.50**
LH - L5	5/16-24 UNJF-3B	NAS509L5	**$3.00**
LH - L6	3/8-24 UNJF-3B	NAS509L6	**$3.70**
LH - L7	7/16-20 UNJF-3B	NAS509L7	**$3.90**
LH - L8	1/2-20 UNJF-3B	NAS509L8	**$4.20**

NAS671 HEX NUT



Hex Nuts, Small Pattern - NAS671
Material - Carbon Steel
Finish - Cad Type IIPer QQ-P-416

Thread Size	A Dim	T Dim	Part No.	Price
6-32	.241-.250	.087-.098	**04-03004**	**$0.15**
8-32	.302-.313	.102-.114	**04-03005**	**$0.16**
10-32	.332-.344	.117-.130	**04-03006**	**$0.18**

NAS1423 DRILLED HEX NUTS



Material - 4130 Alloy Steel Per AMS-S-6758
Finish - Cad Type II, Class 2 Per AMS-QQ-P-416
Heat Treat- 150 KSI Min Per AMS2759
Hardness - 34-38 HRC

Thread Dash	Thread Size	Part No.	Price
RH-4	1/4-28 UNJF-3B	NAS1423-4	**$3.00**
RH-5	5/16-24 UNJF-3B	NAS1423-5	**$3.30**
RH-6	3/8-24 UNJF-3B	NAS1423-6	**$3.40**
RH-7	7/16-20 UNJF-3B	NAS1423-7	**$4.00**
RH-8	1/2-20 UNJF-3B	NAS1423-8	**$5.20**
LH-4LH	1/4-28 UNJF-3B	NAS1423-4LH	**$3.40**
LH-5LH	5/16-24 UNJF-3B	NAS1423-5LH	**$3.50**
LH-6LH	3/8-24 UNJF-3B	NAS1423-6LH	**$3.90**

MS35649 STAINLESS STEEL HEX MACHINE NUTS



MS35649 Stainless Steel
Hex Machine Nut
Description Thread Size

Description	Thread Size	Material	Part No.	Price
MS35649-224	2-56	Stainless Steel	**04-01357**	**$0.26**
MS35649-286T	8-32	Brass - Tin Plated	**04-01393**	**$0.61**
MS35650-305T	10-32	Brass - Tin Plated	**04-01394**	**$0.31**
MS35649-2252	1/4-20	CAD Plated Carbon Steel	**04-01396**	**$0.17**
MS35649-2312	5/16-18	CAD Plated Carbon Steel	**04-01397**	**$0.39**

AN121501 - AN121504 HEX NUTS



Hex Nuts - AN121501 - AN121504
Material - Alloy Steel Per AMS6322
Finish - Cad Per AMS2400

Mfr PN	Thread Size	A Dim	T Dim	Part No.	Price
AN121501	10-32	.367-.376	**0.156**	**04-02999**	**$1.78**
AN121502	1/4-28	.430-.439	**.219**	**04-03001**	**$2.02**
AN121503	5/26-24	.492-.502	**.266**	**04-03002**	**$2.60**
AN121504	3/8-24	.533-.564	**.328**	**04-03003**	**$4.50**

6-32 BRASS INSTRUMENT STOP-NUT



6-32 Brass Instrument Stop-Nut.
P/N MS21044B06 ..... **$1.18**

NAS43DD3 SPACERS



NAS43DD3-10FC Spacers.

Material - 2024 Aluminum
Finish - Chemical Film

For #10 (190) Screws

Mfr PN	Length	Part No.	Price
NAS43DD3-10FC	0.156 = 5/32	04-02990	**$0.19**
NAS43DD3-12FC	0.188 = 3/16	04-02991	**$0.19**
NAS43DD3-16FC	0.250 = 1/4	04-02992	**$0.25**
NAS43DD3-24FC	0.375 = 3/8	04-02993	**$0.28**
NAS43DD3-32FC	0.500 = 1/2	04-02994	**$0.42**
NAS43DD3-40FC	0.625 = 5/8	04-02995	**$0.36**
NAS43DD3-48FC	0.750 = 3/4	04-02996	**$0.42**
NAS43DD3-56FC	0.875 = 7/8	04-02997	**$0.47**
NAS43DD3-64FC	1.000 = 1	04-02998	**$0.76**

SELF LOCKING SCREW THREAD INSERTS



Screw Thread Inserts - Self Locking
Material - Stainless Steel Per NASM8846
Finish - Plain, Dyed Red Or Dry Film Lube (L) Per AS5272

Material	Thread Size	Nominal Diameter	Nominal Length	Part No.	Price
Dyed Red	4-40	0.112	**0.112**	**MS21209C0410**	**$0.18**
Dyed Red	4-40	0.112	**0.168**	**MS21209C0415**	**$0.18**
Dyed Red	4-40	0.112	**0.224**	**MS21209C0420**	**$0.18**
Dyed Red	6-32	0.138	**0.138**	**MS21209C0610**	**$0.18**
Dyed Red	6-32	0.138	**0.207**	**MS21209C0615**	**$0.18**
Dyed Red	6-32	0.138	**0.276**	**MS21209C0620**	**$0.18**
Dyed Red	8-32	0.164	**0.164**	**MS21209C0810**	**$0.18**
Dyed Red	8-32	0.164	**0.246**	**MS21209C0815**	**$0.18**
Dyed Red	8-32	0.164	**0.328**	**MS21209C0820**	**$0.18**
Dyed Red	10-32	0.190	**0.190**	**MS21209F1-10**	**$0.18**
Dyed Red	10-32	0.190	**0.285**	**MS21209F1-15**	**$0.18**
Dyed Red	10-32	0.190	**0.380**	**MS21209F1-20**	**$0.18**
Dyed Red	1/4-28	0.250	**0.250**	**MS21209F4-10**	**$0.18**
Dyed Red	1/4-28	0.250	**0.375**	**MS21209F4-15**	**$0.18**
Dyed Red	1/4-28	0.250	**0.500**	**MS21209F4-20**	**$0.18**
Dry Film Lube	4-40	0.112	**0.112**	**MS21209C0410L**	**$0.22**
Dry Film Lube	4-40	0.112	**0.168**	**MS21209C0415L**	**$0.22**
Dry Film Lube	6-32	0.138	**0.138**	**MS21209C0610L**	**$0.22**
Dry Film Lube	6-32	0.138	**0.207**	**MS21209C0615L**	**$0.22**
Dry Film Lube	8-32	0.164	**0.164**	**MS21209C0810L**	**$0.22**
Dry Film Lube	8-32	0.164	**0.246**	**MS21209C0815L**	**$0.22**
Dry Film Lube	10-32	0.190	**0.190**	**MS21209F1-10L**	**$0.22**
Dry Film Lube	10-32	0.190	**0.285**	**MS21209F1-15L**	**$0.22**
Dry Film Lube	10-32	0.190	**0.380**	**MS21209F1-20L**	**$0.22**

Prices Subject to Change Without Notice

TINNERMAN FASTENERS

TINNERMAN NUTS FOR SHEET METAL SCREWS



"B"-type Sheet Metal Screw

These speed nuts are self-locking steel fasteners. Locking action is derived from the force exerted by the two arched prongs against the root of the screw thread and by the spring tension of the prongs and base. The combined forces of the thread lock and spring tension provide a vibration proof fastening. Speed nuts retain their spring tension and may be used repeatedly without losing their self-locking effectiveness. Suitable for numerous non-structural applications.

Finish: Phosphate-coated with three coats of olive drab paint.

Important: Speed nuts for aircraft are designed to fit standard AN530-AN531 type B sheet metal screws only. Do not use pointed type A sheet metal screws with aircraft Speed nuts. There is a difference in root diameter and thread pitch. Screw lengths: B type sheet metal screws have a blunt taper at the end. To be certain the fastener prongs grip on the full root diameter, the screw should protrude two to three threads beyond the prongs. See the illustration.

FLAT TYPE (NAS 446)

Used to replace threaded nuts, lock washers, and spanner washers; weigh less than other types of self-locking aircraft fasteners. Can be applied faster, easier, and are vibration resistant. Provide maximum holding power at minimum cost per fastener. Turned-up ends prevent scoring of surfaces. Use with type B tapping screws.



Part No.	Screw Size	Price ea.
A1776-4Z-1D	#4	**$0.21**
A1777-6Z-1D	#6	**$0.29**
A1778-8Z-1D	#8	**$0.19**
A1779-10Z-1D	#10	**$0.22**

ANCHOR NUTS (NAS 444)

Riveted or welded in position. Attach access plates, doors or any part that must be fastened securely, yet easily removed with fasteners retained in a blind location. Install with AN426AD-3 rivets.



Part No.	Screw Size	Price/Ea.
A6195-6Z-1D	#6	**$0.39**
A6195-8Z-1D	#8	**$0.37**

LHA 4972 FLOATING CLIPNUT

CADMIUM-PLATED STEEL



Part No.	Thread	Price Each
4972-5-62	6-32	**$2.08**
4972-6-82	8-32	**$1.59**
LHA4972-1032	10-32	**$2.25**

FLOATING CLIP NUT 4972-1032



Reach: .500"
Thread: 10-32
Edge Distance: .375
Material Thickness: .020" - .090
P/N 04-01489..... **$2.25**

INSTRUMENT MOUNTING NUTS



Cage type. Permit mounting of aircraft instruments from the front of the panel. No charge in panel or instrument design required. Non-magnetic (speed nut is brass; cage is phosphor bronze). Conform to MIL-N-3336. Cage is easily compressed with finger-pressure to allow insertion of legs into clearance holes. When fully inserted and pressure is released, legs spring apart; retain SPEED NUT in screw-receiving position. Turned-down corners hold firm against force of inserting screw and screw-tightening torque. All instrument mounting nuts listed below take a 6-32 machine screw.

Tinnerman Part No.	Our Part No.	NAS Part No.	Instrument Thickness	Price Ea.
A8938-632-493	MS33737-9C	487-13	.062	**$1.98**
A8939-632-493	MS33737-10C	487-14	.091	**$1.78**
A6939-632-493	MS33737-11C	487-15	.125	**$1.64**
A8940-632-493	MS33737-12C	487-16	.187	**$1.73**
A8941-632-493	MS33737-13C	487-17	.250	**$1.75**
A8942-632-493	MS33737-14C	487-18	.313	**$1.75**
A8943-632-493	MS33737-15C	487-20	.375	**$1.79**
A8944-632-493	MS33737-16C	487-21	over .375	**$1.80**

MONADNOCK CLIP NUTS

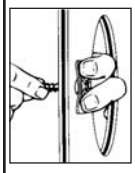
High strength Forged hex nuts suitable for structural and non-structural applications in metal, plastic, and composite materials.



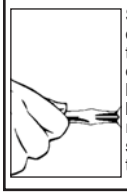
Size	Distance	Edge Tkns	Part Number	Price Ea.
6-32	.180-.120	.030-.051	04-00151	**$2.25**
8-32	.310-.500	.020-.090	04-00152	**$1.10**
10-32	.350-.500	.020-.090	04-00153	**$1.38**

HOW TO APPLY SPEED NUT FASTENERS

FLAT TYPE

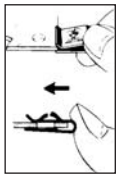


Fastener is positioned over screw clearance hole with screw-engaging prongs pointing up or outward. Screw is started into nut by hand from the underside.

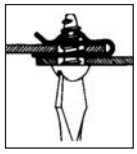


Screw can be power-driven into locked position (when base arch of fastener is flat) or a hand screw driver can be used. No wrench is required, finger pressure will prevent it from turning

"U" TYPE



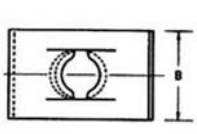
Push into position with thumb until extrusion on lower leg snaps into screw hole. The fastener "floats" in screw-receiving position to correct for normal misalignment in panel mounting holes.



Place second panel in position & drive screw. Access to opposite side is unnecessary. Flush mounting can be made by embossing either panel.

"U" TYPE (NAS 395) CLIP NUTS

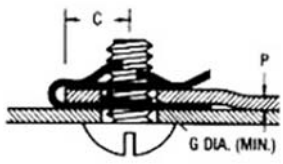
Snaps over edge of panels or into center hole locations. Holds itself in place for blind assembly. "Floats" free for easy hole alignment.











Part Number	TypeB Scrw Size	Design Variation	P-panel Thickness Range	A Length	B Width	C-max. ctr. hole to edge	G-panel hole dia.	T-mat'l. Thkness	Price
A1784-6Z-1D	#6	E	.025-.051	0.61	0.44	0.281	0.250	0.025	**$0.33**
A1785-6Z-1D	#6	E	.025-.064	0.84	0.44	0.500	0.281	0.025	**$0.36**
A1789-8Z-1D	#8	E	.025-.051	0.61	0.44	0.281	0.250	0.028	**$0.29**
A1787-8Z-1D	#8	E	.025-.064	0.84	0.44	0.500	0.281	0.028	**$0.31**
A1788-8Z-1D	#8	A E	.025-.064	0.84	0.44	0.500	0.170	0.028	**$0.26**
A1348-8Z-1D	#8	A E	.025-.064	0.73	0.50	0.343	0.170	0.028	**$0.47**
A1786-8Z-1D	#8	C E H	.040-.051	0.53	0.50	0.218	0.250	0.028	**$0.25**
A178710Z-1D	#10	E	.025-.064	0.84	0.44	0.500	0.281	0.031	**$0.35**
A1758-10Z-1D	#10	E	.081-.094	0.62	0.44	0.281	0.281	0.031	**$0.30**

MS27039 & MS27039C MACHINE SCREWS



Pan head low alloy steel machine screws have 125,000 to 145,000 psi tensile strength with cadmium plate finish to QQ-P-416, Type 2, Class 3. MS27039C screws are stainless steel Manufactured to MIL-S-6050 or MIL-8695. Equivalent to NAS 220.

Part Number	Diam.-Thrd. Size	Length (In.)	Grip Length (in)	MS27039 Price	MS27039C Price
MS27039-0804	8-32	9/32	---	$0.11	$0.38
MS27039-0805	8-32	11/32	---	$0.10	$0.48
MS27039-0806	8-32	13/32	---	$0.13	----
MS27039-0807	8-32	15/32	---	$0.13	----
MS27039-0808	8-32	17/32	.094	$0.14	----
MS27039-0809	8-32	19/32	.156	$0.15	----
MS27039-0810	8-32	21/32	.219	$0.13	----
MS27039-0811	8-32	23/32	.281	$0.15	$0.84
MS27039-0812	8-32	25/32	.344	$0.18	----
MS27039-0813	8-32	27/32	.406	$0.10	$0.87
MS27039-0814	8-32	29/32	.469	$0.19	$0.73
MS27039-0815	8-32	31/32	.531	$0.16	$0.99
MS27039-0816	8-32	1-1/32	.594	$0.18	----
MS27039-0817	8-32	1-3/32	.656	$0.21	$0.72
MS27039-0818	8-32	1-5/32	.719	$0.26	----
MS27039-0819	8-32	1-7/32	.781	$0.18	----
MS27039-0820	8-32	1-9/32	.844	$0.26	----
MS27039-0821	8-32	1-11/32	.906	$0.26	----
MS27039-0822	8-32	1-13/32	.969	$0.22	----
MS27039-0823	8-32	1-15/32	1.031	$0.23	----
MS27039-0824	8-32	1-17/32	1.094	$0.23	----
MS27039-1-04	10-32	9/32	---	$0.15	$0.84
MS27039-1-05	10-32	11/32	---	$0.11	$0.57
MS27039-1-06	10-32	13/32	---	$0.12	$0.59
MS27039-1-07	10-32	15/32	---	$0.12	----
MS27039-1-08	10-32	17/32	.062	$0.11	----
MS27039-1-09	10-32	19/32	.125	$0.15	$0.57
MS27039-1-10	10-32	21/32	.188	$0.13	$0.90
MS27039-1-11	10-32	23/32	.250	$0.17	$0.79
MS27039-1-12	10-32	25/32	.312	$0.17	----
MS27039-1-13	10-32	27/32	.375	$0.20	$0.81
MS27039-1-14	10-32	29/32	.438	$0.16	----
MS27039-1-15	10-32	31/32	.500	$0.19	$0.98
MS27039-1-16	10-32	1-1/32	.563	$0.17	----
MS27039-1-17	10-32	1-3/32	.625	$0.19	$1.10
MS27039-1-18	10-32	1-5/32	.688	$0.19	$1.31
MS27039-1-19	10-32	1-7/32	.750	$0.32	$1.34
MS27039-1-20	10-32	19/32	.813	$0.22	$1.36
MS27039-1-21	10-32	1-11/32	.875	$0.28	$1.43
MS27039-1-22	10-32	1-13/32	.938	$0.21	$1.50
MS27039-1-23	10-32	1-15/32	1.000	$0.39	$2.50
MS27039-1-24	10-32	1-17/32	1.062	$0.52	$1.90
MS27039-1-25	10-32	1-19/32	1.125	$0.53	----
MS27039-1-26	10-32	1-21/32	1.188	$0.42	----
MS27039-1-27	10-32	1-23/32	1.250	$0.43	----
MS27039-1-28	10-32	1-25/32	1.312	$0.43	----
MS27039-1-29	10-32	1-27/32	1.375	$0.78	----
MS27039-1-30	10-32	1-29/32	1.438	$0.44	----
MS27039-1-31	10-32	1-31/32	1.500	$0.48	----
MS27039-1-32	10-32	2-1/32	1.563	$0.53	----
MS27039-4-06	1/4-28	13/32	---	$0.17	$0.67
MS27039-4-07	1/4-28	15/32	---	$0.24	$1.20
MS27039-4-08	1/4-28	17/32	---	$0.21	$1.22
MS27039-4-09	1/4-28	19/32	.062	$0.19	$1.39
MS27039-4-10	1/4-28	21/32	.125	$0.24	$1.62
MS27039-4-11	1/4-28	23/32	.188	$0.30	$1.14
MS27039-4-12	1/4-28	25/32	.250	$0.27	$1.65
MS27039-4-13	1/4-28	27/32	.312	$0.29	$1.10
MS27039-4-14	1/4-28	29/32	.375	$0.32	$2.15
MS27039-4-15	1/4-28	31/32	.438	$0.30	$1.50
MS27039-4-16	1/4-28	1-1/32	.500	$0.33	$1.24
MS27039-4-17	1/4-28	1-3/32	.563	$0.29	----
MS27039-4-18	1/4-28	1-5/32	.625	$2.20	----
MS27039-4-19	1/4-28	1-7/32	.688	$0.34	----
MS27039-4-20	1/4-28	1-9/32	.750	$0.29	----
MS27039-4-21	1/4-28	1-11/32	.813	$0.37	----
MS27039-4-22	1/4-28	1-13/32	.875	$0.36	----
MS27039-4-23	1/4-28	1-15/32	.938	$0.37	----
MS27039-4-24	1/4-28	1-17/32	1.000	$0.46	----

MS35190 MACHINE SCREWS (CROSS RECESSED)



82° flat head machine screws have 55,000psi minimum tensile strength and feature cadmium plate finish per QQ P-416, Type 2, Class 3. Manufactured from carbon steel to Federal Standard #66.

Part Number	Old AN505R	Diam.-Thrd. Size	Length (In.)	Price
MS35190-221	-4R4	4-40	1/4	$0.11
MS35190-222	-4R5	4-40	5/16	$0.20
MS35190-225	-4R8	4-40	1/2	$0.09
MS35190-226	-4R10	4-40	5/8	$0.08
MS35190-234	-6R4	6-32	1/4	$1.43
MS35190-236	-6R6	6-32	3/8	$0.07
MS35190-238	-6R8	6-32	1/2	$0.06
MS35190-239	-6R10	6-32	5/8	$0.08
MS35190-240	-6R12	6-32	3/4	$0.07
MS35190-250	-8R5	8-32	5/16	$0.08
MS35190-253	-8R8	8-32	1/2	$0.08
MS35190-254	-8R10	8-32	5/8	$0.09



MS35207 MACHINE SCREWS (CROSS RECESSED)

These pan head machine screws have 55,000 psi minimum tensile strength and are cadmium plated to Specification QQ-P-416, Type 2, Class 3. Manufactured from carbon steel per Federal Standard #66.

Part Number	Old AN520R	Diam.-Thrd. Size	Length (In.)	Price ea.
MS35207-260	-10R5	10-32	5/16	$0.08
MS35207-261	-10R6	10-32	3/8	$0.08
MS35207-262	-10R7	10-32	7/16	$0.06
MS35207-263	-10R8	10-32	1/2	$0.07
MS35207-264	-10R10	10-32	5/8	$0.08
MS35207-265	-10R12	10-32	3/4	$0.11
MS35207-266	-10R14	10-32	7/8	$0.11
MS35207-267	-10R16	10-32	1	$0.12
MS35207-268	-10R20	10-32	1-1/4	$0.09
MS35207-269	-10R24	10-32	1-1/2	$0.13
MS35207-270	-10R28	10-32	1-3/4	$0.18
MS35207-271	-10R32	10-32	2	$0.19



MS35206 MACHINE SCREWS (CROSS RECESSED)

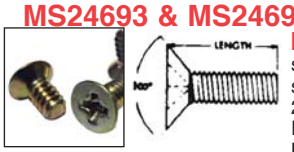
These pan head machine screws feature 60,000 psi minimum tensile strength and are cadmium plated to specification QQ-P-416, Type 2, Class 3. Manufactured from carbon steel to Federal Standard #66, these screws can be used as replacements for AN526 machine screws. Phillips head.

Part Number	Old AN515R	Diam.-Thrd. Size	Length (In.)	Price ea.
MS35206-203	-2R2	2-56	1/4	$0.07
MS35206-204	-2R5	2-56	5/16	$0.06
MS35206-205	-2R6	2-56	3/8	$0.04
MS35206-206	-2R7	2-56	7/16	$0.05
MS35206-207	-2R8	2-56	1/2	$0.05
MS35206-208	-2R10	2-56	5/8	$0.05
MS35206-209	-2R12	2-56	3/4	$0.06
MS35206-212	-4R3	4-40	3/16	$0.04
MS35206-213	-4R4	4-40	1/4	--
MS35206-214	-4R5	4-40	5/16	$0.04
MS35206-215	-4R6	4-40	3/8	$0.04
MS35206-216	-4R7	4-40	7/16	$0.05
MS35206-217	-4R8	4-40	1/2	$0.05
MS35206-218	-4R10	4-40	5/8	$0.06
MS35206-219	-4R12	4-40	3/4	$0.06
MS35206-220	-4R14	4-40	7/8	$0.05
MS35206-221	-4R16	4-40	1	$0.08
MS35206-222	-4R20	4-40	1-1/4	$0.17
MS35206-223	-4R24	4-40	1-1/2	$0.09
MS35206-226	-6R4	6-32	1/4	$0.05
MS35206-227	-6R5	6-32	5/16	$0.05
MS35206-228	-6R6	6-32	3/8	$0.05
MS35206-229	-6R7	6-32	7/16	$0.05
MS35206-230	-6R8	6-32	1/2	$0.05
MS35206-231	-6R10	6-32	5/8	$0.06
MS35206-232	-6R12	6-32	3/4	$0.06
MS35206-233	-6R14	6-32	7/8	$0.08
MS35206-234	-6R16	6-32	1	$0.06
MS35206-235	-6R20	6-32	1-1/4	$0.09
MS35206-236	-6R24	6-32	1-1/2	$0.12
MS35206-238	-6R32	6-32	2	$0.19
MS35206-241	-8R4	8-32	1/4	$0.05
MS35206-242	-8R5	8-32	5/16	$0.04
MS35206-243	-8R6	8-32	3/8	$0.05
MS35206-244	-8R7	8-32	7/16	$0.06
MS35206-245	-8R8	8-32	1/2	$0.06
MS35206-246	-8R10	8-32	5/8	$0.08
MS35206-247	-8R12	8-32	3/4	$0.07
MS35206-248	-8R14	8-32	7/8	$0.10
MS35206-249	-8R16	8-32	1	$0.10
MS35206-250	-8R20	8-32	1-1/4	$0.13
MS35206-251	-8R24	8-32	1-1/2	$0.14
MS35206-252	-8R28	8-32	1-3/4	$0.13
MS35206-253	-8R32	8-32	2	$0.29
MS35206-261	-10R6	10-24	3/8	$0.07
MS35206-262	-10R7	10-24	7/16	$0.08
MS35206-263	-10R8	10-24	1/2	$0.06
MS35206-264	-10R10	10-24	5/8	$0.10
MS35206-265	-10R12	10-24	3/4	$0.09
MS35206-267	-10R16	10-24	1	$0.13

Prices Subject to Change Without Notice

MACHINE SCREWS

MS24693 & MS24693C MACHINE SCREWS



FORMERLY AN 507) - These non-structural screws have a 100° countersunk flat head. Cadmium plated, Type 2, Class 3. Tensile strength 55,000 PSI. For both CAD plated and Stainless MS24693C are stainless steel.

Thread	Length	MS24693 Cad Plated P/N	Price Each	MS24693C Stainless P/N	Price Each
4-40	3/8	MS24693S4	$0.05	MS24693C4	$0.04
	7/16	MS24693S5	$0.05	---	---
	1/2	MS24693S6	$0.05	MS24693C6	$0.04
	5/8	MS24693S7	---	MS24693C7	$0.06
	1	MS24693S10	$0.09	MS24693C10	$0.07
6-32	1/4	MS24693S24	$0.05	MS24693C24	$0.04
	3/8	MS24693S26	$0.05	MS24693C26	$0.06
	7/16	MS24693S27	---	MS24693C27	$0.05
	1/2	MS24693S28	$0.06	MS24693C28	$0.06
	5/8	MS24693S29	$0.05	MS24693C29	$0.08
	3/4	MS24693S30	$0.06	MS24693C30	$0.08
	7/8	MS24693S31	$0.07	---	---
	1	MS24693S32	$0.09	MS24693C32	$0.08
	1-1/2	MS24693S36	$0.17	---	---
	2	MS24693S40	$0.21	---	---
8-32	1/4	MS24693S46	$0.06	MS24693C46	$0.09
	3/8	MS24693S48	$0.06	MS24693C48	$0.09
	7/16	MS24693S49	---	MS24693C49	$0.09
	1/2	MS24693S50	$0.07	MS24693C50	$0.09
	5/8	MS24693S51	$0.06	MS24693C51	$0.09
	3/4	MS24693S52	$0.05	MS24693C52	$0.10
	7/8	MS24693S53	$0.08	---	---
	1	MS24693S54	$0.09	MS24693C54	$0.13
	1-1/4	MS24693S56	---	MS24693C56	$0.17
	1-1/2	MS24693S58	$0.15	---	---
	2	MS24693S62	$0.35	---	---
10-32	1/4	MS24693S268	$0.08	MS24693C268	$0.12
	3/8	MS24693S270	$0.07	MS24693C270	$0.09
	7/16	MS24693S271	---	MS24693C271	$0.10
	1/2	MS24693S272	$0.09	MS24693C272	$0.12
	5/8	MS24693S273	$0.09	MS24693C273	$0.14
	3/4	MS24693S274	$0.11	MS24693C274	$0.14
	1	MS24693S276	$0.14	MS24693C276	$0.18
	1-1/4	MS24693S278	---	MS24693C278	$0.22
	1-1/2	MS24693S280	$0.16	---	---
	2	MS24693S284	$0.44	---	---
	2-1/2	MS24693-S286	$0.60	---	---
1/4-28	7/16	---	---	MS24693C293	$0.26
	1/2	MS24693S294	---	MS24693C294	$0.27
	5/8	MS24693S295	---	MS24693C295	$0.24
	3/4	MS24693S296	$0.16	---	---
	1	---	---	MS24693C298	$0.39

AN525 WASHER HEAD SCREWS



High-strength machine screws fabricated from alloy steel per specification AMS6300. Tensile strength 125,000 PSI. Cadmium plated per QQ-P-416, Type II, Class 3. Cross-recessed head.

Dash No.	Length in.	Grip in.	Thread Size	Price
AN525-832R4	1/4	1/32	8-32	$0.19
AN525-832R5	5/16	--	8-32	$0.09
AN525-832R6	3/8	1/32	8-32	$0.10
AN525-832R7	7/16	1/16	8-32	$0.12
AN525-832R8	1/2	1/8	8-32	$0.13
AN525-832R9	9/16	5/32	8-32	$0.17
AN525-832R10	5/8	7/32	8-32	$0.16
AN525-832R11	11/16	9/32	8-32	$0.12
AN525-832R12	3/4	11/32	8-32	$0.15
AN525-832R14	7/8	15/32	8-32	$0.20
AN525-832R16	1	19/32	8-32	$0.17
AN525-832R18	1-1/8	23/32	8-32	$0.26
AN525-832R20	1-1/4	27/32	8-32	$0.24
AN525-832R22	1-3/8	31/32	8-32	$0.23
AN525-832R24	1-1/2	1-3/32	8-32	$0.35
AN525-8R9	9/16	5/32	8/36	$0.17
AN525-10R4	1/4	--	10-32	$0.10
AN525-10R5	5/16	--	10-32	$0.13
AN525-10R6	3/8	1/32	10-32	$0.12
AN525-10R7	7/16	1/16	10-32	$0.12
AN525-10R8	1/2	1/8	10-32	$0.12
AN525-10R9	9/16	5/32	10-32	$0.15
AN525-10-9 (Slotted)	9/16	5/32	10-32	$0.17
AN525-10R10	5/8	7/32	10-32	$0.16
AN525-10R11	11/16	9/32	10-32	$0.16
AN525-10R12	3/4	11/32	10-32	$0.15
AN525-10R14	7/8	15/32	10-32	$0.23
AN525-10R16	1	19/32	10-32	$0.19
AN525-10R18	1-1/8	23/32	10-32	$0.34
AN525-10R20	1-1/4	27/32	10-32	$0.30
AN525-10R22	1-3/8	31/32	10-32	$0.28
AN525-10R24	1-1/2	1-3/32	10-32	$0.29
AN525-416R6	3/8	1/32	1/4-28	$0.58
AN525-416R7	7/16	1/16	1/4-28	$0.52
AN525-416R8	1/2	1/8	1/4-28	$0.54
AN525-416R9	9/16	5/32	1/4-28	$0.54
AN525-416R10	5/8	7/32	1/4-28	$0.49
AN525-416R12	3/4	11/32	1/4-28	$0.56
AN525-416R14	7/8	15/32	1/4-28	$0.76
AN525-416R16	1	19/32	1/4-28	$0.63
AN525-416R18	1-1/8	23/32	1/4-28	$1.39
AN525-416R20	1-1/4	27/32	1/4-28	$1.43

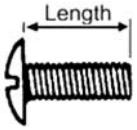
AN526 MACHINE SCREWS

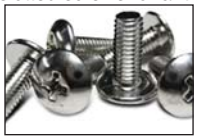
Truss-head non-structural machine screws made of carbon steel, cadmium plated. Minimum tensile strength 55,000 PSI. Available in slot head or Phillips recessed head.

Thread	Length	Phillips Part No.	Price Ea.	Slotted Part No.	Price Ea.
4-40	1/4	AN526-440R4	$0.20	-----	---
	3/8	AN526-440R6	$0.07	-----	---
	1/2	AN526-440R8	$0.06	-----	---
	1	AN526-440R16	-----	-----	---
6-32	1/4	AN526-632R4	$0.05	-----	---
	5/16	AN526-632R5	$0.04	-----	---
	3/8	AN526-632R6	$0.06	AN526-632-6	$0.14
	7/16	AN526-632R7	$0.06	-----	---
	1/2	AN526-632R8	$0.06	AN526-632-8	$0.11
	9/16	AN526-632R9	$0.08	-----	---
	5/8	AN526-632R10	$0.07	AN526-632-10	$0.54
	3/4	AN526-632R12	$0.08	AN526-632-12	$0.16
	7/8	AN526-632R14	$0.05	-----	---
	1	AN526-632R16	$0.08	-----	---
	1-1/2	AN526-632-R24	$0.17	-----	---
	2	AN526-632R32	$0.20	-----	---
8-32	1/4	AN526-832R4	$0.08	-----	---
	5/16	AN526-832R5	$0.07	-----	---
	3/8	AN526-832R6	$0.07	-----	---
	7/16	AN526-832R7	$0.07	-----	---
	1/2	AN526-832R8	$0.07	AN526-832-8	$0.46
	9/16	AN526-832R9	$0.08	-----	---
	5/8	AN526-832R10	$0.06	---	---
	3/4	AN526-832R12	$0.08	AN526-832-12	$0.24
	7/8	AN526-832R14	$0.09	-----	---
	1	AN526-832R16	$0.09	AN526-832-16	$0.19
	1-1/4	AN526-832-R20	$0.12	-----	---
	1-1/2	AN526-832-R24	$0.29	-----	---
10/32	1/4	AN526-1032R4	$0.11	-----	---
	5/16	AN526-1032R5	$0.07	-----	---
	3/8	AN526-1032R6	$0.08	-----	---
	7/16	AN526-1032R7	$0.07	-----	---
	1/2	AN526-1032R8	$0.09	-----	---
	9/16	AN526-1032R9	$0.09	-----	---
	5/8	AN526-1032R10	$0.09	AN526-1032-10	$0.16
	3/4	AN526-1032R12	$0.11	AN526-1032-12	$0.13
	7/8	AN526-1032R14	$0.12	AN526-1032-14	---
	1	AN526-1032R16	$0.13	-----	---
	1-1/8	AN526-1032R18	$0.13	-----	---
	1-1/4	AN526-1032R20	$0.16	-----	---
	1-1/2	AN526-1032R24	$0.19	-----	---
	1-3/4	AN526-1032R28	$0.28	-----	---
	2	AN526-1032R32	$0.52	-----	---

AN526C STAINLESS STEEL MACHINE SCREWS

Stainless steel Phillips and slotted, Use slotted screws for antiques.





Thread	Length	Phillips Part No.	Price Ea.	Slotted Part No.	Price Ea.
4-40	1/2	AN526C-440R8	$0.08	-----	---
6-32	1/4	AN526C-632R4	$0.07	AN526C-632-4	$0.26
	3/8	AN526C-632R6	$0.07	-----	---
	1/2	AN526C-632R8	$0.06	AN526C-632-8	$0.20
	5/8	AN526C-632R10	$0.08	AN526C-632-10	$0.30
	3/4	AN526C-632R12	$0.09		
	1	AN526C-632R16	$0.11	AN526C-632-16	$0.29
8-32	1/4	AN526C-832R4	$0.14	-----	---
	3/8	AN526C-832R6	$0.08	-----	---
	1/2	AN526C-832R8	$0.08	AN526C-832-8	$0.16
	5/8	AN526C-832R10	$0.09	AN526C-832-10	$0.26
	3/4	AN526C-832R12	$0.10	AN526C-832-12	$0.34
	1	AN526C-832R16	$0.14	AN526C-832-16	$0.20
10-32	1/4	AN526C-1032R4	$0.38	-----	---
	3/8	AN526C-1032R6	$0.11	AN526C-1032-6	$0.21
	1/2	AN526C-1032R8	$0.13	AN526C-1032-8	$0.24
	5/8	AN526C-1032R10	$0.15	AN526C-1032-10	$0.20
	3/4	AN526C-1032R12	$0.16	AN526C-1032-12	---
	1	AN526C-1032R16	$0.16	-----	---
	1-1/4	AN526C-1032R20	-----	-----	---
	1-1/2	AN526C-1032R24	$0.24	-----	---
1/4-20	1/2	AN526C-420R8	$1.57	-----	---
1/4-28	1/2	AN526C-428R8	$0.28	-----	---
	3/4	AN526C-428R12	$0.42	-----	---
	1-1/8	-----	---	AN526C-428-18	$0.69

Note: Some sizes of AN526C screws are furnished as commercial equipment as AN screws are no longer available.

HA

FILLISTER HEAD SCREWS – MACHINE SCREWS



MS24694 MACHINE SCREWS (FORMERLY AN509)

These structural screws have a 100° countersunk head. Cadmium plated per QQ-P-416, Type II, Class 3. Minimum tensile strength for steel is 125,000 PSI.

MS24694 Dash No.	AN509 Dash No.	Length In.	Grip In.	Thread Size	Price Each
-S1	-8R4	9/32	3/32	8-32	$0.10
-S2	-8R5	11/32		8-32	$0.13
-S3	-8R6	13/32		8-32	$0.12
-S4	-8R7	15/32		8-32	$0.12
-S5	-8R8	17/32		8-32	$0.11
-S7	-8R10	21/32	7/32	8-32	$0.13
-S8	-8R11	23/32	9/32	8-23	---
-S9	-8R12	25/32	11/32	8-32	$0.14
-S10	-8R13	27/32	13/32	8-32	---
-S11	-8R14	29/32	15/32	8-32	$0.14
-S12	-8R15	31/32	17/32	8-32	---
-S13	-8R16	1-1/32	19/32	8-32	$0.18
-S14	-8R17	1-1/32	21/32	8-32	---
-S15	-8R18	1-5/32	23/32	8-32	$0.21
-S16	-8R19	1-7/32	25/32	8-32	---
-S17	-8R20	1-9/32	27/32	8-32	$0.21
-S18	-8R21	1-11/32	29/32	8-32	$0.28
-S19	-8R22	1-13/32	31/32	8-32	$0.20
-S20	-8R23	1-15/32	1-1/32	8-32	---
-S21	-8R24	1-17/32	1-3/32	8-32	$0.20
-S28	-8R31	1-31/32	1-17/32	8-32	$1.95
-S29	-8R32	2-1/32	1-19/32	8-32	$0.82
-S31	-8R34	2-5/32	1-23/32	8-32	$1.36
-S46	-10R4	9/32	7/64	10-32	---
-S47	-10R5	11/32		10-32	---
-S48	-10R6	13/32		10-32	$0.13
-S49	-10R7	15/32		10-32	$0.14
-S50	-10R8	17/32		10-32	$0.14
-S51	-10R9	19/32		10-32	$0.13
-S52	-10R10	21/32	3/16	10-32	$0.12
-S53	-10R11	23/32	1/4	10-32	$0.16
-S54	-10R12	25/32	5/16	10-32	$0.15
-S55	-10R13	27/32	3/8	10-32	$0.16
-S56	-10R14	29/32	7/16	10-32	$0.16
-S57	-10R15	31/32	1/2	10-32	---
-S58	-10R16	1-1/32	9/16	10-32	$0.17
-S59	-10R17	1-3/32	5/8	10-32	$0.19
-S60	-10R18	1-5/32	11/16	10-32	$0.18
-S61	-10R19	1-7/32	3/4	10-32	---
-S62	-10R20	1-9/32	13/16	10-32	$0.26
-S63	-10R21	1-11/32	7/8	10-32	---
-S64	-10R22	1-13/32	15/16	10-32	$0.21

MS24694 Dash No.	AN509 Dash No.	Length In.	Grip In.	Thread Size	Price Each
-S65	-10R23	1-15/32	1	10-32	$0.33
-S66	-10R24	1-17/32	1-1/16	10-32	$0.23
-S67	-10R25	1-19/32	1-1/8	10-32	---
-S68	-10R26	1-21/32	1-3/16	10-32	---
-S69	-10R27	1-23/32	1-1/4	10-32	---
-S70	-10R28	1-25/32	1-5/16	10-32	$0.41
-S71	-10R29	1-27/32	1-3/8	10-32	---
-S72	-10R30	1-29/32	1-7/16	10-32	$0.44
-S74	-10R32	2-1/32	1-9/16	10-32	$0.34
-S75	-10R33	2-3/32	1-5/8	10-32	$1.12
-S76	-10R34	2-5/32	1-11/16	10-32	$0.74
-S77	-10R35	2-7/32	1-3/4	10-32	$0.94
-S79	-10R37	2-11/32	1-7/8	10-32	$0.72
-S82	-10R40	2-17/32	2-1/16	10-32	$0.63
-S84	-10R42	2-21/32	2-3/16	10-32	$0.30
-S88	-10R46	2-29/32	2-7/16	10-32	$1.77
-S90	-10R48	3-1/32	2-9/16	10-32	$0.59
-S93	-416R6	13/32	9/64	1/4-28	---
-S94	-416R7	15/32		1/4-28	---
-S95	-416R8	17/32		1/4-28	---
-S96	-416R9	19/32		1/4-28	---
-S97	-416R10	21/32		1/4-28	$0.19
-S98	-416R11	23/32	3-16	1/4-28	---
-S99	-416R12	25/32	1/4	1/4-28	$0.22
-S100	-416R13	27/32	5/16	1/4-28	$0.26
-S101	-416R14	29/32	3/8	1/4-28	$0.29
-S102	-416R15	31/32	7/16	1/4-28	$0.28
-S103	-416R16	1-1/32	1/2	1/4-28	$0.25
-S104	-416R17	1-3/32	9/16	1/4-28	$0.25
-S105	-416R18	1-5/32	5/8	1/4-28	$0.29
-S106	-416R19	1-7/32	11/16	1/4-28	$0.26
-S107	-416R20	1-9/32	3/4	1/4-28	---
-S108	-416R21	1-11/32	13/16	1/4-28	---
-S109	-416R22	1-13/32	7/8	1/4-28	$0.34
-S110	-416R23	1-15/32	15/16	1/4-28	$0.32
-S111	-416R24	1-17/32	1	1/4-28	$0.29
-S113	-416R26	1-21/32	1-1/8	1/4-28	$0.46
-S115	-416R28	1-25/32	1-1/4	1/4-28	$0.49
-S119	-416R32	2-1/32	1-1/2	1/4-28	$0.72
-S121	-416R34	2-5/32	1-5/8	1/4-28	$1.19
-S123	-416R36	2-9/32	1-3/4	1/4-28	$1.83
-S148	-516R16	1-1/32	15/32	5/16-24	---
-S178	-516R46	2-29/32	2-11/32	5/16-24	---



MS24694C STAINLESS STEEL MACHINE SCREWS

Same style screws as MS24694, except stainless steel. Phillips head. (Formerly AN509C) Minimum tensile strength for stainless steel is 85,000 PSI.

MS Part No.	AN509C No.	Thread Size	Length Inches	Price ea.
MS24694C1	-8R4	8-32	9/32	$0.17
MS24694C2	-8R5	8-32	11/32	$0.12
MS24694C3	-8R6	8-32	13/32	$0.17
MS24694C4	-8R7	8-32	15/32	$0.14
MS24694C5	-8R8	8-32	17/32	$0.11
MS24694C6	-8R9	8-32	19/32	$0.12
MS24694C7	-8R10	8-32	21/32	$0.17
MS24694C8	-8R11	8-32	23/32	$0.19
MS24694C9	-8R12	8-32	25/32	$0.17
MS24694C10	-8R13	8-32	27/32	$0.17
MS24694C11	-8R14	8-32	29/32	$0.29
MS24694C13	-8R16	8-32	1-1/32	$0.32
MS24694C14	-8R17	8-32	1-3/32	$0.59
MS24694C15	-8R18	8-32	1-5/32	$1.78
MS24694C46	-10R4	10-32	9/32	$0.17
MS24694C47	-10R5	10-32	11/32	$0.14
MS24694C48	-10R6	10-32	13/32	$0.17

MS Part No.	AN509C No.	Thread Size	Length Inches	Price ea.
MS24694C49	-10R7	10-32	15/32	$0.16
MS24694C50	-10R8	10-32	17/32	$0.18
MS24694C51	-10R9	10-32	19/32	$0.17
MS24694C52	-10R10	10-32	21/32	$0.18
MS24694C53	-10R11	10-32	23/32	$0.22
MS24694C54	-10R12	10-32	25/32	$0.23
MS24694C55	-10R13	10-32	27/32	$0.23
MS24694C56	-10R14	10-32	29/32	$0.24
MS24694C57	-10R15	10-32	31/32	$0.32
MS24694C58	-10R16	10-32	1-1/32	$0.32
MS24694C59	-10R17	10-32	1-3/32	$0.36
MS24694C60	-10R18	10-32	1-5/32	$0.39
MS24694C61	-10R19	10-32	1-7/32	$0.39
MS24694C62	-10R20	10-32	1-9/32	$0.34
MS24694C92		1/4-28	3/8	$0.43

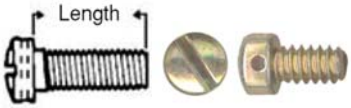


NAS387 SERIES MACHINE SCREWS

Type: NAS387. Material: Carbon Steel Type 1016 - 1024. Finish: Nickel Plate

Thread	Length	Part No.	Price
6-32	3/8	NAS387-632-6P	$0.16
	7/16	NAS387-632-7P	----
	1/2	NAS387-632-8P	$0.10
	5/8	NAS387-632-10P	$0.16
	3/4	NAS387-632-12P	$0.16
8-32	1/2	NAS387-832-8P	$0.20
	5/8	NAS387-832-10P	$0.20
	3/4	NAS387-832-12P	$0.24
	7/8	NAS387-832-14P	$0.30

Thread	Length	Part No.	Price
10-32	1/2	NAS387-1032-8P	$0.30
	5/8	NAS387-1032-10P	$0.20
	3/4	NAS387-1032-12P	$0.26
	7/8	NAS387-1032-14P	$0.30
	1	NAS387-1032-16P	$0.30
	1-1/8	NAS387-1032-18P	---
	1-1/4	NAS387-1032-20P	$0.29
	1/12	NAS387-1032-24P	$0.36



AN500, AN501 FILLISTER HEADSCREWS

AN500 (coarse thread) & AN501 (fine thread) slotted fillister head screws are fabricated from carbon steel. Tensile strength 60,000 PSI. Cadmium plated,Type II Class 3.
If there is an "A" after the dash, the part is cadmium plated, Type II, Class 3, with a drilled head. If there isn't an "A" after the dash, the part is Cadmium plated, Type I.

AN500

AN500 Dash No.*	MS35265 Dash No.	Length (In.)	Thread Size	Price ea. Drilled	Price ea. Undrilled
-A4-3	MS35265-12	3/16	4-40	**$0.20**	---
-A4-4	MS35265-13	1/4	4-40	**$0.25**	---
-A4-5	MS35265-14	5/16	4-40	**$0.27**	---
-A4-6	MS35265-15	3/8	4-40	**$0.36**	---
-A4-7	MS35265-16	7/16	4-40	**$0.23**	---
-A4-8	MS35265-17	1/2	4-40	**$0.26**	---
-A4-10	MS35265-18	5/8	4-40	**$0.24**	---
-A4-12	MS35265-19	3/4	4-40	**$0.24**	---
-A6-4	MS35265-26	1/4	6-32	**$0.43**	**$0.34**
-A6-5	MS35265-27	5/16	6-32	**$0.53**	---
-A6-6	MS35265-28	3/8	6-32	**$0.19**	**$0.38**
-A6-7	MS35265-29	7/16	6-32	**$0.24**	---
-A6-8	MS35265-30	1/2	6-32	**$0.20**	---
-A6-10	MS35265-31	5/8	6-32	**$0.24**	---
-A6-12	MS35265-32	3/4	6-32	**$0.22**	---
-A6-14	MS35265-33	7/8	6-32	**$0.28**	---
-A8-4	MS35265-41	1/4	8-32	**$0.31**	---
-A8-5	MS35265-42	5/16	8-32	**$0.58**	---
-A8-6	MS35265-43	3/8	8-32	**$0.19**	---
-A8-7	MS35265-44	7/16	8-32	**$0.24**	---
-A8-8	MS35265-45	1/2	8-32	**$0.21**	**$0.78**
-A8-10	MS35265-46	5/8	8-32	**$0.22**	---
-A8-12	MS35265-47	3/4	8-32	**$0.21**	---
-A8-14	MS35265-48	7/8	8-32	**$0.23**	---
-A8-16	MS35265-49	1	8-32	**$0.60**	---
-A10-4	MS35265-59	1/4	10-24	**$0.53**	---
-A10-5	MS35265-60	5/16	10-24	**$0.83**	---
-A10-6	MS35265-61	3/8	10-24	**$0.31**	---
-A10-7	MS35265-62	7/16	10-24	**$0.27**	---
-A10-8	MS35265-63	1/2	10-24	**$0.29**	---
-A10-10	MS35265-64	5/8	10-24	**$0.27**	---
-A10-12	MS35265-65	3/4	10-24	**$0.25**	---
-A10-16	MS35265-66	1	10-24	**$0.64**	---
-A416-8	MS35265-79	1/2	1/4-20	**$0.96**	---
-A416-10	MS35265-80	5/8	1/4-20	**$0.69**	---
-416-12	MS35265-81	3/4	1/4-20	**$0.42**	---

AN501

AN501 Dash No.*	MS35266 Dash No.	Length (In.)	Thread Size	Price ea. Drilled	Price ea. Undrilled
-8-12	-47	3/4	8-36	---	---
-A10-4	-59	1/4	10-32	**$0.40**	---
-A10-6	-61	3/8	10-32	**$0.65**	---
-A10-8	-63	1/2	10-32	**$0.28**	---
-A10-10	-64	5/8	10-32	**$0.25**	---
-A10-12	-65	3/4	10-32	**$0.25**	---
-A10-14	-66	7/8	10-32	**$0.27**	---
-A10-16	-67	1	10-32	**$0.29**	---
-A10-20	-68	1-1/4	10-32	**$0.33**	---

AN500AD Stainless Steel

AN500 Dash No.*	MS35275 Dash No.	Length (In.)	Thread Size	Price ea. Drilled	Price ea. Undrilled
-AD2-2	-201	1/8	2/56	**$0.60**	---
-AD2-3	-202	3/16	2/56	**$0.29**	---
-AD2-4	-203	1/4	2/56	**$0.29**	---
-AD2-5	-204	5/16	2/56	**$0.45**	---
-AD2-6	-205	3/8	2/56	**$0.46**	---
-AD2-7	-206	7/16	2/56	**$0.54**	---
-AD2-8	-207	1/2	2/56	**$0.35**	---
-AD2-10	-208	5/8	2/56	**$0.29**	---
-AD2-12	-209	3/4	2/56	**$0.38**	---
-AD4-2	-211	1/8	4-40	**$0.73**	---
-AD4-3	-212	3/16	4-40	**$0.24**	---
-AD4-4	-213	1/4	4-40	**$0.31**	---
-AD4-6	-215	3/8	4-40	**$0.33**	---
-AD4-7	-216	7/16	4-40	**$0.32**	---
-AD4-8	-217	1/2	4-40	**$0.26**	---
-AD4-10	-218	5/8	4-40	**$0.43**	---
-AD4-12	-219	3/4	4-40	**$0.33**	---
-AD4-14	-220	7/8	4-40	**$0.33**	---
-AD4-16	-221	1	4-40	**$0.35**	---
-AD6-4	-226	1/4	6-32	**$0.29**	---
-AD6-5	-227	5/16	6-32	**$0.25**	---
-AD6-6	-228	3/8	6-32	**$0.34**	---
-AD6-7	-229	7/16	6-32	**$0.30**	---
-AD6-8	-230	1/2	6-32	**$0.25**	---
-AD6-10	-231	5/8	6-32	**$0.32**	---
-AD6-12	-232	3/4	6-32	**$0.33**	---
-AD6-14	-233	7/8	6-32	**$0.39**	---
-AD6-16	-234	1	6-32	**$0.36**	---
-AD8-5	-242	5/16	8-32	**$0.33**	---
-AD8-6	-243	3/8	8-32	**$0.27**	---
-AD8-7	-244	7/16	8-32	**$0.34**	---
-AD8-8	-245	1/2	8-32	**$0.34**	---
-AD8-10	-246	5/8	8-32	**$0.34**	---
-AD8-12	-247	3/4	8-32	**$0.35**	---
-AD8-14	-248	7/8	8-32	**$0.35**	---
-AD8-16	-249	1	8-32	**$0.45**	---

AN501AD Stainless Steel

AN501 Dash No.*	MS35276 Dash No.	Length (In.)	Thread Size	Price ea. Drilled	Price ea. Undrilled
-AD10-5	-260	5/16	10-32	**$0.43**	---
-AD10-6	-261	3/8	10-32	**$0.48**	---
-AD10-7	-262	7/16	10-32	**$0.33**	---
-AD10-8	-263	1/2	10-32	**$0.38**	---
-AD10-10	-264	5/8	10-32	**$0.42**	---
-AD10-12	-265	3/4	10-32	**$0.44**	---
-AD10-14	-266	7/8	10-32	**$0.55**	---
-AD10-16	-267	1	10-32	**$0.57**	---



AN502, AN503 FILLISTER HEAD SCREWS

AN502 (fine thread) and AN503 (coarse thread) drilled head, slotted fillister head screws are fabricated from steel meeting specification MIL-S-6050. Tensile strength 125,000 PSI. Cadmium plated, Type I, Class 3.

AN502

AN502 Dash No.*	Length (In.)	Thread Size	Price Each	AN502 Dash No.*	Length (In.)	Thread Size	Price Each
-10 -5	5/16	10-32	**$0.74**	-10 -12	3/4	10-32	**$0.40**
-10 -6	3/8	10-32	**$0.27**	-10 -16	1	10-32	**$0.46**
-10 -8	1/2	10-32	**$0.41**	-416 -12	3/4	1/4-28	**$0.70**
-10 -10	5/8	10-32	**$0.37**	-416 -16	1	1/4-28	**$1.61**

AN503

AN503 Dash No.*	Length (In.)	Thread Size	Price Each	AN503 Dash No.*	Length (In.)	Thread Size	Price Each
-6 -4	1/4	6-32	**$0.44**	-10 -6	3/8	10-24	**$0.44**
-6 -6	3/8	6-32	**$0.26**	-10 -8	1/2	10-24	**$0.43**
-8 -4	1/4	8-32	**$0.26**	-10 -10	5/8	10-24	**$0.47**
-8 -6	3/8	8-32	**$0.26**	-10 -12	3/4	10-24	**$0.39**
-8 -8	1/2	8-32	**$0.39**	-10-16	1	10-24	**$0.66**
-8 -10	5/8	8-32	**$0.35**	-10 -24	1-1/2	10-24	**$0.61**
-8 -16	1	8-32	**$0.42**	-416 -8	1/2	1/4-20	**$0.63**
				-416 -10	5/8	1/4-20	**$0.77**
				-416 -12	3/4	1/4-20	**$0.92**

MS51957 / MS51958 STAINLESS MACHINE SCREWS



- Phillips Pan Head
- 300 Series Stainless Steel
- Finish - Passivate per QQ-P-35

Thread	Length	Phillips Part No.	Price Each
2-56	.188	MS51957-2	$0.05
	.250	MS51957-3	$0.05
	.312	MS51957-4	$0.05
	.375	MS51957-5	$0.04
	.438	MS51957-6	$0.06
	.500	MS51957-7	$0.07
	.750	MS51957-9	$0.07
	.875	MS51957-10	$0.08
4-40	.188	MS51957-12	$0.05
	.250	MS51957-13	$0.05
	.312	MS51957-14	$0.06
	.375	MS51957-15	$0.05
	.438	MS51957-16	$0.06
	.500	MS51957-17	$0.05
	.625	MS51957-18	$0.06
	.750	MS51957-19	$0.08
	.875	MS51957-20	$0.11
	1.00	MS51957-21	$0.07
6-32	.188	MS51957-25	$0.06
	.250	MS51957-26	$0.06
	.312	MS51957-27	$0.06
	.375	MS51957-28	$0.05
	.438	MS51957-29	$0.07
6-32	.500	MS51957-30	$0.06
	.625	MS51957-31	$0.08
	.750	MS51957-32	$0.09
	.875	MS51957-33	$0.10
	1.00	MS51957-34	$0.10
8-32	.250	MS51957-41	$0.09
	.312	MS51957-42	$0.09
	.375	MS51957-43	$0.09
	.438	MS51957-44	$0.08
	.500	MS51957-45	$0.11
	.625	MS51957-46	$0.10
	.750	MS51957-47	$0.11
	.875	MS51957-48	$0.12
	1.00	MS51957-49	$0.14
10-32	.312	MS51958-60	$0.12
	.375	MS51958-61	$0.14
	.438	MS51958-62	$0.16
	.500	MS51958-63	$0.13
	.625	MS51958-64	$0.15
	.750	MS51958-65	$0.18
	.875	MS51958-66	$0.16
	1.00	MS51958-67	$0.19
	1.25	ms51958-68	$0.19

SNAP BUSHINGS

Fingertip Assembly



Ideal for abrasion and cutting protection of wiring, antenna leads, tubing, cables, etc. that are routed through bulkheads, ribs and other internal aircraft structures. Made of hard black nylon. Drill a hole about 1/8" larger than bushing I.D. and insert bushing. Spring-like fingers snap out to hold it in place. Special sizes on request with 100 piece minimum. *For .062" max. bulkhead thickness. All others for .125" max. bulkhead thickness.

Mounting Part No.	Hole Dia.	Bushing I.D.	Price Ea.	Mounting Part No.	Hole Dia.	Bushing I.D.	Price Ea.
04-05700*	.250	1/8"	$0.08	04-05753	.500	3/8	$0.13
04-05710*	.312	3/16"	$0.13	04-05775	.625	1/4"	$0.29
04-05730	.375	1/4"	$0.10	04-05773	.625	1/2"	$0.14
04-05738	.437	1/4"	$0.13	04-05790	.750	3/8"	$0.23
04-05758	.500	1/4"	$0.16	04-05793	.750	9/16"	$0.18

For .062" max. bulkhead thickness. All others for .125" max. bulkhead thickness. Less 15% Discount on 100 pieces per size.

SNAP BUSHINGS



Converts raw-edged holes to smooth, neat, insulated holes. Locking fingers "snap" into holes with fingertip pressure. Locking finger steps are designed at fractional increments to accommodate a range of panel thicknesses up to .250" (6,4 mm). Withstands a push back force of 35 pounds.

Panel Dimensions				P/N	UL/CSA Desig-nation	Part Dimensions					
Maximum Thkness		Mounting Hole Dia.		Color		A Inside Diameter		B Head Diameter		C Overall Height	
in.	mm.	in.	mm.	Black		in.	mm.	in.	mm.	in.	mm.
.125	3,2	1.093 - 1.125	27, 8-28 ,6	2163	SB1093 - 14	.875	22,2	1.218	30,9	.453	11,5
.125	3,2	1.093 - 1.125	27, 8-28, 6	2166	SB1093 -15	.937	23,8	1.218	30,9	.453	11,5

Model 2163..... P/N 04-01985..... **$0.23**
Model 2166..... P/N 04-01986..... **$0.35**

AN535 DRIVE SCREWS

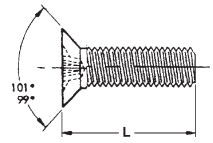


Hardened steel screws to make permanent fastenings to ferrous and non-ferrous castings, heavy gauge steel, plastics, etc. Cadmiumplated. Spec. MS21318

AN535 Dash #	MS21318 Dash #	Dia. In.	Length In.	Sugg. Drill Size	Price Each
-00-4	-3	.060	1/4	#55 (.052")	$0.78
-0-4	-9	.075	1/4	#51 (.067")	$0.06
-2-3	-14	.100	3/16	#44 (.086")	$0.06
-2-4	-15	.100	1/4	#44 (.086")	$0.06
-4-4	-21	.116	1/4	#37 (.104")	$0.06
-00-2	-1	.060	1/8	#55 (.052")	$0.05
-00-3	-2	.060	3/16	#55 (.052")	$0.06
-0-2	-7	.075	1/8	#51 (.067")	$0.06
-0-3	-8	.075	3/16	#51 (.067")	$0.06
-2-2	-13	.100	1/8	#44 (.086")	$0.06
-4-3	-20	.116	3/16	#37 (.104")	$0.07
-4-5	-22	.116	5/16	#37 (.104")	$0.07

NAS514 MACHINE SCREWS

- Phillips 100° Flat Head
- Fully Threaded
- Alloy Steel (8740)
- Finish - Cadmium per QQ-P-416 Type II
- Tensile -125,000 145,000 PSI

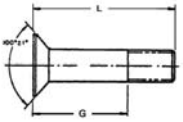




Thrd.	Length	Phillips Part No.	Price Ea.
4-40	.250	NAS514P440-4P	$0.10
	.312	NAS514P440-5P	$0.08
	.375	NAS514P440-6P	$0.08
	.438	NAS514P440-7P	$0.08
	.500	NAS514P440-8P	$0.08
	.625	NAS514P440-10P	$0.08
	.750	NAS514P440-12P	$0.16
6-32	.188	NAS514P632-3P	$0.13
	.250	NAS514P632-4P	$0.11
	.312	NAS514P632-5P	$0.12
	.375	NAS514P632-6P	$0.08
	.438	NAS514P632-7P	$0.08
	.500	NAS514P632-8P	$0.10
	.625	NAS514P632-10P	$0.12
	.750	NAS514P632-12P	$0.10
	.875	NAS514P632-14P	$0.13
	1.00	NAS514P632-16P	$0.09
8-32	.250	NAS514P832-4P	$0.11
	.312	NAS514P832-5P	$0.13
	.375	NAS514P832-6P	$0.13
	.438	NAS514P832-7P	$0.14
	.500	NAS514P832-8P	$0.14
	.625	NAS514P832-10P	$0.16
	.750	NAS514P832-12P	$0.12
	.875	NAS514P832-14P	$0.14
	1.00	NAS514P832-16P	$0.28
	1.25	NAS514P832-20P	$0.15
10-32	.250	NAS514P1032-4P	$0.13
	.312	NAS514P1032-5P	$0.14
	.375	NAS514P1032-6P	$0.13
	.438	NAS514P1032-7P	$0.16
	.500	NAS514P1032-8P	$0.13
	.625	NAS514P1032-10P	$0.18
	.750	NAS514P1032-12P	$0.14
	.875	NAS514P1032-14P	$0.19
	1.00	NAS514P1032-16P	$0.20
	1.25	NAS514P1032-20P	$0.19

NAS517 FLUSH HEAD SCREWS

- Phillips 100 Deg. Flat Head
- Alloy Steel Per Mil-S-6049
- Finish - Cad Plate per QQ-P-416 Type II





Thrd	Grip	Lgth	Phillips Part No.	Price Ea.
8-32	-	.469	NAS517-2-1	$0.27
	.125	.531	NAS517-2-2	$0.14
	.188	.594	NAS517-2-3	$0.15
	.250	.656	NAS517-2-4	$0.14
	.312	.719	NAS517-2-5	$0.17
	.375	.781	NAS517-2-6	$0.19
	.438	.844	NAS517-2-7	$0.17
	.500	.906	NAS517-2-8	$0.18
	.562	.969	NAS517-2-9	$0.13
	.625	1.031	NAS517-2-10	$0.27
10-32	.688	1.093	NAS517-2-11	$0.12
	.750	1.156	NAS517-2-12	$0.13
	-	.406	NAS517-3-0	$0.18
	-	.469	NAS517-3-1	$0.14
	.125	.531	NAS517-3-2	$0.11
	.188	.594	NAS517-3-3	$0.13
	.250	.656	NAS517-3-4	$0.14
	.312	.719	NAS517-3-5	$0.14
	.375	.781	NAS517-3-6	$0.16
	.438	.844	NAS517-3-7	$0.17
	.500	.906	NAS517-3-8	$0.19
	.562	.969	NAS517-3-9	$0.20
	.625	1.031	NAS517-3-10	$0.19
	.688	1.093	NAS517-3-11	$0.18
	.750	1.156	NAS517-3-12	$0.17
	.812	1.219	NAS517-3-13	$0.17
	.875	1.281	NAS517-3-14	$0.19
	1.00	1.406	NAS517-3-16	$0.19

SET SCREWS



Set screws are used to provide immediate, binding location of various parts on shafts. Maximum holding pressure is made by the cup point edge gripping the contact suface. Allen head wrenches are used to operate set screws.

Part No.	Thread	Length	Price
04-00182	8-32	3/16	$0.09
04-00183	8-32	1/4	$0.09

Part No.	Thread	Length	Price
04-00184	10-32	1/4	$0.10
04-00189	10-32	1/2	$0.23
04-00191	1/4-28	5/16	$0.12

10-32 X1/4 INCH ALLEN SET SCREW



Set Screw - Socket Products Type: Socket Set Screws Point Type: Cup Thread Size: 10-32 Overall Length: 1/4 Material: Alloy Steel - Grade 8 Finish/Coating: Black Oxide. Key Size (Inch): 3/32. Metalworking Book: 2085. Big Book: 1830 P/N 04-01032.....**$0.40**

SHORTY BUSHING 2820



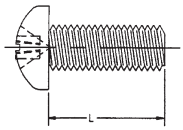
Material: 6/6 Nylon Certifications: File E15331 File LR8919 Flammability Rating: 94V-2 Material Temperature Index: 125°C (257°F)–Max. temperature on part not to exceed 105°C (221°F) Insulating feed-thru bushings for limited internal clearance applications.

P/ N 04-02026.....**$0.15**

Prices Subject to Change Without Notice

NAS600 - NAS603 MACHINE SCREWS





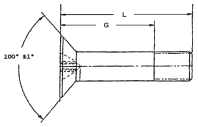
- Phillips Pan Head
- Alloy Steel (8740)
- Finish - Cadmium per QQ-P-416
- Tensile -160,000 - 180,000 PSI

Thread	Length	Part No.	Price Ea.
4-40	.188	NAS600-3P	$0.11
	.250	NAS600-4P	$0.08
	.312	NAS600-5P	$0.09
	.375	NAS600-6P	$0.09
	.438	NAS600-7P	$0.08
	.500	NAS600-8P	$0.07
6-32	.188	NAS601-3P	$0.12
	.250	NAS601-4P	$0.07
	.312	NAS601-5P	$0.08
	.375	NAS601-6P	$0.09
	.438	NAS601-7P	$0.08
	.500	NAS601-8P	$0.09
	.562	NAS601-9P	$0.09
	.625	NAS601-10P	$0.10
	.750	NAS601-12P	$0.14
8-32	.188	NAS602-3P	$0.15
	.250	NAS602-4P	$0.11
	.312	NAS602-5P	$0.11
	.375	NAS602-6P	$0.14
	.438	NAS602-7P	$0.11
	.500	NAS602-8P	$0.15
	.562	NAS602-9P	$0.14
	.625	NAS602-10P	$0.12
	.688	NAS602-11P	$0.13
	.750	NAS602-12P	$0.18
	.813	NAS602-13P	$0.14
	875	NAS602-14P	$0.15
	1.00	NAS602-16P	$0.15
10-32	.250	NAS603-4P	$0.17
	.312	NAS603-5P	$0.14
	.375	NAS603-6P	$0.14
	.438	NAS603-7P	$0.18
	.500	NAS603-8P	$0.14
	.562	NAS603-9P	$0.21
	.625	NAS603-10P	$0.16
	.688	NAS603-11P	$0.19
	.750	NAS603-12P	$0.18
	.813	NAS603-13P	$0.17
	.875	NAS603-14P	$0.28
	.938	NAS603-15P	$0.16
	1.00	NAS603-16P	$0.21
	1.125	NAS603-18P	$0.23
	1.25	NAS603-20P	$0.39

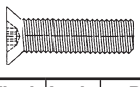
NAS1202 / NAS1203 FLUSH HEAD SCREWS

- Phillips 100° Flat Head
- Tensile – 160,000 – 180,000 PSI
- Alloy Steel Per MIL-S-6049
- Finish - Cadmium per QQ-P-416, Type II





Thrd.	Grip	Lgth.	Part No.	Price Ea.
8-32	.125	.401	NAS1202-2	$0.14
	.188	.464	NAS1202-3	$0.16
	.250	.526	NAS1202-4	$0.13
	.312	.588	NAS1202-5	$0.13
	.375	.651	NAS1202-6	$0.17
10-32	.125	.401	NAS1203-2	$0.15
	.188	.464	NAS1203-3	$0.14
	.250	.526	NAS1203-4	$0.15
	.312	.588	NAS1203-5	$0.17
	.375	.651	NAS1203-6	$0.18
	.438	.714	NAS1203-7	$0.15
	.500	.776	NAS1203-8	$0.18



MS51959 MACHINE SCREWS

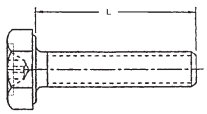
- Phillips 82° Flat Head
- Stainless Steel

Thrd.	Lgth.	Part No.	Each
2-56	.188	MS51959-2	$0.04
	.250	MS51959-3	$0.04
	.312	MS51959-4	$0.04
	.375	MS51959-5	$0.05
	.250	MS51959-13	$0.04
4-40	.312	MS51959-14	$0.05
	.375	MS51959-15	$0.05
	.438	MS51959-16	$0.07
	.500	MS51959-17	$0.06

Thrd.	Lgth.	Part No.	Each
6-32	.312	MS51959-27	$0.09
	.375	MS51959-28	$0.07
	.438	MS51959-29	$0.07
	.500	MS51959-30	$0.07
	.625	MS51959-31	$0.07
8-32	.375	MS51959-43	$0.09
	.438	MS51959-44	$0.09
	.500	MS51959-45	$0.09
	.625	MS51959-46	$0.09
	.750	MS51959-47	$0.11

NAS1096 HEX HEAD SCREWS



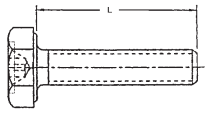


- Phillips Hex Head
- Alloy Steel per MIL-S-6049
- Finish - Cadmium per QQ-P-416 Type II
- Tensile – 125,000-145,000 PSI

Thread	Length	Part No.	Price Ea.
6-32	.375	NAS1096-1-6	$0.14
	.438	NAS1096-1-7	$0.11
	.500	NAS1096-1-8	$0.19
	.562	NAS1096-1-9	$0.16
	.625	NAS1096-1-10	$0.15
	.750	NAS1096-1-12	$0.18
8-32	.312	NAS1096-2-5	$0.10
	.375	NAS1096-2-6	$0.13
	.438	NAS1096-2-7	$0.13
	.500	NAS1096-2-8	$0.13
	.562	NAS1096-2-9	$0.18
	.625	NAS1096-2-10	$0.17
	.750	NAS1096-2-12	$0.17
10-32	.312	NAS1096-3-5	$0.09
	.375	NAS1096-3-6	$0.18
	.438	NAS1096-3-7	$0.18
	.500	NAS1096-3-8	$0.17
	.562	NAS1096-3-9	$0.16
	.625	NAS1096-3-10	$0.18
	.750	NAS1096-3-12	$0.23
	.875	NAS1096-3-14	$0.26
	1.00	NAS1096-3-16	$0.28
	1.25	NAS1096-3-20	$0.23

NAS1801 HEX HEAD SCREWS

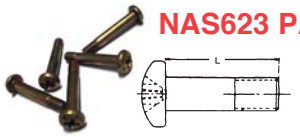




- Phillips Hex Head
- Alloy Steel Per MIL-S-6049
- Finish - Cad Plate per QQ-P-416, Type II
- Tensile – 160,000-185,000 PSI

Thread	Length	Part No.	Price Ea.
8-32	.250	NAS1801-08-4	$0.15
	.312	NAS1801-08-5	$0.17
	.375	NAS1801-08-6	$0.16
	.438	NAS1801-08-7	$0.14
	.500	NAS1801-08-8	$0.19
	.562	NAS1801-08-9	$0.22
	.625	NAS1801-08-10	$0.18
	.750	NAS1801-08-12	$0.22
	.875	NAS1801-08-14	$0.22
	1.00	NAS1801-08-16	$0.21
	1.125	NAS1801-08-18	$0.21
	1.25	NAS1801-08-20	$0.21
	1.375	NAS1801-08-22	$0.45
10-32	.312	NAS1801-3-5	$0.16
	.375	NAS1801-3-6	$0.19
	.438	NAS1801-3-7	$0.19
	.500	NAS1801-3-8	$0.21
	.562	NAS1801-3-9	$0.26
	.625	NAS1801-3-10	$0.24
	.750	NAS1801-3-12	$0.26
	.875	NAS1801-3-14	$0.24
	1.00	NAS1801-3-16	$0.34
	1.125	NAS1801-3-18	$0.36
	1.25	NAS1801-3-20	$0.28
	1.375	NAS1801-3-22	$0.48
	1.50	NAS1801-3-24	$0.51

NAS623 PAN HEAD SCREWS



- Phillips Pan Head • Alloy Steel per MIL-S-6049 • Finish: Cadmium per QQ-P-416, Type II • Tensile: 160,000-180,000 PSI

Thrd.	Lgth.	Part No.	Each
8-32	.338	NAS623-2-1	$0.14
	.401	NAS623-2-2	$0.15
	.464	NAS623-2-3	$0.16
	.526	NAS623-2-4	$0.14
	.588	NAS623-2-5	$0.19
	.651	NAS623-2-6	$0.21
	.714	NAS623-2-7	$0.19
	.776	NAS623-2-8	$0.21
	.838	NAS623-2-9	$0.20
	.901	NAS623-2-10	$0.17
	.964	NAS623-2-11	$0.21
	1.026	NAS623-2-12	$0.20
10-32	.401	NAS623-3-2	$0.16
	.464	NAS623-3-3	$0.18
	.526	NAS623-3-4	$0.15

Thrd.	Lgth.	Part No.	Each
10-32	.588	NAS623-3-5	$0.17
	.651	NAS623-3-6	$0.18
	.714	NAS623-3-7	$0.22
	.776	NAS623-3-8	$0.19
	.838	NAS623-3-9	$0.22
	.901	NAS623-3-10	$0.17
	.964	NAS623-3-11	$0.19
	1.026	NAS623-3-12	$0.21
	1.088	NAS623-3-13	$0.18
	1.151	NAS623-3-14	$0.21
	1.214	NAS623-3-15	$0.24
	1.276	NAS623-3-16	$0.21
	1.338	NAS623-3-17	$0.24
	1.401	NAS623-3-18	$0.32

HA

SHEET METAL SCREWS



TRUSS HEAD TYPE A STAINLESS

Size	Length	Phillips		Slotted	
		Part No.	Price Each	Part No.	Price Each
4	1/4	T4X4	$0.03	TS4X4	$0.04
	3/8	T4X6	$0.04	TS4X6	$0.09
	1/2	T4X8	$0.04	TS4X8	$0.05
6	1/4	T6X4	$0.04	TS6X4	---
	3/8	T6X6	$0.03	TS6X6	$0.03
	1/2	T6X8	$0.04	TS6X8	$0.03
	5/8	T6X10	$0.04	TS6X10	$0.06
	3/4	T6X12	$0.04	TS6X12	$0.07
	1	T6X16	$0.06	TS6X16	---
8	3/8	T8X6	$0.05	TS8X6	---
	1/2	T8X8	$0.05	TS8X8	$0.06
	5/8	T8X10	$0.06	TS8X10	$0.07
	3/4	T8X12	$0.06	TS8X12	$0.11
	1	T8X16	$0.07	TS8X16	$0.17
	1-1/4	T8X20	$0.08	TS8X20	$1.58
10	3/8	T10X6	$0.06	TS10X6	---
	1/2	T10X8	$0.06	TS10X8	$0.09
	5/8	T10X10	$0.08	TS10X10	$0.08
	3/4	T10X12	$0.07	TS10X12	$0.26
	1	T10X16	$0.11	TS10X16	$0.09
	1-1/4	T10X20	$0.12	TS10X20	$0.10



TRUSS HEAD TYPE B PHILLIPS STAINLESS

Size	Head Size	L (in)	P/N	Price
4	1/4"	1/4	04-00164	$0.11
		3/8	04-00166	$0.06
		1/2	04-00167	$0.17
6	5/16"	1/4	04-00168	$0.05
		3/8	04-00169	$0.07
		1/2	T6X8B	$0.09
		5/8	04-00171	$0.29
		3/4	04-00172	$0.17
		1	04-00173	$0.32

Size	Head Size	L (in)	P/N	Price
8	3/8"	3/8	04-00174	$0.13
		1/2	T8X8B	$0.08
		5/8	04-00007	$0.12
		3/4	04-00176	$0.17
		1	04-00177	$0.52
10	7/16"	3/8	04-00178	$0.12
		1/2	T10X8B	$0.11
		5/8	04-00008	$0.17
		3/4	04-00179	$0.11
		1	04-00181	$0.19



82° OVAL HEAD TYPE A, PHILLIPS (FOR UPHOLSTERY)

Size	Length	Stainless P/N	Price Ea	Zinc P/N	Price Ea
4	1/4	O4X4	$0.05	O4X4Z	---
	3/8	O4x6	$0.05	O4X6Z	$0.09
	1/2	O4X8	$0.03	O4X8Z	---
	5/8	O4X10	$0.04	O4X10Z	$0.07
6	3/8	O6X6	$0.04	O6X6Z	$0.07
	1/2	O6X8	$0.04	O6X8Z	$0.04
	5/8	O6X10	$0.04	O6X10Z	---
	3/4	O6X12	$0.04	O6X12Z	---
	1	O6X16	$0.05	O6X16Z	---
8	3/8	O8X6	$0.06	O8X6Z	---
	1/2	O8X8	$0.05	O8X8Z	$0.22
	5/8	O8X10	$0.05	O8X10Z	$0.22
	3/4	O8X12	$0.05	O8X12Z	---
	1	O8X16	$0.07	O8X16Z	$0.05
10	1/2	O10X8	$0.06	O10X8Z	$0.09
	3/4	O10X12	$0.08	O10X12Z	---



100°FLAT HEAD TYPE A, PHILLIPS, STAINLESS

Size	Length	Part No.	Price
6	1/2	6RX1/2-A-FL-SS	$0.07
6	--	6RX1-A-FL-SS	$0.20
8	1/2	C8X8	$0.08
10	1/2	10RX1/2-A-FL-SS	$0.12
10	5/8	10RX5/8-A-FL-SS	$0.19

AN530 ROUND HEAD

Use slotted type for antiques.



Size	SLOTTED		PHILLIPS	
	Price	P/N AN530 Dash#	Price	P/N AN530 Dash#
4X1/4	---	----	$0.07	4R4
4X3/8	$0.24	-4-6	---	N/A
4X1/2	---	---	$0.36	4R8
6X3/8	---	-6-6	$0.08	6R6
6X1/2	---	-6-8	$0.09	6R8
6X5/8	---	---	$0.48	6R10
6X3/4	---	-6-12	---	6R12
8X3/8	---	---	$0.08	8R6
8X1/2	---	---	$0.12	8R8
10X1/2	---	10-8	$0.11	10R8



FLAT HEAD TYPE B, PHILLIPS, STAINLESS

Size	Length	Degree	Part No.	Price Ea
6	3/8	100°	MS21207-C6-6	$0.09
6	1/2	100°	MS21207-C6-8	$0.08
8	1/2	100°	MS21207-C8-8	$0.12
8	5/8	100°	MS21207-C8-10	$0.11
10	1/2	100°	MS21207-C10-8	$0.17
8	1/2	82°	04-00187	$0.10





ZINC-PLATED, TRUSS HEAD TYPE A & TYPE B

Size	Length	Phillips			Slotted		
		Part No. Type A	Part No. Type B	Price Each	Part No. Type A	Part No. Type B	Price Each
4	1/4	THA4X4	THB4X4	$0.06	THA4-4	------	---
4	3/8	THA4X6	THB4X6	$0.06	THA4-6	------	---
4	3/8	------	------	----		4X3/8-B-TR-SH	$0.05
4	1/2	THA4X8	THB4X8	$0.06	THA4-8	------	$0.06
4	5/8	THA4X10	THB4X10	$0.07	THA4-10	------	$0.06
4	3/4	THA4X12	THB4X12	$0.07	THA4-12	------	---
4	7/8	THA4X14	------	----	-----	------	---
6	3/8	THA6X6	THB6X6	$0.03	THA6-6	------	$0.17
6	1/2	THA6X8	THB6X8	$0.02	THA6-8	------	---
6	5/8	THA6X10	THB6X10	$0.03	THA6-10	------	$0.26
6	3/4	THA6X12	THB6X12	$0.03	THA6-12	------	$0.03
8	3/8	THA8X6	THB8X6	$0.03	THA8-6	------	$0.03
8	1/2	THA8X8	THB8X8	$0.03	THA8-8	------	$0.04
8	5/8	THA8X10	THB8X10	$0.04	THA8-10	------	---
8	3/4	THA8X12	THB8X12	$0.04	THA8-12	------	---
8	1	THA8X16	THB8X16	$0.04	THA8-16	------	$0.07
10	1/2	THA10X8	THB10X8	$0.04	THA10-8	------	$0.10
10	5/8	THA10X10	THB10X10	$0.05	THA10-10	------	---
10	3/4	THA10X12	THB10X12	$0.06	THA10-12	------	$0.12
10	1	THA10X16	THB10X16	$0.07	THA10-16	------	---





ZINC-PLATED, 82° FLAT HEAD TYPE A ZINC-PLATED STEEL

(Use slotted screws for antiques)

Size	Length	Phillips			Slotted	
		Part No. Type A	Part No. Type B	Price Each	Part No. Type A	Price Each
4	1/4	FHA4X4	FHB4X4	$0.04	FHA4-4	---
4	3/8	FHA4X6	FHB4X6	$0.03	FHA4-6	---
4	1/2	FHA4X8	FHB4X8	$0.03	FHA4-8	---
4	5/8	FHA4X10	FHB4X10	---	FHA4-10	---
4	3/4	FHA4X12	FHB4X12	---	FHA4-12	---
6	3/8	FHA6X6	FHB6X6	$0.06	FHA6-6	---
6	1/2	FHA6X8	FHB6X8	$0.03	FHA6-8	---
6	5/8	FHA6X10	FHB6X10	$0.05	FHA6-10	$0.36
6	3/4	FHA6X12	FHB6X12	$0.03	FHA6-12	$0.05
8	3/8	FHA8X6	FHB8X6	$0.04	FHA8-6	---
8	1/2	FHA8X8	FHB8X8	$0.03	FHA8-8	---
8	5/8	FHA8X10	FHB8X10	$0.04	FHA8-10	---
8	3/4	FHA8X12	FHB8X12	$0.04	FHA8-12	---
8	1	FHA8X16	FHB8X16	$0.08	FHA8-16	---
10	1/2	FHA10X8	FHB10X8	$0.04	FHA10-8	$0.05
10	5/8	FHA10X10	FHB10X10	$0.04	FHA10-10	---
10	3/4	FHA10X12	FHB10X12	---	FHA10-12	$0.12



MS51861 SERIES SCREWS

MS numbers without the C at the end - Material: Carbon Steel Type 1016 - 1024 Finish: CAD TYPE II
MS numbers with the C at the end - Material: Stainless Steel Type 410 Finish: Passivate

Size	Length	Part No.	Price each	Part No.	Price each
#4	1/4	MS51861-12	$0.10	MS51861-12C	$0.20
	3/8	MS51861-14	$0.11	MS51861-14C	$0.21
	1/2	MS51861-15	$0.12	MS51861-15C	$0.22
#6	1/4	MS51861-22	$0.12	MS51861-22C	$0.22
	3/8	MS51861-24	$0.13	MS51861-24C	$0.23
	1/2	MS51861-25	$0.13	MS51861-25C	$0.24
	5/8	MS51861-26	$0.14	MS51861-26C	$0.25
	3/4	MS51861-27	$0.15	MS51861-27C	$0.26
	1	MS51861-29	$0.16	MS51861-29C	---
#8	3/8	MS51861-34	$0.12	MS51861-34C	$0.24
	1/2	MS51861-35	$0.14	MS51861-35C	$0.27
	5/8	MS51861-36	$0.16	MS51861-36C	$0.28
	3/4	MS51861-37	$0.17	MS51861-37C	$0.30
	1	MS51861-39	$0.18	MS51861-39C	---
#10	1/2	MS51861-45	$0.17	MS51861-45C	$0.30
	5/8	MS51861-46	$0.18	MS51861-46C	$0.32
	3/4	MS51861-47	$0.19	MS51861-47C	---
	1	MS51861-49	$0.20	MS51861-49C	---



FUEL TANK STRUCTURAL STAINLESS SCREW KITS (PER TANK)

Aircraft Model	Part No.	Price
Cessna 150/152 (Standard)	04-01005	$36.50
Cessna 150/152 (Long Range)	04-01004	$49.50
Cessna 172	04-01003	$64.99
Cessna 172 (Long Range)	04-02068	$72.75
Piper PA28 Cherokee (Standard)	04-01002	$64.75
Piper PA28 Cherokee (Long Range)	04-01001	$81.75
Cessna 150 Aerobat	04-01006	$19.75
Cessna150/152 (67-77)	04-01008	$20.00
Cessna 170AF	04-01009	$25.00
Cessna 182F	04-01011	$20.25
Piper Cherokee 140/150/160/180/235 (Cad. Plated)	04-01015	$22.50

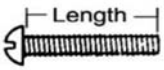
Prices Subject to Change Without Notice

MACHINE SCREWS

BRASS INSTRUMENT SCREWS

Use brass screws for all panel installations to eliminate magnetic interference. All brass screws are coated in black oxide.

AN515 & AN520 ROUND HEAD SCREWS



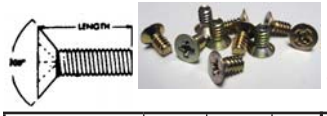
Part Number	Length (In.)	Thread Size	Price Each
AN515B6R8 (Recessed)	1/2	6-32	**$0.21**
AN515B6-12 (Slot)	3/4	6-32	**$0.17**
AN515B6R12 (Recessed)	3/4	6-32	**$0.18**
AN515B8-16 (Slot)	1	8-32	**$0.35**
AN515B10-16 (Slot)	1	10-24	**$0.72**



MS35214 & MS35215 PAN HEAD SCREWS

Part No.	Length	Thread	Price
MS35214-12	1/4"	4-40	**$0.08**
MS35214-13	5/16"	4-40	**$0.08**
MS35214-14	3/8"	4-40	**$0.08**
MS35214-15	7/16"	4-40	**$0.09**
MS35214-16	1/2"	4-40	**$0.08**
MS35214-18	3/4"	4-40	**$0.09**
MS35214-23	1/4"	6-32	**$0.10**
MS35214-24	5/16"	6-32	**$0.11**
MS35214-26	7/16"	6-32	**$0.13**
MS35214-27	1/2"	6-32	**$0.12**
MS35214-28	5/8"	6-32	**$0.12**
MS35214-29	3/4"	6-32	**$0.12**
MS35214-30	7/8"	6-32	**$0.17**
MS35214-31	1"	6-32	**$0.16**
MS35214-32	1-1/4"	6-32	**$0.15**
MS35214-33	1-1/2"	6-32	**$0.16**

Part No.	Length	Thread	Price
MS35214-40	3/8"	8-32	**$0.11**
MS35214-41	7/16"	8-32	**$0.15**
MS35214-42	1/2"	8-32	**$0.15**
MS35214-43	5/8"	8-32	**$0.17**
MS35214-44	3/4"	8-32	**$0.19**
MS35214-45	7/8"	8-32	**$0.27**
MS35214-46	1"	8-32	**$0.20**
MS35214-47	1-1/4"	8-32	**$0.24**
MS35214-48	1-1/2"	8-32	**$0.29**
MS35214-59	1"	10-24	**$0.79**
MS35215-53	3/8"	10-32	**$0.18**
MS35215-55	1/2"	10-32	**$0.25**
MS35215-56	5/8"	10-32	**$0.22**
MS35215-57	3/4"	10-32	**$0.23**
MS35215-59	1"	10-32	**$0.22**
MS35215-60	1-1/4"	10-32	-



MS24693 FLAT HEAD SCREWS (RECESSED)

Part Number	Length	Thread	Price
MS24693BB2	.250	4-40	**$0.06**
MS24693BB3	.312	4-40	**$0.09**
MS24693BB4	.375	4-40	**$0.07**
MS24693BB5	.438	4-40	**$0.07**
MS24693BB6	.500	4-40	**$0.11**
MS24693BB7	.625	4-40	**$0.09**
MS24693BB24	.250	6-32	**$0.14**
MS24693BB25	.312	6-32	**$0.10**
MS24693BB26	.375	6-32	**$0.08**
MS24693BB27	.438	6-32	**$0.11**
MS24693BB28	.500	6-32	**$0.12**
MS24693BB29	.625	6-32	**$0.08**
MS24693BB30	.750	6-32	**$0.09**
MS24693BB31	.875	6-32	**$0.10**

Part Number	Length	Thread	Price
MS24693BB32	1.00	6-32	**$0.17**
MS24693BB33	1.13	6-32	**$0.15**
MS24693BB34	1.25	6-32	**$0.16**
MS24693BB36	1.50	6-32	**$0.17**
MS24693BB48	.375	8-32	**$0.14**
MS24693BB50	.500	8-32	**$0.17**
MS24693BB51	.625	8-32	**$0.13**
MS24693BB54	1	8-32	**$0.17**
MS24693BB56	1.25	8-32	**$0.27**
MS24693BB272	.500	10-32	**$0.18**
MS24693BB273	.625	10-32	**$0.15**
MS24693BB274	.750	10-32	**$0.23**
MS24693BB276	1.00	10-32	**$0.29**
MS24693BB278	1.25	10-32	**$0.22**

STAINLESS STEEL SCREW, WASHER & STOP NUT ASSORTMENT

This 2400 piece assortment is ideal for aircraft homebuilders, owners, mechanics and FBO's. It is packaged in a handy divided storage kit and contains 2100 stainless steel screws and washers and 300 stop nuts. Kit contains 100 each of the following:

NON-STRUCTURAL MACHINE SCREWS

Countersunk Flat Head	*Truss Head*
AN507C632R8	AN526C632R8
AN507C832R8	AN526C832R8
AN507C832R10	AN526C832R10
AN507C1032R8	AN526C1032R8
AN507C1032R10	AN526C1032R10

ELASTIC STOP NUTS

AN365C632
AN365C832
AN365C1032

WASHERS

Tinnerman Countersunk

A3135- SS- 017 (#8)
A3235- SS- 020 (#10)
Flat: AN960C6
AN960C8 or AN960C10

SHEET METAL SCREWS

Truss Head Phillips, Type A (Sharp Point)

4R x 1/2	8R x 1/2
6R x 3/8	8R x 5/8
6R x 1/2	10R x 1/2

STAINLESS STEEL HARDWARE ASSORTMENT

P/N 04-05000 ..... **$123.75**

INDIVIDUAL AIRPLANE EXTERIOR STAINLESS TRIM SCREW AND WASHER KITS

These kits do not include any structural screws.

Aircraft Type	# of Pieces	P/N	Price
BEECHCRAFT			
Baron	1310	04-04400	**$70.75**
Bonanza	675	04-04300	**$49.95**
Musketeer/Sport	615	04-04350	**$38.50**
Sundowner	615	04-04350	**$38.50**
BELLANCA			
Citabria	248	04-00990	**$26.80**
Viking	-	04-00880	**$24.99**
CESSNA			
120/140	310	04-01200	**$28.90**
150/152	355	04-01000	**$35.50**
170	310	04-01200	**$28.90**
170-B	310	04-01200	**$28.90**
172/172 Skyhawk	410	04-01100	**$35.50**
172RG	330	04-01400	**$40.50**
172 XP	520	04-01300	**$39.50**
175	450	04-01500	**$37.75**
177/177RG Cardinal	600	04-01600	**$48.85**
180/185 Skywagon	530	04-01700	**$39.75**
182RG Skylane	580	04-01900	**$41.95**
188 Agwagon	775	04-02000	**$50.50**
190/195	370	04-02100	**$29.95**
205	510	04-02200	**$39.50**
206-208 Stationair	555	04-02300	**$40.50**
210 Centurion	630	04-02400	**$47.50**
310/320	1110	04-02500	**$97.85**
335/340	1492	04-02510	**$124.75**
336/337	1347	04-02700	**$98.75**
401/402	1468	04-00401	**$139.75**
411/414	1342	04-02750	**$112.75**
421	1580	04-02800	**$143.75**
Commander - Lark/Darter	-	04-04510	**$36.55**
Ercoupe - 415C/Forney	525	04-04900	**$29.50**
GRUMMAN			
AA1A/AA1B	490	04-04600	**$35.55**
Ag Cat	515	04-04800	**$41.50**
Cheetah/Tiger	975	04-04700	**$60.75**
Lake - Amphibian	265	04-04710	**$27.50**
PIPER			
Aerostar	-	04-04720	**$99.75**
Apache	-	04-04730	**$64.85**
Arrow	615	04-03800	**$55.75**
Arrow III	590	04-03810	**$56.75**
Aztec	1050	04-03200	**$75.75**
Cherokee 140/150/160/180/235	570	04-03600	**$49.80**
Cherokee Six	455	04-04000	**$50.95**
Comanche (Single)	485	04-03300	**$30.50**
Comanche (Twin)	800	04-03900	**$62.95**
J-3 Cub	-	04-03910	**$47.50**
Navajo	2065	04-03920	**$203.95**
Pawnee	1965	04-03400	**$156.75**
PA28 Arrow (Fat Wing)	615	04-03800	**$55.75**
PA28 Challenger/Archer	670	04-03500	**$50.95**
PA28R Arrow (Tap. Wing)	590	04-03810	**$56.75**
PA32R Lance	685	04-04010	**$50.50**
Seneca I & II	1415	04-04100	**$96.75**
Super Cub	-	04-04110	**$49.50**
Tomahawk	440	04-04200	**$39.50**
Tripacer/Colt	360	04-03100	**$33.50**
Warrior/Archer	480	04-03700	**$36.50**
Pitts - S2A	640	04-03710	**$36.50**
Rockwell - 12/114	570	04-03720	**$29.95**
MOONEY			
68, 77, 78	1240	04-02900	**$56.75**
201/231	970	04-03050	**$67.75**
M20C	1022	04-02820	**$56.75**
M20-C 69, 76	-	04-03000	**$54.85**
M20E/G (up to 1976)	-	04-02830	**$69.85**
M20E/G (1977 & up)	-	04-02840	**$73.25**
M20F	-	04-02850	**$94.50**

NOTE: 10% DISCOUNT OFFERED IF CUSTOMER CAN PROVIDE US WITH TYPES AND SIZES FOR AIRCRAFT NOT LISTED.

HA

SOCKET HEAD CAP SCREWS



SOCKET HEAD CAP SCREW STAINLESS STEEL-DRILLED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1352C04H4		4-40	1/4”	**$1.13**
NAS1352C04H6		4-40	3/8”	**$1.39**
NAS1352C06H6	MS24674-2	6-32	3/8”	**$1.22**
NAS1352C06H8	MS24674-3	6-32	1/2”	**$1.22**
NAS1352C08H6	MS24674-7	8-32	3/8”	**$1.51**
NAS1352C08H8	MS24674-8	8-32	1/2”	**$1.39**
NAS1352C08H10	MS24674-9	8-32	5/8”	**$1.58**
NAS1351C3H6	MS24673-1	10-32	3/8”	**$1.79**
NAS1351C3H8	MS24673-2	10-32	1/2”	**$1.40**
NAS1351C3H10	MS24673-3	10-32	5/8”	**$1.72**
NAS1351C4H10	MS24673-10	1/4”-28	5/8”	**$1.72**
NAS1351C4H12	MS24673-11	1/4”-28	3/4”	**$1.60**
NAS1351C4H14	MS24673-12	1/4”-28	7/8”	**$3.85**
NAS1351C4H16	MS24673-13	1/4”-28	1	**$2.60**



SOCKET HEAD CAP SCREW ALLOY STEEL-DRILLED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1352-04H4P	MS24677-1	4-40	1/4”	**$1.10**
NAS1352-04H6P	MS24677-2	4-40	3/8”	**$1.10**
NAS1352-06H6P	MS24677-7	6-32	3/8”	**$1.04**
NAS1352-06H8P	MS24677-8	6-32	1/2”	**$0.99**
NAS1352-06H10P	MS24677-9	6-32	5/8”	**$1.12**
NAS1352-08H6P	MS24677-14	8-32	3/8”	**$1.18**
NAS1352-08H8P	MS24677-15	8-32	1/2”	**$1.02**
NAS1352-08H10P	MS24677-16	8-32	5/8”	**$1.09**
NAS1352-08H12P	MS24677-17	8-32	3/4”	**$1.14**
NAS1351-3H6P	MS24678-9	10-32	3/8”	**$1.09**
NAS1351-3H8P	MS24678-10	10-32	1/2”	**$0.99**
NAS1351-3H10P	MS24678-11	10-32	5/8”	**$1.18**
NAS1351-3H12P	MS24678-12	10-32	3/4”	**$1.38**
NAS1351-4H10P	MS24678-21	1/4-28	5/8”	**$1.42**
NAS1351-4H12P	MS24678-22	1/4-28	3/4”	**$1.53**
NAS1351-4H14P	MS24678-23	1/4-28	4/8”	**$1.68**
NAS1351-4H16P	MS24678-24	1/4-28	1”	**$1.58**



SOCKET HEAD CAP SCREW STAINLESS STEEL-UNDRILLED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1352C04-4	MS16995-9	4-40	1/4”	**$0.25**
NAS1352C04-8	MS16995-11	4-40	1/2”	**$0.28**
NAS1352C06-4	MS16995-16	6-32	1/4”	**$0.31**
NAS1352C06-6	MS16995-17	6-32	3/8”	**$0.27**
NAS1352C06-8	MS16995-18	6-32	1/2”	**$0.29**
NAS1352C06-10	MS16995-19	6-32	5/8”	**$0.32**
NAS1352C08-6	MS16995-25	8-32	3/8”	**$0.34**
NAS1352C08-8	MS16995-26	8-32	1/2”	**$0.36**
NAS1352C08-10	MS16995-27	8-32	5/8”	**$0.39**
NAS1352C08-12	MS16995-28	8-32	3/4”	**$0.42**
NAS1351C3-6	MS16996-9	10-32	3/8”	**$0.33**
NAS1351C3-8	MS16996-10	10-32	1/2”	**$0.34**
NAS1351C3-10	MS16996-11	10-32	5/8”	**$0.38**
NAS1351C3-12	MS16996-12	10-32	3/4”	**$0.46**
NAS1351C4-10	MS16996-22	1/4-28	5/8”	**$0.84**
NAS1351C4-12	MS16996-23	1/4-28	3/4”	**$0.65**
NAS1351C4-16	MS16996-24	1/4-28	1”	**$0.82**



SOCKET HEAD CAP SCREW ALLOY STEEL UN-DRILLED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1352-04-4P	MS16997-9	4-40	1/4”	**$0.44**
NAS1352-04-6P	MS16997-10	4-40	3/8”	**$0.37**
NAS1352-04-8P	MS16997-11	4-40	1/2”	**$0.43**
NAS1352-06-6P	MS16997-19	6-32	3/8”	**$0.42**
NAS1352-06-8P	MS16997-20	6-32	1/2”	**$0.54**
NAS1352-06-10P	MS16997-21	6-32	5/8”	**$0.54**
NAS1352-08-6P	MS16997-31	8-32	3/8”	**$0.58**
NAS1352-08-8P	MS16997-32	8-32	1/2”	**$0.57**
NAS1352-08-10P	MS16997-33	8-32	5/8”	**$0.63**
NAS1352-08-12P	MS16997-34	8-32	3/4”	**$0.63**
NAS1351-3-6P	MS16998-26	10-32	3/8”	**$0.52**
NAS1351-3-8P	MS16998-27	10-32	1/2”	**$0.42**
NAS1351-3-10P	MS16998-28	10-32	5/8”	**$0.48**
NAS1351-3-12P	MS16998-29	10-32	3/4”	**$0.59**
NAS1351-4-10P	MS16998-42	1/4-28	5/8”	**$0.95**
NAS1351-4-12P	MS16998-43	1/4-28	3/4”	**$1.08**
NAS1351-4-14P	MS16998-44	1/4-28	7/8”	**$0.97**
NAS1351-4-16P	MS16998-45	1/4-28	1”	**$0.88**



AN565 SET SCREWS

Description	Thread	Length	Part No.	Price
MS1029-10	4-40	3/16	AN565AC4H3	**$0.86**
MS1965-31	8-32	3/8	AN565A8H6	**$0.87**
MS51021-9	4-40	1/8	AN565DC4H2	**$0.94**
MS51021-10	4-40	3/16	AN565DC4H3	**$0.86**
MS51021-11	4-40	1/4	AN565DC4H4	**$0.94**
MS51021-21	6-32	1/8	AN565DC6H2	**$1.20**
MS51021-22	6-32	3/16	AN565DC6H3	**$1.26**
MS51021-23	6-32	1/4	AN565DC6H4	**$1.21**
MS51021-31	8-32	3/16	AN565DC8H3	**$1.26**
MS51021-32	8-32	1/4	AN565DC8H4	**$0.94**
MS51029-11	4-40	1/4	AN565AC4H4	**$0.94**
MS51029-17	6-32	3/16	AN565AC6H3	**$1.10**
MS51029-18	6-32	1/4	AN565AC6H4	**$1.06**
MS51029-27	8-32	1/4	AN565AC8H4	**$1.06**
MS51029-28	8-32	5/16	AN565AC8H5	**$1.08**
MS51029-29	8-32	3/8	AN565AC8H6	**$1.08**
MS51963-9	4-40	1/8	AN565D4H2	**$0.99**
MS51963-10	4-40	3/16	AN565D4H3	**$1.19**
MS51963-11	4-40	1/4	AN565D4H4	**$1.11**

Description	Thread	Length	Part No.	Price
MS51963-20	6-32	1/8	AN565D6H2	**$1.13**
MS51963-21	6-32	3-16	AN565D6H3	**$1.17**
MS51963-22	6-32	1/4	AN565D6H4	**$0.86**
MS51963-34	8-32	3/16	AN565D8H3	**$0.98**
MS51963-35	8-32	1/4	AN565D8H4	**$0.99**
MS51963-36	8-32	5/16	AN565D8H5	**$0.86**
MS51963-37	8-32	3/8	AN565D8H6	**$0.87**
MS51964-49	10-32	1/4	AN565D1032H4	**$1.13**
MS51964-50	10-32	5/16	AN565D1032H5	**$0.98**
MS51964-51	10-32	3/8	AN565D1032H6	**$0.99**
MS51965-17	6-32	1/8	AN565A6H2	**$1.06**
MS51965-19	6-32	1/4	AN565A6H4	**$0.86**
MS51965-20	6-32	5/16	AN565A6H5	**$0.87**
MS51965-21	6-32	3/8	AN565A6H6	**$0.87**
MS51965-28	8-32	3/16	AN565A8H3	**$1.04**
MS51965-29	8-32	1/4	AN565A8H4	**$0.86**
MS51965-30	8-32	5/16	AN565A8H5	**$1.14**
MS51965-18	6-32	3/16	AN565A6H3	**$1.03**

NAS333 AND NAS334 SCREWS



Material - Alloy Steel (8740)
Heat Treat - 160,000 - 180,000 PSI
Finish - Cadmium Per QQ-P-416 Type II

Thread	Grip	Length	Part No.	Price
10-32	0.125	0.531	NAS333CPA4	**$0.21**
10-32	0.188	0.594	NAS333CPA4-5	**$0.22**
10-32	0.250	0.656	NAS333CPA5	**$0.23**
10-32	0.312	0.719	NAS333CPA5-5	**$0.24**
10-32	0.375	0.781	NAS333CPA6	**$0.24**
10-32	0.500	0.906	NAS333CPA7	**$0.25**
10-32	0.625	1.031	NAS333CPA10	**$0.26**
1/4-28	0.188	0.657	NAS334CPA5	**$0.27**
1/4-28	0.312	0.781	NAS334CPA6	**$0.28**
1/4-28	0.438	0.907	NAS334CPA7	**$0.29**
1/4-28	0.562	1.031	NAS334CPA10	**$0.32**

NAS1580 SCREWS



Offset Cruciform 100 Deg Flush Head
Material - Alloy Steel (8740) or Cres. (A-286)
Heat Treat - 160,000 - 180,000 or PSI 160,000 - 190,000 PSI
Finish - Cadmium Per AmsQQ-P-416 TYPE II or Passivate Per Ams 2700
Thread: 10-32

Dash No.	Material	Heat Treat	Finish	Grip	Length	Part No.	Price
A3T2	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.125**	**0.487**	**NAS1580A3T2**	**$0.28**
A3T3	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.187**	**0.549**	**NAS1580A3T3**	**$0.28**
A3T4	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.250**	**0.613**	**NAS1580A3T4**	**$0.29**
A3T5	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.312**	**0.675**	**NAS1580A3T5**	**$0.30**
C3T3	Cres. (A-286)	160,000 - 190,000 PSI	Passivate Per Ams 2700	**0.187**	**0.549**	**NAS1580C3T3**	**$0.76**
C3T4	Cres. (A-286)	160,000 - 190,000 PSI	Passivate Per Ams 2700	**0.250**	**0.613**	**NAS1580C3T4**	**$0.77**

NAS1581 SCREWS



Offset Cruciform 100 Deg Flush Head
Material - Alloy Steel (8740) or Cres. (A-286)
Heat Treat - 160,000 - 180,000 PSI or 160,000 - 190,000 PSI
Finish - Cadmium Per AmsQQ-P-416 TYPE II or Passivate Per Ams2700
Thread: 10-32

Dash No.	Material	Heat Treat	Finish	Grip	Length	Part No.	Price
F3T2 Plain Cruciform	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.125**	**0.487**	**NAS1581F3T2**	**$0.26**
F3T3 Plain Cruciform	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.187**	**0.549**	**NAS1581F3T3**	**$0.32**
F3T4 Plain Cruciform	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.250**	**0.613**	**NAS1581F3T4**	**$0.34**
F3T5 Plain Cruciform	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.312**	**0.675**	**NAS1581F3T5**	**$0.36**
F3T8 Plain Cruciform	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.500**	**0.863**	**NAS1581F3T8**	**$0.37**
F3R2 Ribbed Cruciform	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.125**	**0.487**	**NAS1581F3R2**	**$0.36**
F3R3 Ribbed Cruciform	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.187**	**0.549**	**NAS1581F3R3**	**$0.38**
F3R4 Ribbed Cruciform	Alloy Steel (8740)	160,000 - 180,000 PSI	Cadmium Per Ams QQ-P-416 TYPE II	**0.250**	**0.613**	**NAS1581F3R4**	**$0.40**
C3T2	Cres. (A-286)	160,000 - 190,000 PSI	Passivate Per Ams 2700	**0.125**	**0.487**	**NAS1581C3T2**	**$0.86**
C3T3	Cres. (A-286)	160,000 - 190,000 PSI	Passivate Per Ams 2700	**0.187**	**0.549**	**NAS1581C3T3**	**$0.87**
C3T4	Cres. (A-286)	160,000 - 190,000 PSI	Passivate Per Ams 2700	**0.250**	**0.613**	**NAS1581C3T4**	**$0.88**

NAS1802 PHILLIPS HEX HEAD SCREWS



Screw, Phillips Hex Head
Material - A-286 Corrosion Resisting Steel
Finish - Passivate Per QQ-P-35

NAS1802 Dash No.	Thread Size	Length	Part No.	Price
06-5	6-32	0.312	NAS1802-06-5	**$0.52**
06-6	6-32	0.375	NAS1802-06-6	**$0.52**
06-7	6-32	0.438	NAS1802-06-7	**$0.54**
06-8	6-32	0.500	NAS1802-06-8	**$0.56**
06-9	6-32	0.562	NAS1802-06-9	**$0.60**
08-5	8-32	0.312	NAS1802-08-5	**$0.58**
08-6	8-32	0.375	NAS1802-08-6	**$0.59**
08-7	8-32	0.438	NAS1802-08-7	**$0.61**
08-8	8-32	0.500	NAS1802-08-8	**$0.64**
08-9	8-32	0.562	NAS1802-08-9	**$0.66**
08-10	8-32	0.625	NAS1802-08-10	**$0.70**
08-11	8-32	0.688	NAS1802-08-11	**$0.76**
08-12	8-32	0.750	NAS1802-08-12	**$0.80**
08-16	8-32	1.000	NAS1802-08-16	**$0.86**
3-5	10-32	0.312	NAS1802-3-5	**$0.72**
3-6	10-32	0.375	NAS1802-3-6	**$0.72**
3-7	10-32	0.438	NAS1802-3-7	**$0.75**
3-8	10-32	0.500	NAS1802-3-8	**$0.77**
3-9	10-32	0.562	NAS1802-3-9	**$0.82**
3-10	10-32	0.312	NAS1802-3-10	**$0.84**
3-11	10-32	0.688	NAS1802-3-11	**$0.86**
3-12	10-32	0.750	NAS1802-3-12	**$0.88**
3-13	10-32	0.812	NAS1802-3-13	**$0.89**
3-14	10-32	0.875	NAS1802-3-14	**$0.92**
3-15	10-32	--	NAS1802-3-15	**$0.97**
3-16	10-32	1.00	NAS1802-3-16	**$1.08**

NAS4403 SCREWS



Tri-Slot 100 Deg Flat Head, Close Tolerance
Material - Alloy Steel (8740)
Heat Treat - 160,000 - 180,000
Finish - Cadmium Per AmsQQ-P-416 TYPE II

Thread: 10-32

NAS4403 Dash No.	Grip	Length	Part No.	Price
-2	0.125	0.448	NAS4403-2	**$0.30**
-3	0.187	0.511	NAS4403-3	**$0.31**
-4	0.250	0.573	NAS4403-4	**$0.24**
-5	0.312	0.635	NAS4403-5	**$0.25**
-6	0.374	0.698	NAS4403-6	**$0.26**

SCREWS – TAPER PINS

NAS7403 SCREWS



Phillips 100 Deg Flush Head, Close Tolerance, Short Thread
Material - Alloy Steel (8740)
Heat Treat - 160,000 - 180,000
Finish - Cadmium Per AmsQQ-P-416 TYPE II
Thread: 10-32

NAS7403 Dash No.	Grip	Length	Part No.	Price
-2	0.125	0.448	NAS7403-2	**$0.28**
-3	0.187	0.511	NAS7403-3	**$0.28**
-4	0.250	0.573	NAS7403-4	**$0.24**
-5	0.312	0.635	NAS7403-5	**$0.25**
-6	0.374	0.698	NAS7403-6	**$0.25**
-7	0.438	0.761	NAS7403-7	**$0.26**

NAS8603 SCREWS



Ribbed Cruciform 100 Deg Reduced Flat Head, Close Tolerance, Short Thread
Material - Alloy Steel (8740)
Heat Treat - 160,000 - 180,000
Finish - Cadmium Per AmsQQ-P-416 TYPE II
Thread: 10-32

NAS8603 Dash No.	Grip	Length	Part No.	Price
-1	0.062	0.385	NAS8603-1	**$0.76**
-2	0.125	0.448	NAS8603-2	**$0.52**
-3	0.187	0.511	NAS8603-3	**$0.54**
-4	0.250	0.573	NAS8603-4	**$0.60**

NAS8703 SCREWS



Ribbed Cruciform 100 Deg Reduced Flat Head, Close Tolerance, Short Thread
Material - Cres. (A-286)
Heat Treat - 160,000 - 190,000 PSI
Finish - Cadmium Per AmsQQ-P-416 TYPE II or Passivate Per Ams 2700 Thread: 10-32

NAS8703 Dash No.	Finish	Grip	Length	Part No.	Price
-3	Cadmium Per Ams QQ-P-416 TYPE II	0.187	0.511	**NAS8703-3**	**$2.00**
-4	Cadmium Per Ams QQ-P-416 TYPE II	0.250	0.573	**NAS8703-4**	**$0.74**
-U2	Passivate Per Ams 2700	0.125	0.448	**NAS8703U2**	**$0.75**
-U3	Passivate Per Ams 2700	0.187	0.511	**NAS8703U3**	**$0.76**
-U4	Passivate Per Ams 2700	0.250	0.573	**NAS8703U4**	**$0.77**
-U5	Passivate Per Ams 2700	0.312	0.635	**NAS8703U5**	**$0.78**

NIELSEN TRANSFER SCREWS



Size	Part No.	Price	Size	Part No.	Price
10-24	04-03857	**$1.77**	7/16-14	04-03865	**$2.28**
10-32	04-03858	**$1.77**	7/16-20	04-03866	**$2.27**
1/4-20	04-03859	**$1.88**	1/2-13	04-03867	**$2.41**
1/4-28	04-03860	**$1.88**	1/2-20	04-03868	**$2.41**
5/16-18	04-03861	**$2.00**	5/8-11	04-03869	**$2.68**
5/16-24	04-03862	**$2.00**	5/8-18	04-03870	**$2.68**
3/8-16	04-03863	**$2.13**	3/4-10	04-03871	**$2.98**
3/8-24	04-03864	**$2.13**	3/4-16	04-03872	**$2.98**

NIELSEN TRANSFER SCREW SETS



Description	Includes	Part No.	Price
#2 Coarse Screw Set	5/16"-18, 3/8"-16, 1/2"-13 (4 of each size)	04-03851	**$25.85**
#2 Fine Screw Set	5/16"-24, 3/8"-24, 1/2"-20 (4 of each size)	04-03852	**$25.85**
#3 Coarse Screw Set	7/16"-14, 1/2"-13, 5/8"-11 (4 of each size)	04-03853	**$29.45**
#3 Fine Screw Set	7/16"-20, 1/2"-13, 5/8"-18 (4 of each size)	04-03854	**$29.45**
#4 Coarse Screw Set	1/2"-13, 5/8"-11, 3/4"-10 (4 of each size)	04-03855	**$32.00**
#4 Fine Screw Set	1/2"-20, 5/8"-18, 3/4"-16 (4 of each size)	04-03856	**$32.00**

NAS4703 SCREWS



Tri-Slot 100 Deg Flat Head, Close Tolerance
Material - Alloy Steel (8740)
Heat Treat - 160,000 - 180,000
Finish - Cadmium Per AmsQQ-P-416 TYPE II
Thread: 10-32

NAS4703 Dash No.	Grip	Length	Part No.	Price
-2	0.125	0.448	NAS4703-2	**$0.40**
-3	0.187	0.511	NAS4703-3	**$0.42**
-4	0.250	0.573	NAS4703-4	**$0.44**
-5	0.312	0.635	NAS4403-5	**$0.25**

METRIC HARDWARE

M8X1.25 HEX NUT



• Diameter: M8 • Thread Pitch: 1mm • Material: Steel • Finish: Clear • Zinc • DIN934 • Weight: .0103 lb.
P/N 15-08653.....**$0.21**

M8X25 STUD 8.8



• Diameter: M8 • Length: 25mm • Thread Pitch: 1.25mm • Material: Steel • Finish: Plain • DIN939.
P/N 15-08652.....**$0.82**

M8 SPLIT LOCK WASHER

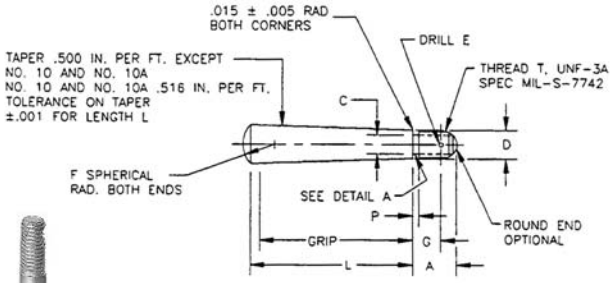


Diameter: M8 • Material: Steel • Grade: 350-425HV • Finish: Clear Zinc • DIN127B • Weight: .0033 lb.
P/N 15-08654.....**$0.19**

MS16624-1037 EXTERNAL SNAP RING



External Snap Ring. MS16624-1037.
P/N MS16624-1037 ...**$0.36**





AN386 TAPER PINS

Manufactured from alloy steel, minimum tensile strength 125,000 PSI. Cadmium plated per spec. QQ-P-416, Type I, Class 3. Taper: 0.500"/ft. Use with AN975 taper pin washer, AN320 shear castle nut and cotter pin or with AN364 elastic stop nut. When installed, the small end of the tapered shank should protrude no more than 1/16" above the surface of the assembly. The first dash number is the Brown & Sharpe taper pin reamer number and the second dash number is the grip length in eighths of an inch. For undrilled threaded shank add the letter "A" after second dash number.

First Dash No.	1	2	3	4	5	6	7	8	9	10	10A
Thread T	10-32	10-32	1/4-28	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14	7/8-14
A	7/16	7/16	29/64	33/64	35/64	35/64	19/32	21/32	47/64	51/64	51/64
C±.005	.141	.141	.196	.250	.313	.360	.422	.482	.660	.773	.773
D±.002	.205	.255	.317	.355	.455	.505	.605	.755	.905	1.050	1.153
E +.010, -.000	No.50 (.070)	No.50 (.070)	No.48 (.076)	No.48 (.076)	No.36 (.106)	No.36 (.106)	No.36 (.106)	No. 28 (.141)	No.28 (.141)	No.28 (.141)	No.28 (.141)
F	1/2	1/2	1/2	1/2	1/2	3/4	3/4	1	1	1-1/4	1-1/4
G	5/16	5/16	21/64	21/64	23/64	23/64	13/62	15/32	35/64	39/64	39/64
P	3/64	3/64	3/64	1/16	1/16	1/16	1/16	5/64	3/32	3/32	3/32

AN386-1-6 ..... **$6.50**
AN386-1-6A **$6.25**
AN386-1-7 ..... **$8.50**
AN386-1-7A **$6.95**
AN386-1-8 ..... **$7.90**
AN386-1-9 ..... **$9.50**
AN386-1-9A **$7.92**
AN386-1-10A **$6.50**
AN386-1-11 ..... **$7.95**
AN386-2-8 ..... **$14.90**
AN386-2-9A **$6.94**
AN386-2-10 ..... **$9.65**
AN386-2-12 ..... **$13.60**
AN386-2-13 ..... **$11.85**
AN386-2-14 ..... **$8.75**
AN386-3-12 ..... **$22.70**
AN386-3-12A **$21.65**
AN386-3-14 ..... **$9.80**
AN386-4-13 ..... **$19.50**

New Surplus AN386-3-12A Taper Pin..... P/N 04-02149..... **$14.75**

Prices Subject to Change Without Notice

WASHERS



AN960 FLAT WASHERS

AN960 flat washers are used under hex nuts to provide a smooth bearing surface, as shims to obtain the correct grip length for a bolt and nut assembly, and to adjust the position of AN310 and AN320 castle nuts with respect to drilled cotter pin holes in bolts and clevis pins. Available in cadmium plated steel or anodized aluminum, and in regular and light thickness. Add the letter "L" to dash number to indicate light series. For anodized aluminum washers, add the letters "PD" after AN number.

Examples: AN960-416L is a light series cadmium plated steel washer for 1/4" dia. bolt. AN960PD-10 is an anodized aluminum washer for a 3/16" dia. bolt. AN960PD-10L is a light series anodized aluminum washer for a 3/16" dia. bolt.

NSWC FLAT WASHER KIT - Contains: • Flat AN960-916 (12 qty)• Flat AN960-616L (4 qty) • Flat AN960-416 (40 qty) • Flat AN960-716L (8 qty) • Flat AN960-616 (40 qty) • Flat AN960-816 (32 qty) • Flat AN960-816L (32 qty) ..... P/N 04-01728..... **$7.75**

Dash #	Bolt or Screw Size	O.D. (In.)	I.D. (In.)	Thickness steel		Thickness Aluminum		Price	
				Light	Regular	Light	Regular	Steel each	Alum. each
-4	No. 4	.312	.125	.016	.032	.016	.032	**$0.02**	**$0.04**
-6	No. 6	.375	.149	.016	.032	.016	.032	**$0.02**	**$0.03**
-8	No. 8	.375	.174	.016	.032	.016	.032	**$0.02**	**$0.04**
-10	No. 10	.438	.203	.032	.063	.032	.063	**$0.02**	**$0.05**
-416	1/4"	.500	.265	.032	.063	.016	.063	**$0.03**	**$0.06**
-516	5/16"	.562	.328	.032	.063	.016	.063	**$0.04**	**$0.08**
-616	3/8"	.625	.390	.032	.063	.016	.063	**$0.04**	**$0.09**
-716	7/16"	.750	.453	.032	.063	.016	.063	**$0.05**	**$0.12**
-816	1/2"	.875	.515	.032	.063	.016	.063	**$0.07**	**$0.15**
-916	9/16"	1.062	.578	.032	.063	.016	.063	**$0.09**	**$0.55**
-1016	5/8"	1.118	.640	.032	.063	----	----	**$0.12**	**----**
-1216	3/4"	1.312	.765	.032	.090	----	----	**$0.23**	**----**

AN960C STAINLESS WASHERS

Size	Regular		Light	
	Part No.	Price Ea.	Part No.	Price Ea.
4	AN960C4	**$0.03**	AN960C4L	**$0.03**
5	-----	**---**	-----	**---**
6	AN960C6	**$0.03**	AN960C6L	**$0.03**
8	AN960C8	**$0.03**	AN960C8L	**$0.03**
3/16	AN960C10	**$0.05**	AN960C10L	**$0.04**
1/4	AN960C416	**$0.06**	AN960C416L	**$0.04**
5/16	AN960C516	**$0.09**	AN960C516L	**$0.03**
3/8	AN960C616	**$0.09**	AN960C616L	**$0.05**
7/16	AN960C716	**$0.10**	AN960C716L	**$0.09**
1/2	AN960C816	**$0.17**	AN960C816L	**$0.09**
9/16	AN960C916	**$0.23**	AN960C916L	**$0.14**
5/8	AN960C1016	**$0.62**	AN960C1016L	**$0.17**
3/4	AN960C1216	**$0.76**	-----	**----**



AN970 FLAT WASHERS

Manufactured of carbon steel, cadmium plated per QQ-P-416C, Type II, Class 2. They provide a greater bearing area than AN960 washers. Used on wooden structures under both the head of the bolt & the nut to prevent crushing the surface. Part numbers with a "C" are stainless steel.

Dash No.	Bolt Size	O.D. (In.)	I.D. (In.)	Thk (In.)	Price Each	Price per 100
-3	3/16"	.875	.203	.063	**$0.08**	**$6.40**
-4	1/4"	1.125	.265	.063	**$0.10**	**$8.00**
-C4	1/4"	1.125	.265	.063	**$0.73**	**---**
-5	5/16"	1.375	.328	.063	**$0.17**	**$13.60**
-C5	5/16"	1.375	.328	.063	**$0.75**	**---**
-6	3/8"	1.625	.390	.063	**$0.21**	**$16.80**
-7	7/16"	1.812	.453	.109	**$0.54**	**$43.20**
-8	1/2"	2.000	.515	.109	**$0.63**	**$50.40**
-10	5/8"	2.375	.640	.125	**$0.88**	**$70.40**



NAS620 FLAT WASHERS

MIL-SPEC designations for flat washers, NAS620. Covered by military procurement specification FF-W-92 which has, as minimum requirements.

1.Chemical analysis
2.Process certification on protective finish
3. Workmanship
4. Magnetic permeability (stainless steel only)

Description	Part Number	Price
NAS620-4	NAS620-4	**$0.03**
NAS620-6	NAS620-6	**$0.03**
NAS620-6L	NAS620-6L	**$0.03**
NAS620-8	NAS620-8	**$0.04**
NAS620-8L	NAS620-8L	**$0.03**
NAS620-10	NAS620-10	**$0.05**
NAS620-10L	04-00854	**$0.04**



MS15795 FLAT WASHERS

Material - 300 Series Stainless Steel
Finish - Passivate Per Astm A380

MS15795 Dash No.	O.D. (in.)	I.D. (in.)	Thickness	Price
MS15795-802	0.094	2.50	0.020	**$0.02**
MS15795-803	0.125	0.250	0.022	**$0.02**
MS15795-805	0.156	0.312	0.035	**$0.02**
MS15795-806	0.156	0.375	0.049	**$0.03**
MS15795-807	0.188	0.375	0.049	**$0.03**
MS15795-808	0.219	0.438	0.049	**$0.03**



NAS43HT4 SPACERS

NAS43HT4 Spacers.
Material - 4130 Steel Alloy

Manufacturer	Length	Part No.	Price
NAS43HT4-9	0.1406 = 9/64	06-02534	**$0.78**
NAS43HT4-16	0.250 = 1/4	06-02529	**$0.90**
NAS43HT4-22	0.34 = 11/32	06-02530	**$1.10**
NAS43HT4-28	0.4375 = 7/16	06-02531	**$0.90**
NAS43HT4-43	0.6718 = 43/64	06-02532	**$1.04**
NAS43HT4-46	0.71875 = 23/32	06-02533	**$1.35**





NORD-LOCK WEDGE LOCKING WASHERS

Nord-Lock washers secure bolted joints with tension instead of friction. It is a high quality product with documented success in many industries worldwide.

Bolt Size	Description	Part No.	Price
#10	Carbon Steel Washer NL 1/4	04-03873	**$0.55**
1/4"	Carbon Steel Washer NL 1/4	04-03874	**$0.57**
5/16"	Carbon Steel Washer NL8	04-03875	**$0.59**
5/16"	Carbon Steel Washer NL8 sp	04-03876	**$0.67**
3/8"	Carbon Steel Washer NL 3/8	04-03877	**$0.67**
7/16"	Carbon Steel Washer NL11	04-03878	**$1.02**
--	Carbon Steel Washer NL12 sp	04-03879	**$1.21**
1/2"	Carbon Steel Washer NL 1/2	04-03880	**$1.09**
1/2"	Carbon Steel Washer NL 1/2 sp	04-03881	**$1.17**

HA



MS35338 LOCK WASHERS

MS35338 split, helical lock washers are made of carbon steel, cadmium plated per QQ-P-416A, Type II, Class 3. They replace AN935 medium-weight washers. Formerly AN935.

Cad. Plated			Stainless	
Size	Part No.	Price	Part No.	Price
6	MS35338-41	**$0.02**	MS35338-136	**$0.03**
8	MS35338-42	**$0.02**	MS35338-137	**$0.04**
10	MS35338-43	**$0.02**	MS35338-138	**$0.05**
1/4	MS35338-44	**$0.02**	MS35338-139	**$0.12**
5/16	MS35338-45	**$0.04**	MS35338-140	**$0.19**
3/8	MS35338-46	**$0.07**	MS35338-141	**$0.49**
7/16	MS35338-47	**$0.09**	MS35338-142	**$0.49**
1/2	MS35338-48	**$0.09**	MS35338-143	**$0.64**

MS35333 & MS35335 LOCK WASHERS



Provide efficient locking action by spring tension and biting action of tapered twisted teeth. Made of 1050 spring steel and cadmium plated per specification QQ-P-416A, Type II, Class 3. Available with internal teeth (Type A) or external teeth (Type B).

Type	Size	Cad Plated PN	Price Cad. Plated	Stainless PN	Price Stainless
Type A	6	MS35333-37	**$0.02**	MS35333-71	**$0.07**
Type A	8	MS35333-38	**$0.02**	MS35333-72	**$0.06**
Type A	10	MS35333-39	**$0.02**	MS35333-73	**$0.06**
Type A	1/4	MS35333-40	**$0.02**	MS35333-74	**$0.09**
Type A	5/16	MS35333-41	**$0.04**	MS35333-75	**$0.21**
Type A	3/8	MS35333-42	**$0.07**	MS35333-76	**$0.32**
Type A	7/16	MS35333-43	**$0.08**	MS35333-77	**$0.36**
Type A	1/2	MS35333-44	**$0.11**	MS35333-78	**$0.50**
Type A	5/8	MS35333-46	**$0.18**	--	**--**
Type B	6	MS35335-30	**$0.02**	-	**-**
Type B	8	MS35335-31	**$0.03**	-	**-**
Type B	10	MS35335-32	**$0.03**	-	**-**
Type B	1/4	MS35335-33	**$0.04**		
Type B	5/16	MS35335-34	**$0.05**	-	**-**
Type B	3/8	MS35335-35	**$0.08**	-	**-**
Type B	1/2	MS35335-37	**$0.14**		



TOOTH LOCKWASHER

MIL-SPEC designations for tooth lockwashers include, but are not limited to MS35335. These are covered by military procurement specification FF-W-100

Nominal Screw Size	Inside Diameter		Outside Diameter		Material Thickness		MS 35335 Steel Plated	P/N	Price
	Min	Max	Min	Max	Min	Max			
9/16	0.576	0.596	0.960	0.985	0.037	0.045	-38	04-00099	**$0.28**
3/4	0.768	0.795	1.220	1.260	0.047	0.055	-40	04-00101	**$0.76**
7/8	0.897	0.927	1.380	1.410	0.052	0.060	-41	04-00103	**$0.56**

NAS549 PHENOLIC WASHERS

NAS549-10 Phenolic insulating washers for #10 screws. Size: 13/64" I.D. x 7/16" O.D. x 1/16 thick..... **$0.17 Ea.**

G-8 TINNERMAN WASHERS



A No. 8 'Tinnerman' style washer with the same O.D. as a No. 10 (0.75). Great for those oversize holes in fairings. Unlike the No. 10 washer with a No. 8 screw, these washers will tighten down on the fairing (not bottom out on the cone) thus providing the proper "clamp up" between the fastener and the fairing. The G-8 washers are Made in the USA from 304 (1/2 hard) Stainless Steel and are machine tumbled for a shiny finish.

P/N 04-01989 ..... **$0.29**



TINNERMAN COUNTERSUNK WASHERS

For use with 100° flat-head screws such as MS24693 and MS24694 machine screws and NAS548 sheet metal screws to provide reinforced, low-profile attachments. Made of spring steel, Zinc Plated.

Part No.	Screw Size	I.D. In.	O.D. In.	Price Each	Price per 100
A3236-012-193	#6	.140	.50	$0.25	---
A3135-017-193	#8	.171	.56	$0.20	**$16.00**
A3235-028-193	#10	.196	.75	$0.10	**$8.00**

NYLON WASHERS

Part No.	Thread Size	Price Ea.
04-00219	#4	**$0.02**
04-00216	#6	**$0.02**

Part No.	Thread Size	Price Ea.
04-00217	#8	**$0.02**
04-00218	#10	**$0.03**

Less 20% Discount on 100 per size

100° CSK STAINLESS WASHERS



Use with 100° flathead screws to provide reinforced, low-profile attachments.

Size	Dimensions	Part No.	Price
6	.500 OD x .012 T	04-00397	**$0.12**
8	.562 OD x .017 T	04-00392	**$0.12**
10	.750 OD x .020 T	04-00398	**$0.09**

Less 20% Discount on 100 per size



AN975 TAPER PIN WASHERS

Taper pin washers are used with AN386 threaded taper pins. Manufactured of steel, cadmium plated per QQ-P-416, Type II, Class 2.

AN975 Dash #	Fits Taper Pin #	Price Ea.
-3	1, 2	**$0.77**
-4	3	**$2.15**
-5	4	**$3.35**
-6	5	**$2.90**

82º COUNTERSUNK WASHERS



Finishing washers are used in non-structural interior and upholstery applications. The parts covered by NAS390 & NAS391 are getting harder to procure and do not necessarily conform exactly to all of the dimensions stated on the specs. Commercial equivalents can be supplied and are suggested. These are non-critical washers that are readily available and cost effective.

Screw or Bolt Size	Countersink Washer Part No.	Price		Flush Washer Part No.	Price	
		Each	100		Each	100
#4	NAS391B4P	**$0.06**	**$4.80**	NAS390B4P	--	--
#6	NAS391B6P	**$0.05**	**$4.00**	NAS390B6P	**$0.04**	**$3.20**
#8	NAS391B8P	**$0.08**	**$6.40**	NAS390B8P	**$0.06**	**$4.80**
#10	NAS391B10P	**$0.09**	**$7.20**	NAS390B10P	**$0.08**	**$6.40**

POLYMER SPINNER WASHERS

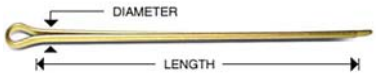


Propeller spinner washers are typically made from thin nylon. They are usually replaced every time the spinner is removed because the screw pressure against the spinner curvature causes the nylon washers to fail. Instead of nylon, these washers are machined from an extruded billet of a, very tough polymer material – the toughest we make – so they won't crack or extrude. The washers easily conform to the spinner's curved surface and will serve without replacement for a very long time. In fact, they may never need replacement! Fits a # 10 screw, with a diameter and thickness to suit the round head stainless steel screw usually used for prop spinners.

SCREWS NOT INCLUDED PACKAGED IN BAGS OF 25

P/N 05-12883 ..... **$71.75**

Prices Subject to Change Without Notice



MS24665 COTTER PINS (FORMERLY AN380)

MS24665 cotter pins are stocked in cadmium plated steel (formerly AN380) and in passivated corrosion resisting steel (formerly AN381) in the priced sizes listed below. Other sizes available on special order. Write for quotation.

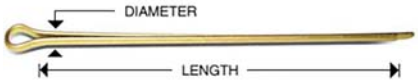
Assortment of 100 Cadmium Plated Cotter Pins
P/N 04-05050 .....**$4.10**

CADMIUM PLATED			
Part No.	AN380 Dash No.	Dia. & Length	Price
MS24665-5	-1-2	1/32 X 1/2	**$0.06**
MS24665-7	-1-3	1/32 X 3/4	**$0.03**
MS24665-9	-1-4	1/32 X 1	**$0.06**
MS24665-132	-2-2	1/16 X 1/2	**$0.03**
MS24665-134	-2-3	1/16 X 3/4	**$0.03**
MS24665-136	-2-4	1/16 X 1	**$0.03**
MS24665-138	-2-5	1/16 X 1-1/4	**$0.05**
MS24665-140	-2-6	1/16 X 1-1/2	**$0.07**
MS24665-142	-2-7	1/16 X 1-3/4	**$0.08**
MS24665-143	-2-8	1/16 X 2	**$0.07**
MS24665-208	-	5/64 X 1/2	**$0.03**
MS24665-281	-3-2	3/32 X 1/2	**$0.03**
MS24665-283	-3-3	3/32 X 3/4	**$0.03**
MS24665-285	-3-4	3/32 X 1	**$0.04**
MS24665-287	-3-5	3/32 X 1-1/4	**$0.05**
MS24665-289	-3-6	3/32 X 1-1/2	**$0.05**
MS24665-292	-3-8	3/32 X 2	**$0.06**
MS24665-349	-4-2	1/8 X 1/2	**$0.03**
MS24665-351	-4-3	1/8 X 3/4	**$0.04**
MS24665-353	-4-4	1/8 X 1	**$0.05**
MS24665-355	-4-5	1/8 X 1-1/4	**$0.05**
MS24665-357	-4-6	1/8 X 1-1/2	**$0.06**
MS24665-359	-4-7	1/8 X 1 3/4	**$0.07**
MS24665-360	-4-8	1/8 X 2	**$0.08**
MS24665-362	-4-10	1/8 X 2-1/2	**$0.12**
MS24665-426	-5-9	5/32 X 2	**$0.10**
MS24665-498	-6-8	3/16 X 2	**$0.19**
MS24665-500	-6-10	3/16 X 2 1/2	**$0.14**

CORROSION RESISTANT STEEL			
Part No.	AN381 Dash No.	Dia. & Length	Price
MS24665-22	-1-8	1/32 X 1/2	**$0.04**
MS24665-24	-1-12	1/32 X 3/4	**$0.05**
MS24665-26	-1-16	1/32 X 1	**$0.12**
MS24665-151	-2-8	1/16 X 1/2	**$0.04**
MS24665-153	-2-12	1/16 X 3/4	**$0.05**
MS24665-155	-2-16	1/16 X 1	**$0.06**
MS24665-157	-2-20	1/16 X 1-1/4	**$0.08**
MS24665-159	-2-24	1/16 X 1-1/2	**$0.08**
MS24665-161	-2-28	1/16 X 1-3/4	**$0.11**
MS24665-162	-2-32	1/16 X 2	**$0.13**
MS24665-227	-25-8	5/64 X 1/2	**$0.07**
MS24665-229	-25-12	5/64 X 3/4	**$0.09**
MS24665-298	-3-8	3/32 X 1/2	**$0.07**
MS24665-300	-3-12	3/32 X 3/4	**$0.09**
MS24665-302	-3-16	3/32 X 1	**$0.10**
MS24665-304	-3-20	3/32 X 1-1/4	**$0.13**
MS24665-306	-3-24	3/32 X 1-1/2	**$0.13**
MS24665-309	-3-32	3/32 X 2	**$0.16**
MS24665-366	-4-8	1/8 X 1/2	**$0.10**
MS24665-368	-4-12	1/8 X 3/4	**$0.12**
MS24665-370	-4-16	1/8 X 1	**$0.15**
MS24665-372	-4-20	1/8 X 1-1/4	**$0.18**
MS24665-374	-4-24	1/8 X 1-1/2	**$0.20**
MS24665-377	-4-32	1/8 X 2	**$0.25**
MS24665-379	-4-40	1/8 X 2-1/2	**$0.22**
MS24665-444	-5-32	5/32 X 2	**$0.27**
MS24665-516	-6-32	3/16 X 2	**$0.39**
MS24665-518	-6-40	3/16 X 2 1/2	**$0.62**

Discount: 25% for quantities of 100 or more of the same Part No.

MS9245 SPLIT COTTER PINS



Material - Cres Gr. 321 Per Ams 7211
Heat Treat - 1200°F
Finish - Gray To Black Color From 1200°F Heating

MS9245 Dash No.	Dia. & Length	Part Number	Price
-21	1/16 x 1/4	**MS9245-21**	**$0.17**
-22	1/16 x 5/16	**MS9245-22**	**$0.17**
-23	1/16 x 3/8	**MS9245-23**	**$0.17**
-24	1/16 x 7/16	**MS9245-24**	**$0.17**
-25	1/16 x 1/2	**MS9245-25**	**$0.17**
-27	1/16 x 5/8	**MS9245-27**	**$0.18**
-28	1/16 x 3/4	**MS9245-28**	**$0.18**
-43	3/32 x 9/16	**MS9245-43**	**$0.22**
-44	3/32 x 5/8	**MS9245-44**	**$0.22**
-45	3/32 x 3/4	**MS9245-45**	**$0.22**



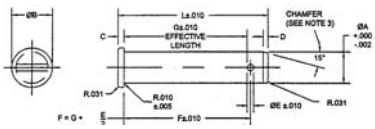
RING COTTERS

MB Spring Wire, Zinc Coated or Type 302 Stainless Steel.

Manufacturer	O.D. x Wire Diameter	Use on Diameter	Part No.	Price
3703	5/8 x .048	3/16 - 1/4	04-03448	**$0.04**
3705	3/4 x .048	1/4 - 5/16	04-03449	**$0.04**
3707	1 x .062	3/8 - 7/16	04-03450	**$0.06**
3709	1-1/8 x .072	7/16 - 1/2	04-03451	**$0.07**



CLEVIS PINS



Made of alloy steel per specification MIL-P-5673 and cadmium plated per QQ-P-416, Type II, Class 3. Provided with drilled hole for cotter pin. Used with clevis forks and in secondary controls which are not subjected to continuous operation. Order by AN number and dash number. Example: AN395-41 is a 5/16"dia. pin with an effective length of 1-9/32". Equivalent MS number is MS20392-4C41. ***Less 20% in lots of 25 per size. Request quotation on unlisted sizes. NOTE: Clevis pin prices fluctuate with changes in cost/availability at suppliers.***

Dash No.	Effective Length (In.)	AN392 MS20392 -1C 1/8"	AN393 MS20392 - 2C 3/16"	AN394 MS20392 -3C 1/4"	AN395 MS20392 - 4C 5/16"	AN396 MS20392 -5C 3/8"
-7	7/32	**$0.42**	**$0.51**	--	--	--
-9	9/32	**$0.49**	**$0.48**	--	--	--
-11	11/32	**$0.52**	**$0.53**	**$0.77**	**$0.79**	--
-13	13/32	**$0.47**	**$0.59**	**$0.68**	--	--
-15	15/32	**$0.54**	**$0.61**	**$0.60**	**$1.61**	--
-17	17/32	**$0.52**	**$0.55**	**$0.62**	**$0.98**	**$1.65**
-19	19/32	**$0.56**	**$0.60**	**$0.56**	**$0.99**	**$0.98**
-21	21/32	**$0.54**	**$0.49**	**$0.96**	**$0.86**	--
-23	23/32	**$0.62**	**$0.66**	**$0.60**	**$1.33**	**$1.43**
-25	25/32	**$0.53**	**$0.55**	**$0.98**	**$2.32**	**$0.98**
-27	27/32	**$0.65**	**$0.49**	**$0.89**	**$1.05**	**$1.38**
-29	29/32	**$0.68**	**$0.70**	**$0.58**	**$1.38**	--
-31	31/32	**$0.61**	**$0.69**	**$0.74**	**$1.16**	--
-33	1-1/32	**$0.69**	**$0.55**	**$0.66**	**$0.97**	**$2.42**
-35	1-3/32	**$0.61**	**$0.62**	**$0.73**	**$1.21**	**$2.96**
-37	1-5/32	**$0.77**	**$0.69**	**$0.80**	**$1.75**	--
-39	1-7/32	**$0.79**	**$0.69**	**$1.12**	**$0.97**	--
-41	1-9/32	**$0.54**	**$0.78**	**$0.69**	**$1.11**	**$1.63**
-43	1-11/32	**$0.94**	**$0.89**	**$0.94**	**$2.50**	--
-45	1-13/32	**$0.81**	**$0.61**	**$1.04**	**$1.42**	**$1.83**
-47	1-15/32	**$0.94**	**$0.43**	**$0.67**	**$0.98**	**$1.54**
-49	1-17/32	**$1.10**	**$1.32**	**$0.79**	--	--
-51	1-19/32	--	**$0.99**	**$1.29**	**$1.26**	--
-53	1-21/32	**$0.77**	**$0.94**	**$0.88**	**$1.79**	**$3.45**
-55	1-23/32	**$0.87**	**$0.72**	**$0.79**	--	**$7.88**
-57	1-25/32	**$0.84**	**$1.32**	**$0.82**	**$4.95**	--
-59	1-27/32	**$1.02**	**$1.12**	**$1.65**	--	**$1.85**
-61	1-29/32	**$0.99**	**$1.47**	**$1.26**	--	--
-63	1-31/32	**$3.45**	**$0.77**	**$0.97**	**$8.90**	**$0.72**
-65	2-1/32	**$0.88**	**$1.77**	**$0.89**	--	**$1.93**
-67	2-3/32	**$1.83**	**$1.18**	**$1.50**	--	**$1.40**
-69	2-5/32	--	**$0.97**	**$1.34**	**$1.37**	**$1.36**
-71	2-7/32	--	**$1.76**	--	**$8.60**	--
-73	2-9/32	--	**$3.45**	**$1.88**	--	**$3.65**
-75	2-11/32	--	--	**$0.99**	--	**CALL**
-79	2-15/32	--	**$0.87**	**$3.95**	--	--
-81	2-17/32	--	**$4.35**	**$1.24**	--	**$9.50**
-83	2-19/32	--	**$1.79**	--	--	--
-85	2-21/32	--	**$1.69**	**$1.69**	**$0.87**	--
-87	2-23/32	--	**$1.47**	--	--	--
-89	2-25/32	--	**$2.12**	--	**$1.32**	--
-91	2-27/32	--	--	--	--	--
-93	2-29/32	--	**$1.10**	--	--	--
-95	2-31/32	--	-	**$1.23**	--	--
-97	3-1/32	--	- -	**$4.60**	- -	**$5.50**
-99	3-3/32	--	- -	--	--	--
-101	3-5/32	--	- -	--	--	--

AN397-27 - 7/16".....P/N AN397-27 .....**$14.85**



LOCK PINS

AN415-2 corrosion resistant steel wire cowl lock pins 1-15/16" long, .080" dia. wire.
P/N AN415-2.....**$0.48 Ea.**
$38.40 for 100

Commercial steel cadmium plated wire lock pins 1-1/4" long, .062" dia. wire. P/N 04-05100.....**$0.08 Ea.**
$6.40 for 100



COWLING SAFETY PINS

Positive locking pins that can be readily used without aid of tools. Made of spring steel, cadmium plated, 1-1/16" long.

.051" Wire Dia. ..... .AN416-1.....**$0.27 Ea.**.....**$21.60/100**
.041" Wire Dia. ..... .AN416-2.....**$0.19 Ea.**..... **$15.20/100**



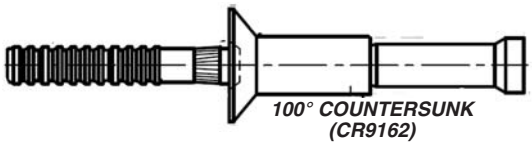
TUBULAR PIN MS16562

MS16562-200..... P/N 02-00096..... **$0.60**
MS16562-224..... P/N 04-01715..... **$0.75**
NASM16562-16..... P/N 05-11917..... **$1.64**

HA

CHERRY COMMERCIAL RIVETS

CHERRY AEROSPACE RIVETS - SELF-PLUGGING CHERRY RIVETS

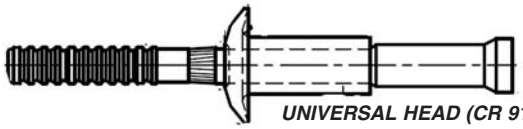


100° COUNTERSUNK (CR9162)

The self-plugging Cherry Blind Rivet is a 2-piece assembly - a hollow rivet and an inner member or stem, drawn into or through the hollow rivet. Cherry CR162 & CR163 series rivets are now replaced by CR9162 & CR9163 series rivets which are less expensive but does require the use of a rivet gun that comes with the req. nosepiece.

P/N 04-01515 Pulling Head (required) **$586.00**

G-29 Rivet Gun - Comes equipped with a 728A9-3 nosepiece to install 3/32" rivets and has a 728A9-104 nosepiece stored in the handle for installing 1/8" rivets. .....P/N 12-00701 ... **$118.75**



UNIVERSAL HEAD (CR 9163)

Part No.	Head Style	Nominal Dia.	Grip Range	Price		
				Each	100	1000
CR9162-4-2	Csk	1/8"	.063-.125	$0.34	$30.60	$272.00
CR9162-4-4			.188-.250	$0.33	$29.70	$264.00
CR9162-4-6			.313-.375	$0.43	$38.70	$344.00
CR9162-4-8			.438-.500	$0.49	$44.10	$392.00
CR9163-4-2	Univ.	1/8"	.063-.125	$0.32	$28.80	$256.00
CR9163-4-4			.188-.250	$0.39	$35.10	$312.00
CR9163-4-6			.313-.375	$0.44	$39.60	$352.00
CR9163-5-2	Univ.	5/32"	.063-.125	$0.38	$34.20	$304.00

HA

CHERRY N RIVETS

Break mandrel rivets Conform to MIL-R-24243 & IFI-114 Standards



LOW COST

Substantial savings in installed costs can be realized when Cherry N Rivets are substituted for spotwelds, screws or bolts.

FAST INSTALLATION

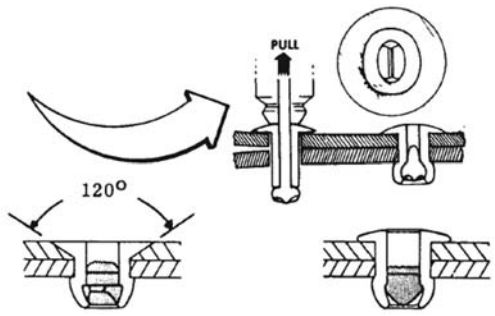
Quick and easy to use with hand or power riveters, Cherry N Rivets have endless fastening applications in manufacturing, maintenance.

UNIQUE FEATURES

Unusual mandrel design of Cherry N Rivets holds rivet and mandrel firmly together prior to installation and insures positive mandrel retention in the installed rivet.

NO MANDREL POP OUTS—

As the mandrel is drawn into the rivet, the end of the rivet sleeve closes in an elliptical configuration... locking the mandrel firmly in place!



FLUSH HEAD **PROTRUDING HEAD**

CHERRY N RIVET IDENTIFICATION CODE

First letter is rivet material:
A = 5052 Aluminum B = 5056 Aluminum C = Stainless
M = Monel S= Steel U = Copper

Second letter is mandrel material:
A = 7178 Aluminum S = Steel C = Stainless

Third letter is head style:
P = Protruding L = Large C = Flush

First number is rivet diameter in 32nds of an inch:
For example,—4 is 4/32nds or 1/8" diameter

Second number is rivet maximum grip length in 16ths of an inch:
For example,—6 is 6/16ths or 3/8" grip length

MINIMUM RIVET SHEAR AND TENSILE STRENGTH (IBS.)

CHERRY N RIVETS

RIVET DIAM. MAND.	BS SERIES ALUM RIVET STEEL MAND. GRADE 19		MS SERIES MONEL RIVET STEEL MAND. GRADE 40		CC SERIES STAINLESS RIVET STAINLESS GRADE 51	
	Shear	Tens	Shear	Tens	Shear	Tens
3/32	125	175	200	300	230	280
1/8	200	325	350	525	450	600
5/32	325	450	600	900	750	1000
3/16	430	650	750	1100	1000	1300
1/4	750	1050	1450	2150	1700	2250

CHERRY Q RIVETS

Structural—Self-plugging rivets



HIGH SHEAR STRENGTH

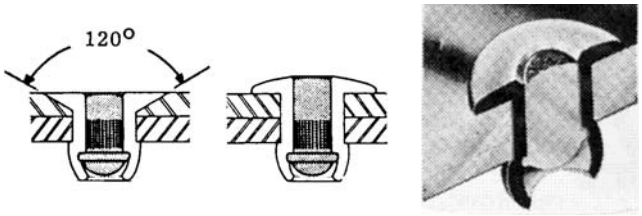
Cherry Q Rivet mandrel plugs the entire length of the rivet sleeve, providing full shear strength values for structural or load-bearing applications.

SEALING CAPABILITY

Specially designed mandrel of the Q Rivet is engineered to effect a seal, upon installation which offers resistance to leakage.

VIBRATION RESISTANT

Rivet sleeve curls over end of mandrel to insure its positive retention.



FLUSH HEAD **PROTRUDING HEAD**

CHERRY Q RIVET IDENTIFICATION CODE

First letter is rivet material:
A = 5052 Aluminum B = 5056 Aluminum C = Stainless
M = Monel S= Steel

Second letter is mandrel material:
A = 7178 Aluminum S = Steel C = Stainless

Third letter is head style:
P = Protruding L = Large C = Flush

Fourth letter is type of rivet:
Q = Cherry Q Rivet, structural, self-plugging

First number is rivet diameter in 32nds of an inch:
For example,—6 is 6/32nds or 3/16" diameter

Second number is rivet maximum grip length in 1/16 of an inch:
For example,—8 is 8/16ths or 1/2" grip length

MINIMUM RIVET SHEAR AND TENSILE STRENGTH (IBS.)

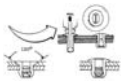
CHERRY Q RIVETS

RIVET DIAM.	BS SERIES ALUM RIVET STEEL MAND. GRADE 19		MS SERIES MONEL RIVET STEEL MAND. GRADE 40		CC SERIES STAINLESS RIVET STAINLESS MAND. GRADE 51	
	Shear	Tens	Shear	Tens	Shear	Tens
1/8	350	325	650	525	700	600
5/32	525	450	950	900	1050	1000
3/16	750	650	1450	1100	1650	1300
1/4	1250	1050	2350	2150	2450	2250

NOTE: SUBJECT TO PRICE AND AVAILABILITY OF CHERRY BRAND RIVETS. EQUIVALANT RIVETS MAY BE FURNISHED.

Prices Subject to Change Without Notice

CHERRY "POP" RIVETS



For conversion of the most frequently used "Pop" rivets to the corresponding CHERRY numbers, see the following table.
NOTE: SUBJECT TO PRICE AND AVAILABILITY OF CHERRY BRAND RIVETS. EQUIVALENT RIVETS MAY BE FURNISHED. ***Attention: Avdel has changed the mandrel design for some of their Cherry "N" Rivets. The change has not affected the strength of the rivet.***

CHERRY COMMERCIAL RIVET PRICE TABLE

G

Grip is total of material thickness

CHERRY – Commercial rivets with maximum grip length greater than the material thickness may be substituted for a rivet of the required grip length.

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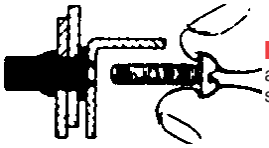
Cherry Rivet		USM "POP" Rivet Equiv.*	Rivet Dia.	Drill Size	Cherry Max Rivet Grip Length	Price**					
Type	Number					Price Ea. 1-99	Price Per 100 10% Discount	Price for 600 12% Discount	Price for 1000 15% Discount	Price for 3000 18% Discount	Price for 10,000 20% Discount
"N"	BSP-41	AD41BS	1/8"	30	Up to .062	$0.06	$5.40	$31.68	$51.00	$147.60	$480.00
	BSPS-42				.063-.125	$0.04	$3.60	$21.12	$34.00	$98.40	$320.00
	BSPS-43				.126-.187	$0.04	$3.60	$21.12	$34.00	$98.40	$320.00
	BSPS-44				.188-.250	$0.03	$2.70	$15.84	$25.50	$73.80	$240.00
	BSP-46				.313-.375	$0.06	$5.40	$31.68	$51.00	$147.60	$480.00
	BSP-48				.438-.500	$0.07	$6.30	$36.96	$59.50	$172.20	$560.00
"N"	BSCS-34	BSC-34	3/32"		.126-.250	$0.15	$13.50	$79.20	$127.50	$369.00	$1,200.00
	BSC-43	AK43BS	1/8"	30	.126-.187	$0.05	$4.50	$26.40	$42.50	$123.00	$400.00
	BSC-44	44BS			.188-250	$0.05	$4.50	$26.40	$42.50	$123.00	$400.00
	BSC-46	A46SC	1/8"		.313-.375	$0.17	---	---	---	---	---
"N"	MSP-32	MD319BS	3/32"	41	.020-.125	$0.20	$18.00	$105.60	$170.00	$492.00	$1,600.00
	-42	424BS	1/8"		.063-.125	$0.35	$31.50	$184.80	$297.50	$861.00	$2,800.00
	-43	429BS			.126-.187	$0.27	$24.30	$142.56	$229.50	$664.20	$2,160.00
	-44	435BS			.188-.250	$0.39	$35.10	$205.92	$331.50	$959.40	$3,120.00
	-45	440BS			.251-.312	$0.23	$20.70	$121.44	$195.50	$565.80	$1,840.00
	-54	530BS	5/32"	20	.126-.250	$0.29	$26.10	$153.12	$246.50	$713.40	$2,320.00
"N"	CCC-32	MK319BS	3/32"	41	.020-.125	$0.09	$8.10	$47.52	$76.50	$221.40	$720.00
	-42	424BS	1/8"	30	.062-.125	$0.11	$9.90	$58.08	$93.50	$270.60	$880.00
	-44	444BS	1/8"	30	.188-.250	$0.19	$17.10	$100.32	$161.50	$467.40	$1,520.00
"N"	CCP-32		3/32"		.020-.125	$0.15	$13.50	$79.20	$127.50	$369.00	$1,200.00
	CCP-42	SSD42SSDS	1/8"	30	.062-.125	$0.10	$9.00	$52.80	$85.00	$246.00	$800.00
	CCP-43		1/8"	30	.126-.187	$0.15	$9.00	$52.80	$85.00	$246.00	$800.00
	-44				.188-250	$0.10	$9.00	$52.80	$85.00	$246.00	$800.00
	-46			30	.313-.375	$0.15	$13.50	$79.20	$127.50	$369.00	$1,200.00
"N"	SSP-42		1/8"	30	.062-.125	$0.04	$3.60	$21.12	$34.00	$98.40	$320.00
"N"	-44				.188-.250	$0.12	$10.80	$63.36	$102.00	$295.20	$960.00
	-45		1/8"		.251-.312	$0.16	$14.40	$84.48	$136.00	$393.60	$1,280.00
	04-01952	CSPS4-4	1/8"	30	.188-.250	$0.32	$28.80	$168.96	$272.00	$787.20	$2,560.00
	04-01953	CSPS4-8	1/8"	30	.438-.500	$0.79	$71.10	$417.12	$671.50	$1,943.40	$6,320.00
"N"	SSC-43		1/8"		.126-.187	$0.16	$30.60	$52.80	$85.00	$246.00	$2,720.00
	SSC-44	S44SC	1/8"		.188-.250	$0.34	$30.60	$179.52	$289.00	$836.40	$2,720.00
"Q"	BSPQ-41	AD41H	1/8"	30	Up to .062	$0.32	$28.80	$168.96	$272.00	$787.20	$2,560.00
	-42	AD42H		30	.062-.125	$0.16	$14.40	$84.48	$136.00	$393.60	$1,280.00
	-43	AD43H			.126-.187	$0.19	$17.10	$100.32	$161.50	$467.40	$1,520.00
	-44	AD44H			.188-.250	$0.34	$30.60	$179.52	$289.00	$836.40	$2,720.00
	-46	AD46H			.313-.375	$0.25	$22.50	$132.00	$212.50	$615.00	$2,000.00
"Q"	AAPQ-42	AD43H	1/8"	30	.125	$0.15	$13.50	$79.20	$127.50	$369.00	$1,200.00
	-44	AD44H		30	.250	$0.18	$16.20	$95.04	$153.00	$442.80	$1,440.00
	CCPQ-43	CCPQ-43	1/8"	30	.337	$0.28	$25.20	$147.84	$238.00	$688.80	$2,240.00
	CCPQ-44	CCPQ-44	1/8"	30	.400	$0.40	---	---	---	---	---

All USM "Pop" rivets are 1/64" larger than nominal diameter. Presented here for cross reference purposes only. **Quotations on larger quantities.

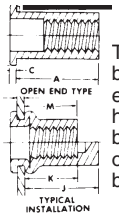
RIVETS – RIVET NUTS

CLOSED END POP RIVETS

Model	Head	Size	Grip	Part No.	Price
AD42H	Dome	1/8"	.063-.125	04-02334	**$0.10**
AD43H	Dome	1/8"	.125-.187	04-02335	**$0.11**
AK42H	CSK	1/8"	.063-.125	04-02336	**$0.11**
AK43H	CSK	1/8"	.125-.187	04-02337	**$0.11**



BLIND NUT PLATE - Installed Rivet Nut also serve as blind nut plates for simple screw attachments.



RIVET NUTS (OPEN END)

The Rivet nut is a one-piece internally threaded and counter-bored tubular aluminum rivet that can be pulled up or headed while working entirely from one side, forming a bulge or head on the blind side. This upset is large enough to resist being pulled through metal or plastic even under conditions of eccentric load. It overcomes the difficulty of installing brackets, handles or other attachments to tubular pieces.

FLAT HEAD

Part No.	Type	Grip Range	Length	Thread	Price/ea.
NAS1329A06K75	Keyed	.010-.075	.438	6-32	**$0.16**
NAS1329A06-75	Keyless	.010-.075	.438	6-32	**$0.17**
NAS1329A06K120	Keyed	.075-.120	.500	6-32	**$0.26**
NAS1329A06-120	Keyless	.075-.120	.500	6-32	**$0.23**
NAS1329A08K75	Keyed	.010-.075	.438	8-32	**$0.22**
NAS1329A08-75	Keyless	.010-.075	.438	8-32	**$0.22**
NAS1329A08K120	Keyless	.075-.120	.500	8-32	**$0.36**
NAS1329A08-120	Keyless	.075-.120	.500	8-32	**$0.18**
NAS1329A3K80	Keyed	.010-.075	.438	10-32	**$0.23**
NAS1329A3-80	Keyless	.010-.075	.438	10-32	**$0.26**
AEA10K140	Keyed	.075-.140	.500	10-32	**$0.60**
AEA10-140	Keyless	.075-.140	.500	10-32	**$0.53**

COUNTERSUNK HEAD

Part Number		Grip Range	Length	Thread	Price Each
Keyed	Keyless				
NAS1330A06K106	NAS1330A06-106	.065-.106	.500	6-32	**$0.29**
NAS1330A08K106	NAS1330A08-106	.065-.106	.500	8-32	**$0.27**



PULL RIVETS

Blind open end pull rivets are available in a variety of sizes, types, and materials to fit most any application. Simple three step riveting make quick work of most any fastening job. These open end rivets resemble conventional tubular rivets when set, but retain the mandrel within the rivet body for added strength.

Note: All rivets listed are round head rivets.

Code No.	Type	Dia.	Head	Range	Part No.	Price
AD42-A	Aluminum	1/8	1/4	1/16 to 1/8	15-05793	**$0.19**
AD43-A	Aluminum	1/8	1/4	1/8 to 3/8	15-05794	**$0.16**
AD48-A	Aluminum	1/8	1/4	3/8 to 1/2	15-05795	**$0.18**
ADL44-A	Aluminum	1/8	3/8	3/16 to 1/4	15-05797	**$0.17**
AD62-A	Aluminum	3/16	3/8	1/16 to 1/8	15-05796	**$0.24**
AD66-A	Aluminum	3/16	3/8	1/4 to 3/8	15-05807	**$0.22**
AD68-A	Aluminum	3/16	3/8	3/8 to 1/2	15-05808	**$0.19**
ADL612-A	Aluminum	3/16	5/8	5/8 to 3/4	15-05809	**$0.35**
ADL68-A	Aluminum	3/16	5/8	3/8 to 1/2	15-05810	**$0.29**
SD42	Steel	1/8	1/4	1/16 to 1/8	15-05798	**$0.54**
SD43	Steel	1/8	1/4	1/8 to 3/16	15-05799	**$0.22**
SD48	Steel	1/8	1/4	3/8 to 1/2	15-05800	**$0.23**
SDL44	Steel	1/8	3/8	3/16 to 1/4	15-05801	**$0.20**
SD62	Steel	3/16	3/8	1/16 to 1/8	15-05811	**$0.13**
SD66	Steel	3/16	3/8	1/4 to 3/8	15-05812	**$0.22**
SD68	Steel	3/16	3/8	3/8 to 1/2	15-05813	**$0.22**
SDL612	Steel	3/16	5/8	5/8 to 3/4	15-05814	**$0.33**
SDL68	Steel	3/16	5/8	3/8 to 1/2	15-05815	**$0.19**
SSD42-S	Stainless Steel	1/8	1/4	1/16 to 1/8	15-05802	**$0.37**
SSD43-S	Stainless Steel	1/8	1/4	1/8 to 3/16	15-05803	**$0.39**
SSD48-S	Stainless Steel	1/8	1/4	3/8 to 1/2	15-05804	**$0.66**
SSD64-S	Stainless Steel	3/16	3/8	1/8 to 1/4	15-05805	**$0.94**
SSD68-S	Stainless Steel	3/16	3/8	3/8 to 1/2	15-05806	**$1.32**

AVEX NON-STRUCTURAL BLIND RIVETS

Avex non- structural blind rivets, with aluminum body and steel stem, are similar to the Cherry BSP and BSC commercial rivets. We stock the standard dome head, 120° countersunk head and the low-profile "Lo-Pro" dome head rivets in diameters up to 3/16".

Head Style	Part No.	Dia.	Grip Range	Price		
				Each	100	1000
Dome	1601-0410	1/8"	To .187	**$0.09**	**$8.10**	**$72.00**
	1601-0414	1/8"	To .312	**$0.08**	**$7.20**	**$64.00**
	1601-0613	3/16"	To .250	**$0.08**	**$7.20**	**$64.00**
	1601-0619	3/16"	To .437	**$0.09**	**$8.10**	**$72.00**
	04-01949	5/32"	.046-.250	**$0.08**	**$7.20**	**$64.00**
Counter-sunk (120°)	1604-0412	1/8"	To .250	**$0.09**	**$8.10**	**$72.00**
	1604-0514	5/32"	To .312	**$0.14**	**$12.60**	**$112.00**
	1604-0615	3/16"	To .312	**$0.11**	**$9.90**	**$88.00**
Lo-Pro	1661-0613	3/16"	To .250	**$0.11**	**$9.90**	**$88.00**
	1661-0621	3/16"	To .500	**$0.11**	**$9.90**	**$88.00**



SPRING LOADED CENTER PUNCH

Spring loaded center punch works great with universal aluminum head rivets, oval head and round head rivets.
P/N 12-02464 .....**$38.95**



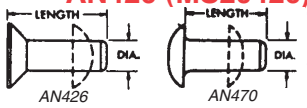
RIVET/RIVET NUT BACK MARKERS

Used to locate pre-drilled holes in the wing ribs, fuel tank covers, panels, skin. Pre-drill the ribs, screw in the back markers, lay the skin sheet over the top, tap with a hammer, turn the sheet over, and drill the holes. This is especially useful for rivnut installation. Due to the large size of the hole required, small errors in location can lead to the "Oh darn, I missed the rib syndrome". Backmarkers can save you hours of frustration. Two sizes of threaded backmarkers are available. We recommend using the 04-00131 for wing ribs. Drilling the wing ribs with a 3/32" drill. Drop in the back markers. Mark the skin by taping with a soft hammer. Turn the skin over and drill the skin with a 3/32" drill. Cleco the skin into position enlarge the holes with #30 drill & cleco. Now you are ready to rivet.

Nut Plate	Marker Size	Drill Size	Part No.	Price Ea.
3/8-24	.327	5/8"	04-00121	**$1.15**
1/4-28	.209	1/2	04-00123	**$1.15**
10-32	.154	3/8"	04-00124	**$0.98**
6-32	.102	3/8"	04-00129	**$0.98**

Prices Subject to Change Without Notice

SOLID ALUMINUM RIVETS
AN426 (MS20426) AN470 (MS20470)



"A" rivets are "soft". They are fabricated from 1100-grade aluminum and have a tensile strength of 16,000 PSI. "AD" rivets are fabricated from 2117 aluminum and heat treated to the T4 condition. They have a shear strength of 26,000 PSI and a tensile strength of 38,000 PSI. All rivets sold in 1/4 lb. & 1/8 lb. packages.

Dash No.	Dia. x L	Price per 1/4 Lb. AN426A	Price per 1/4 Lb. AN426AD	Qty Lb.	Price per 1/4 Lb AN470A	Price per 1/4 Lb AN470AD	Qty Lb.
2-5	---	---	---	---	---	$83.95	---
3-2	3/32 x 1/8	$13.99	$14.69	6406	$10.95	$11.68	4107
3-3	3/32 x3/16	$9.99	$9.88	5003	$9.13	$11.21	3485
3-3.5	3/32 X 7/32	---	$43.90	5618	---	---	---
3-4	3/32 x 1/4	$9.38	$8.38	4103	$8.13	$8.40	3027
3-5	3/32 x 5/16	$8.71	$8.44	3478	$7.63	$5.94	2675
3-6	3/32 x 3/8	$7.13	$8.13	3018	$6.88	$7.88	2397
3-7	3/32 x 7/16	$6.88	$8.38	2666	$7.38	$8.88	2171
3-8	3/32 x 1/2	$7.96	$7.98	2161	$7.45	$7.13	1826
3-9	3/32 x 9/16	$29.95	$31.60	---	---	$31.50	---
3-10	3/32 x 5/8	$7.63	$7.49	1817	$6.38	$7.73	1576
3-12	3/32 x 3/4	$5.38	$7.93	1640	$6.49	$6.38	1403
3-14	3/32 x 7/8	$7.68	$7.88	1567	$9.49	$8.68	1386
3-15	3/32 x 5/16	$5.99	---	1383	---	---	---
3-16	3/32 x 1	$5.99	--	1378	$7.95	$9.38	1237
4-3	1/8 x 3/16	$8.13	$7.88	2810	$5.63	$7.38	1734
4-4	1/8 x 1/4	$4.65	$5.13	2308	$4.89	$5.38	1529
4-4.5	1/8 x 9/32	---	---	---	---	$21.50	1925
4-5	1/8 x 5/16	$5.00	$5.45	1958	$4.88	$5.88	1367
4-5.5	1/8 X 11/32	---	---	---	---	$25.50	1674
4-6	1/8 x 3/8	$4.88	$6.16	1700	$5.13	$5.38	1236
4-7	1/8 x 7/16	$5.88	$5.61	1502	$4.63	$5.63	1128
4-8	1/8 x 1/2	$5.13	$5.13	1346	$4.63	$4.99	1037
4-9	1/8 x 9/16	$7.96	$5.00	1219	$5.38	$5.20	960
4-10	1/8 x 5/8	$4.98	$5.38	1025	$4.49	$4.88	836
4-11	1/8 x 1	---	---	---	---	$36.85	---
4-12	1/8 x 3/4	$4.89	$5.38	885	$4.98	$4.88	740
4-13	1/8 x 13/16	$11.48	$6.88	797	$4.83	$4.99	715
4-14	1/8 x 7/8	$5.98	$5.94	631	$6.63	$5.88	689
4-15	1/8 x 15/16	---	---	---	---	$45.65	---
4-16	1/8 x 1	$5.38	$5.19	592	$5.13	$5.63	594
4-20	1/8 x 1-1/4	$6.88	$6.96	467	$4.88	$6.43	521
4-22	1/8 x 1-3/8	---	$6.38	328	$5.38	$8.15	496
5-3	5/32 x 3/16	---	$24.60	1800	---	---	---
5-4	5/32 x 1/4	$5.39	$4.93	1440	$4.88	$5.14	888
5-5	5/32 x 5/16	$4.70	$4.45	1226	$4.96	$5.38	850
5-6	5/32 x 3/8	$4.13	$4.71	1079	$4.23	$4.61	802
5-7	5/32 x 7/16	$5.21	$5.38	946	$6.65	$4.48	672
5-8	5/32 x 1/2	$5.68	$4.88	849	$4.46	$4.63	621
5-9	5/32 x 9/16	$4.71	$5.14	770	$3.96	$4.88	578
5-10	5/32 x 5/8	$4.45	$4.89	649	$4.15	$5.71	507
5-12	5/32 x 3/4	$4.98	$5.13	494	$4.49	$4.70	407
5-13	5/32 x .812	---	---	---	---	$6.48	514
5-14	5/32 x 7/8	$18.95	---	---	---	---	---
5-16	5/32 x 1	$5.14	$4.96	450	$5.13	$4.46	366
5-22	5/32 x 1-3/8	$4.88	$5.64	368	$6.38	$5.63	314
6-4	3/16 x 1/4	$19.90	$18.50	1134	$20.50	$20.75	1134
6-5	3/16 x 5/16	$4.88	$4.16	846	$4.63	$4.13	515
6-6	3/16 x 3/8	---	---	---	---	$4.50	---
6-7	3/16 x 7/16	$3.89	$4.70	728	$4.13	$4.18	436
6-8	3/16 x 1/2	$16.50	$18.50	395	$14.80	$18.95	395
6-9	3/16 x 9/16	$18.70	$18.50	---	$18.55	$16.90	354
6-10	3/16 x 5/8	$4.41	$4.63	451	$4.88	$4.20	334
612	3/16 x 3/4	---	---	---	$22.80	---	---
6-14	3/16 x 7/8	$4.90	$4.63	390	$4.88	$4.38	299

10% Discount for 5lbs. of rivets or more (per P/N)

SOLID RIVET ASSORTMENT

"AD" indicates Hard 2117 aluminum alloy. These rivets are heat treated and have a minimum tensile strength of 38,000 PSI. "A" indicates Soft 100 pure aluminum and have a minimum tensile strength of 16,000 PSI. ***Each kit contains 1/8 lb each of the following 12 sizes:*** 3/32 (3-4, 3-6, 3-8); 5/32 (5-4, 5-5, 5-6, 5-8); 1/8 (4-4, 4-6, 4-8); 3/16 (6-6, 6-8)

Pack C ..... AN470AD, Universal Hard ..... P/N 04-00357 ... **$34.75**
Pack D ..... AN470A, Universal Soft ..... P/N 04-00358 ... **$32.75**
Pack E ..... AN426AD, 100° CSK Hard ..... P/N 04-00359 ... **$35.75**
Pack F ..... AN426A, 100° CSK Soft ..... P/N 04-00361 ... **$35.00**

SEAT RAIL RIVET KIT - Contains AN470AD rivets for installation of 2 seat rails in Cessna 177 ..... P/N 01-01361 ... **$31.50**

CHERRYMAX RIVETS



100° Countersunk Head (CR3242 & CR3212)



Universal Head (CR3243 & CR3213)

Due to the large bulbed blind head, similar to that of a solid rivet, the Cherrylock and CherryMax rivets are especially suited for double dimpled or high vibration applications. They can be used as replacements for some solid rivets and are excellent for use in fiberglass or composites as the rivet spreads in a way that prevents crazing or cracking of the material. NOTE: CR3212 & CR3213 are nominal diameters. CR3242 & CR3243 are oversized diameters and measure 1/64" more than listed diameter.

Install with P/N 12-03105 G-27 Hand Gun.

Dash #	Dia.	CR3212 Grip Range	CR3213 Grip Range	Each	Price 100
4-1	.126	-----	.025-.062	---	---
4-2		.063-.125	.063-.125	$0.60	$54.00
4-3		.126-.187	.126-.187	$0.60	$54.00
4-4		.188-.250	.188-.250	$0.56	$50.40
4-5		.251-.312	.251-.312	$0.66	$59.40
4-6		.313-.375	.313-.375	$0.62	$55.80
5-2	.157	.065-.125	.063-.125	$0.63	$56.70
5-3		.126-.187	.126-.187	$0.62	$55.80
5-4		.188-.250	.188-.250	$0.66	$59.40
5-5		.251-.312	.251-.312	$0.97	$87.30
5-6		.313-.375	.313-.375	$0.72	$64.80
6-10	.189	.563-.625	.563-.625	$2.75	$247.50

Dash #	Dia.	CR3242 Grip Range	CR3243 Grip Range	Each	Price 100
4-1	.140	.032-.063	.025-.062	$0.77	$69.30
4-2		.063-.125	.063-.125	$0.63	$56.70
4-3		.126-.187	.126-.187	$0.64	$57.60
4-4		.188-.250	.188-.250	$0.65	$58.50
4-5		.251-.312	.251-.312	$0.68	$61.20
4-6		.313-.375	.313-.375	$1.03	$92.70
5-2	.173	.063-.125	.063-.125	$0.72	$64.80
5-3		.126-187	.126-.187	$0.74	$66.60
5-4		.188-.250	.188-.250	$0.74	$66.60
5-5		.251-.312	.251-.312	$0.74	$66.60
5-6		.313-.375	.313-.375	$0.94	$84.60
6-6	.187	---	.313-.375	$1.02	---

NOTE: SUBJECT TO PRICE AND AVAILABILITY OF CHERRY BRAND RIVETS. EQUIVALENT RIVETS MAY BE FURNISHED.



CHERRYMAX GRIP GAUGE

Measures rivet diameter and length, P/N 12-00217 ..... **$8.65**



ZENAIR BLIND RIVETS

The Zenith blind rivets are made from quality alloys, and are batch tested by Zenith Aircraft Company for shear strength before being shipped. These rivets are corrosion resistant, and the stem becomes locked in after being set. Also, not many different lengths are required for different diameters or thicknesses. In the Assembly Instructions, they are designated as A4 (1/8) and A5 (5/32.

See Tools Section for Zenair Riveters.

Description	Length	Grip	Drill	Min. Single Shear Strength	PN	Price
A4 Blind Rivet	1/8" / 3.2mm	1/4" / 6.4mm	#30	110 lbf / 50kg	12-03709	$13.65
A5 Blind Rivet	5/32" / 4mm	5/16" / 7.9mm	#20	180 lbf / 80kg	12-03711	$18.75

OVERSIZE AND HALF SIZE RIVETS



HALF-SIZE LENGTH RIVETS - These flush head AN426 rivets are ideal for those situations where one length is just too short & the next length is too long.

Part No.	Dia.	Length	Price Per 1/8 lb.
AN426AD-3-3.5	3/32"	7/32"	$43.90
AN426AD-3-4.5	3/32"	9/32"	$36.75
AN426AD-3-5.5	3/32"	11/32"	$36.50



OVERSIZE SHANK RIVETS - These NAS1097 rivets feature a 1/8" diameter shank with a head size that of a 3/32" rivet. Perfect when rivet hole becomes enlarged requiring 1/8" shank but 3/32" head matches rest of your 3/32" rivets.

Part No.	Dia.	Length	Price Per 1/8 lb.
NAS1097AD-4-3.5	1/8"	7/32"	$33.60
NAS1097AD-4-4	1/8"	1/4"	$31.60
NAS1097AD-4-5	1/8"	5/16"	$29.90
NAS1097AD-4-6	1/8"	3/8"	$26.95

HA

NUTSERTS



The A-T Series Insert is unique in that it can be installed into most any material above .030/,76 mm in thickness. As the A-T Series is installed, the threaded portion is completely swaged 360° into the sleeve portion and the hole. This permits the A-T Series to be used with Grade 8/metric 12.9 mating screws.
The A-T Series Insert is installed using light-weight, hand held pneumatic tools that can be located at any position in your product's assembly sequence. The A-T Series Insert can be installed either prior to or after finish.

360°SWAGING HOW IT WORKS FOR YOU

As the A-T Series Insert is installed, the threaded nut portion is drawn into the upper sleeve portion.



As this occurs, a 360° swaging action takes place anchoring the A-T Series in the parent material.

HA

NUTSERT HOLE SIZE / MATERIAL THICKNESS CHART

Installation hole size for the A-T Series Insert is determined by the parent material's thickness and density. The thicker the material the larger the hole required to allow full 360° installation swaging. The application should be tested before hole size is specified.

THREAD SIZE	.030-.090 MAT. THICKNESS		.091-.124 MAT THICKNESS		.125-.186 MAT. THICKNESS		.187-OVER MAT. THICKNESS	
	DRILL SIZE	DECIMAL	DRILL SIZE	DECIMAL	DRILL SIZE	DECIMAL	DRILL SIZE	DECIMAL
4-40 UNC	3/16	.1875	#10	.1935	#10	.1935	#9	.1960
6-32 UNC	7/32	.2188	#2	.2210	#1	.2280	#1	.2280
8-32 UNC	1/4	.2500	"F"	.2570	17/64	.2656	17/64	.2656
10-24 UNC	9/32	.2812	"L"	.2900	"L"	.2900	19/64	.2969
10-32 UNF	9/32	.2812	"L"	.2900	"L"	.2900	19/64	.2969
1/4-20 UNC	3/8	.3750	3/8	.3750	"W"	.3860	25/64	.3906
1/4-28 UNC	3/8	.3750	3/8	.3750	"W"	.3860	25/64	.3906
5/16-18 UNC	1/2	.5000	1/2	.5000	33/64	.5156	33/64	.5156
5/16-24 UNC	1/2	.5000	1/2	.5000	33/64	.5156	33/64	.5156
3/8-16 UNC	9/16	.5625	9/16	.5625	37/64	.5781	37/64	.5781
1/2-13 UNC	3/4	.7500	49/64	.7656	25/32	.7810	51/64	.7970



THREAD SIZE	THREAD CALL OUT	HD ±.005	L ±.015	D MAX.	IL MAX.	LB ±.015	ILB MAX.	IATD** MAX.	HOLE DEPTH MIN.	PART NO.	PRICE EACH
4-40 UNC	440	.211	.370	.1875	.205	.660	.495	.395	.400	ATS2-440	**$0.29**
6-32 UNC	632	.240	.370	.2185	.205	.675	.505	.410	.400	ATS2-632	**$0.27**
8-32 UNC	832	.269	.370	.2495	.205	.675	.505	.410	.400	ATS2-832	**$0.26**
10-24 UNC	1024	.306	.370	.2805	.205	.685	.520	.385	.400	ATS2-1024	**$0.38**
10-32 UNF	1032	.306	.370	.2805	.205	.685	.520	.385	.400	ATS2-1032	**$0.25**
1/4-20 UNC	420	.400	.515	.3745	.275	1.005	.760	.615	.540	ATS2-420	**$0.45**
1/4-28 UNC	420	.400	.515	.3745	.275	1.005	.760	.615	.540	ATS2-428	**$0.52**
5/16-18 UNC	518	.528	.615	.4995	.325	1.065	.770	.630	.640	ATS2-518	**$0.93**
5/16-24 UNC	518	.528	.615	.4995	.325	1.065	.770	.630	.640	ATS2-524	**$1.76**
3/8-16 UNC	616	.588	.745	.5615	.390	1.450	1.095	.890	.770	ATS2-616	**$1.02**
1/2-13 UNC	813	.800	.935	.7485	.485	NA	NA	NA	.960	ATS2-813	**$4.20**

***Dimensions in minimum grip condition. Additional UNF thread sizes available.**

AA-112 HI-TORQUE NUTSERT TOOL



The hi-torquer tool is ideal for field and maintenance applications. It features a patented Quick Change thread size nose assembly. Order one base tool plus appropriate conversion kit. No warranty on these tools.

THREAD SIZE	CONV. KIT PART NO.	PRICE EACH
4-40 UNC	AAT-202-440	**$31.75**
6-32 UNC	AAT-202-632	**$31.70**
8-32 UNC	AAT-202-832	**$31.75**
10-24 UNC	AAT-202-1024	**$31.75**
10-32 UNF	AAT-202-1032	**$31.75**
1/4-20 UNC	AAT-202-420	**$31.75**
1/4-28 UNC	AAT-202-428	**$31.75**
5/16-18 UNC	AAT-202-518	**$31.75**
5/16-24 UNC	AAT-202-524	**$31.75**
3/8-16 UNC	AAT-202-616	**$31.75**
Base tool, P/N AA-112		**$69.50**

AAT916 EXPENDABLE NUTSERT TOOLS



These expendable tools are ideal for applications such as field repair. They can also be packaged with instructions for use along with quantity of inserts for consumer assembly. Sizes 6-32, 8-32 include a hex key. Sizes 10-32,and larger require a wrench (not included). No warranty on these tools.

THREAD SIZE	TOOL PART NUMBER	PRICE EACH
4-40 UNC	AAT-916-440	**$9.50**
6-32 UNC	AAT-916-632	**$11.00**
8-32 UNC	AAT-916-832	**$9.50**
10-24 UNC	AAT-916-1024	**$9.50**
10-32 UNF	AAT-916-1032	**$9.50**
1/4-20 UNC	AAT-916-420	**$9.50**
1/4-28 UNC	AAT-916-428	**$9.85**
5/16-18 UNC	AAT-916-518	**$9.50**
5/16-24 UNC	AAT-916-524	**$9.50**
1/2-13 UNC	AAT-916-813	**$83.75**
3/8-16 UNC	AAt-916-616	

AAT312A MASTER NUTSERT ASSORTMENT KIT



The A-T Series master assortment kit is ideal for prototype and maintenance repair applications. The rugged hard shell plastic kit contains quantities of the A-T Series Inserts and the AA 112 Hi-torquer tool. It also contains a full compliment of thread size conversion kits and instruction label. No warranty on these tools.

KIT CONTAINS:

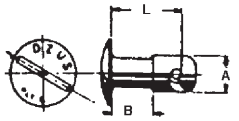
THREAD SIZE	QTY	NUTSERT PART NO.	CONV. KIT
4-40 UNC	50	ATS2-440	AAT-202-440
6-32 UNC	50	ATS2-632	AAT-202-632
8-32 UNC	50	ATS2-832	AAT-202-832
10-32 UNF	50	ATS2-1032	AAT-202-1032
1/4-20 UNC	50	ATS2-420	AAT-202-420
5/16-18 UNC	50	ATS2-518	AAT-202-518
Kit, P/N AAT312A			**$219.95**

Nutsert available. Sold Each.

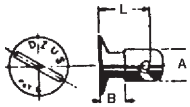
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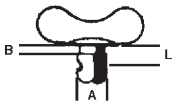
DZUS® FASTENERS



Oval Head Stud



Flush Head Stud



Wing Head Stud

OVAL HEAD STUD, LONG UNDERCUT

Model No.	Stud Dimensions			Zinc Electroplated		Model No.	Stainless		GROMMETS & SNAP RINGS	SPRINGS
	A	B	L	Cat. #	Price Each		Cat. #	Price Each		
121J-325-Z3C	.1875	.075	.250	AJ3-25*	**$1.89**	-	-	-	GA3-175, 200, 250 GP3B, GH3 SR3SS SX-520SS	S3-150, 175 200,225
121J-330-Z3C	.1875	.100	.300	AJ3-30	**$1.92**	-	-	-		
121J-335-Z3C	.1875	.150	.350	AJ3-35*	**$1.45**	121J-335-SS	AJ3-35SS*	**$5.35**		
121J-340-Z3C	.1875	.200	.400	AJ3-40	**$1.80**	-	-	-		
121J-425-Z3C	.250	.100	.250	AJ4-25*	**$1.77**	121J-425-SS	AJ4-25SS*	**$6.75**	GA4-225, 250, 275, 300 GP4B, GH4 SB4SS SX-523SS	S4-200, 225
121J-430-Z3C	.250	.100	.300	AJ4-30	**$1.64**	121J-430-SS	AJ4-30SS	**$4.25**		
121J-435-Z3C	.250	.150	.350	AJ4-35*	**$1.55**	121J-435-SS	AJ4-35SS*	**$4.35**		
121J-440-Z3C	.250	.200	.400	AJ4-40	**$1.49**	121J-440-SS	AJ4-40SS	**$3.65**		
121J-445-Z3C	.250	.225	.450	AJ4-45*	**$3.35**	-	-	-		
121J-450-Z3C	.250	.250	.500	AJ4-50	**$1.84**	-	-	-		
121J-530-Z3C	.3125	.125	.300	AJ5-30	**$1.83**	121J-530-SS	AJ5-30SS	**$2.10**	GA5-312, 350, 375 GP5B, GH5 SR5SS SX-510SS	S5A200, 225 250, 275
121J-535-Z3C	.3125	.125	.350	AJ5-35*	**$1.84**	121J-535-SS	AJ5-35SS*	**$2.61**		
121J-540-Z3C	.3125	.190	.400	AJ5-40	**$1.56**	121J-540-SS	AJ5-40SS	**$2.59**		
121J-545-Z3C	.3125	.190	.450	AJ5-45*	**$1.85**	-	-	-		
121J-550-Z3C	.3125	.250	.500	AJ5-50	**$1.87**	-	-	-		
121J-560-Z3C	.3125	.300	.600	AJ5-60	**$1.84**	-	-	-		
121J-570-Z3C	.3125	.400	.700	AJ5-70	**$3.25**	-	-	-		
121J-635-Z3C	.375	.150	.350	AJ6-35*	**$1.86**	-	-	-	GA6-350, 375, 425 GP6B,GH6 SR6SS SX-518SS	S6-225, 250, 275 300
121J-640-Z3C	.375	.190	.400	AJ6-40	**$2.85**	-	-	-		
121J-650-Z3C	.375	.250	.500	AJ6-50	**$1.98**	-	-	-		
121J-660-Z3C	.375	.300	.600	AJ6-60	**$1.99**	-	-	-		
121J-670-Z3C	.375	.350	.700	AJ6-70	**$9.50**	-	-	-		
121J-740-Z3C	.4375	.190	.400	AJ7-40	**$4.25**	-	-	-	GA7-375, 475, 525 GH7 SR7SS SX-519SS	S7-225, 250, 275, 300
121J-750-Z3C	.4375	.250	.500	AJ7-50	**$1.60**	-	-	-		
121J-760-Z3C	.4375	.300	.600	AJ7-60	**$34.50**	-	-	-		
121J-770-Z3C	.4375	.350	.700	AJ7-70	**$6.55**	-	-	-		

FLUSH HEAD STUD, LONG UNDERCUT

Model No.	Stud Dimensions			Zinc Electroplated		Model No.	Stainless		GROMMETS & SNAP RINGS	SPRINGS
	A	B	L	Cat. #	Price Each		Cat. #	Price Each		
126J-330-Z3C	.1875	.150	.300	FJ3-30	**$4.85**	-	-	-	GP3B-GH3 SR3SS SX-520SS	S3-150, 175, 200, 225
126J-335-Z3C	.1875	.175	.350	FJ3-35*	**$1.11**	-	-	-		
126J-340-Z3C	.1875	.200	.400	FJ3-40	**$6.50**	-	-	-		
-	.250	.150	.300	-	-	126J-430-SS	FJ4-30SS	**$2.73**	GF4-125, 150, 175, 200 GP4B, GH4 SR4SS SX-523SS	S4-200, 225
126J-435-Z3C	.250	.175	.350	FJ4-35*	**$1.77**	126J-435-SS	FJ4-35SS1	**$3.15**		
126J-440-Z3C	.250	.200	.400	FJ4-40	**$8.65**	126J-440-SS	FJ4-40SS	**$3.35**		
126J-445-Z3C	.250	.225	.450	FJ4-45*	**$1.22**	126J-445-SS	FJ4-45SS1	**$9.80**		
126J-450-Z3C	.250	.250	.500	FJ4-50	**$1.95**	-	-	-		
126J-540-Z3C	.3125	.225	.400	FJ5-40	**$3.65**	126J-540-SS	FJ5-40SS	**$2.75**	GF5-175, 225, 250 GP5B, GH5 SR5SS, SX-510SS	S5A200, 225 250, 275
126J-550-Z3C	.3125	.250	.500	FJ5-50	**$1.45**	-	-	-		
126J-560-Z3C	.3125	.300	.600	FJ5-60	**$15.95**	-	-	-		
126J-650-Z3C	.375	.250	.500	FJ6-50	**$2.00**	-	-	-	GF6-218, 250 GP6B,GH6 SR6SS, SX-518SS	S6-225, 250, 275 300
126J-660-Z3C	.375	.300	.600	FJ6-60	**$4.40**	-	-	-		
126J-670-Z3C	.375	.350	.700	FJ6-70	**$3.35**	-	-	-		
126J-750-Z3C	.4375	.250	.500	FJ7-50	**$1.65**	-	-	-	GF7-250, 325, 400 GH7, SR7SS, SX-519SS	S7-225, 250, 275, 300
126J-760-Z3C	.4375	.300	.600	FJ7-60	**$2.25**	-	-	-		
126J-770-Z3C	.4375	.350	.700	FJ7-70	**$6.65**	-	-	-		

WING HEAD STUD, LONG UNDERCUT

(A, B, L dimensions for AJW are same as for AJ; P, Q, R dimensions given are for wing head)

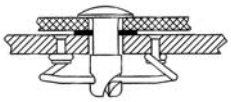
Model No.	Stud Dimensions			Zinc Electroplated		Model No.	Stainless		GROMMETS & SNAP RINGS	SPRINGS
	A	B	L	Cat. #	Price Each		Cat. #	Price Each		
121J-W325-Z3C	.1875	.075	.250	AJW3-25*	**$23.80**	-	AJW3-25SS*	**$10.50**	GA3-175, 200, 250 GP3B, GH3 SR3SS SX-520SS	S3-150, 175 200, 225
121J-W330-Z3C	.1875	.100	.300	AJW3-30	**$1.56**	-	-	-		
121J-W335-Z3C	.1875	.150	.350	AJW3-35*	**$5.35**	-	-	-		
121J-W340-Z3C	.1875	.200	.400	AJW3-40	**$1.59**	-	-	-		
121J-W425-Z3C	.250	.100	.250	AJW4-25*	**$1.44**	-	-	-	GA4-225, 250, 275, 300 GP4B, GH4 SR4SS SX-523SS	S4-200, 225
121J-W430-Z3C	.250	.100	.300	AJW4-30	**$2.35**	-	-	-		
121J-W435-Z3C	.250	.150	.350	AJW4-35*	**$1.73**	-	-	-		
121J-W440-Z3C	.250	.200	.400	AJW4-40	**$1.65**	-	-	-		
121J-W530-Z3C	.3125	.125	.300	AJW5-30	**$2.10**	-	-	-	GA5-312, 350, 375 SR5SS SX-510SS	S5A200, 225
121J-W540-Z3C	.3125	.190	.400	AJW5-40	**$2.19**	-	-	-		
121J-W545-Z3C	.3125	.200	.450	AJW5-45*	**$4.60**	-	-	-		
121J-W550-Z3C	.3125	.250	.500	AJW5-50	**$2.13**	-	-	-		

CAD PLATED FASTENERS ARE NO LONGER AVAILABLE DUE TO ENVIROMENTAL REASONS.

No longer available after our current stock is depleted. Please order next longer size.

DZUS® FASTENERS

STUD AND SPRING SELECTION TABLES



1. Find total thickness (distance) from underside of stud head to point of spring attachment).
2. Select stud "L" and spring "H" dims.

Size 3 Stud, S3 Spring			Size 4 Stud, S4 Spring		
	USE			USE	
Total Thickness	Stud Dim. L	Spring Dim. H	Total Thickness	Stud Dim. L	Spring Dim. H
.045 - .069	-25	-225	.050 - .074	-25	-225
.070 - .094	-25	-200	.075 - .099	-25	-200
.095 - .119	-30	-225	.100 - .124	-30	-225
.120 - .144	-30	-200	.125 - .149	-30	-200
.145 - .169	-30	-175	.150 - .174	-35	-225
.170 - .194	-30	-150	.175 - .199	-35	-200
.195 - .219	-35	-175	.200 - .224	-40	-225
.220 - .224	-35	-150	.225 - .249	-40	-200
.245 - .269	-40	-175	.250 - .274	-45	-225
.270 - .294	-40	-150	.275 - .299	-45	-200
			.300 - .324	-50	-225
			.325 - .344	-50	-200

Size 5 Stud, S5A Spring			Size 6 Stud, S6 Spring Size 7 Stud, S7 Spring		
	USE			USE	
Total Thickness	Stud Dim. L	Spring Dim. H	Total Thickness	Stud Dim. L	Spring Dim. H
.055 - .079	-30	-275	.090 - .114	-35	-300
.080 - .104	-30	-250	.115 - .139	-35	-275
.105 - .129	-30	-225	.140 - .164	-35	-300
.130 - .154	-30	-200	.165 - .189	-40	-275
.155 - .179	-40	-275	.190 - .214	-40	-250
.180 - .204	-40	-250	.215 - .239	-40	-225
.205 - .229	-40	-225	.240 - .264	-50	-300
.230 - .254	-40	-200	.225 - .249	-40	-200
.255 - .279	-50	-275	.265 - .289	-50	-275
.280 - .304	-50	-250	.290 - .314	-50	-250
.305 - .329	-50	-225	.315 - .339	-50	-225
.330 - .354	-50	-200	.340 - .364	-60	-300
.355 - .379	-60	-275	.365 - .389	-60	-275
.380 - .404	-60	-250	.390 - .414	-60	-250
.405 - .429	-60	-225	.415 - .439	-60	-225
.430 - .454	-60	-200	.440 - .464	-70	-300
.455 - .479	-70	-275	.465 - .489	-70	-275
.480 - .504	-70	-250	.490 - .514	-70	-250
.505 - .529	-70	-255	.515 - .539	-70	-225
.530 - .554	-70	-200			

INSTALLATION TOOLS

Part No.	Description (Installs:)	Price
04-01441	A, AJ3 Oval Head Studs & Grommets	$47.50
04-01410	A4,AJ4 Oval Head Studs & Grommets	$47.50
04-01409	A5,AJ5 Oval Head Studs & Grommets	$49.75
04-01442	A6.5,AJ6.5 Oval Head Studs & Grommets	$49.85
04-01413	A7, AJ7 Oval Head Studs & Grommets	$275.95
04-01447	F5, FJ5 Flush Head Studs & Grommets	$49.75
04-01637	F6.5,FA6.5,FJ6.5 Flush Head Studs & Grommets	$49.75

**** Note: A5 tool is specially designed to install grommets in Bonanza cowlings without removing cowling brackets. This will save you a lot of time.***

Description	Part No.	Price
Modified C-Clamp (Required and Accepts All Attachment Sets)	12-02272	$46.50

RETAINING SPRINGS



When there is a gap between the top and bottom panels, a retaining spring is used to hold the stud in locking position for alignment with receptacle.

Model No.	Part No.	Price ea
1219-24520-SS	SX-520SS	$0.14
1219-24523-SS	SX-523SS	$0.12
1219-24510-SS	SX-510SS	$0.52
1219-24518-SS	SX-518SS	$0.14
1219-24519-SS	SX-519SS	$1.40

SNAP RINGS



A snap ring is used when there is not a lot of pull-out load. This ring is expandable easily installed with pliers or screwdriver and takes little space.

Model No.	Part No.	Price ea
1219-R3-SS	SR3SS	$0.31
1219-R4-SS	SR4SS	$0.23
1219-R5-SS	SR5SS	$0.20
1219-R6-SS	SR6SS	$0.29
1219-R7-SS	SR7SS	$0.10

SPRINGS

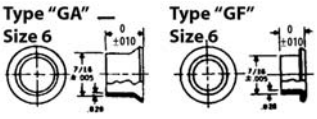




Model No.	Part No.	Price Ea.	Model No.	Part No.	Price Ea.
1219-3150-Z3CT	S3-150	$1.50	1219-5300-Z3Y	S5A-300	$1.93
1219-3175-Z3Y	S3-175	$1.55	1219-6225-Z3Y	S6A-225	$2.15
1219-3200-Z3Y	S3-200	$1.52	1219-6250-Z3Y	S6A-250	$2.88
1219-3225-Z3Y	S3-225	$1.94	1219-6275-Z3Y	S6A-275	$2.85
1219-4220-Z3Y	S4-200	$0.73	1219-6300-Z3Y	S6-300	$2.95
1219-4225-Z3Y	S4-225	$0.68	1219-6400-Z3Y	S6A-400	$3.60
1219-4250-Z3Y	S4-250	$0.93	1219-6425-Z3Y	S6A-425	$2.25
1219-A4200-Z3Y	S4A-200	$0.73	1219-6325-Z3Y	S5A-325	$2.28
S5-325-SURP		$7.50	1219-7250-Z3Y	S7-250	$6.95
1219-A5200-Z3Y	S5A-200	$1.25			
1219-A5225-Z3Y	S5A-225	$0.94			
1219-A5250-Z3Y	S5A-250	$1.12			
1219-A5275-Z3Y	S5A-275	$1.21			

The dash number represents the height ("H" dimension) of the spring.

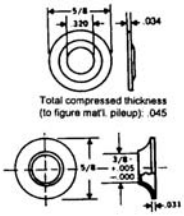
FULL GROMMETS



A full grommet is used when protection of the hole is a definite consideration. It protects panel finish and reduces stud play. A tool is required for installation. The "GA" type full grommet is used with a protruding head stud, and the "GF" type with a flush head stud.

ALUMINUM

Outer Panel Thickness	Type "GA"			Type "GF"		
	Model No.	Part No.	Price	Model No.	Part No.	Price
.015 - .025	1271-3175	GA3-175	$3.25	---	N/A	---
.026 - .050	1271-200	GA3-200	$1.84	---	N/A	---
.051 - .094	1271-250	GA3-250	$1.79	---	N/A	---
.015 - .025	---	GA4-225	--	1276-4125	GF4-125	$5.70
.026 - .050	1271-4250	GA4-250	$1.45	1276-4150	GF4-150	$0.70
.051 - .075	1271-4275	GA4-275	$1.25	1276-4175	GF4-175	$3.95
.076 - .100	1271-4300	GA4-300	$2.25	1276-4200	GF4-200	$8.50
.031 - .062	1271-5312	GA5-312	$1.20	1276-5175	GF5-175	$0.89
.063 - .094	1271-5350	GA5-350	$0.45	1276-5225	GF5-225	$1.73
.095 - .125	1271-5375	GA5-375	$1.64	1276-5250	GF5-250	$2.45
.040 - .065	1271-6350	GA6-350	$1.88	---	GF6-218	---
.066 - .100	1271-6375	GA6-375	$2.20	1276-6250	GF6-250	$2.00
.101 - .135	1271-6425	GA6-425	$2.41	---	---	---
.050 - .095	1271-7375	GA7-375	$5.35	1276-7250	GF7-250	$5.35
.096 - .156	---	GA7-475	---	---	GF7-325	---
.157 - .218	1271-7525	GA7-525	---	1276-7400	GF7-400	---



HALF GROMMETS

A half grommet does not break easily, and it flattens but guarantees hold of the stud. It is used when protection of the hole is not a consideration, but protection of panel finish might be. The "GH" type half grommet is installed with a tool; the "GP" type is pushed on by hand.

Type "GP" Thermoplastic			Type "GH" Aluminum		
Model No.	Part No.	Price ea	Model No.	Part No.	Price ea
127P-3B	GP3B	$0.20	127H-3	GH3	$0.40
127P-4B	GP4B	$0.12	127H-4	GH4	---
127P-5B	GP5B	$0.11	127H-5	GH5	$0.43
127P-6B	GP6B	$0.22	127H-6	GH6	$0.30
127P-7B	GP7B	---	127H-7	GH7	$1.47



DZUS® FASTENER SPRING ADJUSTER

The MS-7301 tool easily adjusts DZUS® fastener springs for a perfect fit every time. Great for Warbirds and vintage aircraft. Bend springs in or out with a few simple turns. P/N 04-00957..... **$42.75**

DZUS® DRIVER

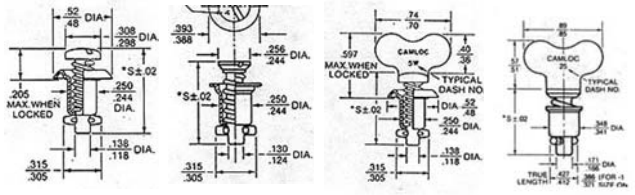
The MS-Driver is a great tool for locking and unlocking DZUS® fasteners. The large handle gives you plenty of torque and is comfortable in the hand. The blade has a radius end to fit fastener slots better than a standard screwdriver and is heat treated steel with zinc plating for long life. P/N 04-00958.....**$18.95**



Prices Subject to Change Without Notice

CAMLOC FASTENERS

The 2600 and 2700 series Camloc fasteners exceed requirements for MIL-F-5591, Style 3, Size 2. Shear and tensile strength: 300 lbs. (ultimate), 200 lbs. (rated). Studs and washers listed are made of steel. The receptacles are made of copper base alloy. All components listed are rated to 450° F. The 4002 series fasteners are considerably stronger than the 2600 and 2700 series. Shear and tensile strength: 1050 lbs. (ultimate), 700 lbs. (rated). All studs and grommets listed are made of steel. Rated to 450° F.



2600 *2700* *2600 WING* *4002 WING*

2600 SERIES STUDS

Dash No.	CAD Plated 2600 Slot Price Ea	CAD Plated 26S8 Phillips Price Ea	Stainless Dash No.	Stainless 2600 Slot Price Ea	CAD Plated Wing CAD Plated	CAD Plated Price Each
-1	$4.55	$6.60	-1S	$11.50	---	---
-2	$3.40	$2.90	-2S	$5.65	2600-2W	$8.50
-3	$2.15	$2.45	-3S	$3.70	2600-3W	$7.65
-4	$2.20	$2.35	-4S	$3.35	2600-4W	$8.65
-5	$2.14	$2.25	-5S	$3.65	2600-5W	$9.65
-6	$2.11	$2.77	-6S	$4.40	2600-6W	$9.50
-7	$2.40	$2.85	-7S	$4.75	2600-7W	$7.95
-8	$2.50	$2.78	-8S	$5.35	2600-8W	$8.75
-9	$3.45	$3.35	-9S	$4.35	2600-9W	$4.95
-10	$4.35	$3.95	-10S	$10.50	2600-10W	$11.50
-11	$4.40	---	---	---	2600-11W	$6.50
-12	$4.90	---	---	---	2600-12W	$11.90
-13	$3.95	---	---	---	---	---
-14	$3.35	$5.75	---	---	2600-14W	---

2700 SERIES STUDS

Dash No.	CAD Plated 2700 Slot Price Ea	CAD Plated 27S3 Phillips Price Ea	Stainless Dash No.	Stainless 2700 Slot Price Ea
-1	$9.50	$2.95	-1S	$5.35
-2	$4.35	$3.35	-2S	$2.20
-3	$4.35	$4.35	-3S	$7.50
-4	$8.95	$3.55	-4S	$3.95
-5	$3.45	$2.85	-5S	$3.65
-6	$4.45	$3.10	-6S	$3.55
-7	$3.75	$3.99	-7S	$3.95
-8	$4.35	$5.35	-8S	$4.35
-9	$5.65	$4.50	-9S	$4.35
-10	$4.35	$3.65	-10S	$4.80
-11	$3.35	$5.35	-11S	$16.75
-12	---	$4.35	-12S	$4.90
-13	---	$8.95	-13S	---
-14	---	$12.95	---	---

4002 SERIES STUDS

Dash No.	CAD Plated / Stainless 4002 CAD Plated Slot Price Ea	40S5 CAD Plated Phillips Price Ea	SS Phillips 40S5	Price Each	Dash No.	4002 SS Slot Price Ea	Wing CAD Plated	Price Each
-2	$5.25	$3.99	40S5-2S	$6.85	-2S	$6.75	4002-2W	$17.50
-3	$3.45	$4.35	40S5-3S	$3.55	-3S	$9.95	4002-3W	$16.50
-4	$3.50	$3.35	40S5-4S	$2.75	-4S	$5.25	4002-4W	$10.50
-5	$3.35	$3.55	40S5-5S	$2.75	-5S	$4.85	4002-5W	$11.75
-6	$3.35	$3.80	40S5-6S	$2.80	-6S	$6.50	4002-6W	$11.85
-7	$2.75	$5.95	40S5-7S	$2.84	-7S	$6.50	---	---
-8	$4.45	$3.50	40S5-8S	$3.35	-8S	$8.50	4002-8W	$11.50
-9	$3.50	$3.45	40S5-9S	$5.35	-9S	$6.90	4002-9W	$10.00
-10	$5.35	---	40S5-10S	$6.95	---	---	4002-10W	$11.65
-11	$4.80	---	---	---	---	---	4002-11W	---
-12	$4.55	---	---	---	---	---	4002-12W	$17.65
-13	$3.70	---	---	---	---	---	---	---
-14	$5.15	$5.35	---	---	---	---	---	---
-15	$4.85	$4.85	---	---	---	---	---	---
-16	$8.85	---	---	---	---	---	---	---
-17	$17.50	---	---	---	---	---	---	---

Stainless Steel Wing Stud..... P/N 4002-5SW..... **$18.50**

RECEPTACLES

2600 Series - Small enough to fit in limited mounting space and light weight. All of these fasteners have a 600# ultimate tensile load capacity. 4200 Series - The Modern Standard in Quick Release Fastening Systems. They have an 800# working strength and 1050# Ultimate Tensile load capacity.

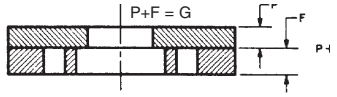


Rivet Holes	2600, 2700 Series Part No.	Price Each	4002 Series Part No.	Price Each
Plain	212-12N	$4.35	214-16N	$4.55
Cntersunk	212-12ND*	$3.99	214-16ND*	$5.35
Plain	Floating Bronze		244-16	$4.65

2600 / 2700 SERIES STUD LENGTH SELECTION

Total material thickness "G" consists of the thickness of all materials to be fastened. This must include the thickness of the material "P" to which the stud assembly is attached, the material "F" to which the receptacle is attached plus gaskets (if used) and allowance for paint or other protective finishes. If the total thickness is near the upper limit of the stud grip range, the next longer stud should be used. This will still maintain positive locking of the fastener under vibration.

P (panel thickness)..... ***.062***
F (frame thickness..... ***+ .062***
GRIP (total thickness)..... ***= .124***



STUD SELECTION TABLE Using 212-12 Receptacle		
Total Grip Thickness	Use 2600	Use 2700
.020 - .059	2600-1	2700-1
.060 - .089	2600-2	2700-2
.090 - .119	2600-3	2700-3
.120 - .149	2600-4	2700-4
.150 - .179	2600-5	2700-5
.180 - .209	2600-6	2700-6
.210 - .239	2600-7	2700-7
.240 - .269	2600-8	2700-8
.270 - .299	2600-9	2700-9
.300 - .329	2600-10	2700-10
.330 - .359	2600-11	2700-11
.360 - .389	2600-12	2700-12
.390 - .419	2600-13	2700-13
.420 - .449	2600-14	2700-14

4002 SERIES (LARGE HEAD) STUD SELECTION

To select the proper length stud, first select the grommet, for example 4002-G. Next, select the receptacle, such as 214-16. After determining the total grip thickness, use the grommet column under which the selected grommet and receptacle appear. Use the dash number which appears opposite the determined total grip thickness.

Example: If the total determined grip thickness "G" was. 144, the stud dash number for the above 4002-G grommet and 214-16 receptacle would be -4. The stud part number would be 4002-4.

Total Grip Thickness Range "G"	Stud Dash Number 4002-G Grommet & 214-16 Receptacle	4002-N, 4002-0 Grommet & 214-16 Receptacle
.021 - .050	--*	-1
.055 - .080	--*	-2
.081 - .110	-2*	-3
.111 - .140	-3	-4
.141 - .170	-4	-5
.171 - .200	-5	-6
.201 - .230	-6	-7
.231 - .260	-7	-8
.261 - .290	-8	-9
.291 - .320	-9	-10
.321 - .350	-10	-11
.351 - .380	-11	-12
.381 - .410	-12	-13
.411 - .440	-13	-14
.441 - .470	-14	-15
.471 - .500	-15	-16
.501 - .530	-16	-17
.531 - .560	-17	-

****4002-G grommet requires .090" minimum grip.***

2600, 2700 SERIES RETAINING WASHERS

Retaining washers are required for studs of -5 length or greater. Use split washer 2600-SW2 where it is desirable to have the stud fall away for minimum internal projection. Use internal tooth washer 2600-LW where it is desirable to retain the stud assembly rigidly.

P/N 2600-SW-2 ..... **$0.52** P/N 2600-LW..... **$0.23**

4002 SERIES GROMMETS & SNAP RINGS



Description	Part No.	Price ea.
CAD Plated		
Flush Grommet	4002-G	$1.40
Flush Grommet	4002-H	$2.25
Plus-Flush Grommet	4002-N	$1.70
Stud Retaining Grommet	4002-O	$1.73
High Shear Flush Grommet	40G1-5	$4.35
Wide Area Grommet	4002-N3	$4.35
Grommet Retaining Ring	R4G	$0.42
Camloc Retaining Ring	4002-SW	$1.46
High Shear Grommet Retaining Ring	R4T	$2.43
Stainless		
High Shear Grommet Retaining Ring	40G26-1	$1.34
Flush Grommet	4002-GS	$1.95
Flush Grommet	4002-HS	$4.35
Plus Flush Grommet	4002-NS	$2.36
Flush Grommet	4002-OS	$3.55

HA

CAMLOC FASTENERS – COWLING KITS

COWLING KITS

Aircraft Make & Model	Stainless Slotted P/N	Stainless Slotted Price	Stainless Phillips P/N	Stainless Phillips Price	Cad-Plated Phillips P/N	Cad-Plated Phillips Price
Aerosport			04-00327 A	$33.25		
Aero Commander 690	04-00286 B	$1,987.00			04-00336 B	$1,221.00
Aerostar	04-00287 B	$1,479.00			04-00337 B	$791.00
Beech Baron B55 ('69 SN TC1230) A	04-00288 B	$657.00	04-00329 B	$494.95		
Beech Baron B58	04-00289 B	$408.95			04-00338 B	$231.95
Beech Baron P58	04-00291 B	$560.00				
Bellanca Scout 8GCBC	04-00292 A	$69.25				
Bellanca Viking	04-00293 B	$260.95			04-00339 B	$140.95
Cessna 150 (1967-77)	04-00294 A	$52.25	04-00331 A	$46.00		
Cessna 172 (1967-82)	04-00297 A	$57.25	04-00332 A	$57.00		
Cessna 172RG (1984)	04-00298 B	$437.95			04-00341 B	$249.95
Cessna 172XP	04-00299 B	$202.95			04-00342 B	$119.95
Cessna 177	04-00301 A	$56.75	04-00333 A	$58.50		
Cessna 182 (1961-69)	04-00303 B	$349.95				
Cessna 182 (1971 SN 60752)	04-00305 B	$348.95	04-00334 B	$269.95	04-00343 B	$192.95
Cessna 182 (1973 & up)	04-00307 B	$188.95			04-00344 B	$126.95
Cessna 182RG	04-00309 B	$520.00	04-01942 B	$441.95	04-01943 B	$275.95
Cessna 206	04-00310 B	$267.95			04-00347 B	$161.95
Cessna 210	04-00311 B	$376.95			04-00348 B	$199.95
Cessna 310K	04-00312 B	$1,506.00			04-00349 B	$1,045.00
Cessna 320	04-00313 B	$1,163.00			04-00351 B	$702.00
Cessna 337	04-00315 B	$916.00			04-00352 B	$593.00
Cessna 340	04-00317 B	$1,283.00			04-00353 B	$659.00
Cessna 414	04-00319 B	$884.00			04-00354 B	$521.00
Cessna 421	04-00320 B	$1,672.00			04-00355 B	$894.00
Mooney 20J	04-00321 B	$223.95	Kit contains Southco or Camloc studs, washers, and retainers. The retainer push on tool is only included in Southco Kits. Receptacles are not included. A is for Southco. B is for Camloc.			
Piper PA18	04-00322 A	$41.95				
Piper Cheyenne	04-00006 B	$661.00				
Piper Comanche Twin (Nose)	04-00324 A	$72.25	***The nose cowl components, if applicable, are not included in any cowling kit.***			
Piper Comanche Twin	04-00325 B	$1,169.00				

MS213 ADJUSTABLE DEPTH RECEPTACLE



- For 2600/2700/2800 Series C-Spec Fasteners.
- Any one stud length fits a wide range of panels.
- The MS213 is an exact replacement for 212-12 receptacles.
- Standard aluminum MS213A receptacles are lighter than 212 fixed depth receptacles with no sacrifice in strength ratings.
- Economical. Simply inventory one stud length for all applications.
- Fully compatible with existing C-Spec (Camloc®) designs.
- FAA approved for aircraft use under TSO-C-148.

Description	Part No.	Price
Receptacle, 2600/2700/2800, Rigid Receptacle, Adjustable Depth, Plain Rivet Holes, Aluminum	04-02069	$5.75
Receptacle, 2600/2700/2800, Adjustable Depth, Rigid Receptacle, Plain Rivet Holes, Stainless Steel	04-02071	$6.50
Receptacle, 2600/2700/2800, Adjustable Depth, Rigid Receptacle, Csk Rivet Holes, Aluminum, Dimpled	04-02072	$5.75
Receptacle, 2600/2700/2800, Adjustable Depth, Rigid Receptacle, Plain Rivet Holes, Steel	04-02073	$5.50
Receptacle, 2600/2700/2800, Adjustable Depth, Rigid Receptacle, Csk Rivet Holes, Stainless Steel, Dimpled	04-02074	$6.50

CAMLOC FASTENER TOOLS



PLIERS P/N 4P3 ..... **$16.95**



2600-LW LOCKWASHER TOOL
P/N T98-1 ..... **$26.85**



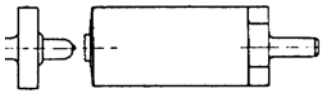
4002 SERIES SNAP RING TOOL
P/N 04-01529 ..... **$23.50**



RECEPTACLE DRILL JIG
For 4002 Series and 2600/2700 Series receptacles
P/N 01-00155 ..... **$41.70**



HOLE SAWS
Stock Sizes:
P/N 04-01516 (.471" dia.)..... **$349.00**
P/N 04-01517 (.687" dia.)..... **$370.00**
Other diameters available



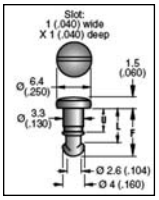
2S200 SERIES DIMPLING TOOL
P/N 2S200M-1
1/4"x9/16"L **$429.00**
P/N 2S200F-1
5/16"x5/8""L **$659.00**
P/N 2S200M-2
5/16"x5/8"L **$624.00**



4002 SERIES MEASURING TOOL
This handy tool is all stainless steel and engraved with Camloc fastener lengths from -2 to -11. Simply slide the Camloc fastener into the tool to determine the size (dash number) of the Camloc. A must for mechanics, paint shops, homebuilders, or anyone working with Camloc fasteners. **Note: Not for use with 2600/2700 Series**
P/N 12-01598 ..... **$16.85**

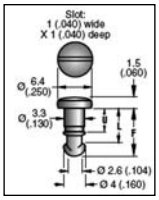
SOUTHCO STUDS

FLUSH SLOTTED



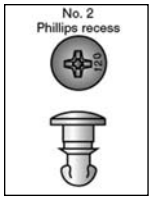
Flush Head #82 Dacrotized Slotted	
Part No.	Price
82-14-120-16	$1.19
82-14-180-20	$0.67
Not stainless. Zinc Plated	
Part No.	Price
82-28-100-16	$0.86
82-28-120-16	$0.75
82-28-140-16	$0.73
82-28-160-16	$1.40
82-28-180-16	$0.87
82-28-200-16	$0.87
82-28-220-16	$0.87
82-28-240-16	$0.84
82-28-260-16	$0.83
82-28-280-16	$1.40
82-28-300-16	$0.80
82-28-320-16	$0.83
82-28-340-16	$0.83

OVAL SLOTTED



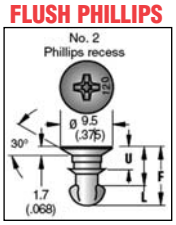
Oval Head #82 Stnls Slotted	
Part No.	Price
82-11-100-20	$1.22
82-11-120-20	$1.04
82-11-140-20	$1.95
82-11-160-20	$1.96
82-11-180-20	$1.95
82-11-200-20	$1.95
82-11-220-20	$1.22
82-11-240-20	$1.97
82-11-280-20	$1.10
Oval Head #82 Dacrotized Slotted	
Part No.	*Price*
82-11-100-16	$0.92
82-11-120-16	$1.38
82-11-140-16	$1.39
82-11-160-16	$1.47
82-11-180-16	$1.47
82-11-200-16	$1.45
82-11-220-16	$1.53
82-11-240-16	$1.38
82-11-260-16	$1.38

OVAL PHILLIPS



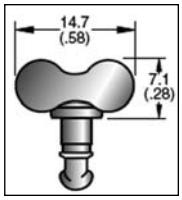
Oval Head #82 Stnls Phillips	
Part No.	Price
82-19-120-20	$1.10
82-19-140-20	$1.10
82-19-160-20	$0.89
82-19-180-20	$1.10
82-19-200-20	$1.06
82-19-220-20	$1.08
Oval Head #85 Stnls Slotted	
Part No.	Price
85-11-100-20	$0.63
85-11-140-20	$1.12
85-11-160-20	$1.29
85-11-180-20	$2.08
85-11-200-20	$1.12
85-11-220-20	$1.13
85-11-240-20	$1.25
85-11-260-20	$1.30
85-11-280-20	$2.04
85-11-300-20	$2.10

FLUSH PHILLIPS



Wing Head #85 Zinc plate, chromate plus sealer	
Part No.	Price
85-12-140-16	$1.16
85-12-160-16	$1.07
85-12-180-16	$1.05
85-12-200-16	$1.03
85-12-220-16	$1.64
85-12-240-16	$1.07
85-12-260-16	$1.13
85-12-280-16	$1.06
85-12-300-16	$0.93
85-12-320-16	$0.93
85-12-340-16	$0.93
85-12-360-16	$1.03
85-12-380-16	$0.93
85-12-400-16	$0.93

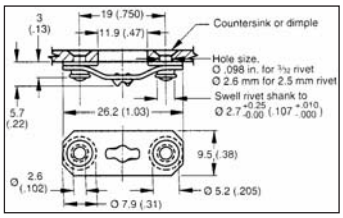
WING HEAD

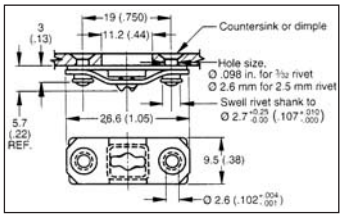


Wing Head #82 Dacrotized	
Part No.	Price
82-12-100-16	$1.76
82-12-120-16	$1.69
82-12-140-16	$1.70
82-12-160-16	$1.65
82-12-180-16	$1.66
82-12-200-16	$0.95
82-12-220-16	$1.70
82-12-240-16	$1.70
82-12-300-16	$1.66
82-12-340-16	$0.97

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#82 SOUTHCO RECEPTACLES

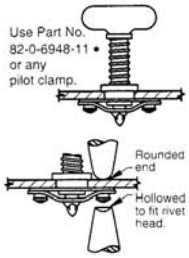




FLOATING FOR RIVETING W/O BASE - This space saving stainless steel receptacle offers optimum weight savings by eliminating base.
P/N 82-35-295-20 ..... **$1.10/ea**

FLOATING FOR RIVETING W/ BASE - Full-floating dacrotized steel receptacle is mounted to inside panel with two 3/32" rivets. Compact dimensions save space and weight.
P/N 82-35-302-15 ..... **$0.55/ea**

FIXED FOR WELDING WITH BASE - Exactly the same as the receptacle with base above except this receptacle features two welding studs for installation by welding rather than rivets.
P/N 82-35-303-15 ..... **$2.15/ea**



CLIP-ON RECEPTACLES - These versatile receptacles will fit material thickness from .020 to .190 by simply slipping over the hole and clipping in place. Easily removed as well, these receptacles do not require welding or riveting.
P/N 82-47-113-200 (Stainless Steel) **$1.33/ea**
P/N 82-47-113-150 (Steel) **$0.32/ea**

RUBBER VIBRATION ISOLATION RECEPTACLES - Use these receptacles where it is necessary to isolate vibration between panels.
P/N 82-35-306-10 ..... **$9.85**

#85 RECEPTACLES

RIVET TYPE - Receptacle Spring: 1064 steel, dacrotized
Base: 1010 steel, dacrotized. P/N 85-35-295-15 ..... **$1.30**

RECEPTACLE SPRING: 17-7 PH, stainless steel, passivated
BASE: 305 stainless steel, passivated. P/N 85-35-295-20 ..... **$3.60/ea**

WELD TYPE - Receptacle Spring: 1064 steel, dacrotized
Base: 1010 steel, dacrotized Rivet: steel, copper-plated.
P/N 85-35-296-15 ..... **$2.75/ea**

CLIP-ON TYPE - 17-7 PH stainless steel, passivated.
P/N 85-47-101-20 ..... **$1.55/ea**

DETERMINING SOUTHCO STUD PART NO.

Stud Length Material Thickness	Selection Chart Thickness Size
.090 - .109	100
.110 - .129	120
.130 - .149	140
.150 - .169	160
.170 - .189	180
.190 - .209	200
.210 - .229	220
.230 - .249	240
.250 - .269	260
.270 - .289	280

Southco studs are commonly used to secure Cessna cowlings, particularly on models 150, 172, and 177. We stock the popular Southco No. 82 1/4 turn fastener studs, receptacles, and accessories.

TO DETERMINE PART NO.

Select Stud part number using chart above. Example:

82 - 14 - 220 - 16

Southco Fastener Number | Head Type (Slotted) | Stud Length | Material Type (Dacrotized)

SOUTHCO SEALING WASHER – This black synthetic washer is used under head of Southco Studs.....P/N 82-43-201-38.....**$0.22/ea**

SOUTHCO EJECTOR SPRING – This stainless steel spring enables the stud head to stand away from the panel when the unit is not fastened. When using the ejector spring, add two grip lengths to stud length to allow for spring and wear washer. .....P/N 43-13-1-24.....**$0.16/ea**

SOUTHCO WEAR WASHER – A plastic washer to reduce wear around the Southco stud.When using wear washer add one grip length to stud length selection. P/N 82-46-101-39 .....**$0.18/ea.**

SOUTHCO SPLIT RING RETAINER – Can be installed by hand or tool, and is fabricated from stainless steel.P/N 82-32-101-20.....**$0.09/ea**

SOUTHCO SPLIT RING RETAINER TOOL - Designed to install Southco split ring retainers. P/N 82-0-7596-11 .....**$27.65/ea**

SOUTHCO PUSH-ON RETAINER – designed for installation using the retainer tool below. Stainless.....P/N 82-32-201-20.....**$0.10/ea**
Plastic.....P/N 82-32-301-12.....**$0.10/ea**

SOUTHCO PUSH-ON RETAINER TOOL – An easy-to-use tool quickly installs Southco push-on retainers P/N 82-0-22542-11 .....**$19.90/ea**

SOUTHCO PUSH-ON RETAINER TOOL - An easy-to-use tool quickly installs Southco 85 Series push-on retainers. P/N 85-0-22543-11 .....**$31.50**

#85 RETAINERS

Split Ring Hand or tool installation. Stainless steel.
P/N 85-34-101-20 .....**$0.13/ea**
Push-On Tool installation only. 302 Stainless Steel, Passivated
P/N 85-34-201-20 .....**$0.14/ea**
Nylon Black .P/N 85-34-301-12.....**$0.12/ea**

#85 THERMOPLASTIC (CUPPED NYLON) WEAR WASHER

Natural color. Order stud one size longer than size you would use without washer. Adjustment Formula: Add 0.51/.020 to your total material thickness. P/N 85-46-101-39 .....**$0.17/ea**

A-SPEC FASTENERS

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A-SPEC FASTENERS



ALoc Fasteners are common on Beechcraft airplanes and latches on many cowlings. The design consists of a simple stud with a pin pressed in the shank. The pin must be installed after the stud is installed and removed prior to removing the stud. Some panel applications for #2, #5, and #7 studs may use a wear grommet. Unlike a ZLoc Fastener, this grommet probably does not require replacement when replacing studs. ALoc Fasteners are made in various stud blank lengths and this length is indicated by the 1st Dash#. Each length can have up to 10 2nd Dash#s, or grip sizes. The 2nd Dash# indicates the maximum grip range in .010 increments. Note that the ALoc design has the least grip range of all 1/4 turn fasteners. Skybolt primarily stocks certain sizes in Stainless Steel for replacement purposes only. Pin Installation Tools are expensive and hard to obtain. To remove an ALoc Stud, clip or die grind the pin enough to remove. Modify a standard pair of Vise Grip Pliers with a die grinder by grinding a slot in one jaw to provide relief when the pin is pressed through the stud.

MS P/N	Our P/N	Size/Head Style	Grip	"A"	Total Length	Price
112060-1-060	04-00931	#2 Flush	.051-.060	.200	.359	**$4.35**
112060-1-080	04-00933	#2 Flush	.071-.080	.220	.359	**$4.35**
112060-1-090	04-00934	#2 Flush	.081-.090	.230	.359	**$3.75**
294186-1-080	04-00936	#5 Flush	.071-.080	.267	.500	**$4.60**
294186-1-100	04-00937	#5 Flush	.091-.100	.287	.500	**$4.35**
294186-2-180	04-00938	#5 Flush	.171-.180	.367	.609	**$4.35**
294186-2-190	04-00939	#5 Flush	.181-.190	.377	.609	**$3.65**
294186-2-200	04-00940	#5 Flush	.191-.200	.387	.609	**$4.35**
294186-2-210	04-00941	#5 Flush	.201-.210	.397	.609	**$4.20**
294186-2-230	04-00942	#5 Flush	.220-.230	.417	.609	**$3.55**
294186-2-240	04-00943	#5 Flush	.231-.240	.427	.609	**$4.35**
294186-2-250	04-00944	#5 Flush	.241-.250	.437	.609	**$4.35**
294290-1-080	04-00945	#5 Round	.071-.080	.267	.500	**$4.35**
294290-1-090	04-00946	#5 Round	.081-.090	.277	.500	**$3.75**
294290-2-170	04-00947	#5 Round	.161-.170	.357	.609	**$3.95**



A-SPEC PINS

Series	Description	Part No.	Price
#2	99785-2 Steel	04-01071	**$0.88**
#2	293274 Stainless	04-01072	**$0.82**
#5	294185 Stainless	04-01074	**$0.75**



A-SPEC RECEPTACLES
(SOLID RECEPTACLE)

Series	Rivet Spacing	Solid Rec. Plain	Price ea.	Solid Rec. Countersink	Our Part No.	Price ea.
#2	3/4"	99871-P098	**Call**	99871-C098	04-00951	**$6.95**
#5	1"	99833-P098	**Call**	99833-C098	---	**Call**
		99833-P130	**Call**	99833-C130	---	**Call**

A-SPEC RECEPTACLES
(FLOATING RECEPTACLE)

Series	Rivet Spacing	Float. Rec. Plain	Our Part No.	Price ea.	Float. Rec. Countersink	Our Part No.	Price ea.
#2	3/4"	--	--	**Call**	99967-C098	--	**Call**
#5	1"	99947-P098	04-00954	**$5.25**	99947-C098	04-00956	**$8.95**
		99947-P130	04-00955	**$8.50**	99947-C130	--	**Call**



A-SPEC GROMMETS

May not require replacement when installing new studs.

Series	Panel Thick.	Flush Head	Part No.	Price
#2	up to .040	295846-1	04-00962	**$3.70**
	.041-.080	295846-2	04-00963	**$3.80**
#5	.041-.121	295250-2	04-00964	**$3.70**
	.122-.201	295250-5	04-00965	**$2.50**

FLARING TOOLS FOR A-SPEC GROMMETS

These tools are required for replacing any A-Lock grommet.

MS P/N	Our P/N	Type	Price
MS29693/29695	04-00959	#2 Flush	**$33.50**
MS9529/29667	04-00960	#5 Flush	**$29.95**
MS9529/29770	04-00961	#5 Round	**$29.95**



SKYBOLT CESSNA SK2003 ADJUSTABLE COWLING MOUNT

The SK2003-51ADJ Platemount will accept #82 Southco; 2000 and 4000 Series CLoc® or Camloc® Fasteners common to all Cessna cowlings. P/N 08-15971..... **$34.75**

BEECH BONANZA COWLING FASTENER CONVERSION KITS



STC approved cowling fastener upgrade kit for B33 and B35 aircraft. Kit is stainless steel and uses MilSpec's exclusive adjustable depth receptacles for an easy , yet very precise fit. The finish on this fastener is bright and shiny. Complete, easy to follow instructions and STC copy included with kit.

Note: Two tools are required for the 40 series kits (Camloc Pliers and 4002 Series Snap Ring Tool). One tool is required for the 28 series kits (2600-LW Lockwasher Tool).

Beech Kit No.	Model	Serial No.	Description	Price
04-00966	33	CD1-350	Gill conversion 2700 series	**$196.95**
	35	D1-6567	Slotted head (looks original)	
04-00967	33	CD1-350	Gill conversion 27S3 series	**$215.95**
	35	D1-6567	Phillips head	
04-00968	33	All	Main Cowling Conversion	**$98.50**
	35	D1-9068	4002 Series Slotted head	
04-00969	33	All	Main Cowling Conversion	**$127.95**
	35	D1-9068	40S5 Series Phillips head	
04-00971	33	CD351-on	Gill Conversion	**$228.95**
	35	D6562-on	4002 Series	
	36	E1 -on	Phillips head	
04-02080	33	CD351 On	Lower Grill Door (Check Panel)	**$228.95**
	35	D6568 On	Upgrade 4002 Series Slotted	
	36	E1 On	C-Spec	

CESSNA CAMLOC FASTENER COWLING KITS

Model	Year	Serial	Description	P/N	Price
CESSNA 150					
C150 A-M	67 On	ALL	4000/2600 Stainless Phillips Complete Conversion	04-01542	**$421.95**
			4000 Stainless Phillips Firewall Only Conversion	04-01543	**$327.95**
CESSNA 172					
C172H-P	67-81	54893-75034	4000 Stainless Phillips Complete Conversions	04-01548	**$579.00**
			4000 Stainless Phillips Firewall Only Conversions	04-01549	**$362.95**
			4000 Stainless Phillips Side Only Conversions	04-01550	**$197.95**
C172P-Q	82-86	75035 On	4000 Stainless Phillips Complete Conversions	04-01551	**$657.95**
			4000 Stainless Phillips Firewall Only Conversions	04-01552	**$362.95**
			4000 Stainless Phillips Side Only Conversions	04-01553	**$196.95**
C172XP-XPII	77-81	2000-3454	4000 Stainless Phillips Complete Conversions	04-01554	**$656.95**
			4000 Stainless Phillips Firewall Only Conversions	04-01555	**$421.95**
CESSNA 177					
C177A-B and C177 RG	71-78	00001 - 02752 and 00001 - 1366	4000 Stainless Phillips Complete Conversion	04-01562	**$568.50**
			4000 Stainless Phillips Firewall Only Conversion	04-01563	**$451.95**
			4000 Stainless Phillips Side Only Conversion	04-01564	**$120.95**
CESSNA 182					
C182	56-60	33000-53007 Screw Cowlings	2800 Stainless Phillips Complete Conversion	04-01566	**$466.95**
C182P-R	73-86	61426-68542	4000 Stainless Phillips Complete Conversion	04-01568	**$567.00**
			4000 Stainless Phillips Firewall Only Conversion	04-01569	**$478.95**



SKYBOLT ADJUSTING RECEPTACLE TOOL

Use for Skybolt Adjusting Receptacles to lock and unlock inserts.

P/N 08-15972..... **$12.50**

C-SPEC FASTENERS

C-SPEC 2600 SERIES STUDS



Zinc Plated Steel Slotted		
Dash No.	Part No.	Price
-1	04-03579	$3.60
-6	04-03522	$4.35
-10	04-03512	$3.60
-11	04-03568	$4.70
-14	04-03584	$4.35

Zinc Plated Steel Phillips Head		
Dash No.	Part No.	Price
-1	04-03555	$3.90
-8	04-03514	$3.55
-9	04-03504	$4.35
-10	04-03556	$3.95

Stainless Steel Wing Stud		
Dash No.	Part No.	Price
-8	04-03532	$7.95

Stainless Steel Slotted		
Dash No.	Part No.	Price
-1	04-03551	$4.20
-3	04-03552	$4.15
-5	04-03513	$3.75
-6	04-03553	$4.25
-7	04-03502	$3.85
-8	04-03554	$4.25
-10	04-03492	$4.35

Zinc Plated Steel Wing Stud		
Dash No.	Part No.	Price
-6	04-03531	$8.65
-7	04-03503	$7.50
-10	04-03528	$8.50
-11	04-03583	$7.50
-12	04-03529	$7.85
-14	04-03530	$7.75

C-SPEC 2700 SERIES STUDS



Zinc Plated Steel Phillips Head		
Dash No.	Part No.	Price
-2	04-03508	$3.90
-3	04-03561	$3.35
-4	04-03586	$3.35
-8	04-03590	$3.90
-12	04-03535	$4.75

Stainless Steel Phillips Head		
Dash No.	Part No.	Price
-2	04-03499	$4.90

Stainless Steel Slotted		
Dash No.	Part No.	Price
-6	04-03585	$5.35

C-SPEC 4000 SERIES STUDS



Zinc Plated Steel Slotted		
Dash No.	Part No.	Price
-4	04-03510	$3.35
-6	04-03577	$3.75
-7	04-03517	$3.50
-9	04-03578	$3.55
-10	04-03515	$3.55
-11	04-03505	$3.80
-12	04-03506	$4.75
-13	04-03539	$4.95
-14	04-03540	$4.95
-15	04-03509	$4.00
-16	04-03541	$5.35

Stainless Steel Slotted		
Dash No.	Part No.	Price
-2	04-03562	$3.80
-3	04-03516	$3.75
-4	04-03563	$5.35
-6	04-03592	$3.95
-7	04-03587	$3.80
-8	04-03564	$3.95
-9	04-03565	$3.95

Zinc Plated Steel Wing Stud		
Dash No.	Part No.	Price
-4	04-03543	$7.75
-5	04-03544	$6.95
-8	04-03545	$7.90
-12	04-03538	$7.95

Stainless Steel Wing Stud		
Dash No.	Part No.	Price
-4	04-03542	$9.50
-5	04-03537	$9.50

Stainless Steel Phillips Head		
Dash No.	Part No.	Price
-6	04-03581	$4.25
-10	04-03588	$4.95



4000 SERIES GROMMETS & RETAINING RINGS

Material	Description	Max Panel Thickness	Part No.	Price
Stainless Steel	5/8" Face Diameter / Flush	065"	04-03507	$2.50
Stainless Steel	5/8" Face Diameter / Flush	.095"	04-03591	$3.35
Zinc Plated Steel	5/8" Face Diameter / Low Profile	.065"	04-03550	$1.65
Zinc Plated Steel	7/8" Face Diameter / Low Profile	.065"	04-03518	$2.15
Stainless Steel	5/8" Face Diameter Grommet, Low Profile	.065"	04-03493	$1.65
Stainless Steel	5/8" Face Diameter Grommet, Low Profile	095"	04-03473	$1.65

RETAINING RINGS

MS No.	Description	Part No.	Price
MS40G26-1	Retainer, Standard, Stainless Steel	04-03546	$0.65
MS4002-SW	Stud Retainer (-16 and longer), Stainless Steel	04-03580	$0.65
MSR4T	Retainer - Phillips Head, Stainless Steel	04-03525	$0.70

RECEPTACLES



2600/2700 SERIES

Fixed Depth Receptacles
04-03475..... **$3.80**



4000 SERIES

MS214-16N, Steel, Rigid, Fixed Depth, Narrow
04-03015..... **$4.40**

MS214-16ND, Steel, Rigid, Fixed Depth, Narrow, CSK
04-03549..... **$5.95**

STUD SELECTION CHARTS

The charts below have the stud dash number in the far left column. This is the number that is stamped in the head of the stud. The two middle columns show the Total Material Thickness range (TMT) of each stud length when using Fixed depth or Adjustable depth receptacles. The far right column shows the S dimension for each dash number so you can easily measure and replace an existing stud. Dimensions are in inches.

2600 AND 2700 SERIES

Stud Dash Number	TMT Using Fixed Depth Receptacles	TMT Using Adjustable Depth Receptacles	2600 Series Total Stud Length *S Dimension	2700 Series Total Stud Length *S Dimension
-1	.030 - .059	.010 - .370	0.76	0.61
-2	.060 - .089	.040 - .400	0.79	0.64
-3	.090 - .119	.070 - .430	0.82	0.67
-4	.120 - .149	.100 - .460	0.85	0.70
-5	.150 - .179	.130 - .490	0.88	0.73
-6	.180 - .209	.160 - .520	0.91	0.76
-7	.210 - .239	.190 - .550	0.94	0.79
-8	.240 - .269	.220 - .580	0.97	0.82
-9	.270 - .299	.250 - .610	1.00	0.85
-10	.300 - .329	.280 - .640	1.03	0.88
-11	.330 - .359	.310 - .670	1.06	0.91
-12	.360 - .389	.340 - .700	1.09	0.94
-13	.390 - .419	.370 - .730	1.12	0.97
-14	.420 - .449	.400 - .760	1.15	1.00
-15	.450 - .479	.430 - .790	1.18	1.03
-16	.480 - .509	.460 - .820	1.21	1.06
-17	.510 - .539	.490 - .850	1.24	1.09
-18	.540 - .569	.520 - .880	1.27	1.12
-19	.570 - .599	.550 - .910	1.30	1.15
-20	.600 - .629	.580 - .940	1.33	1.18

4000 SERIES

Stud Dash Number	TMT Using Fixed Depth Receptacles	TMT Using Adjustable Depth Receptacles	Total Stud Length *S Dimension (+/- .010")
-1	.021 - .050	.010 - .310	0.650
-2	.051 - .080	.040 - .340	0.680
-3	.081 - .110	.070 - .370	0.710
-4	.111 - .140	.100 - .400	0.740
-5	.141 - .170	.130 - .430	0.770
-6	.171 - .200	.160 - .460	0.800
-7	.201 - .230	.190 - .490	0.830
-8	.231 - .260	.220 - .520	0.860
-9	.261- .290	.250 - .550	0.890
-10	.291 - .320	.280 - .580	0.920
-11	.321 - .350	.310 - .610	0.950
-12	.351 - .380	.340 - .640	0.980
-13	.381 - .410	.370 - .670	1.010
-14	.411 - .440	.400 - .700	1.040
-15	.441 - .470	.430 - .730	1.070
-16	.471 - .500	.460 - .760	1.100
-17	.501 - .530	.490 - .790	1.130
-18	.531 - .560	.520 - .820	1.160
-19	.561 - .590	.550 - .850	1.190
-20	.591 - .620	.580 - .880	1.220

SKYBOLT CESSNA COWLING FASTENER KITS

CESSNA COWLING STAINLESS SK203 FASTENER CONVERSION KITS

Attention (**): Retro Kit, for customers who have already converted to CLoc™ fasteners in the past but would like to upgrade to the next generation plate mount. (Does not include fasteners, grommets, etc.) Convert your existing "screw cowling" to CLoc™ ¼ Turn Stainless SK203 Fasteners, STC'd & FAA-PMA approved. Designed around the exclusive SK28S3 Wide Flange CLoc™ Fastener, to convert your Southco Cowlings to Heavy Duty SK40S5 CLoc™ ¼ Turn Stainless Fasteners. Cowling Conversion Kits are designed around the superior SK2003 Cowling Mount with Adjustable Receptacles! **FW = Firewall Kit**

Aircraft	Serial No.	Description	Part No.	Price
C150	17001-64532	Convert C150 59-66 from screws to CLoc 25S4S Complete Kit	04-02179	**$337.50**
C150	64533-79405	Convert C150G-M 67-On to CLoc 40S5S/28S3S Complete Kit	08-00666	**$489.00**
C150	64533-79405	Convert C150G-M 67-On to CLoc 40S5S (FW & Sides)	04-02182	**$739.00**
C150	64533-79405	Convert C150G-M 67-On to CLoc 40S5S (FW Only)	04-02258	**$447.00**
C150	64533-79405	Convert C150G-M 67-On to CLoc 40S5S (Sides Only)	04-02180	**$133.95**
C172	28000-54892	Convert C172 56-66 from screws to CLoc 25S4S Complete Kit	04-02185	**$479.00**
C172	54893-75034	Convert C172H-P 67-81 to CLoc 40S5S Complete kit	08-00667	**$737.00**
C172	54893-75034	Convert C172H-P 67-81 to CLoc 40S5S (FW Only)	04-02187	**$482.00**
C172	54893-75034	Convert C172H-P 67-81 to CLoc 40S5S (Sides Only)	04-02186	**$285.95**
C172	75035-76516	Convert C172P-Q 80-85 to CLoc 40S5S Complete Kit	08-00671	$749.00
C172	75035-76516	Convert C172P-Q 80-85 to CLoc 40S5S (FW Only)	04-02189	**$482.00**
C172	75035-76516	Convert C172P-Q 80-85 to CLoc 40S5S (Sides Only)	04-02190	**$285.95**
C172	R1722000-3454	Convert C172XP 77-81 to CLoc 40S5S Complete Kit	04-02191	**$734.00**
C172	R1722000-3454	Convert C172XP 77-81 to CLoc 40S5S (FW Only)	04-02192	**$543.00**
C172	R1722000-3454	Convert C172XP 77-81 to CLoc 40S5S (Sides Only)	04-02193	**$233.95**
C172	80001/8001-On	Replace C172R-S 97-On CLoc 40S5S Complete Kit	04-02195	**$676.00**
C172	80001/8001-On	Replace C172R-S 97-On CLoc 40S5S (FW Only)	04-02196	$487.00
C175	55001-57119	Convert C175 58-62 from screws to CLoc 25S4S Complete Kit	04-02197	**$473.00**
C177	00001-02752	Convert C177A-B,RG 68-78 to CLoc 40S5S Complete Kit	08-00668	**$694.00**
C177	00001-02752	Convert C177A-B,RG 68-78 to CLoc 40S5S (FW Only)	04-02198	**$585.00**
C177	00001-02752	Convert C177A-B,RG 68-78 to CLoc 40S5S (Sides)	04-02199	**$286.95**
C180	30000-50911	Convert C180 53-60 from screws to CLoc 25S4S Complete Kit	04-02202	**$447.00**
C182	33000-53007	Convert C182 56-60 from screws to CLoc 25S4S Complete Kit	04-02203	**$473.00**
C182	61426-68542	Replace C182 73-86 with CLoc 28S3S Complete Kit	04-02204	**$499.00**
C182	61426-68542	Convert C182P-RB 73-86 27S3 to CLoc 40S5S Complete Kit	08-00669	**$612.00**
C182	61426-68542	Convert C182P-RB 73-86 27S3 to CLoc 40S5S (FW)	04-02205	**$584.00**
C150	64533-79405	**Upgrade C-150 Retrofit Kit - Plate Mount	04-02259	**$428.00**
C172	75035-All XP	**Upgrade C-172 all XP Retrofit Kit - Plate Mount	04-02194	**$463.00**
C177	00001-02752	**Upgrade C-177 Retrofit Kit - Plate Mount	04-02201	**$486.00**
C182	61426-68542	**Upgrade C-182 Retrofit Kit - Plate Mount	04-02206	**$503.00**

Note: RET Kits are for customers who have previously installed SK245 Kits and want to convert back to the SK2003 rubber mounts. RET Kits include new SK2003 Mounts, SK2003-AW Alignment Washers and all Hardware (No Studs or Grommets)

BEECH BONANZA & DEBONAIR COWLING REPLACEMENT AND CONVERSION KITS

Skybolt Replacement Fasteners are TSO-C148 approved. Skybolt Conversion Kits are STC'd for both TC A-777 and 3A15 that cover all Model 33, 35, and 36 Bonanza series. Conversion kits include easy to install SK215-435D Adjustable Receptacles that fit the same hole pattern as the original parts. Complete, up-to-date installation instructions, STC, along with Form 337 statement of conformance included.

Notes:
1: Includes studs and grommets.
2: Uses easy to install SK215-435D adjustable receptacles.
3: Includes studs and pins (no grommets). If grommets installed, they do not require removal to install new studs.
4: Slotted 2700 studs (small flange cups).
5: Phillips SK28S3 studs (wide flange).
6: 4000 series studs.

UPPER COWLING KITS

Description	Model Serial Numbers	Part No.	Price
Stainless Dzus Replacement Kit - Upper Cowlings TSO-C148. Tools required See T1 . (Includes studs and grommets.) Note 1	Bonanza 35 D1 thru D9068, Debonair 33 CD1-CD1234, C33A, E33A CE1-CE289	04-02207	**$49.50**
Stainless Phillips CLoc 40P Conversion Kit - Upper Cowlings STC Note 2	Bonanza 35 D1 thru D9068, Debonair 33 CD1-CD1234, C33A, E33A CE1-CE289	04-02208	**$153.75**
Stainless Slotted CLoc 40S Conversion Kit - Upper Cowlings STC Note 3	Bonanza 35 D1 thru D9068, Debonair 33 CD1-CD1234, C33A, E33A CE1-CE289	04-02209	**$154.75**

LOWER CHEEK COWLING KITS

Description	Model Serial Numbers	Part No.	Price
Stainless Airloc #2-090 Replacement Kit- Lower Cheek Cowling TSOC148. Tools requires see T3. (Note 3)	Bonanza 35 D1 thru D6567, Debonair 33 CD1 thru CD350	04-02210	**$81.75**
Stainless Airloc #5-080 Replacement Kit- Lower Cheek Cowling TSOC148. Tools required see T3. (Note 3)	Bonanza 35 D6568 thru D9068, 33 CD351 thru CD1304, CE-1 On, CJ26 On, 36 E1 thru E424	04-02213	**$81.75**
Stainless Airloc #5-100 Replacement Kit- Lower Cheek Cowling TSOC148. See T3	Bonanza V35B D9069 On, 36TC EA1 On, 36 E425 On (Note 3)	04-02215	**$59.75**
Stainless Phillips CLoc 27S Conversion Kit - Lower Cheek Cowling STC Note 4	Bonanza 35 D1 thru D6567, Debonair 33 CD1 thru CD350	04-02212	**$208.95**
Stainless Phillips Cloc 28P Conversion Kit - Lower Cheek Cowling STC Note 5	Bonanza 35 D1 thru D6567, Debonair 33 CD1 thru CD350	04-00971	**$228.95**
Stainless Phillips Cloc 40P Conversion Kit - Lower Cheek Cowling STC. See T2 Note 6	Bonanza 35 D6568 On, 33 CD351 On, CE-1 On, CJ26 On, 36 E1 On	04-02214	**$262.95**
Stainless Slotted Cloc 40S Conversion Kit - Lower Cheek Cowling STC Note 6	Bonanza 35 D6568 On, 33 CD351 On, CE-1 On, CJ26 On, 36 E1 On	04-02080	**$228.95**
Stainless Slotted Cloc 40S Conversion Kit - Lower Cheek Cowling STC Note 6	Bonanza V35B D9069-On, 36TC EA1-On, 36 E425-On	04-02217	**$264.95**

INSTALL TOOLS

SK-A5C - Skybolt #5 Zloc Grommet Tool - Will install A5 studs on Bonanza Cowlings..... P/N 04-02218..... **$105.95**
4P3-T26 - Used to install CLoc 4000 Series studs into grommets. SK-T26 - Two Tools in One - For all SK4002 Grommet R4G Retainers and SK2600-LW Retainers..... P/N 04-01990..... **$79.75**

Prices Subject to Change Without Notice

SKYBOLT VANS RV COWLING FASTENER KITS

COWLING MOUNTING KITS

Kits Include SK215 and SK245 Dash 4 Series Receptacles and SK-RVFS1 Flanges

Skybolt P/N	Aircraft	Description	Part No.	Price
RV4J-C1S	Vans RV4 - Complete Kit	38 Collared Slotted Fasteners	04-00399	**$381.00**
RV4J-C1P	Vans RV4 - Complete Kit	Phillips	04-00403	**$381.00**
RV4J-C1S-U	Vans RV4 - Upper (FW/Side) Kit	30 Collared Slotted Fasteners	04-02238	**$336.00**
RV4J-C1P-U	Vans RV4 - Upper (FW/Side) Kit	Phillips	04-02041	**$400.00**
RV4J-C1S-F	Vans RV4 - Complete Firewall Kit	18 Collared Slotted Fasteners	04-00405	**$208.95**
RV4J-C1P-F	Vans RV4 - Complete Firewall Kit	Phillips	04-00406	**$211.95**
RV4J-C1S-UF	Vans RV4 - Upper Firewall Kit	10 Collared Slotted Fasteners	04-02240	**$123.50**
RV4J-C1P-UF	Vans RV4 - Upper Firewall Kit	Phillips	04-02042	**$147.75**
RV4J-C1S-S	Vans RV4 - Side Kit	20 Collared Slotted Fasteners	04-00407	**$230.95**
RV4J-C1P-S	Vans RV4 - Side Kit	Phillips	04-00408	**$221.95**
RV4J-C1S-C	Vans RV4 - Cheek Cowl Kit	8 Collard Slotted Fasteners	04-02241	**$100.80**
RV4J-C1P-C	Vans RV4 - Cheek Cowl Kit	Phillips	04-02242	**$102.80**
RV8J-C1S	Vans RV8 - Complete Kit	50 Collared Slotted Fasteners	04-00409	**$487.00**
RV8J-C1P	Vans RV8 - Complete Kit	Phillips	04-00410	**$498.00**
RV8J-C1S-U	Vans RV8 - Upper (FW/Side) Kit	34 Collared Slotted Fasteners	04-02243	**$375.00**
RV8J-C1P-U	Vans RV8 - Upper (FW/Side) Kit	Phillips	04-02043	**$381.97**
RV8J-C1S-F	Vans RV8 - Complete Firewall Kit	30 Collared Slotted Fasteners	04-00411	**$323.00**
RV8J-C1P-F	Vans RV8 - Complete Firewall Kit	Phillips	04-00412	**$333.00**
RV8J-C1S-UF	Vans RV8 - Upper Firewall Kit	14 Collared Slotted Fasteners	04-02244	**$162.80**
RV8J-C1P-UF	Vans RV8 - Upper Firewall Kit	Phillips	04-02044	**$179.75**
RV8J-C1S-S	Vans RV8 - Side Kit	20 Collared Slotted Fasteners	04-00413	**$230.95**
RV8J-C1P-S	Vans RV8 - Side Kit	Phillips	04-00415	**$236.95**
RV679J-C1S	Vans RV6,7,9 - Complete Kit	52 Collared Slotted Fasteners	04-02245	**$506.00**
RV679J-C1P	Vans RV6,7,9 - Complete Kit	Phillips	04-00418	**$498.00**
RV679J-C1S-U	Vans RV6,7,9 - Upper (FW/Side) Kit	36 Collared Slotted Fasteners	04-00417	**$394.00**
RV679J-C1P-U	Vans RV6,7,9 - Upper (FW/Side) Kit	Phillips	04-02045	**$398.00**
RV679J-C1S-F	Vans RV6,7,9 - Complete Firewall Kit	32 Collared Slotted Fasteners	04-00419	**$494.00**
RV679J-C1P-F	Vans RV6,7,9 - Complete Firewall Kit	Phillips	04-00420	**$328.00**
RV679J-C1S-UF	Vans RV6,7,9 - Upper Firewall Kit	16 Collared Slotted Fasteners	04-02246	**$231.95**
RV679J-C1P-UF	Vans RV6,7,9 - Upper Firewall Kit	Phillips	04-02046	**$218.95**
RV679J-C1S-S	Vans RV6,7,9 - Side Kit	20 Collared Slotted Fasteners	04-00421	**$230.95**
RV679J-C1P-S	Vans RV6,7,9 - Side Kit	Phillips	04-00422	**$235.95**
RV10J-C1S	Vans RV10 - Complete Kit	62 Collared Slotted Fasteners	04-02247	**$594.00**
RV10J-C1P	Vans RV10 - Complete Kit	Phillips	04-02157	**$583.00**
RV10J-C1S-U	Vans RV10 - Upper (FW/Side) Kit	45 Collared Slotted Fasteners	04-02158	**$483.00**
RV10J-C1P-U	Vans RV10 - Upper (FW/Side) Kit	Phillips	04-02154	**$493.00**
RV10J-C1S-F	Vans RV10 - Complete Firewall Kit	36 Collared Slotted Fasteners	04-02159	**$384.00**
RV10J-C1P-F	Vans RV10 - Complete Firewall Kit	Phillips	04-02156	**$394.00**
RV10J-C1S-UF	Vans RV10 - Upper Firewall Kit	19 Collared Slotted Fasteners	04-02248	**$211.95**
RV10J-C1P-UF	Vans RV10 - Upper Firewall Kit	Phillips	04-02155	**$254.95**
RV10J-C1S-S	Vans RV10 - Side Kit	26 Collared Slotted Fasteners	04-02160	**$288.95**
RV10J-C1P-S	Vans RV10 - Side Kit	Phillips	04-02161	**$295.95**
LANCAIR-C1S	Lancair - Complete Kit	62 Collared Slotted Fasteners (Inc SK2800S)	04-00423	**$807.00**
LANCAIR-C1P	Lancair - Complete Kit	Phillips (Inc SK28S3S around gear well)	04-00424	**$809.00**
LANCAIR-C1S-U	Lancair - Upper Cowl Kit	45 Collared Slotted Fasteners	04-02249	**$482.00**
LANCAIR-C1P-U	Lancair - Upper Cowl Kit	Phillips	04-02047	**$616.00**
LANCAIR-C1S-F	Lancair - Firewall Kit	36 Collared Slotted Fasteners	04-00425	**$306.95**
LANCAIR-C1P-F	Lancair - Firewall Kit	Phillips	04-02048	**$479.95**
LANCAIR-C1S-UF	Lancair - Upper Firewall Kit	19 Collared Slotted Fasteners	04-02250	**$211.95**
LANCAIR-C1P-UF	Lancair - Upper Firewall Kit	Phillips	04-02251	**$216.95**
LANCAIR-C1S-S	Lancair - Side Kit	26 Collared Slotted Fasteners	04-02252	**$289.95**
LANCAIR-C1P-S	Lancair - Side Kit	Phillips	04-02049	**$370.95**
RV-OD1	Oil Door Winged Fasteners (Skytanium)	2 ea ZG2600-1W, SK213-2, Drill Template	04-02253	**$17.50**
RV-OD2	Oil Door Phillips Fasteners (Stainless)	2 ea SK28S3-2S, SK213-2, Drill Template	04-02254	**$15.85**
SK-RVFS1	Inter-Locking Flange (Patent Pending)	1 ea Flange	04-02255	**$2.90**
SK-RVCI	Cleko Insert	1 ea Insert	04-02256	**$1.98**
SK-4002-TS2	Installation Tool Set	SK-4P3 Pliers, T26 Tool, Unibit-1, Unibit-4	04-02257	**$154.75**
4P3-T26	Stud Installation Pliers, Retainer Installation Tool		04-01990	**$79.75**

CLICK BOND FASTENERS

CLICK BOND FASTENERS

Click Bond Fasteners mount to surfaces with adhesive. They are assembled in a disposable, self-fixturing device of plastic that aligns and holds the fastener in position and under controlled pressure while the bonding material cures. After the installation is completed, the holding fixture is removed and the conventional attachment is made to the fastener. Bonded fasteners eliminate welding or drilling surfaces and result in reinforced substrate strength, leakproof and corrosion resistant attachments. Aircraft Spruce & Specialty Co. offers Click Bond Fasteners in convenient, pre-packaged kits as shown.

CABLE TIE MOUNT KIT



Each cable tie mount in this kit is pre-assembled in a temporary, easy-to-remove fixture that holds the cable tie mount in place and under pressure while the adhesive cures. No additional installation tools are needed. The kit includes four CB3019AA3N cable tie mounts with nylon ties (5" 40 lbs.), one adhesive packet, surface preparation materials, and installations.

P/N 04-06000 .....**$18.50**

FLOATING NUTPLATE KIT



The Click Bond adhesive bonded floating nutplate has a metal base and is installed using a disposable, elastomeric fixture that temporarily holds the nutplate in place and under pressure while the adhesive cures. The fixture prevents fouling of the clearance hole. No additional tools are needed for making the nutplate attachment. This fastener meets or exceeds the standards set by MIL-N-25027 for push-out, torque-out, and cycle life. Bonded nutplates eliminate composite damaging rivets, reinforce the structure, and reduce installation time. The kit includes four CB2009A3S floating nutplates (10-32) with aluminum baseplate, one adhesive packet, surface preparation materials, and instructions.

P/N 04-06005 .....**$29.95/ea.**

REPAIR PATCH KIT



These self-fixturing surface mounted patches repair small holes and fastener leaks without access to the reverse side of the surface. The patches are adhesively bonded to flat or curved surfaces with the aid of an integral, disposable fixture. The high peel strength adhesive allows the patches to withstand supersonic flight, cleaning, de-icing, and paint stripping. Patches can be removed easily with heat application. The kit includes one CP125-000-005A1A1 aluminum repair patch (.005 thick and 1.25 inch diameter), one adhesive packet, surface preparation materials, and instructions.

P/N 04-06015 .....**$13.50**

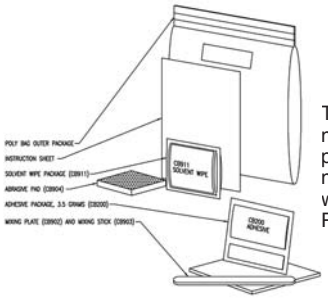
CB 200 ACRYLIC ADHESIVE



A high strength, two part adhesive. 3.5 gram package. One package is usually sufficient to do five of any Click Bond fasteners.

P/N 04-06040 .....**$2.75**

CB92 ADHESIVE MIX KIT



The CB92 Acrylic adhesive & prep material kit includes adhesive package (3.5 grams) mixing plate, mixing stick, abrasive pad, solvent wipe package, and instructions.

P/N 04-02059 ..... **$4.50**

STUD KITS



Click Bond studs are available in several sizes. The Metal Small Base Stud Kit includes six CS62-1032-12AX-CR aluminum small base stainless studs, six stainless nylocks/washers (10-32), one adhesive packet, surface preparation materials, and instructions. The Metal Large Base Stud Kit includes four CS125-1420-16AX-CR aluminum large base stainless studs, four stainless nylock/washers (1/4-20), one adhesive packet, surface preparation materials, and instructions. The Fiberglass Base Stud Kit includes two CS125-1032-12G-CR fiberglass large base stainless studs, two stainless nylocks/washers (10-32), one adhesive packet, surface preparation materials, and instructions.

Metal Small Base Stud Kit..... P/N 04-06020.....**$31.65**
Metal Large Base Stud Kit ..... P/N 04-06025.....**$27.85**
Fiberglass Base Stud Kit..... P/N 04-06030.....**$16.50**

EZ-POINT NUTS & STUDS FOR COMPOSITES



Creating a hard point in a composite laminated structure has never been easier. Simply drill a hole, prep the area, apply structural adhesive to the alodined, cleaned surface of the EZ-Point and snap into place. Simple and clean. For secondary structural applications, apply three plies of bid cloth to the area. Un-glassed samples were tested to failure in excess of 200 lbs. in shear. Glassed samples exceeded testing ability at over 500 lbs. Perfect for Adel clamps, trim and auto pilot servos, hydraulics, anything but primary structure. Available in 8-32, 10-32, 1/4 – 20, 1/4 – 28, your choice of locking, blind and studs. Used extensively in the installation of the Flesher 360 interior for the Lancair.

STUDS			BLIND NUTS			LOCKING NUTS		
THREAD	P/N	$ EA	THREAD	P/N	$ EA	THREAD	P/N	$ EA
8-32	04-06330	**$3.35**	8-32	04-06350	**$3.65**	8-32	04-06370	**$3.85**
10-32	04-06335	**$3.35**	10-32	04-06355	**$3.25**	10-32	04-06375	**$3.35**
1/4 - 20	04-06340	**$2.85**	1/4 - 20	04-06360	**$3.95**	1/4 - 28	04-06380	**$3.35**
						1/4 - 28	04-06385	**$3.45**

EZ-POINT STRIPS FOR COMPOSITES



Take the guesswork out of nut plate spacing with EZ-Point Strips. They maintain consistent spacing while remaining flexible enough to conform to curvature. Perfect for cowling attachments, Access doors, removable wingtips, anywhere you would use a standard 10/32 or 8/32 nut plate. Locking threads, available in one, two and three inch centers. Sold in one-foot sections.

8-32 thread, 1" centers
P/N 04-06450..... **$89.75 ea.**
8-32 thread, 2" centers
P/N 04-06455..... **$41.50 ea.**
8-32 thread, 3" centers
P/N 04-06460..... **$34.80 ea.**
10-32 thread, 1" centers
P/N 04-06465..... **$46.75ea.**

AN FITTINGS

The aircraft fittings shown on the following pages conform to current AN and MS specifications. We stock aluminum, brass and/or steel fittings. Fittings not regularly stocked can be special ordered. Order by Part Number. Example: AN840-8D.



AN804

TEE, FLARED TUBE WITH BULKHEAD ON RUN

Size No.		Tube	Thread	Price Each	
Steel	Alum.	O.D.	Size	Steel	Alum.
2	2D	1/8	5/16-24	$14.50	- - -
3	3D	3/16	3/8-24	$16.50	$12.80
4	4D	1/4	7/16-20	$15.50	$12.60
5	5D	5/16	1/2-20	$32.50	$12.70
6	6D	3/8	9/16-18	$17.85	$17.50
8	8D	1/2	3/4-16	$18.95	$14.50
10	10D	5/8	7/8-14	- - -	$19.50
12	12D	3/4	1-1/16-12	- - -	- - -



AN815

UNION, FLARED TUBE

Size No.		Tube	Thread	Price Each	
Steel	Alum.	O.D.	Size	Steel	Alum.
2	2D	1/8	5/16-24	$10.75	$3.80
3	3D	3/16	3/8-24	$13.50	$3.55
4	4D	1/4	7/16-20	$5.50	$2.64
5	5D	5/16	1/2-20	$10.50	$4.35
6	6D	3/8	9/16-18	$12.90	$3.95
8	8D	1/2	3/4-16	$20.50	$4.55
10	10D	5/8	7/8-14	$19.50	$6.90
12	12D	3/4	1-1/16-12	$9.50	$11.50

SS AN815-4J.....P/N AN815-4J **$6.50**
SS AN815-6J.....P/N AN815-6J **$7.90**
New Surplus AN815-5D
P/N 04-03304.....**$1.81**



AN818

NUT, COUPLING

Size No.		Tube	Thread	Price Each	
Steel	Alum.	O.D.	Size	Steel	Alum.
2	2D	1/8	5/16-24	$1.68	$1.25
3	3D	3/16	3/8-24	$2.44	$1.11
4	4D	1/4	7/16-20	$1.91	$0.80
5	5D	5/16	1/2-20	$2.19	$0.88
6	6D	3/8	9/16-18	$2.65	$0.84
8	8D	1/2	3/4-16	$3.35	$2.20
10	10D	5/8	7/8-14	$6.50	$2.45
12	12D	3/4	1-1/16-12	$7.50	$3.35

SS AN818-4J.....P/N AN818-4J **$2.15**
SS AN818-6J.....P/N AN818-6J **$2.20**



AN807

ADAPTER HOSE TO UNIVERSAL

Size No.		Hose	Thread	Price Each	
Brass	Alum.	I.D.	Size	Brass	Alum.
4	4D	1/4	7/16-20	---	$16.45
6	6D	3/8	9/16-18	---	$13.50
8	8D	1/2	3/4-16	- - -	$16.90



AN816

NIPPLE, FLARED TUBE AND PIPE THREAD

Size No.		Tube	Pipe	Price Each	
Steel	Alum.	O.D.	Size	Steel	Alum.
2	2D	1/8	1/8	$9.50	$3.50
3	3D	3/16	1/8	$6.70	$2.80
4	4D	1/4	1/8	$7.50	$2.49
4-4	4-4D	1/4	1/4	$7.95	$3.35
5	5D	5/16	1/8	$5.60	$3.35
6	6D	3/8	1/4	$9.50	$3.45
6-2	6-2D	3/8	1/8	$9.50	$3.75
6-6	6-6D	3/8	3/8	$18.50	$4.40
7	7D	1/2	1/4	$15.85	$4.35
8	8D	1/2	3/8	$17.65	$4.60
10	10D	5/8	1/2	$16.50	$5.35
12	12D	3/4	3/4	- - -	$7.50

SS AN816-4J.....P/N AN816-4J **$8.50**
New Surplus AN816-12
P/N 04-03011.....**$13.50**



AN819 (MS20819)

SLEEVE, COUPLING

Size No.		Tube	Price Each	
Steel	Alum.	O.D.	Steel	Alum.
2	2D	1/8	$0.96	$0.86
3	3D	3/16	$1.35	$0.68
4	4D	1/4	$1.23	$0.57
5	5D	5/16	$3.35	$0.81
6	6D	3/8	$2.09	$1.00
8	8D	1/2	$1.58	$1.09
10	10D	5/8	$4.35	$1.75
12	12D	3/4	$3.99	- - -



AN814

PLUG AND BLEEDER, SCREW THREAD

Size No.		Tube	Thread	Price Each	
Steel	Alum.	O.D.	Size	Steel	Alum.
2	2D	1/8	5/16-24	- - -	$4.85
3	3D	3/16	3/8-24	$7.90	$1.70
4	4D	1/4	7/16-20	$9.86	$2.77
5	5D	5/16	1/2-20	$10.46	$3.35
6	6D	3/8	9/16-18	$25.75	$4.55
8	8D	1/2	3/4-16	$4.99	$5.35
10	10D	5/8	7/8-14	- - -	$10.95
12	12D	3/4	1-1/16-12	$15.50	$9.98



AN821

ELBOW, FLARED TUBE, 90°

Size No.		Tube	Thread	Price Each	
Steel	Alum.	O.D.	Size	Steel	Alum.
--	2D	1/8	5/16-24	---	$12.80
3	3D	3/16	3/8-24	$14.90	$12.50
4	4D	1/4	7/16-20	$13.50	$8.50
5	5D	5/16	1/2-20	$84.75	$11.70
6	6D	3/8	9/16-18	$15.90	$10.50
8	8D	1/2	3/4-16	$24.95	$16.90
10	10D	5/8	7/8-14	$32.25	$12.75
--	12D	3/4	1-1/16-12	---	$14.85
--	16D	1	1-5/16-12	---	$27.50

New Surplus
AN821-5D.....P/N 04-03303.....**$5.85**



AN806

FLARED TUBE PLUG

Size No.		Tube	Thread	Price Each	
Steel	Alum.	O.D.	Size	Steel	Alum.
2	2D	1/8	5/16-24	$9.50	$4.35
3	3D	3/16	3/8-24	$5.70	$1.40
4	4D	1/4	7/16-20	$6.75	$1.10
5	5D	5/16	1/2-20	$10.50	$1.38
6	6D	3/8	9/16-18	$5.65	$2.22
8	8D	1/2	3/4-16	$6.80	$1.86



AN822 (MS20822)

ELBOW, FLARED TUBE AND PIPE THREAD, 90°

Size No. Steel	Size No. Alum.	Tube O.D.	Pipe Size	Price Each Steel	Price Each Alum.
2	2D	1/8	1/8	$39.50	$15.50
3	3D	3/16	1/8	$12.90	$11.85
4	4D	1/4	1/8	$17.50	$8.50
4-4	4-4D	1/4	1/4	$26.55	$7.80
-	5-4D	5/16	1/4	-	$13.95
5	5D	5/16	1/8	$25.95	$13.50
6	6D	3/8	1/4	$15.50	$9.65
6-2	6-2D	3/8	1/8	$18.65	$12.95
6-6	6-6D	3/8	3/8	$17.75	$15.80
8	8D	1/2	3/8	$19.85	$13.50
10	10D	5/8	1/2	$21.65	$22.95
12	12D	3/4	3/4	$38.70	$15.95



AN825 (MS20825)

TEE, FLARED TUBE WITH PIPE THREAD ON SIDE

Size No. Steel	Size No. Alum.	Tube O.D.	Pipe Thread	Price Each Steel	Price Each Alum.
2	2D	1/8	1/8	---	$15.50
3	3D	3/16	1/8	$25.65	$12.95
4	4D	1/4	1/8	$14.95	$12.55
5	5D	5/16	1/8	$14.50	$13.55
6	6D	3/8	1/4	$16.85	$13.50
8	8D	1/2	3/8	---	$18.50
10	10D	5/8	1/2	---	$17.50
12	12D	3/4	3/4	---	---
16	16D	1	5/16	---	$38.75

New Surplus AN825-10D .....P/N 04-02226 .....$12.90



AN832

UNION, FLARED TUBE, BULKHEAD AND UNIVERSAL

Size No. Steel	Size No. Alum.	Tube O.D.	Thread Size	Price Each Steel	Price Each Alum.
2	2D	1/8	5/16-24	$23.50	$12.65
3	3D	3/16	3/8-24	$6.50	$5.35
4	4D	1/4	7/16-20	$9.95	$4.35
5	5D	5/16	1/2-20	$14.70	$7.95
6	6D	3/8	9/16-18	$26.50	$5.70
8	8D	1/2	3/4-16	$19.95	$5.35
10	10D	5/8	7/8-14	$31.75	$12.95
12	12D	3/4	1-1/16-12	$26.50	$16.55

SS AN832-4J.....P/N AN832-4J $13.85
SS AN832-6J.....P/N AN832-6J $25.50



AN823 (MS20823)

ELBOW, FLARED TUBE AND PIPE THREAD, 45°

Size No. Steel	Size No. Alum.	Tube O.D.	Pipe Thread	Price Each Steel	Price Each Alum.
2	2D	1/8	1/8	$31.50	$16.50
3	3D	3/16	1/8	$13.85	$9.70
4	4D	1/4	1/8	$15.50	$9.60
5	5D	5/16	1/8	- - -	$13.50
6	6D	3/8	1/4	$16.65	$10.55
8	8D	1/2	3/8	$22.95	$14.50
10	10D	5/8	1/2	- - -	$17.99
12	12D	3/4	3/4	$34.75	$18.90

New Surplus AN823-12.....P/N 04-02268 .....$19.90
New Surplus AN823-5D .....P/N 04-03303 .....$5.85



AN826 (MS20826)

TEE TUBE WITH PIPE THREAD ON RUN

Size No. Steel	Size No. Alum.	Tube O.D.	Pipe Thread	Price Each Steel	Price Each Alum.
3	3D	3/16	1/8	$14.65	$11.50
4	4D	1/4	1/8	$12.90	$12.50
5	5D	5/16	1/8	$20.80	$14.50
6	6D	3/8	1/4	$20.50	$13.60
8	8D	1/2	3/8	$28.50	$17.90
10	10D	5/8	1/2	$20.85	$19.50
12	12D	3/4	3/4	- - -	$31.65

New Surplus AN826-3.....P/N 04-02227 .....$10.50



AN833

ELBOW, FLARED TUBE BULKHEAD AND UNIVERSAL, 90°

Size No. Steel	Size No. Alum.	Tube O.D.	Thread Size	Price Each Steel	Price Each Alum.
2	2D	1/8	5/16-24	$34.50	$18.50
3	3D	3/16	3/8-24	$14.50	$10.99
4	4D	1/4	7/16-20	$16.50	$9.60
5	5D	5/16	1/2-20	$9.99	$13.50
6	6D	3/8	9/16-18	$16.50	$11.65
8	8D	1/2	3/4-16	$22.50	$17.95
10	10D	5/8	7/8-14	---	$16.50
12	12D	3/4	1-1/16-12	---	$22.50



AN824

TEE, FLARED TUBE

Size No. Steel	Size No. Alum.	Tube O.D.	Thread Size	Price Each Steel	Price Each Alum.
2	2D	1/8	5/16-24	- - -	$13.65
3	3D	3/16	3/8-24	$17.50	$10.50
4	4D	1/4	7/16-20	$13.95	$9.50
5	5D	5/16	1/2-20	$21.50	$11.50
6	6D	3/8	9/16-18	$16.50	$11.80
8	8D	1/2	3/4-16	$25.55	$14.55
10	10D	5/8	7/8-14	$19.50	$21.50
12	12D	3/4	1-1/16-12	- - -	$26.55

New Surplus AN824-2
P/N 04-02178 ..... $39.80



AN827

CROSS, FLARED TUBE

Size No. Steel	Size No. Alum.	Tube O.D.	Thread Size	Price Each Steel	Price Each Alum.
2	2D	1/8	5/16-24	- - -	- - -
3	3D	3/16	3/8-24	- - -	$14.50
4	4D	1/4	7/16-20	- - -	$18.60
5	5D	5/16	1/2-20	- - -	$18.50
6	6D	3/8	9/16-18	- - -	$17.90
8	8D	1/2	3/4-16	- - -	$47.85
10	10D	5/8	7/8-14	- - -	- - -
12	12D	3/4	1-1/16-12	- - -	$28.50



AN834

TEE, FLARED TUBE, BULKHEAD AND UNIVERSAL

Size No. Steel	Size No. Alum.	Tube O.D.	Thread Size	Price Each Steel	Price Each Alum.
2	2D	1/8	5/16-24	- - -	- - -
3	3D	3/16	3/8-24	- - -	$13.70
4	4D	1/4	7/16-20	$20.50	$12.55
5	5D	5/16	1/2-20	- - -	$12.75
8	8D	1/2	3/4-16	$25.75	$17.85
10	10D	5/8	7/8-14	- - -	$19.65
12	12D	3/4	1-1/16-12	- - -	- - -

New Surplus AN834-6.....P/N 04-02273 .....$27.50

Prices Subject to Change Without Notice

AN FITTINGS



AN837 ELBOW,

FLARED TUBE, BULKHEAD AND UNIVERSAL 45°

Size No.		Tube	Thread	Price Each	
Steel	Alum.	O.D.	Size	Steel	Alum.
2	2D	1/8	5/16-24	---	$15.70
3	3D	3/16	3/8-24	$16.99	$11.65
4	4D	1/4	7/16-20	$14.50	$13.50
5	5D	5/16	1/2-20	---	$11.50
6	6D	3/8	9/16-18	$17.85	$13.50
8	8D	1/2	3/4-16	$29.50	$14.80
10	10D	5/8	7/8-14	$37.60	$16.70
12	12D	3/4	1-1/16-12	---	---



AN838 ELBOW,

BULKHEAD & HOSE TO UNIVERSAL, 90°

Size No.		Hose	Thread	Price Each	
Brass	Alum.	I.D.	Size	Brass	Alum.
4	4D	1/4	7/16-20	---	$24.50
6	6D	3/8	9/16-18	---	$31.50



AN840 HOSE NIPPLE,

PIPE THREAD

Size No.		Hose	Pipe	Price Each	
Brass	Alum.	I.D.	Size	Brass	Alum.
4	4D	1/4	1/8	$10.75	$4.90
6	6D	3/8	1/4	$14.60	$5.80
8	8D	1/2	3/8	$16.80	$8.50
---	10D	5/8	1/2	---	$10.75
12	12D	3/4	3/4	$47.50	$12.50



AN844 HOSE ELBOW,

PIPE THREAD, 45°

Size No.		Hose	Pipe	Price Each	
Brass	Alum.	I.D.	Thread	Brass	Alum.
4	4D	1/4	1/8	---	$12.55
6	6D	3/8	1/4	---	$13.50
8	8D	1/2	3/8	$15.60	$16.50
10	10D	5/8	1/2	$16.55	$20.50
12	12D	3/4	3/4	---	$23.60

New Surplus

AN844-4 ..... P/N 04-02175 ..... $16.85

AN844-10D..... P/N 04-02274 ..... $19.50



AN848 ELBOW,

HOSE BULKHEAD, 90°

Size No.		Hose	Thread	Price Each	
Brass	Alum.	I.D.	Size	Brass	Alum.
---	4D	1/4	7/16-20	--	$31.60
---	6D	3/8	9/16-18	--	$29.85
---	8D	1/2	3/4-16	--	$54.75



AN842 HOSE ELBOW,

PIPE THREAD, 90°

Size No.		Hose	Pipe	Price Each	
Brass	Alum.	I.D.	Thread	Brass	Alum.
4	4D	1/4	1/8	$25.70	$19.50
6	6D	3/8	1/4	$17.80	$13.99
8	8D	1/2	3/8	---	$17.50
10	10D	5/8	1/2	$39.85	$20.50
12	12D	3/4	3/4	$22.50	$23.90



AN894

FLARED TUBE REDUCER AND EXPANDERS

Fitting No.	Price
AN894-6-5D	$9.95
AN894-D6-4	$7.95
AN894-D12-6	$21.35
AN894-5-4	$30.80
AN894-5-4D	$10.95



AN910 COUPLING

PIPE THREAD

Size No.		Thread	Price Each	
Brass	Alum.	Size	Brass	Alum.
1	1D	1/8	$12.95	$4.35
2	2D	1/4	$6.38	$3.90
3	3D	3/8	$37.99	$4.80
4	4D	1/2	$24.85	$8.75
6	6D	3/4	---	$13.50



AN911 NIPPLE

PIPE THREAD

Size No.		Pipe	Price Each	
Brass	Alum.	Thread	Brass	Alum.
1	1D	1/8	$12.80	$5.00
2	2D	1/4	$7.75	$4.60
3	3D	3/8	$7.50	$5.75
4	4D	1/2	$14.50	$8.95
6	6D	3/4	$49.90	$11.50



AN912 BUSHING

PIPE THREAD REDUCER

Size No. Alum.	Pipe Size	Price Ea.	Size No Alum	Pipe Size	Price Ea.
1D	1/4-1/8	$3.65	8D	3/4-3/8	$7.80
2D	3/8-1/4	$4.70	9D	3/4-1/4	$17.50
3D	3/8-1/8	$4.95	10D	1-3/4	$20.50
4D	1/2-3/8	$5.55	11D	1-1/2	- - -
5D	1/2-1/4	$5.35	12D	1-3/8	$21.65
6D	1/2-1/8	$6.70	13D	11/4-3/4	$12.99
7D	3/4-1/2	$7.85			

New Surplus AN912-11D ..... P/N 04-02271.... $22.50

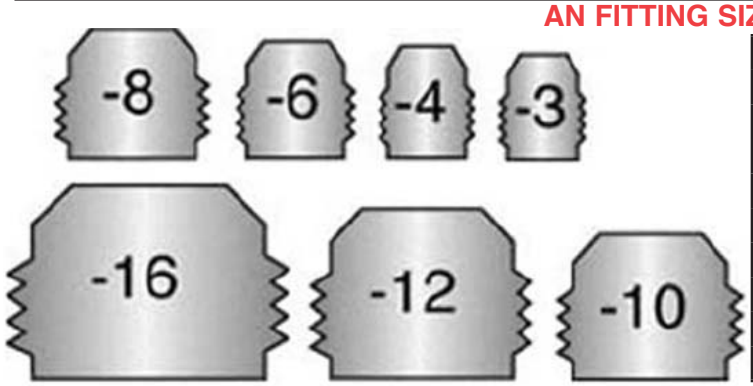


AN913 (MS20913) PLUG

SQUARE HEAD, PIPE THREAD

Size No.			Pipe	Price Each		
Brass	Steel	Alum.	Thread	Brass	Steel	Alum.
1	1S	1D	1/8	$4.85	$8.85	$3.40
2	2S	2D	1/4	$4.90	$8.50	$5.35
3	3S	3D	3/8	$4.45	---	$5.99
4	4S	4D	1/2	---	---	$6.95
6	6S	6D	3/4	$24.55	---	$9.75

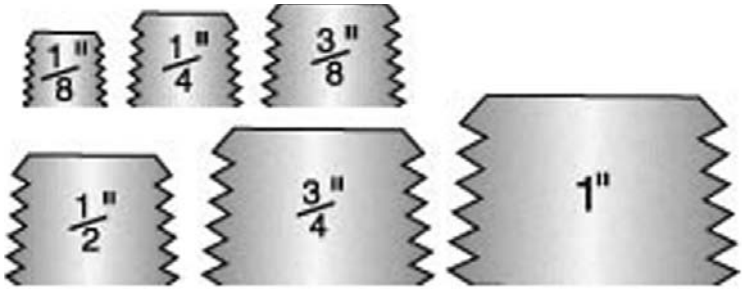
AN FITTING SIZES



AN Size	Metal Tube O.D.	Thread Size
2	1/8	5/16-24 SAE
3	3/16	3/8-24 SAE
4	1/4	7/16-20 SAE
5	5/16	1/2-20 SAE
6	3/8	9/16-18 SAE
8	1/2	3/4-16 SAE
10	5/8	7/8-14 SAE
12	3/4	1-1/16-12 SAE
16	1”	1-5/16-12 SAE

NPT FITTING SIZES

Pipe Thread Size	Threads per inch	Theoretical I.D. of Fitting	Closest AN FittingSize
1/16”	27	1/16”	
1/8”	27	1/8”	4
1/4”	18	1/4”	6
3/8”	18	3/8”	8
1/2”	14	1/2”	10
3/4”	14	3/4”	12
1”	11.5	1”	16
1-1/4”	11.5	1-1/4”	20
1-1/2”	11.5	1-1/2”	24
2”	11.5	2”	



DIAGRAMS MAY NOT BE ACCURATE AND SHOULD NOT BE USED FOR EXACT SIZING. FOR REFERENCE ONLY

AN FITTINGS



AN914 ELBOW,

INTERNAL AND EXTERNAL PIPE THREAD, 90°

Size No.		Pipe	Price Each	
Brass	Alum.	Thread	Brass	Alum.
1	1D	1/8	$21.90	$10.55
2	2D	1/4	$30.50	$12.99
3	3D	3/8	$23.50	$14.50
4	4D	1/2	---	$21.75

New Surplus AN914-6D ..... P/N 04-02267.... **$15.95**



AN915 ELBOW,

INTERNAL AND EXTERNAL PIPE THREAD, 45°

Size No.		Pipe	Price	
Brass	Alum.	Thread	Brass	Alum.
1	1D	1/8	$65.75	$11.95
2	2D	1/4	---	$12.70
3	3D	3/8	$20.50	$13.85
4	4D	1/2	---	$17.65
6	6D	3/4	---	$18.80

New Surplus AN915-6D ..... P/N 04-02233.... **$18.80**



AN916 ELBOW,

INTERNAL PIPE THREAD, 90°

Size No.		Pipe	Price	
Brass	Alum.	Thread	Brass	Alum.
1	1D	1/8	$13.80	$22.50
2	2D	1/4	---	$13.60
3	3D	3/8	---	$14.85
4	4D	1/2	---	$26.90
6	6D	3/4	---	---

New Surplus AN916-6D
P/N 04-02176 ..... **$15.60**
New Surplus AN916-3 Brass
P/N 04-03012 ..... **$19.50**



AN917 TEE,

INTERNAL, PIPE THREAD

Size No.		Pipe	Price	
Brass	Alum.	Thread	Brass	Alum.
1	1D	1/8	$27.50	$12.95
2	2D	1/4	$29.90	$14.95
3	3D	3/8	$46.50	$15.50
4	4D	1/2	$45.50	$35.65
6	6D	3/4	---	$42.75

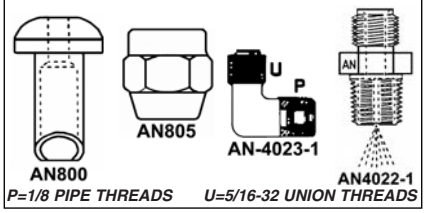


AN918 CROSS INTERNAL PIPE THREAD

Size #	Pipe	Price Ea
Alum.	Thread	Alum.
1D	1/8	$21.95
2D	1/4	$19.50
3D	3/8	---
6D	3/4	---

New Surplus
AN918-4D..... P/N 04-02284 ..... **$23.50**
AN918-6D..... P/N 04-02236 ..... **$5.80**

PRIMER FITTINGS



P=1/8 PIPE THREADS *U=5/16-32 UNION THREADS*

AN No.	Description	Thread	Price
AN780-2	Union Nipple	1/8x5/16-32	$6.75
AN800-2	Union Cone	--	$2.45
AN800-2C-SS	Union Cone	--	$18.50
AN805-2	Union Nut	5/16-32	$2.51
AN4022-1	Discharge Nipple	1/8x5/16-32	$16.70
AN4023-1	Discharge Elbow New Surplus	1/8x5/16-32	$13.50

New Surplus Primer Elbow Fitting
P/N 04-02162 ..... **$13.50**



AN924 NUT, FLARED TUBE, BULKHEAD AND UNIVERSAL FITTING

Size No.		Tube	Thread	Price	
Steel Black	Alum. Blue	O.D.	Size	Steel	Alum.
2	2D	1/8	5/16-24	$4.35	$1.74
3	3D	3/16	3/8-24	$2.34	$0.95
4	4D	1/4	7/16-20	$2.32	$0.78
5	5D	5/16	1/2-20	$2.72	$1.85
6	6D	3/8	9/16-18	$6.99	$0.99
8	8D	1/2	3/4-16	$5.35	$1.84
10	10D	5/8	7/8-14	$6.60	$2.09
12	12D	3/4	1-1/16-12	$16.80	$3.45



AN929 CAP, FLARED TUBE FITTING

Size No.	Tube O.D.	Thread Size	Price Each
2	1/8	5/16-24	$1.90
3	3/16	3/8-24	$1.99
4	1/4	7/16-20	$1.83
5	5/16	1/2-20	$2.83
6	3/8	9/16-18	$2.59
8	1/2	3/4-16	$3.50
10	5/8	7/8-14	$5.50
12	3/4	1-1/16-12	$7.95
16	1	1-5/16-12	$15.50



AN919 REDUCER, EXTERNAL THREAD

Size No.		Tube O.D.	Price	
Steel	Alum.		Steel	Alum.
0	0D	3/16-1/8	$7.99	$2.70
1	1D	1/4-1/8	$7.50	$5.35
2	2D	1/4-3/16	$6.99	$4.35
3	3D	5/16-1/4	$11.50	$3.35
4	4D	3/8-1/8	$24.85	$8.95
5	5D	3/8-3/16	---	$10.90
6	6D	3/8-1/4	$15.30	$4.60
7	7D	3/8-5/16	$10.65	$3.90
8	8D	1/2-1/8	---	$7.50
9	9D	1/2-3/16	---	$18.50
10	10D	1/2-1/4	$15.60	$6.70
11	11D	1/2-5/16	$11.60	$10.50
12	12D	1/2-3/8	$21.50	$7.55
19	19D	3/4-1/2	---	$13.55



AN932-4D PLUG

Plug Countersunk 3/8P.
AN932-4D **$7.90**



AN938 FITTINGS

Description	Part Number	Price
AN938 Fitting	AN938-8D	$26.50

ALUMINUM MANIFOLD FITTINGS

ORDERING INFORMATION

Basic part number on all fittings is 04-00XXX, complete the part number by filling in the last 3 digits after selecting the fitting you need according to the details below. Example: 04-00102.

First Code Number - Determines the style of the fitting.

- **-1:** One port in the end with two ports out, 90° cross drilled with one port per side. 3 ports total. Two Mounting Holes.
- **-2:** One port in the end with four ports out, 90° cross drilled with two ports per side. 5 ports total. Two Mounting Holes.
- **-3:** One port in the end with six ports out, 90° cross drilled with three ports per side. 7 ports total. Four Mounting Holes.
- **-4:** One port in the end with eight ports out, 90° cross drilled with four ports per side. 9 ports total. Four Mounting Holes.
- **-5:** One port in the end with four ports out, 90° drilling with four ports on one side only. 5 ports total. Two Mounting Holes.

Second Code Number - Determines the style of porting.

- **-0:** All the ports are the same.
- **-1:** Inlet port is one size larger than outlet ports.
- **-2:** Inlet port is two sizes larger than outlet ports.

Third Code Number - Determines the inlet port size.

- **-2:** 1/8-27 taper pipe thread (NPT)
- **-4:** 1/4-18 taper pipe thread (NPT)
- **-6:** 3/8-18 taper pipe thread (NPT)
- **-8:** 1/2-14 taper pipe thread (NPT)

In the example above - 04-00102, this would be a 1/8 NPT inlet with two outlets of the same size.
Ex.-04-00326, this would have a 3/8 NPT inlet w/six 1/8 NPT outlets.



Our aluminum manifold fittings are a bolt-on design with taper pipe threads. These fittings are designed to provide a convenient means of plumbing multiple hoses from and/or to one source with the fitting being bolted to a supporting structure. This design will eliminate Adel clamps at the juncture of the hoses and eliminate additional tee type fittings when more than two hoses are to be connected to one source. Applications include brake reservoir lines, static system, suction systems, fuel systems, air line pigs, smoke systems, and more. Not for use on oxygen systems or pressures over 150 psi.

Part No.	Price
04-00102	$11.85
04-00104	$14.90
04-00106	$16.50
04-00108	$20.50
04-00114	$11.95
04-00116	$15.50
04-00118	$17.95
04-00126	$13.70
04-00128	$17.50
04-00202	$14.95
04-00204	$19.90
04-00206	$25.50
04-00208	$33.50

Part No.	Price
04-00214	$16.90
04-21600	$22.80
04-21800	$28.50
04-00226	$21.50
04-00228	$25.50
04-00302	$20.50
04-00304	$26.70
04-00306	$32.80
04-00308	$37.50
04-00314	$21.55
04-00316	$29.75
04-00318	$33.50
04-00326	$30.50

Part No.	Price
04-00328	$34.50
04-00402	$25.50
04-00404	$29.50
04-00414	$28.70
04-00416	$37.50
04-00426	$33.50
04-00428	$38.50
04-00502	$17.50
04-00504	$22.65
04-00514	$19.95
04-00516	$26.50
04-00526	$24.65
04-00528	$31.70

Prices Subject to Change Without Notice

PHENIX FITTINGS



PHENIX FEMALE TO FLARE EXPANDERS AND REDUCERS (CLEAR)

Light weight aluminum adapters by Phenix Industries are designed for leak-proof sealing with any manufacturers hose ends. Made in USA.

Phenix Part No.	Female / Male	Part No.	Price
C46-4	-4 / -6	04-02102	**$6.50**
C68-4	-6 / -8	04-02101	**$8.50**
C810-4	-8 / 10	04-02103	**$10.70**
C1012-4	-10 / -12	04-02104	**$14.70**
C1216-4	-12 / -16	04-02105	**$17.65**



PHENIX FEMALE TO FLARE EXPANDERS AND REDUCERS - BLUE

Light weight aluminum adapters by Phenix Industries are designed for leak-proof sealing with any manufacturers hose ends. Made in USA.

Phenix Part No.	Female / Male	Part No.	Price
C431-4	-4 / -3	04-02094	**$6.50**
C64-4	-6 / -4	04-02095	**$6.50**
C86-4	-8 / -6	04-02096	**$8.50**
C106-4	-10 / -6	04-02097	**$12.95**
C108-4	-10 / -8	04-02098	**$14.50**
C1210-4	-12 / -10	04-02099	**$18.50**



PHENIX SWIVEL COUPLER STRAIGHT - BLUE

Light weight aluminum adapters by Phenix Industries are designed for leak-proof sealing with any manufacturers hose ends. Made in USA.

Phenix Part No.	AN	Part No.	Price
C6-4	-6	04-02145	**$6.95**
C8-4	-8	04-02146	**$8.50**
C10-4	-10	04-02147	**$10.50**
C12-4	-12	04-02148	**$14.50**



PHENIX STRAIGHT SWIVEL FEMALE TO MALE NPT - BLUE

Light weight aluminum adapters by Phenix Industries are designed for leak-proof sealing with any manufacturers hose ends. Made in USA.

Phenix Part No.	AN	NPT	Part No.	Price
C1451-4	-4	1/8"	04-02139	**$7.90**
C1651-4	-6	1/4"	04-02140	**$9.50**
C1652-4	-6	3/8"	04-02141	**$10.50**
C1851-4	-8	3/8"	04-02142	**$10.55**
C1852-4	-8	1/2"	04-02143	**$12.80**
C11051-4	-10	1/2"	04-02144	**$12.80**



PHENIX 90° SWIVEL COUPLER - BLUE AND RED

Phenix Swivel Coupler 90°. Light weight aluminum adapters by Phenix Industries are designed for leak-proof sealing with any manufacturers hose ends. Made in USA.

Phenix Part No.	Size	Description	Part No.	Price
C690-2	-6	Swivel Coupler 90º	04-03802	**$12.35**
C1090-2	-10	Swivel Coupler 90º	04-03801	**$17.95**
C1290-2	-12	Swivel Coupler 90º	04-03819	**$19.50**



PHENIX 90 DEGREE SWIVEL FEMALE TO MALE - BLUE

Light weight aluminum adapters by Phenix Industries are designed for leak-proof sealing with any manufacturers hose ends. Made in USA.

Phenix Part No.	Female AN	Male AN	Part No.	Price
C0647-4	-6	-6	04-02113	**$13.85**
C0847-4	-8	-8	04-02114	**$20.70**



PHENIX 45 DEGREE SWIVEL COUPLER - BLUE

Light weight aluminum adapters by Phenix Industries are designed for leak-proof sealing with any manufacturers hose ends. Made in USA.

Phenix Part No.	AN	AN	Part No.	Price
C645-4	-6	-6	04-02135	**$11.90**
C845-4	-8	-8	04-02136	**$15.50**
C1045-4	-10	-10	04-02137	**$17.65**
C1405-2	-10	-10	04-03815	**$17.65**
C1245-2	-12	-12	04-03818	**$19.50**





PHENIX STRAIGHT AND 90 DEGREE PUSH-LOK RED/BLUE

Phenix Compression Hose Ends are constructed from lightweight 6061 aluminum and designed for smooth flow, easy assembly, and longer life. All elbow ends are built from one-piece billet tube construction, avoiding leakable braze joints. Viton O-Ring seal allows 360 degree rotation. 37 degree AN flare assures leak proof sealing surface eliminating the need for taping. Compatible with all AN adapter fittings. Made in the U.S.A. Compatible Hose Type: Push-On Hose.

STRAIGHT

Phenix Part No.	AN	Part No.	Price
J2400-2	-4	04-02120	**$4.45**
J2600-2	-6	04-02121	**$4.35**
J3800-2	-8	04-03804	**$6.50**
J31000-2	-10	04-03805	**$7.55**
J31200-2	-12	04-03806	**$9.90**

90 DEGREE

Phenix Part No.	AN	Part No.	Price
J3490-2	-4	04-03812	**$12.80**
J2890-2	-8	04-02132	**$15.65**
J21290-2	-12	04-02134	**$18.50**

SEE OUR WEBSITE FOR MORE PHENIX FITTINGS

WWW.AIRCRAFTSPRUCE.COM

PHENIX FITTINGS

Phenix compression swivel hose ends are constructed from lightweight 6061 aluminum and designed for smooth flow, easy assembly, and longer life. All elbow ends are built from one-piece billet tube construction, avoiding leakable braze joints. O-ring seals allow 360 degree rotation. 37 degree AN flare assures leak proof sealing surface, eliminating need for taping. Compatible with all AN adapter fittings. Made in USA.



PHENIX COMPRESSION SWIVEL HOSE END STRAIGHT

Size	Color	P/N	Price
AN-4	Blue/red	04-03602	**$5.75**
AN-6	Blue/red	04-03603	**$6.95**
AN-8	Blue/red	04-03604	**$8.80**
AN-10	Blue/red	04-03605	**$10.85**
AN-12	Blue/red	04-03606	**$15.50**
AN-4	Black	04-03629	**$5.75**
AN-6	Black	04-03630	**$7.50**
AN-8	Black	04-03631	**$8.65**
AN-10	Black	04-03632	**$10.85**
AN-12	Black	04-03633	**$15.50**



PHENIX PUSH-ON SWIVEL HOSE END - 45°

Size	Color	P/N	Price
AN-8	Blue/red	04-02127	**$19.50**
AN-10	Blue/red	04-02128	**$26.60**
AN-12	Blue/red	04-03820	**$21.50**



PHENIX COMPRESSION SWIVEL HOSE END - 90°

Phenix compression swivel hose ends are constructed from lightweight 6061 aluminum and designed for smooth flow, easy assembly, and longer life. All elbow ends are built from one-piece billet tube construction, avoiding leakable braze joints.

O-ring seals allow 360 degree rotation. 37 degree AN flare assures leak proof sealing surface, eliminating need for taping.

Compatible with all AN adapter fittings.
Made in USA

90°				45°			
Color	Size	Part No.	Price	Color	Size	Part No.	Price
Blue/Red	AN-4	04-03612	**$16.50**	Blue/Red	AN-4	04-03607	**$16.50**
Blue/Red	AN-6	04-03613	**$16.50**	Blue/Red	AN-6	04-03608	**$16.50**
Blue/Red	AN-8	04-03614	**$19.50**	Blue/Red	AN-8	04-03609	**$19.50**
Blue/Red	AN-10	04-03615	**$22.60**	Blue/Red	AN-10	04-03610	**$22.60**
Blue/Red	AN-12	04-03616	**$23.75**	Blue/Red	AN-12	04-03611	**$24.50**
Black	AN-4	04-03639	**$16.50**	Black	AN-4	04-03634	**$16.50**
Black	AN-6	04-03640	**$16.50**	Black	AN-6	04-03635	**$16.50**
Black	AN-8	04-03641	**$19.50**	Black	AN-8	04-03636	**$18.95**
Black	AN-10	04-03642	**$22.60**	Black	AN-10	04-03637	**$22.60**
Black	AN-12	04-03643	**$23.75**	Black	AN-12	04-03638	**$24.50**



PHENIX COMPRESSION SWIVEL HOSE END - 120°

Phenix compression swivel hose ends are constructed from lightweight 6061 aluminum and designed for smooth flow, easy assembly, and longer life. All elbow ends are built from one-piece billet tube construction, avoiding leakable braze joints.

O-ring seals allow 360 degree rotation. 37 degree AN flare assures leak proof sealing surface, eliminating need for taping.

Compatible with all AN adapter fittings.
Made in USA

Color	Size	Part No.	Price
Blue/Red	AN-6	04-03617	**$23.50**
Blue/Red	AN-8	04-03618	**$25.95**
Blue/Red	AN-10	04-03619	**$30.50**
Blue/Red	AN-12	04-03620	**$33.50**
Black	AN-6	04-03644	**$23.50**
Black	AN-8	04-03645	**$25.95**
Black	AN-10	04-03646	**$30.50**
Black	AN-12	04-03647	**$33.50**



PHENIX COMPRESSION SWIVEL HOSE END - 150°

Phenix compression swivel hose ends are constructed from lightweight 6061 aluminum and designed for smooth flow, easy assembly, and longer life. All elbow ends are built from one-piece billet tube construction, avoiding leakable braze joints.

O-ring seals allow 360 degree rotation. 37 degree AN flare assures leak proof sealing surface, eliminating need for taping.

Compatible with all AN adapter fittings.
Made in USA

Color	Size	Part No.	Price
Blue/Red	AN-6	04-03621	**$23.50**
Blue/Red	AN-8	04-03622	**$25.95**
Blue/Red	AN-10	04-03623	**$30.50**
Blue/Red	AN-12	04-03624	**$33.50**
Black	AN-6	04-03648	**$23.50**
Black	AN-8	04-03649	**$25.95**
Black	AN-10	04-03650	**$30.50**
Black	AN-12	04-03651	**$33.50**



PHENIX COMPRESSION SWIVEL HOSE END - 180°

Phenix compression swivel hose ends are constructed from lightweight 6061 aluminum and designed for smooth flow, easy assembly, and longer life. All elbow ends are built from one-piece billet tube construction, avoiding leakable braze joints.

O-ring seals allow 360 degree rotation. 37 degree AN flare assures leak proof sealing surface, eliminating need for taping.

Compatible with all AN adapter fittings.
Made in USA

Color	Size	Part No.	Price
Blue/Red	AN-6	04-03625	**$23.50**
Blue/Red	AN-8	04-03626	**$25.95**
Blue/Red	AN-10	04-03627	**$30.75**
Blue/Red	AN-12	04-03628	**$33.50**
Black	AN-6	04-03652	**$23.50**
Black	AN-8	04-03653	**$25.95**
Black	AN-10	04-03654	**$30.75**
Black	AN-12	04-03655	**$33.50**

SEE OUR WEBSITE FOR MORE PHENIX FITTINGS

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Prices Subject to Change Without Notice

PHENIX FITTINGS

PHENIX BLACK BRAIDED HOSE



A lightweight alternative to standard double braided stainless hose. This hose is constructed of a high grade CPE (Chlorinated Polyethylene) inner core surrounded by lightweight stainless center braid and a tightly woven black nylon outer braid. This combination creates superior strength and is lightweight. This hose is not recommended for high vacuum applications with using an inner spring support. Quantities are sold by the foot.

Model	Color	Part No.	Price
AN-4	Black	04-03661	**$6.50**
AN-6	Black	04-03662	**$6.60**
AN-8	Black	04-03663	**$7.95**
AN-10	Black	04-03664	**$8.85**



PHENIX DOUBLE BRAIDED STAINLESS STEEL HOSE

Phenix Hose products have been tested through independent ASTM laboratories to meet all SAE-30R7 standards. These stainless braided hose products were designed for easier assembly by the end user, plus limited wire frays and spreads which occur after cutting. Hoses are engineered to be dimensionally consistent and easier to assemble with re-usable fittings. The enhanced curing process of the hose uniformly applies the glue and adhesion of glue between the stainless braid and the CPE inner core. This dramatically reduces the frays and spreads associated with cut stainless braided hose products. Operating temperatures are from -40 degrees to +350 degrees F and deliver hydrocarbon and alcohol based fuels, motor oils, and coolant. Quantities are sold by the foot. For AN adapter fittings.
Made in USA

Model	Color	Part No.	Price
AN-4	Stainless Steel	04-03656	**$6.50**
AN-6	Stainless Steel	04-03657	**$6.50**
AN-8	Stainless Steel	04-03658	**$7.50**
AN-10	Stainless Steel	04-03659	**$8.75**
AN-12	Stainless Steel	04-03660	**$9.90**

PHENIX PUSH ON HOSES



Designed for reduced weight and increased flexibility, Phenix Push-On Hose features a Class A high oil resistant nitrile inner tube with a reinforcing two spiral aramid fiber and a nitrile/PVC cover resistant to oil and petroleum based products. Our Push-On hose is compatible with a wide range of oils and fuels, however is NOT recommended for use with unleaded gasoline. DO NOT USE with brake fluids or power steering fluids. Operates at 250 PSI and temperature range -30 degrees to +160 degrees F. Use with Push-Lok swivel hose ends.

Key Features:

- Operates at 250 PSI
- Temperature Range: -30 Deg to +160 Deg f
- Compatible with Push-Lok Swivel Hose Ends

Model	Color	Part No.	Price
K204-3	Black	04-03786	**$2.15**
K204-4	Blue	04-03791	**$2.17**
K206-3	Black	04-03787	**$2.61**
K206-4	Blue	04-03792	**$2.66**
K208-3	Black	04-03788	**$3.35**
K208-4	Blue	04-03793	**$3.35**
K210-3	Black	04-03789	**$6.50**
K210-4	Blue	04-03794	**$6.50**
K212-3	Black	04-03790	**$7.50**
K212-4	Blue	04-03795	**$7.50**

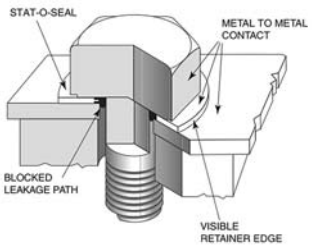
DEL 37° FITTING SEALS



DEL fitting seals are designed to eliminate leakage due to scratches on the sealing surface, improper torquing, or poor finishes on tube ends, in high or low pressure applications. For use with AN, MS, and JIC 37° flared fittings, DEL fitting seals also reduce tube flare cracking by reducing torque needed, eliminating nose damage to the fitting, and allow reuse of hardware. Approved by FAA, NASA, SAE, Air Force, Army, Navy, and major aerospace contractors.

Part Number	Tube Size OD	Fitting Dash Size	Price Each
Aluminum			
04-05002	1/8	2	**$1.75**
04-05003	3/16	3	**$1.75**
04-05004	1/4	4	**$1.75**
04-05006	3/8	6	**$1.75**
04-05008	1/2	8	**$1.75**
04-05010	5/8	10	**$1.75**
04-05012	3/4	12	**$1.75**
04-05016	1	16	**$1.75**
Copper			
08-13471	1/4”	4	**$1.75**
08-013472	3/8”	6	**$1.75**

PARKER STAT-O-SEAL NAS1523



The NAS 1523 Stat-O-Seal is designed with a pre-calculated interference factor built into the teardrop shaped elastomeric seal designed for applications requiring NAS 1523 conformance. The cross-section free height of the rubber is greater than the metal retainer, providing the proper compression without squeezing the seal beyond its elastic limit.

NAS 1523 Stat-O-Seal Features:
Parker NAS 1523 Stat-O-Seals are one-piece, molded-in-place seals with the rubber sealing element mechanically and/or chemically bonded to the metal retainer. Parker’s “Splined and Coined” mechanical bonding feature is used on many 600, NAS1523 and 610 series sizes. This feature ensures a positive attachment of the rubber to the retainer, eliminating missing or loose seal elements associated with bonded seals. Stat-O-Seals are designed to seal beneath the head of the fastener as shown for both internal and external pressure and vacuum systems.

NAS 1523 Stat-O-Seals offer users long and reliable service, a high degree of reusability and easy assembly.

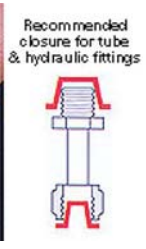
Description	Fastener Size	I.D.	O.D.	Part Number	Price
NAS1523-4B	1/4"	.240	.500	05-14983	**$3.35**
NAS1523-8B	1/2"	.490	.875	05-12626	**$1.98**
NAS1523-10B	5/8"	.615	1.188	05-14987	**$3.35**

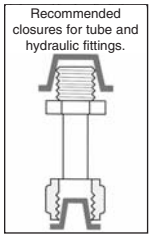
SEE OUR WEBSITE FOR MORE PHENIX FITTINGS

CAPLUGS

T SERIES CAPLUGS (NON-THREADED)







Tapered Caplugs can be used as either caps or plugs. Because they are tapered in design and made from highly pliable (or flexible) Polyethylene, they can be applied to fit snugly and are readily removable, whether used for capping or plugging. Especially recommended for use on MIL Std. and SAE-type tube and hydraulic fittings and for threaded external and internal NPT fittings.

Part No.	Dash No.	Tubing O.D.	Thread	Caplugs As Plugs	Caplugs As Caps	Price Each
04-00045	-2	1/8	5/16-24	1	2	**$0.28**
04-00046	-3	3/16	3/8-24	2	3-X	**$0.21**
04-00047	-4	1/4	7/16-20	3	4-X	**$0.21**
04-00048	-5	5/16	1/2-20	4	5	**$0.23**
04-00049	-6	3/8	9/16-18	5	6-X	**$0.25**
04-00050	-8	1/2	3/4-16	8	9-X	**$0.21**
04-00051	-10	5/8	7/8-14	10	11-X	**$0.23**
04-00052	-12	3/4	1 1/16-12	12-X	13-X	**$0.26**
04-00053	-16	1	1 5/16-12	14-X	15-X	**$0.43**

Less 20% Discount on 50 Caplugs (Same P/N)

SC SERIES CAPLUGS (NON-THREADED)



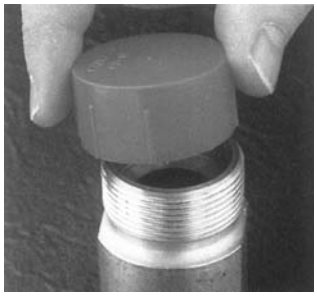


Series SC sleeve caps are designed to fit outside diameters of tubing sizes listed with a snug friction grip. Available in 57 different O.D.'s and lengths. Ideal for capping and protecting both threaded and non-threaded tubing or rod ends. The also make excellent masks, for painting, plating or grit-blasting operations.

Less 20% Discount on 50 Caplugs (Same P/N)

Part No.	Caplug No.	A To fit tube O.D. Inches	A To fit tube O.D. mm	B Inside Length Inches	B Inside Length mm	Price Ea.
04-00054	SC-1/8	1/8	3.18	.59	14.99	**$0.18**
04-00055	SC-3/16-5	3/16	4.76	.35	8.89	**$0.18**
04-00056	SC-3/16-16	3/16	4.76	1.00	25.40	**$0.19**
04-00057	SC-1/4-4	1/4	6.35	.22	5.59	**$0.21**
04-00058	SC-1/4-14	1/4	6.35	.88	22.35	**$0.22**
04-00059	SC-5/16	5/16	7.94	.88	22.35	**$0.19**
04-00060	SC-3/8	3/8	9.53	.88	22.35	**$0.22**
04-00061	SC-7/16-14	7/16	11.11	.88	22.35	**$0.26**
04-00062	SC-1/2-8	1/2	12.70	.50	12.70	**$0.23**
04-00063	SC-1/2-14	1/2	12.70	.88	22.35	**$0.22**
04-00064	SC-9/16-9	9/16	14.29	.56	14.22	**$0.27**
04-00065	SC-9/16-14	9/16	14.29	.88	22.35	**$0.42**
04-00066	SC-5/8	5/8	15.88	.88	22.35	**$0.27**
04-00067	SC-3/4	3/4	19.05	.88	22.35	**$0.33**
04-00068	SC-7/8	7/8	22.23	.88	22.35	**$0.33**
04-00069	SC-1	1	25.40	1.00	25.40	**$0.41**

CD SERIES CAPLUGS (THREADED)





Knurled for ease of application, Series CD caps seal flared JIC fittings exceptionally well against dirt and moisture, as well as for masking during dipping, painting and plating.

Part No.	Caplug No.	To Cap Normal Tubing Size Inches	To fit Thread	Dim A In	Dim A mm	No. of Knurls	Price Each
04-00032	CD-3	3/16	3/8-24	.47	11.94	4	**$0.10**
04-00033	CD-4	1/4	7/16-20	.47	11.94	4	**$0.08**
04-00034	CD-5	5/16	1/2-20	.47	11.94	6	**$0.23**
04-00035	CD-6	3/8	9/16-18	.53	13.46	6	**$0.09**
04-00036	CD-6A	3/8	5/8-18	.53	13.46	6	**$0.31**
04-00037	CD-8	1/2	3/4-16	.57	14.48	6	**$0.12**
04-00038	CD-10	5/8	7/8-14	.68	17.27	6	**$0.38**
04-00039	CD-11	-	1-14	.78	19.81	8	**$0.39**
04-00040	CD-12	3/4	1 1/16-12	.75	19.05	8	**$0.42**

Less 20% Discount on 50 Caplugs (Same P/N)

PD SERIES CAPLUGS (THREADED)





Series PD Plugs, designed for use on flared JIC fittings, air knurled for ease of application. They will seal low pressure requirements with light finger tightening. PD plugs can be used to seal 37° flare fittings without gaskets.

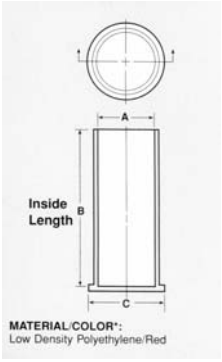
Part No.	Caplug No.	To Plug Nominal Tubing Size	To fit Thread	Dimensions B in	Dimensions B mm	Dimensions C in	Dimensions C mm	Dimensions D in	Dimensions D mm	Price Each
04-03007	PD-20	1/8	5/16-24	.44	11.18	.44	11.18	.18	4.57	**$0.27**
04-00023	PD-30	3/16	3/8-24	.46	11.68	.50	12.70	.18	4.57	**$0.11**
04-00024	PD-40	1/4	7/16-20	.53	13.46	.62	15.75	.19	4.83	**$0.11**
04-00025	PD-50	5/16	1/2-20	.53	13.46	.68	17.27	.25	6.35	**$0.12**
04-00026	PD-60	3/8	9/16-18	.50	12.70	.81	20.57	.25	6.35	**$0.12**
04-00027	PD-65	3/8	5/8-18	.59	14.99	.81	20.57	.25	6.35	**$0.13**
04-00028	PD-80	1/2	3/4-16	.75	19.05	.94	23.88	.25	6.35	**$0.12**
04-00029	PD-100	5/8	7/8-14	.87	22.10	1.06	26.93	.25	6.35	**$0.15**
04-00030	PD-121	3/4	1-1/16-14	1.12	28.45	1.31	33.28	.25	6.35	**$0.44**
04-00031	PD-160	1	1-5/16-12	.93	23.62	1.50	38.10	.25	6.35	**$0.19**

Less 20% Discount on 50 Caplugs (Same P/N)

CAPLUGS

RCL SERIES CAPLUGS (UNTHREADED)





Series RCL caps are ideal for protecting threaded or smooth cylindrical surfaces. Originally designed for use on hydraulic double threaded bulkhead fittings, they are especially suitable where greater longitudinal protection is required.

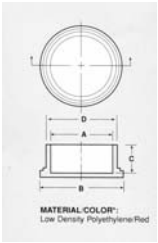
Less 20% Discount on 50 Caplugs (Same P/N)

Part No.	Caplug No. (formerly) (series B-203)	A	B		C		Price Each
		To Cap Thread Size In.	Inside Length				
			In	mm	in	mm	
04-00079	RCL-2	5/16	1.24	31.50	.46	11.68	**$0.25**
04-00080	RCL-3	3/8	1.24	31.50	.52	13.21	**$0.33**
04-00009	RCL-4	7/16	1.33	33.78	.58	14.73	**$0.29**
04-00011	RCL-5	1/2	1.33	33.78	.64	16.26	**$0.32**
04-00012	RCL-6	9/16	1.41	35.82	.70	17.78	**$0.36**
04-00013	RCL-8	3/4	1.56	39.63	.88	22.35	**$0.30**
04-00014	RCL-9	M-20 (.787)	1.56	39.63	.91	23.11	**$0.79**
04-00015	RCL-10	7/8	1.70	43.18	1.01	25.66	**$0.40**
04-00016	RCL-12	11/16	1.89	48.01	1.19	30.23	**$0.57**

HA

EC SERIES CAPLUGS (UNTHREADED)





Static dissipative EC Series Caplugs provide positive ESD and physical protection for all common sizes of threaded electrical and electronic connectors. Also suitable for protecting non-threaded bayonet-type connectors.

Less 20% Discount on 50 Caplugs (Same P/N)

Part No.	Caplug No.	A-Caps Nominal Thread Size In.	Dimensions				Price Each
			B		C		
			In	mm	in	mm	
04-00070	EC-4	1/4	.48	12.19	.50	12.70	**$0.20**
04-00071	EC-5	5/16	.55	13.97	.56	14.22	**$0.21**
04-00072	EC-6	3/8	.62	15.75	.50	12.70	**$0.19**
04-00073	EC-8	1/2	.74	18.79	.50	12.70	**$0.26**
04-00074	EC-9	9/16	.78	19.81	.44	11.18	**$0.09**
04-00075	EC-10	5/8	.84	21.34	.50	12.70	**$0.22**
04-00076	EC-12	3/4	.97	24.63	.50	12.70	**$0.23**
04-00077	EC-14	7/8	1.12	28.44	.50	12.70	**$0.33**
04-00078	EC-16	1	1.22	30.98	.50	12.70	**$0.29**

P SERIES CAPLUGS (THREADED)

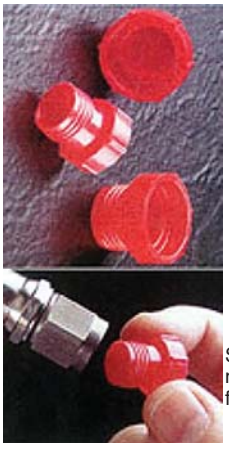


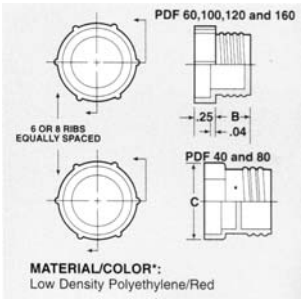
Series P pipe pluge are square head. They are molded in high density polyethylene and are ideal for keeping moisture, dirt and other contaminants from NPT-threaded ports.

Part No.	Caplug No.	To Fit	Dimensions						Price Each
			A		B		C		
			in	mm	in	mm	in	mm	
04-00041	P-18	1/8" NPT	.44	11.18	.28	7.11	-	-	**$0.13**
04-00042	P-28	1/4" NPT	.50	12.70	.37	9.40	-	-	**$0.35**
04-00043	P-38	3/8" NPT	.56	14.22	.44	11.18	-	-	**$0.53**
04-00044	P-48	1/2" NPT	.59	14.99	.56	14.22	-	-	**$0.58**

Less 20% Discount on 50 Caplugs (Same P/N)

PDF SERIES CAPLUGS (THREADED)



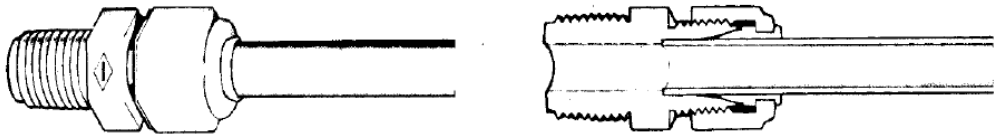


Series PDF plugs are designed for easy mechanical or hand installation on flat-faced O-ring fittings.

Part No.	Caplug No.	To Plug Nominal Tubing Size	To Fit Thread Size	Dimensions				Price Each
				B		C		
				in	mm	in	mm	
04-00018	PDF-60	3/8"	11/16-16	.44	11.18	.87	22.10	**$0.41**
04-00019	PDF-80	1/2"	13/16-16	.50	12.70	.94	23.88	**$0.48**
04-00020	PDF-100	5/8"	1-14	.59	14.99	1.16	29.47	**$0.49**
04-00021	PDF-120	3/4"	13/16-12	.63	16.00	1.33	33.78	**$0.67**
04-00022	PDF-160	1"	17/16-12	.75	19.05	1.63	41.40	**$2.67**

Less 20% Discount on 50 Caplugs (Same P/N)

NYLO-SEAL FITTINGS



Nylo-Seal tube fittings are exceptionally strong. The bodies, made of nylon, are stronger than machined fittings of similar composition. They are furnished complete with nut/sleeve assemblies, made of acetal copolymer. Since the sleeve snaps into and is retained by the nut there is no fumbling for a loose sleeve. Just insert tube into the fitting and tighten the nut 2 to 2-1/2 full turns.

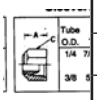
Note: The most frequently used combination of tube and pipe sizes are 1/4" Tube x 1/8" Pipe and 3/8" Tube x1/4" Pipe.

259-P CAP, 259-N INSERT (NYLON)



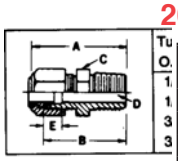
	Tube O.D.	A	D
259-N	1/4	3/8	1/8
259-P	3/8	7/16	13/64

261-N NUT AND SLEEVE ASSEMBLY



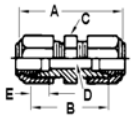
Tube O.D.	Thd.	A	C
1/4	7/16-20	15/32	9/16
3/8	5/8-20	37/64	3/4

268-N MALE CONNECTOR



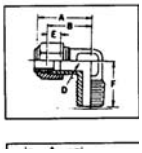
Tube O.D.	Pipe Thd.	A	B	C	D	E
1/4	1/8	1-13/64	1	5/8	15/64	15/32
1/4	1/4	1-25/64	1-3/16	5/8	15/64	11/16
3/8	1/4	1-17/32	1-21/64	13/16	5/16	19/32
3/8	3/8	1-19/32	1-25/64	13/16	11/32	19/32

262-N UNION



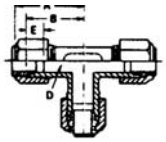
Tube O.D.	A	B	C	D	E
1/4	1-25/64	63/64	5/8	7/32	15/32
3/8	1-21/32	1-1/4	13/16	23/64	19/32

269-N MALE ELBOW



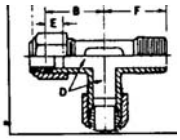
Tube O.D.	Pipe Thd.	A	B	D	E	F
1/4	1/8	1-1/64	13/16	7/32	3/8	27/32
1/4	1/4	1-1/64	13/16	13/32	3/8	1-1/32
3/8	1/4	1-9/64	15/16	5/16	7/16	1-1/32
3/8	3/8	1-9/64	15/16	11/32	7/16	1-3/32

264-N UNION TEE



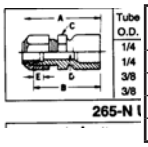
Tube O.D.	A	B	D	E
1/4	1-9/64	47/64	7/32	15/32
3/8	1-11/64	31/31	11/32	19/32

271-N MALE RUN TEE



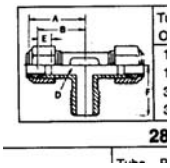
Tube O.D.	Pipe Thd.	A	B	D	E	F
1/4	1/8	59/64	21/32	7/32	15/32	3/4
1/4	1/4	59/64	13/32	7/32	15/32	29/32
3/8	1/4	1-5/32	61/64	5/16	19/32	1-1/16
3/8	3/8	1-3/16	61/64	23/64	19/32	1-7/64

266-N FEMALE CONNECTOR



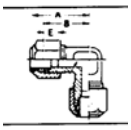
Tube O.D.	Pipe Thd.	A	B	C	D	E
1/4	1/8	1-9/64	15/16	9/16	7/32	9/16
1/4	1/4	1-5/16	1-7/64	11/16	7/32	47/64
3/8	1/4	1-27/64	1-7/32	11/16	11/32	3/4
3/8	3/8	1-27/64	1-7/32	13/16	11/32	3/4

272-N MALE BRANCH TEE



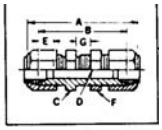
Tube O.D.	Pipe Thd.	A	B	D	E	F
1/4	1/8	15/16	47/64	7/32	15/32	3/4
1/4	1/4	15/16	47/64	7/32	15/32	13/16
3/8	1/4	1-11/64	31/32	5/16	19/32	1-1/16
3/8	3/8	1-11/64	31/32	23/64	19/32	1-7/64

265-N ELBOW UNION



Tube O.D.	A	B	D	E
1/4	1-1/64	13/16	7/32	3/8
3/8	1-5/32	15/16	11/32	7/16

282-N BULKHEAD UNION



Tube O.D.	Pipe Thd.	A	B	C	D	E	F	G
1/4	7/16-20	1-57/64	1-31/64	5/8	7/32	15/32	5/8	5/16
3/8	5/8-20	2-1/4	1-53/64	13/16	11/32	19/32	7/8	3/8

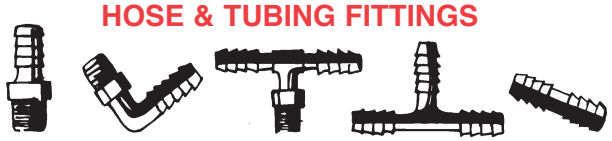
Use 259-N inserts with all Poly-Flo tubing connections. Not needed with Nylo-Seal tubing.

Part No.	Tube Size In.	Price Each	Part No.	Size (In) Tube Pipe	Price Each	Part No.	Size (In) Tube Pipe	Price Each
259-N 04	1/4	**$0.85**	266-N 04 x 02	1/4 x 1/8	**$6.95**	271-N 04 x 02	1/4 x 1/8	**$3.45**
259-N 06	3/8	**$0.99**	266-N 04 x 04	1/4 x 1/4	**$5.90**	271-N 04 x 04	1/4 x 1/4	**$4.45**
259-P 04	1/4	**$0.85**	266-N 06 x 04	3/8 x 1/4	**$7.50**	271-N 06 x 04	3/8 x 1/4	**$8.75**
259-P 06	3/8	**$1.14**	266-N 06 x 06	3/8 x 3/8	**$6.95**	271-N 06 x 06	3/8 x 3/8	**$5.75**
261-N 04	1/4	**$0.85**	268-N 04 x 02	1/4 x 1/8	**$2.50**	272-N 04 x 02	1/4 x 1/8	**$3.45**
261-N 06	3/8	**$1.25**	268-N 04 x 04	1/4 x 1/4	**$2.30**	272-N 04 x 04	1/4 x 1/4	**$4.70**
262-N 04	1/4	**$2.75**	268-N 06 x 04	3/8 x 1/4	**$2.80**	272-N 06 x 04	3/8 x 1/4	**$5.90**
262-N 06	3/8	**$3.70**	268-N 06 x 06	3/8 x 3/8	**$2.65**	272-N 06 x 06	3/8 x 3/8	**$6.35**
264-N 04	1/4	**$4.35**	269-N 04 x 02	1/4 x 1/8	**$2.40**	282-N 04	1/4	**$7.50**
264-N 06	3/8	**$6.50**	269-N 04 x 04	1/4 x 1/4	**$2.50**	282-N 06	3/8	**$7.50**
265-N 04	1/4	**$2.90**	269-N 06 x 04	3/8 x 1/4	**$3.45**	----	----	**----**
265-N 06	3/8	**$5.35**	269-N 06 x 06	3/8 x 3/8	**$3.45**	----	----	**----**

Less 10% on 50 pieces per size, Less 20% on 100 pieces per size

HOSE FITTINGS – PIPE FITTINGS

HOSE & TUBING FITTINGS



Adapter Tube to Pipe | *Elbow Tube to Pipe* | *Tee, Tube to Pipe (Pipe on Side)* | *Tee, Tube on Three Sides* | *Connector Tube to Tube*

Hose and tubing Insert Fittings are available in high density black polyethylene or white Nylon. Use polyethylene fittings with Tygon, nylon or soft rubber tubing to assemble low pressure instrument lines such as airspeed pitot and static lines. Use Nylon fittings in gravity-feed fuel lines and engine breather lines.

Fitting Type	Size	Polyethylene Part No.	Polyethylene Price Each	Nylon Part No.	Nylon Price Each
ADAPTER Tube to pipe	3/16Tx1/8P	0700-150	$0.49	0701-150	$0.99
	1/4Tx1/8P	0700-153	$0.88	0701-153	$0.84
	5/16Tx1/8P	0700-156	$0.99	0701T-15	$1.14
	3/8Tx1/8P	0700-158	$1.38	0701-158	$0.91
	1/4Tx1/4P	0700-110	$0.97	0701-110	$0.83
	3/8Tx1/4P	0700-162	$0.92	0701-162	$0.68
ELBOW Tube to Pipe	1/4Tx1/8P	0710-153	$1.04	0711-153	$1.99
	3/8Tx1/8P	0710-158	$1.44	0711-158	$1.10
	1/4Tx1/4P	0710-110	$1.35	0711-110	$1.50
	3/8Tx1/4P	0710-162	$1.33	0711-162	$1.31
Tube to Tube	1/4Tx1/4T	0710-015	$0.85	0711-015	$1.10
	3/8Tx3/8T	0710-020	$1.45	0711-020	$1.34
REDUCING CONNECTOR	1/4Px1/8P	0725-153	$1.10	0726-153	$1.13
	3/8Px1/8P	0725-161	$1.15	0726-161	$1.33
	3/8Px1/4P	0725-162	$1.10	0726-162	$0.99
TEE Tube to pipe	1/4Tx1/4Tx1/8P	0715-153	$1.30	0716-153	$1.35
	3/8Tx3/8Tx1/4P	0715-162	$1.35	0716-162	$1.35
	1/4Tx1/4Tx1/4P	0715-110	$1.22	0716-110	$1.30
TEE All Tube	3/16Tx3/16Tx3/16T	0715-011	$0.92	0716-011	$0.95
	1/4Tx1/4Tx1/4T	0715-015	$1.35	0716-015	$1.35
	3/8Tx3/8Tx3/8T	0715-020	$1.43	0716-020	$1.26
CONNECTOR Tube to Tube	1/4Tx1/4T	0705-015	$0.80	0706-015	$0.92
	3/8Tx3/8T	0705-020	$0.93	0706-020	$0.86

Fitting Type	Size	Part No.	Price
TEE Tube to pipe HDPE Natural	3/8x3/8x1/4	0715-162	$1.35



TEE CONNECTOR

For pressure switches with 1/8" male pipe threads. For 1/4" O.D oil pressure lines.P/N 10-04846 ..... **$10.55**



HERBIE CLIP HOSE CLAMPS

The Herbie Clip hose clamp is the original double toothed (double row of teeth) ratchet clamp. This makes the Herbie clip twice as strong (up to 200psi depending on hose work and spigot) as similar hose clamps with a single row of teeth. The Herbie Clip hose clamp combines its high strength with other key features such as: non-corrosive and resistant to many chemicals, simple to install can be fitted before or after the hose is in place, minimum leak path, lightweight, easy to use (no sharp edges to cut the operators), fully compliant with ROHS, UL listed (nylon 6.6.)

Clip Size	Min Dia. (in.)	Max Dia. (in.)	Part No.	Price
A	.22	.26	05-02698	$0.24
AA	.26	.31	05-02699	$0.27
B	.31	.36	05-02701	$0.29
C	.40	.47	05-02702	$0.63
CC	.44	.51	05-02695	$0.28
D	.47	.54	05-02703	$0.28
E	.52	.59	05-02704	$0.33
F	.59	.67	05-02705	$0.34
G	.67	.75	05-02706	$0.77
H	.71	.81	05-02696	$0.34
J	.80	.91	05-02707	$0.33
K	.87	.98	05-02708	$0.44

HERBIE CLIP HOSE CLAMP TOOLS



INSTALLATION TOOL

Recommended for medium volume use. .....P/
Fits sizes A to K. .....P/N 05-02709 ..... **$294.95**

REMOVAL TOOL

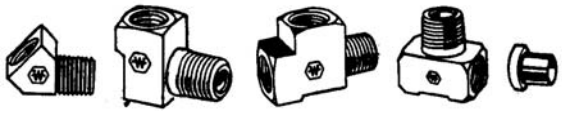
It is easy to install and remove using a choice of manual.

P/N 05-02710..... **$15.50**



WEATHERHEAD BRASS PIPE FITTINGS

These brass elbows and tees provide flexibility in the routing of lines which terminate in male pipe threads.



45° Street Elbow | Street Elbow | Street Tee | Male Branch Tee | Tube Insert

45° STREET ELBOW

Part Number	Pipe Thread	Price Each
3350x2	1/8	$2.87
3350x4	1/4	$4.60
3350x6	3/8	$4.35

90° STREET ELBOW

Part Number	Pipe Thread	Price Each
3400x2	1/8	$2.20
3400x4	1/4	$3.60
3400x6	3/8	$5.35

MALE BRANCH TEE

Part Number	Pipe Thread	Price Each
3600x2	1/8	$5.75
3600x4	1/4	$6.95
3600x6	3/8	$10.90

STREET TEE

Part Number	Pipe Thread	Price Each
3750x2	1/8	$4.70
3750x4	1/4	$8.60
3750x6	3/8	$8.85

WEATHERHEAD BRASS FITTINGS

Part No.	Description	Size	Price Each
2030-4	Tube Insert*	1/8ODx3/32ID	$1.10
3220x4x2	Bushing	1/8FPx1/4MP	$1.04
6100x2	Nut	1/8T	$0.95
6200x2	Male Connector	1/8Txl/8P	$1.52
66x2	Fml Connector	1/8Txl/8P	$2.75

**** Used for Long-EZ brake fittings.***

WEATHERHEAD BARB-TITE REUSABLE HOSE ENDS



MALE PIPE



MALEPIPE RIGID - 90° ELBOW

Designed for use with hoses with maximum working pressure up to 250 PSI. Easy to assemble and disassemble.

Part No.	Description	Hose I.D.	Pipe Size	Cut-off Factor	Price Each
10006B-102	Straight Pipe	3/8"	1/8"	1-1/2	$9.50
10006B-104		3/8"	1/4"	1-1/2	$1.97
10008B-108	Straight Pipe	1/2"	1/2"	1.19	$4.75
10006B-106		3/8"	3/8"	1-11/16	$2.21
10006B-C02	90° Pipe	3/8"	1/8"	3/8	$8.90
10006B-C04		3/8"	1/4"	3/8	$9.50



BRASS TUBE FITTINGS

Description	Part No.	Price
Brass Tube Fitting 3/8 inch Pipe x 3/8 inch	04-00833	$4.35
Brass Tube Fitting 1/4 inch Pipe x 3/8 inch	04-00834	$2.90



ALL TUBE COMPRESSION TEE FITTING

All Tube Compression Tee Fitting. Includes nuts and compression ferrules for use on 3/16.

P/N 15-06175 ..... **$3.95**



STRAIGHT TUBE TO MALE NPT ADAPTER

Straight Tube To Male NPT Adapter. Includes compression ferrule for use with 3/16 nylon brake tubing.

P/N 15-05526 ..... **$0.95**



90 DEGREE COMPRESSION TO MALE NPT ELBOW

90 Degree Compression To Male NPT Elbow. Includes compression ferrule for use with 3/16 nylon brake tubing.P/N 15-05525 ..... **$2.45**



TANK FITTING NPT

Hose Barb X Male Pipe. 1/4" x 1/4"

P/N 15-06132 ..... **$1.55**



BLACK NYLON ELBOW TUBE TO PIPE FITTING - 1/4 X 1/8

P/N 04-03823 ..... **$1.09**

HA

HOSE FITTINGS

BRASS POLY-FLO FITTINGS

Poly-Flo Flareless tube fittings consist of a brass body, nut and sleeves. Use with PolyFlo, PVC or Nylaflow pressure tubing. The Poly-Flo fittings have the same configuration as Nylo-Seal fittings of the same basic part number.



261UB - NUT WITH SLEEVE			
Tube O.D.	Thread Size	Part Number	Price Each
1/8	5/16-24	261UB-02	$1.10
3/16	3/8-24	261UB-03	$0.95
1/4	3/8-24	261UB-04	$1.15



262P - UNION			
Tube O.D.	Thread Size	Part Number	Price Each
1/8	--	262P -02	$5.75
3/16	--	262P-03	$4.85
1/4	--	262P-04	$4.50



264P - UNION TEE			
Tube O.D.	Thread Size	Part Number	Price Each
3/16	--	264P-03	$8.50
1/4	--	264P-04	$8.70



266P - FEMALE CONNECTOR			
Tube O.D.	Pipe Thread	Part Number	Price Each
1/8	1/8	266P-02x02	$3.95
3/16	1/8	266P-03x02	$3.90



268P - MALE CONNECTOR			
Tube O.D.	Pipe Thread	Part Number	Price Each
1/8	1/8	268P-02x02	$2.25
3/16	1/8	268P-03x02	$4.35
1/4	1/8	268P-04x02	$2.10



269P - MALE ELBOW			
Tube O.D.	Pipe Thread	Part Number	Price Each
3/16	1/8	269P-03x02	$5.85
1/4	1/8	269P-04x02	$2.65



270P - FEMALE ELBOW			
Tube O.D.	Pipe Thread	Part Number	Price Each
3/16	1/8	270P-03x02	$11.60



272P - MALE BRANCH TEE			
Tube O.D.	Pipe Thread	Part Number	Price Each
3/16	1/8	272P-03X02	$16.50
1/4	1/8	272P-04X02	$5.35

SAE FITTINGS

Brass SAE fittings for NSR tubing.



SAE Nut And Sleeve Assemblies For NSR Tubing				
Description	Tube O.D.	Thread Size	Part No.	Price
61SM-02	1/8"	5/16-24	05-12243	$2.30
61SM-03	3/16"	3/8-24	05-12244	$2.50
61SM-04	1/4"	7/16-24	05-12245	$1.95



SAE Union Fittings For NSR Tubing				
Description	Tube O.D.	Thread Size	Part No.	Price
62SM-02	1/8"	--	05-12246	$3.60
62SM-03	3/16"	--	05-12247	$3.60
62SM-04	1/4"	--	05-12248	$5.35



SAE Female Connectors For NSR Tubing				
Description	Tube O.D.	Thread Size	Part No.	Price
66SM-02 X 02	1/8"	1/8" NPT	05-12249	$3.95
66SM-03 X 02	3/16"	1/8" NPT	05-12250	$3.95
66SM-04 X 02	1/4"	1/8" NPT	05-12251	$2.95



SAE Female Connectors For NSK Tubing				
Description	Tube O.D.	Thread Size	Part No.	Price
64SM-02	1/8"	--	05-12252	$6.95
64SM-03	3/16"	--	05-12253	$8.60
64SM-04	1/4"	--	05-12254	$6.99



SAE Male Connectors For NSR Tubing				
Description	Tube O.D.	Thread Size	Part No.	Price
68SM-02 X 02	1/8"	1/8" NPT	05-12255	$3.95
68SM-03 X 02	3/16"	1/8" NPT	05-12256	$2.45
68SM-04 X 02	1/4"	1/8" NPT	05-12257	$1.95



SAE Male Elbows For NSR Tubing				
Description	Tube O.D.	Thread Size	Part No.	Price
69SM-02 X 02	1/8"	1/8" NPT	05-12258	$3.60
69SM-03 X 02	3/16"	1/8" NPT	05-12259	$4.70
69SM-04 X 02	1/4"	1/8" NPT	05-12260	$4.90

Prices Subject to Change Without Notice



MS21919 DG & WDG CLAMPS

Loop-type cushioned aluminum alloy clamp. Cushion (non-fuel resistant) is bonded to inner surface and edges of clamp. WDG clamps are cushion wedge type. Cushion assures tight fit and eliminates vibration, thus preventing line abrasion.

Tube Dia.	Dash No.	Price Each	Dash No.	Price Each	Tube Dia.	Dash No.	Price Each	Dash No.	Price Each
1/8	DG2	**$0.52**	WDG2	**$0.47**	1-5/16	DG21	**$1.68**	WDG21	**$1.61**
3/16	DG3	**$0.41**	WDG3	**$0.45**	1-3/8	DG22	**$1.56**	WDG22	**$1.23**
1/4	DG4	**$0.25**	WDG4	**$0.47**	1-7/16	DG23	**$2.69**	WDG23	**$1.19**
5/16	DG5	**$0.25**	WDG5	**$0.44**	1-1/2	DG24	**$1.31**	WDG24	**$1.23**
3/8	DG6	**$0.25**	WDG6	**$0.53**	1-9/16	DG25	**$2.60**	WDG25	**$2.27**
7/16	DG7	**$0.52**	WDG7	**$0.55**	1-5/8	DG26	**$1.61**	WDG26	**$1.91**
1/2	DG8	**$0.29**	WDG8	**$0.49**	1-3/4	DG28	**$1.41**	WDG28	**$1.83**
9/16	DG9	**$0.59**	WDG9	**$0.64**	1-7/8	DG30	**$1.82**		
5/8	DG10	**$0.36**	WDG10	**$0.55**	1-15/16	DG31	**$2.75**		
11/16	DG11	**$0.75**	WDG11	**$0.78**	2	DG32	**$1.31**		
3/4	DG12	**$0.40**	WDG12	**$0.74**	2-1/16	DG33	**$1.98**		
13/16	DG13	**$0.76**	WDG13	**$0.87**	2-1/8	DG34	**$1.65**		
7/8	DG14	**$0.67**	WDG14	**$0.83**	2-1/4	DG36	**$1.83**		
15/16	DG15	**$1.03**	WDG15	**$0.92**	2-3/8	DG38	**$2.36**		
1	DG16	**$0.53**	WDG16	**$0.84**	2-1/2	DG40	**$1.92**		
1-1/16	DG17	**$1.15**	WDG17	**$1.29**	2-5/8	DG42	**$4.80**		
1-1/8	DG18	**$1.06**	WDG18	**$1.18**	2-3/4	DG44	**$4.70**		
1-3/16	DG19	**$1.59**	WDG19	**$1.33**	2-7/8	DG46	**$5.35**		
1-1/4	DG20	**$1.27**	WDG20	**$1.10**	3	DG48	**$1.71**	WDG48	**$3.50**
					3-1/8	DG50	**$4.75**		



MS21919-WH CLAMPS

Band Material: Low Carbon Steel
Cushion Material: Silicone - For elevated temperature usage in phosphate ester based fluid and other synthetic fluid contaminated areas. Unaffected by ozone. Not resistant to petroleum based fluids. Color is white.

Part No.	Tube Dia.	Price
MS21919-WH2	1/8”	**$0.84**
MS21919-WH3	3/16”	**$0.87**
MS21919-WH4	1/4”	**$0.83**
MS21919-WH5	5/16”	**$0.89**
MS21919-WH6	3/8”	**$0.84**
MS21919-WH7	7/16”	**$0.88**
MS21919-WH8	1/2”	**$0.95**
MS21919-WH9	9/16”	**$1.06**
MS21919-WH10	5/8”	**$1.10**
MS21919-WH11	11/16”	**$1.17**
MS21919-WH12	3/4”	**$1.22**
MS21919-WH13	13/16”	**$1.14**
MS21919-WH14	7/8”	**$1.12**
MS21919-WH15	15/16”	**$1.18**
MS21919-WH16	1”	**$1.25**
MS21919-WH18	1-1/8”	**$1.09**
MS21919-WH20	1-1/4”	**$1.45**



MS21919 WCH CLAMPS

Band Material: Corrosion Resistant Steel
Cushion Material: Silicone - For elevated temperature usage in phosphate ester based fluid and other synthetic fluid contaminated areas. Unaffected by ozone. Not resistant to petroleum based fluids.

Color is white

Part Number	Tube Dia.	Price
MS21919-WCH2	1/8”	**$1.14**
MS21919-WCH3	3/16”	**$1.32**
MS21919-WCH4	1/4”	**$1.13**
MS21919-WCH5	5/16”	**$1.15**
MS21919-WCH6	3/8”	**$1.24**
MS21919-WCH7	7/16”	**$1.15**
MS21919-WCH8	1/2”	**$1.23**
MS21919-WCH9	9/16”	**$1.28**
MS21919-WCH10	5/8”	**$1.35**
MS21919-WCH11	11/16”	**$1.35**
MS21919-WCH12	3/4”	**$1.49**
MS21919-WCH13	13/16”	**$1.43**
MS21919-WCH14	7/8”	**$1.71**
MS21919-WCH15	15/16”	**$1.75**
MS21919-WCH17	1 1/16”	**$1.57**
MS21919-WCH18	1 1/8”	**$1.75**
MS21919-WCH20	1 1/4”	**$1.85**
MS21919-WCH22	1 3/8”	**$1.75**



MS21919-WCJ CLAMPS

Band Material: Corrosion Resistant Steel
Cushion Material: Fluorosilicone - For elevated temperature usage in petroleum based fluid contaminated areas. Unaffected by ozone. Not resistant to phosphate ester based fluids. Color is solid blue.

Part No.	Tube Dia.	Price
MS21919-WCJ2	1/8”	**$1.64**
MS21919-WCJ3	3/16”	**$1.74**
MS21919-WCJ4	1/4”	**$1.79**
MS21919-WCJ5	5/16”	**$1.75**
MS21919-WCJ6	3/8”	**$1.88**
MS21919-WCJ7	7/16”	**$1.95**
MS21919-WCJ8	1/2”	**$2.10**
MS21919-WCJ9	9/16”	**$2.69**
MS21919-WCJ10	5/8”	**$2.95**
MS21919-WCJ12	3/4”	**$2.98**
MS21919-WCJ14	7/8”	**$3.45**
MS21919-WCJ16	1”	**$3.95**
MS21919-WCJ20	1-1/4”	**$4.50**



OETIKER SS MECHANICAL INTERLOCK CLAMPS

Oetiker’s core skills are reflected in three tried-and-tested product groups. A wide range of clamps and rings for connections and mountings of all types. In-house-produced pincers for optimum installation of our assortment of clamps. And practical Quick Connectors for fast plug connections without tools. • Mechanical interlock: for pre-coated material Clamp ear: fast and simple installation, visible deformation provides evidence of proper closure • Dimple: increases clamping force, spring-effect compensates for changes in diameter due to thermal • Specially formed strip edges: reduced risk of damage to parts being clamped • Material: 155 Stainless Steel, Material no. 1.4301/UNS S30400

Description	Part No.	Price
Oetiker 256 Stainless Steel MI-Clamp 25.6mm (1”) open position / 22.8mm pinched position	15-05730	**$0.34**
Oetiker 226 Stainless Steel MI-Clamp 22.6mm (7/8”) open position / 19.8mm pinched position	15-05731	**$0.35**
Oetiker 105 Stainless Steel MI-Clamp 10.5mm open position / 8.9mm pinched position	15-08416	**$0.30**
Oetiker 133 Stainless Steel MI-Clamp 13.3mm open position / 11.4mm pinched position	15-08417	**$0.28**
Oetiker 145 Stainless Steel MI-Clamp 14.5mm open position / 12.6mm pinched position	15-08418	**$0.28**
Oetiker 170 Stainless Steel MI-Clamp 17.0mmopen position / 15.1mm pinched position	15-08419	**$0.31**
Oetiker 198 Stainless Steel MI-Clamp 19.8mm (3/4”) open position / 17.0mm pinched position	15-08420	**$0.31**



OETIKER STEPLESS SCREW CLAMPS

Oetiker Stepless Screw Clamps feature a unique tongue-in-groove design to provide a perfect 360° seal. Their narrow band width of 9 mm is designed to fit grooved objects. They are ideal where specialty clamping needs have to be met and the application calls for a smooth inner surface such as on flexible duct sleeves. The tongue-in-groove design provides that “stepless” complete seal. Manufactured using 300 AISI series stainless steel.

P/N	Clamping O.D. Range Inches	Price Each	P/N	Clamping O.D. Range Inches	Price Each
028-9	13/16” - 1-1/8”	**$4.85**	090-9	3-5/16” - 3-1/2”	**$4.85**
031-9	15/16” - 1-1/4”	**$5.35**	095-9	3-1/2” - 3-3/4”	**$5.95**
032-9	1-1/16” - 1-1/4”	**$4.90**	100-9	3-11/16” - 3-15/16”	**$4.85**
036-9	1-1/4” - 1-7/16”	**$5.35**	105-9	3-15/16” - 4-1/8”	**$5.95**
040-9	1-3/8” - 1-9/16”	**$4.80**	110-9	4-1/8” - 4-5/16”	**$4.95**
045-9	1-9/16” - 1-3/4”	**$4.95**	115-9	4-5/16” - 4-1/2”	**$6.50**
050-9	1-3/4” - 2”	**$4.95**	120-9	4-1/2” - 4-11/16”	**$4.75**
055-9	1-15/16” - 2-1/8”	**$4.95**	125-9	4-11/16” - 4-15/16”	**$3.65**
060-9	2-1/8” - 2-3/8”	**$5.35**	130-9	4-7/8” - 5-1/8”	**$5.95**
065-9	2-5/16” - 2-9/16”	**$4.95**	135-9	5-1/16” - 5-5/16”	**$4.55**
070-9	2-9/16” - 2-3/4”	**$4.95**	140-9	5-1/2” - 5-11/16”	**$6.75**
075-9	2-3/4” - 3”	**$5.75**	145-9	5-11/16” - 5-7/8”	**$5.35**
080-9	2-15/16” - 3-1/8”	**$6.85**	150-9	5-7/8” - 6-1/16”	**$3.45**
085-9	3-1/8” - 3-5/16”	**$4.95**	160-9	6-1/16” - 6-1/4”	**$4.90**
			165-9	6-1/4” - 6-1/2”	**$5.35**



BREEZE AERO-SEAL® 300 SERIES CLAMPS

The original perforated stainless steel worm-gear clamp. Heavy duty four-piece Quadra-Lock construction enables far more tightening torque to be delivered to the band perforations. Use for aircraft and heavy-duty industrial applications.
9/16" (14.2 mm) band
5/16" (7.9 mm) slotted hex screw
Per SAE standard J1508 Type "F"

SAE Size	Description	Min	Max	PN	Price
6	Breeze Clamp 300-06H	7/16"	25/32"	05-14905	**$0.99**
8	Breeze Clamp 300-08H	1/2"	29/32"	05-14906	**$0.98**
10	Breeze Clamp 300-10H	9/16"	1-1/16"	05-14907	**$0.99**
12	Breeze Clamp 300-12H	11/16"	1-1/4"	05-14908	**$0.99**
16	Breeze Clamp 300-16H	13/16"	1-1/2"	05-14909	**$0.99**
20	Breeze Clamp 300-20H	13/16"	1-3/4"	05-14910	**$0.99**
24	Breeze Clamp 300-24H	1-1/16"	2"	05-14911	**$0.99**
28	Breeze Clamp 300-28H	1-5/16"	2-1/4"	05-14912	**$1.01**
32	Breeze Clamp 300-32H	1-9/16"	2-1/2"	05-14913	**$1.05**
36	Breeze Clamp 300-36H	1-13/16"	2-3/4"	05-14914	**$1.15**
40	Breeze Clamp 300-40H	2-1/16"	3"	05-14915	**$1.30**
44	Breeze Clamp 300-44H	2-5/16"	3-1/4"	05-14916	**$1.32**
48	Breeze Clamp 300-48H	2-9/16"	3-1/2"	05-14917	**$1.43**
52	Breeze Clamp 300-52H	2-13/16"	3-3/4"	05-14918	**$1.37**
56	Breeze Clamp 300-56H	3-1/16"	4"	05-14919	**$1.37**
60	Breeze Clamp 300-60H	3-5/16"	4-1/4"	05-14920	**$1.43**
64	Breeze Clamp 300-64H	3-9/16"	4-1/2"	05-14921	**$2.32**
72	Breeze Clamp 300-72H	1-7/8"	5"	05-14922	**$1.55**
80	Breeze Clamp 300-80H	2-1/2"	5-1/2"	05-14923	**$1.73**
88	Breeze Clamp 300-88H	3-1/8"	6"	05-14924	**$1.80**
96	Breeze Clamp 300-96H	3-5/8"	6-1/2"	05-14925	**$1.83**
104	Breeze Clamp 300-104H	4-1/8"	7"	05-14926	**$1.90**
128	Breeze Clamp 300-128H	5-5/8"	8-1/2"	05-14927	**$3.50**
152	Breeze Clamp 300-152H	7-1/8"	10"	05-14928	**$2.40**
188	Breeze Clamp 300-188H	9-3/8"	12-1/4"	05-14929	**$2.60**



BREEZE LINER CLAMPS

An integral extension of the band as an inner liner protects soft-surface hose (silicone and others) from damage caused by extrusion or shearing through the band slots. Liner clamps afford maximum protection to soft hoses while providing a true concentric seal.

Standard 1/2" (12.7mm) band
5/16" (7.9mm) slotted hex head screw

Per SAE standard J1508 Type "F"

SAE Size	Description	Min	Max	Part Number	Price
6	Breeze Clamp 9406H	7/16"	25/32"	05-14930	**$1.31**
10	Breeze Clamp 9410H	9/16"	1-1/16"	05-14931	**$1.31**
20	Breeze Clamp 9420H	13/16"	1-3/4"	05-14932	**$1.36**
24	Breeze Clamp 9424H	1-1/16"	2"	05-14933	**$1.45**
28	Breeze Clamp 9428H	1-5/16"	2-1/4"	05-14934	**$1.38**
32	Breeze Clamp 9432H	1-9/16"	2-1/2"	05-14935	**$1.45**
36	Breeze Clamp 9436H	1-13/16"	2-3/4"	05-14936	**$1.47**
40	Breeze Clamp 9440H	2-1/16"	3"	05-14937	**$1.73**
44	Breeze Clamp 9444H	2-5/16"	3-1/4"	05-14938	**$1.89**
48	Breeze Clamp 9448H	2-9/16"	3-1/2"	05-14939	**$1.89**
52	Breeze Clamp 9452H	2-13/16"	3-3/4"	05-14940	**$1.95**
52	Breeze Clamp 9452	2-13/16"	3-3/4"	05-15419	**$2.25**
56	Breeze Clamp 9456H	3-1/16"	4"	05-14941	**$1.90**
60	Breeze Clamp 9460H	3-5/16"	4-1/4"	05-14942	**$2.07**
64	Breeze Clamp 9464H	3-9/16"	4-1/2"	05-14943	**$1.95**
72	Breeze Clamp 9472H	1-7/8"	5"	05-14944	**$2.14**
80	2-1/2"Breeze Clamp 9480H	2-1/2"	5-1/2"	05-14945	**$2.45**



100 HOSE CLAMPS

Tangential worm-screw type for use on fuel, oil, air and coolant lines. Worm drive provides uniform clamping pressure without distorting hose. The QS100 series has stainless steel band with cadmium-plated carbon steel thumb screw. To attach, just push housing to the desired position on the band, snugly around hose, & the threads of the worm screw will drop into the slots. Tighten thumb screw with finger pressure - no tools required.

QS100 Dash No.	Dia. Range (In.) Min.	Dia. Range (In.) Max.	Price Each	QS100 Dash No.	Dia. Range (In) Min.	Dia. Range (In) Max.	Price Each
6W	7/16	25/32	**$1.87**	24W	1-1/16	2	**$1.92**
8W	1/2	29/32	**$1.89**	28W	1-1/16	2-1/4	**$1.88**
10W	9/16	1-1/16	**$1.90**	32W	1-9/16	2-1/2	**$2.01**
12W	11/16	1-1/4	**$1.89**	36W	1-13/16	2-3/4	**$2.01**
16W	13/16	1-1/2	**$2.06**	40W	2-1/16	3	**$2.30**

Less 15% in lots of 50. May be assorted.



AERO-SEAL CLAMPS 100 SERIES - HEX HEAD

9/16" (14.2mm) band. 5/16" (7.9mm) Standard Hex Head Screw. Per SAE standard J1508 Type "F".

Part No.	Min	Max	Price
QS100M28H	1 5/16	2 1/4	**$1.40**



STAINLESS STEEL CLAMPS FOR SILICONE VACUUM HOSE

Clamp for silicone hose will not cut into the hose like other clamps. 100 % S/S including wore gear.

Band Width	Min	Max	Part No.	Price
5/16"	1/2"	5/8"	05-04707	**$1.30**
1/2"	1/2"	29/32"	05-04708	**$1.64**
1/2"	11/16"	1-1/4"	05-04709	**$1.71**
1/2"	13/16"	1-1/2"	05-04711	**$1.70**



200 HOSE CLAMPS

Aero-Seal stainless steel clamps are for industrial & aircraft applications. This tangential worm-screw type clamp is for use on fuel, oil, air & coolant lines. The worm drive provides uniform clamping pressure without distorting hose. Tighten slotted head with screwdriver.

QS200 Dash No.	Dia. Range (In.) Min.	Dia. Range (In.) Max.	Price Each	QS200 Dash No.	Dia. Range (In) Min.	Dia. Range (In) Max.	Price Each
-06H	7/16	25/32	**$1.43**	-44H	2-5/16	3-1/4	**$2.00**
-08H	1/2	29/32	**$1.48**	-48H	2-9/16	3-1/2	**$2.04**
-10H	9/16	1-1/16	**$1.53**	-52H	2-13/16	3-3/4	**$2.22**
-12H	11/16	1-1/4	**$1.48**	-56H	3-1/16	4	**$2.17**
-16H	13/16	1-1/2	**$1.45**	-60H	3-5/16	4-1/4	**$2.27**
-20H	13/16	1-3/4	**$1.47**	-64H	3-9/16	4-1/2	**$2.25**
-24H	1-1/16	2	**$1.51**	-72H	4-1/8	5	**$2.42**
-28H	1-5/16	2-1/4	**$1.53**	-80H	4-5/8	5-1/2	**$2.79**
-32H	1-9/16	2-1/2	**$1.54**	-88H	5-1/8	6	**$2.84**
-36H	1-13/16	2-3/4	**$1.61**	-96H	5-5/8	6-1/2	**$2.84**
-40H	2-1/16	3	**$1.94**	---	---	---	---

Less 15% in lots of 50. May be assorted.



BREEZE AEROSPACE CLAMPS AN737TW SERIES

Breeze offers a several products to meet various Aerospace and Military specifications including the NAS1922, NAS 1924, MS35842, and AN737TW clamps that meet Federal Supply Class 4730. Made in the USA

Part No.	Min	Max	Price
AN737TW30	11/16	15/16	**$2.36**
AN737TW44	61/64	1 3/8	**$2.84**

BREEZE AERO-SEAL STAINLESS CLAMP KITS

Pack A : Contains 2 each QS200 -52H, -64H, -72H and -80H.
P/N 05-00942.....**$19.00**
Pack B : Contains 2 each QS200 -8H, -12H, -24H, -32H, -40H, & -64H.
P/N 05-01340.....**$20.00**

Prices Subject to Change Without Notice



DOUBLE EAR CLAMPS

•Robust, durable one-piece design offers positive, tamper resistant seal •For air and fluid media lines •One-piece design offers quick and easy installation •Smooth edges prevent damage to hose.

1/4"..... P/N 15-04628 ..... **$0.52**
5/16"..... P/N 15-04870 ..... **$0.48**
3/8"..... P/N 15-04816 ..... **$0.49**

EAR CLAMP PINCERS WITH SIDE JAWS TOOL



Side Jaw Pincer, Forged Steel, used to close ear clamps.
P/N 12-03358 ..... **$49.75**

STANDARD EAR CLAMP TOOL



Straight Jaw Pincer, Forged Steel, Normal Use of installation or removal of 5mm,7mm,9mm ear clamps.
P/N 12-03297..... **$47.70**

BREEZE MINIATURE CLAMPS



The best clamp for small diameter hose and tubing. Stainless steel band and housing with plated carbon steel screw. Applies an even circumferential pressure with less torque.

7/32" to 5/8"
P/N 6504 ..... **$0.97 Ea.**

7/16" to 7/8"
P/N 6506 ..... **$0.97 Ea.**

VAUGHN'S STANDOFF HUB



The Vaughn's Standoff Hub is a system consisting of three parts (hub, washers, and saddles) that enable you to keep hoses and wires in place in aircraft, machines, and more. The Standoff parts are made of durable nylon and are clean and easy to install. Parts sold separately.

Vaughn's Standoff Hub.....P/N 05-06555 ..... **$1.49**

EXTRA GRIP STEEL CONDUIT CLAMPS



These Extra Grip Conduit Clamps have an added feature other clamps just don't. To help fight the susceptibility of the conduit slipping due to oil buildup in the clamp, this clamp features a groove for increased grip on coiled wire conduit.

Size	Part Number	Price
3/16-Inch	05-13142	**$17.50**
1/4-Inch	05-13143	**$23.55**

SNAPPER CLAMPS



A quick ratchet closure provides specific take-up, eliminating excessive tightening which may mutilate the hose.
3/8" for 1/4" fuel line
P/N 05-00940..... **$0.26**
1", for radiator hose
P/N 05-00941..... **$0.39**

SNAPPER CLAMP FOR 1/4" PRIMER LINE



For use with 7015 1/4 OD primer line. The latest in quick and easy clamping systems. Can be installed in seconds with ordinary pliers. Double ratchet design provides positive locking. Constructed of heavy duty white nylon.
P/N 15-05994..... **$0.59**

LOOM CLAMPS VINYL COATED



Vinyl Hose Clamps. Vinyl coated galvanized steel. Temp. Range (F)-30 to +180

Clamp I.D.	Part No.	Price	Clamp I.D.	Part No.	Price
1/4	15-04635	**$0.59**	5/8	15-04877	**$0.93**
3/16	15-04804	**$0.73**	1/2	15-06851	**$0.84**
3/8	15-04821	**$0.71**			

AN742 PLAIN CLAMPS



Plain loop-type line support clamps, made of aluminum alloy meeting specification QQ-A-362, condition T. Heat-treated to a minimum tensile strength of 50,000 PSI.

Aluminum					
Dash No.	For Tube O. D. (In.)	Price Each	Dash No.	For Tube O. D. (In.)	Price Each
-D3	3/16	**$0.41**	-D8	1/2	**$0.69**
-D4	1/4	**$0.34**	-D10	5/8	**$0.57**
-D5	5/16	**$0.75**	-D12	3/4	**$0.76**
-D6	3/8	**$0.48**	-D15	15/16	**$2.94**
-D7	7/16	**$1.67**	-D16	1	**$0.77**

Steel					
Dash No.	For Tube O. D. (In.)	Price Each	Dash No.	For Tube O. D. (In.)	Price Each
-3	3/16	**$0.74**	-8	1/2	**$1.95**
-4	1/4	**$0.59**	-10	5/8	**$2.80**
-5	5/16	**$1.96**	-12	3/4	**$1.14**
-6	3/8	**$1.27**	-15	15/16	**$6.50**
-7	7/16	---	-16	1	**$3.35**

Less 15% in lots of 50. May be assorted.

LINE CLAMPS



These line clamps are lightweight but tough enough for the most rugged applications. Feature single piece .030" thick aluminum construction. No more messy bundles. Each clamp is shaped to hold braided line, tubing, or wiring securely, without pinching. Secured w/ standard tie wraps, these claps keep movement and wear to a minimum. Can be adjusted to mount on any tubing from 3/4".

Size	P/N	Price	Size	P/N	Price
1/4"	05-00004	**$0.92**	5/8"	05-00007	**$1.16**
3/8"	05-00005	**$0.99**	3/4"	05-00008	**$1.20**
1/2"	05-00006	**$1.12**	1"	05-00009	**$1.29**

30 piece assortment – includes 5 of each clamp
P/N 05-02205..... **$33.00**

TYGON LP-1200 FUEL LINE TUBING



Clear, high-performance fuel tubing for small engines. Tygon® LP-1200 Low Permeation Fuel Tubing is specially designed to meet new EPA and CARB evaporative emission standards of 15g/m2/day. The patent-pending design and robust multi-layer construction offers superior fitting retention and resistance to swelling, hardening and cracking caused by hydrocarbon-based fluids.

I.D. (in.)	O.D. (in.)	Wall Thickness. (in.)	Max. Working Pressure* (PSI)	Part No.	Price Per Foot
1/8	1/4	1/16	60	05-15261	**$1.55**
1/4	3/8	1/16	30	05-15262	**$2.45**

AP

NYLO-SEAL TUBING - POLY-FLO TUBING

AP

NYLO-SEAL NYLON TUBING



Made of Nylon-II and is far superior to other types of Nylon tubing. It does not depend on moisture for flexibility and does not become brittle. It has excellent resistance to flexural fatigue and can be used where there is vibration or tube movement. Self-extinguishing under A.S.T.M. Test D635-44. N Tubing is rated to 1000 lbs. and is excellent for instrument lines and other low pressure applications. Use NSR tubing (2500 lb. rating) for hydraulic brake lines after verifying it is appropriate tubing for your application.

N TUBING

Black Part No.	Natural Part No.	Od Inches	Wall Thickness	Burst Pressure	Min Bend Radius	Weight	Price per Ft.
N/A	05-01009	1/8	0.023	960	3/8	0.004	**$0.41**
N/A	05-01010	3/16	0.025	960	1/2	0.006	**$0.35**
N/A	05-01011	1/4	0.035	960	1-1/4	0.015	**$0.50**
N/A	05-01012	3/8	0.05	960	2	0.032	**$0.93**

NSR TUBING

Black Part No.	Natural Part No.	Od Inches	Wall Thickness	Burst Pressure	Min Bend Radius	Weight	Price per Ft.
05-01228	05-12487	1/8	0.026	2120	5/16	0.004	**$0.47**
05-01230	05-12489	3/16	0.039	2120	7/16	0.008	**$0.82**
05-01229	05-12488	1/4	.050	2120	9/16	0.015	**$1.03**
05-01231	05-12490	3/8	0.075	2120	1	0.032	**$2.10**

NYLAFLOW NYLON TUBING



Nylon Polypenco. pressure tubing is a super tough, low friction, high flexibility tubing that can be used for cable protectors or in short pieces, as small bushings and washers. Suitable for use in oil, air, vacuum, fuel and low pressure hydraulic lines. It resists abrasion and wears better than aluminum or steel tubing. Has an extremely smooth inner surface with a very low coefficient of friction. Used for brake lines, and also as a conduit for the rudder cables in the Rutan VariEze and Long-EZ. Rated 1000 psi. Use Poly-Flo fittings. Sold by the foot.

Type	OD	ID	PSI	Part No.	Price
Standard Wall	1/8	.096	1000	05-00105	**$0.18**
Standard Wall	3/16	.138	1000	05-00110	**$0.38**
Standard Wall	1/4	.190	1000	05-00115	**$0.35**
High Bursting Pressure	1/4	.150	2500	05-04349	**$0.85**
High Bursting Pressure	3/16	.111 (appx.)	2500	05-04355	**$0.28**

NEOPRENE HOSE



Neoprene tubing is used in instrument hookups and for battery drains. Use AN hose fittings such as AN840 with Breeze Mini Clamps, nylon or polyethylene hose fittings such as 0710-153. Not for use as fuel or oil lines.

I.D.	Wall	Part No.	Price/Ft
3/16”	1/16”	05-00200	**$2.25**
1/4”	1/16”	05-00300	**$0.79**
3/8”	1/16”	05-00400	**$1.11**

TYGON TUBING



Tygon tubing is flexible, tough, abrasion-resistant and non-aging. Ideal or hookup of airspeed pitot and static lines (not recommended for pressurized applications). Use AN hose fittings such as AN840 with Breeze Mini Clamps, nylon or polyethylene hose fittings such as 0710-153.

3/8” O.D. X 1/4” I.D. .....P/N 05-00944 ..... **$1.95 Ft**

1/2” O.D. X 3/8” I.D. .....P/N 05-00945 ..... **$4.95 Ft**

BING ALCOHOL RESISTANT FUEL LINE



This fuel line is blue in color and does not rot or deteriorate from the inside, clogging the carburetor or fuel system. It withstands 50 PSI and tensile strength is 8000 PSI. It is resistant to temperatures of -65° to 220°F without deterioration, features exceptional resistance to gasoline, oil, oxygen, and ozone, and has high elastic memory allowing use of Delrin or nylon barbed fittings in low pressure applications without the need for external clamps.

Description	ID	OD	Part No.	Price
Bing Alcohol Resistant Fuel Line	1/4	3/8	05-00500	**$2.45**
Bing Alcohol Resistant Fuel Line	1/8	1/4	05-00560	**$1.30**

VINYL TUBING



This clear Vinyl tubing is strong and light weight. Use flexible vinyl tubing to transport liquids, gases, and some solids. Chemically resistant to alkalies, alcohol, aliphate, hydrocarbons, oils, and some acids.

Part No.	OD	ID	Price
0500-071	3/8	1/4	**$0.58**
0500-165	7/8	5/8	**$2.31**
0500-180	1	3/4	**$2.60**

BLACK MAX NYLON BRAKE LINE



This is the standard brake line used with Black Max Kits. It is nylon tubing with 1/8” OD x .078” ID and 1000PSI. Sold by the Foot. P/N 06-01006..... **$0.62**

POLY-FLO POLYETHYLENE TUBING



Poly-Flo tubing is a flexible, economical thermoplastic tubing fabricated from high molecular weight polyethylene for improved strength. The base resin has the greatest resistance to environmental stress cracking of all the regular polyethylenes. It meets A.S.T.M. D-1248-60T, Type 1, Class A, Grade 4 and Federal Specification LP-590, Type 2, Grade 7. Used for instrument or pneumatic lines. Use Nylo-Seal fittings (259-N inserts are required), nylon or polyethylene hose fittings such as 0710-153. Color - natural.

Part No.	Tube OD	Wall	Bend Radius	PSI at 75 F	PSI at 150 F	Price
44-P	1/4	0.040	1.250	190	75	**$0.39**
66-P	3/8	0.062	2.00	205	80	**$0.38**
88-P	1/2	0.062	2.500	150	60	**$0.57**

PRESSURE RATINGS

Operating Temperature	Poly-Flo (Polyethylene) Burst Pressure* PSI	Poly-Flo (Polyethylene) Max. Work Pressure* PSI	Nylo-Seal NSR** (Nylon 11) Burst Pressure* PSI	Nylo-Seal NSR** (Nylon 11) Max. Work Pressure* PSI
Room Temp.	250-600	75-160	2500	625
140°F.	125-300	37-80	1800	425
230°F.	UNUSABLE		1400	350
280°F.	UNUSABLE		UNUSABLE	

Depends on tube size and wall thickness. Working pressure based on a safety factor of 4.

****Satisfactory for continuous operation up to 180° F. Becomes embrittled above this point.***

SUPER HEAVY PULSE LINE



Super heavy wall clear polyurethane pulse line has an extra thick 3/32” wall that will not dampen crankcase pulse even on longer runs. Clear one piece urethane construction is not affected by fuel. Will not harden, crack, or become brittle with age. Can also be used as clear fuel line. Sold by the foot. Outside Diameter: 7/16”. Inside Diameter: 1/4”. Wall Thickness: 3/32” P/N 15-06094..... **$4.35**

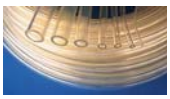
CLEAR BLUE FUEL LINE



Polyether-based Polyurethane Tubing offers excellent resistance to chemicals, kinking, abrasion, hydrolysis, oxidation, and ozone exposure. Our Polyether-based Polyurethane tubing excels in maintaining exceptional flexibility, high-impact strength, and above average performance in cold temperature.

O.D.	Description	Part Number	Price
1/4”	Clear Blue Polyurethane Fuel Line	15-04632	**$0.83**
5/16”	Clear Blue Polyurethane Fuel Line	15-04874	**$0.62**
3/8”	Clear Blue Polyurethane Fuel Line	15-04818	**$0.83**

POLYURETHANE TUBING



Flexible polyurethane tubing has greater abrasion and tear resistance than any other type of plastic tubing. Won’t age or oxidize. Excellent low temperature flexibility - avoids brittleness. Tensile strength 5900 PSI. Use AN hose fittings such as AN840 with Breeze Mini Clamps, nylon or polyethylene hose fittings such as 0710-153. Sold by the foot.

Mfg PN	OD	ID	Our PN	Price
0585-033	3/16	1/8	**05-11169**	**$0.80**
0585-071	3/8	1/4	**0585-071**	**$1.90**
0585-107	1/2	3/8	**0585-107**	**$3.35**
0585-165	7/8	5/8	**0585-165**	**$7.75**
0585-180	1	3/4	**05-04246**	**$10.50**

PARKER SUPER-FLEX 397 SERIES FUEL LINE HOSE



Parker’s fuel line hose includes a thermoplastic barrier that helps protect atmosphere from harmful hydrocarbons that escape through the carcass of ordinary fuel hose. This hose surpasses all of CARB’s stringent permeation requirements and is similar to SAE30R7 specifications. The Super-Flex FL hose also features an abrasion and weather resistant cover to help protect from external application abuse. ***Approved for biodiesel fuels that meet ASTM D 6751 requirements per UL guidelines for Biodiesel compatibility.*** 4:1 Design factor

Tube:	NBR with a thermoplastic barrier
Cover:	Black Hypalon
Reinforcement:	Braided Polyester
Temperature Range:	-30°F to +257°F (-34°C to +125°C)

Part No.	ID (in.)	Reinf. Braids	OD(in.)	OD(mm)	Approx. wt. per 100 ft.	Min. Bend Rad.	Max Rec. WP	Price Per Ft.
05-03597	1/4	1	0.500	12.7	9.7	1.5”	100	**$2.90**
05-07223	5/16	1	0.0562	14.3	11.3	2.5”	100	**$3.50**
05-03598	3/8	1	0.625	15.9	1.30	2”	100	**$4.70**

MIL-DTL 6000D OIL AND COOLANT HOSE



Inside and out, MIL-DTL 6000D is designed to handle the effects of oil, alcohol, coolant, and water. The tube is oil resistant with a black cover reinforced with high strength mildew resistant yarns. It withstands extreme temperature conditions from -40°F to +250°F. Meets or exceeds U.S. military specs. Lightweight, flexible and easy-to-handle, making it the perfect hose for hard-to-get-to spots in tight engine compartments. Not recommended for fuel lines.

Part No.	Hose Dimensions I.D. (In.)	Hose Dimensions O.D. (In.)	Burst Pressure (PSI)	Wt./ Ft. (Lb.)	Price Per Ft.
6000-4	1/4	5/8	1,000	.14	**$5.75**
6000-5	5/16	11/16	1,000	.16	**$5.95**
6000-6	3/8	3/4	1,000	.18	**$6.50**
6000-8	1/2	7/8	1,000	.22	**$6.70**
6000-10	5/8	1	1,000	.26	**$7.50**
6000-12	3/4	1-1/8	1,000	.27	**$8.80**
6000-14	7/8	1-1/4	1,000	.32	**$9.50**
6000-16	1	1-3/8	1,000	.38	**$9.85**
6000-20	1-1/4	1-3/4	1000	---	**$11.50**
6000-24	1-1/2	2	1000	---	**$14.55**
6000-28	1-3/4	2-1/8	1000	---	**$15.50**
6000-32	2	2-3/4	1000	---	**$17.70**

Sold in one foot increments. Max Length:10FT
MIL-DTL-6000C was superseded by this MIL-DTL-6000D
Note: This hose is not recommended for use as fuel lines.

AEROQUIP 306 HOSE (MIL-H-5593)



A low-pressure hose for instrument air & vacuum lines. Consists of an inner tube of seamless synthetic rubber, reinforced with a single layer of cotton braid and a synthetic rubber cover. Used with slip-over hose fittings such as the AN840 series, or with Aeroquip 471 hose fittings when connecting to AN type fittings. Conforms to Specification MIL-H-5593. Specify hose I.D. when ordering.

Part No.	Hose Dimensions I.D. (In.)	Hose Dimensions O.D. (In.)	Burst Pressure (PSI)	Wt./ Ft. (Lb.)	Price Per Ft.
306-3	.188	.406	1,000	.056	**$3.95**
306-2	.125	.344	1,000	.056	**$6.70**
306-4	.250	.469	1,000	.072	**$3.85**
306-6	.375	.594	1,000	.096	**$5.35**
306-8	.500	.750	750	.144	**$6.70**
306-10	.625	.875	700	.168	**$8.50**

AEROQUIP 471 HOSE FITTING
USED WITH AEROQUIP 306 HOSE



471-2D

Aeroquip 471 hose fittings consist of an AN818 nut, an externally threaded 37° nipple and an internally threaded hose socket. All components are anodized aluminum. Fittings conform to MS27404.

Part No.	Tube Size (In.)*	AN818 Nut Thread Size	Price Ea.
471-2D	1/8"	5/6-24	**$13.25**
471-4D	1/4	7/16-20	**$7.25**
471-6D	3/8	9/16-18	**$9.90**
471-8D	1/2	3/4-16	**$28.00**

Corresponds to tube O.D. of AN-type flared tube fittings. Not an Aeroquip dimension.

AEROQUIP ASSEMBLY MANDRELS FOR AIRCRAFT HOSE ASSEMBLIES



For use with Aeroquip 491 fittings. These tools are recommended to avoid damage to the sealing surface and to properly support the inner tube. ***Note:*** These are Aeroquip Factory Mandrels, which are highly recommended for best results.

Hose Size	#491 Fitting P/N	Mandrel P/N	Price	Hose Size	#491 Fitting P/N	Mandrel P/N	Price
3/16"	491-3	S-1051-3*	**$124.90**	1/2"	491-8	S-1051-8	**$91.75**
1/4"	491-4	S-1051-4*	**$98.90**	5/8"	491-10	S-1051-10	**$123.75**
5/16"	491-5	S-1051-5*	**$142.85**	3/4"	491-12	S-1051-12	**$346.00**
3/8"	491-6	S-1051-6*	**$99.75**				

With Removable mandrel. Aeroquip Qty. Discount: 15% for 20 ft.; 20% for 50 ft.; 25% for 100 ft. or more (Per Item)

SILICONE HOSE



Sold by the foot (not for fuel or oil)

ID	OD	Wt/Ft/Lbs	Part No.	Price
1/4"	0.45"	.064	05-00659	**$7.50**
3/8"	0.67"	.144	05-00660	**$7.65**
1/2"	0.80"	.175	05-06925	**$7.65**
5/8"	0.95"	.220	05-00661	**$9.65**
3/4"	1.07"	.276	05-00671	**$9.60**

AEROQUIP 303 HOSE



This standard hose is used in med-pressure a/c hydraulic fuel, oil and coolant systems. An inner tube of seamless synthetic rubber is reinforced with a synthetic-impregnated single-wire braid over a single cotton braid and an outer cover of synthetic-impregnated oil-resistant cotton braid. Operating temperature -65° to 250°F. Conforms to MILH-8794 (supersedes MIL-H-5511A). Used with Aeroquip 491 hose fittings.

Hose P/N*	For Tubing Size	Hose I.D.	Max. Oper. Pressure** (PSI)	Wt. per Ft. (Lb.)	Price Per Ft.
303-3	3/16	1/8	3,000	.120	**$6.85**
303-4	1/4	3/16	3,000	.132	**$7.50**
303-5	5/16	1/4	3,000	.156	**$7.85**
303-6	3/8	5/16	2,000	.228	**$8.65**
303-8	1/2	13/32	2,000	.264	**$9.55**
303-10	5/8	1/2	1,750	.372	**$9.95**
303-12	3/4	5/8	1,500	.456	**$11.80**

Corresponds to dash no. of Aeroquip 491 hose fittings.
Safety factor of 4.



P/N 491-3

AEROQUIP 491 HOSE FITTINGS
USED WITH AEROQUIP 303 HOSE

Aeroquip 491 hose fittings consist of an AN818 style nut, an externally threaded 37° nipple and an internally threaded hose socket. Fittings of sizes 3 through 6 have nuts and nipples of cadmium plated steel. Nuts and nipples for size 8 and larger are of anodized aluminum. Fittings conform to MS24587.

Part No.	Tube Size (In.)*	AN818 Nut Thread Size**	Price Each
491-3	3/16	3/8-24	**$15.25**
491-4	1/4	7/16-20	**$10.95**
491-5	5/16	1/2-20	**$14.90**
491-6	3/8	9/16-18	**$15.75**
491-8D	1/2	3/4-16	**$17.75**
491-10D	5/8	1-1/16-12	**$26.50**
491-12D	3/4	1-1/16-12	**$34.85**

Corresponds to dash no. of Aeroquip 816 hose fittings.
Safety factor of 4.

HOSE AND FITTING ASSEMBLY MANDRELS



These hose and fitting assembly mandrels are designed for all straight fittings in Aeroquip 303 and Stratoflex 111 series. These hose types are common to most hydraulic, pneumatic, coolant, fuel and oil systems specified in MS33620 for aircraft applications. These quality tools are made from premium tool steel and bright nickel plated for long life. Available individually in sizes -3 thru -12 or in an assortment kit including all 7 sizes.

MILSPEC MANDRELS	Hose	Fitting	Price
05-01885	3/16	MS-3M	**$18.50**
05-01886	1/4	MS-4M	**$14.75**
05-01887	5/16	MS-5M	**$14.75**
05-01888	3/8	MS-6M	**$18.50**
05-04241	1/2	MS-8M	**$22.75**
05-04242	5/8	MS-10M	**$31.95**
05-04243	3/4	MS-12M	**$38.50**
05-04544	Includes 1 each of the MilSpec Mandrels		**$158.95**



AEROQUIP 666 HOSE

Aeroquip 666 medium pressure Teflon hose is widely used in aircraft applications handling fuel, oils, and other fluids. It is unaffected by all fuels, oils, alcohols, coolants, or solvents commonly use in aircraft. Construction of Aeroquip 666 hose is of spiral extruded Teflon resin for the inner tube with a reinforcement and outer cover of Type 300 Series stainless steel wire braid. The result is a lightweight hose able to withstand prolonged flexing and vibration under all service conditions. Aeroquip 666 hose is also use in hydraulic and pneumatic applications at pressures up to 1500 psi.

Hose Part No.	Hose I.D. (inches)	Hose O.D. (inches)	Max. Oper. Pressure	Wt. Per Ft. (lbs.)	Price Per Ft.
666-4	.188	.312	1500	.08	**$9.85**
666-5	.250	.375	1500	.09	**$11.80**
666-6	.313	.466	1500	.11	**$13.95**
666-8	.406	.562	1500	.14	**$18.90**
666-10	.500	.656	1500	.19	**$23.65**
666-12	.625	.789	1000	.24	**$27.50**



REUSABLE 37° FITTINGS FOR #666 HOSE

Use with Hose Size	Part No.	Price ea.
666-4	05-01320	**$54.25**
666-5	05-01321	**$86.75**
666-6	05-01322	**$65.00**

Use with Hose Size	Part No.	Price ea.
666-8	05-01323	**$89.75**
666-10	05-01324	**$118.90**
666-12	05-01325	**$141.75**



STRAIGHT CRIMP FLARELESS FITTINGS FOR #666 HOSE

Part Number	Aeroquip Hose Size	Price ea.
AE21502-E	666-4	**$29.50**
AE21502-F	666-5	**$34.60**
AE21502-G	666-6	**$34.50**

Part Number	Aeroquip Hose Size	Price ea.
AE21502-H	666-8	**$26.90**
AE21502-J	666-10	**$44.90**
AE21502-K	666-12	**$46.85**

Crimping tool and sleeve required for assembly.

AP

AEROQUIP 816 & 8891 HOSE FITTINGS

USED WITH AEROQUIP 601 HOSE



816-4

Aeroquip 816 straight hose fittings and 8891 90° hose fittings consist of a pre-assembled nut/nipple assembly and an internally threaded hose socket. The size 4 fitting has a cadmium plated steel nut and nipple. Sizes 6, 8 and 10 nuts and nipples, and all sizes of sockets, are anodized aluminum. Note: Aeroquip 816 fittings are not the same as AN816 fittings. Include the word "Aeroquip" with Part number when ordering.

PN	Tube Size	Thread	Price
816-4	1/4	7/16-20	**$35.75**
816-6D	3/8	9/16-18	**$33.50**
816-8D	1/2	3/4-16	**$36.50**
816-10D	5/8	7/8-14	**$43.25**
816-12D	3/4	1-1/16	**$45.90**
816-16D	1	1-5/16-12	**$66.50**
816-20D	1-1/4	1-5/8-12	**$104.95**
816-32D	2	2-1/2	**$387.95**

PN	Tube Size	Thread	Price
8891-4	1/4	7/16-20	**$62.25**
8891-6D	3/8	9/16-18	**$79.75**
8891-8D	1/2	3/4-16	**$83.25**
8891-10D	5/8	7/8-14	**$99.95**
8891-12D	3/4	1-1/16	**$114.95**
8891-16D	1	1-5/16-12	**$187.95**
8891-20D	1-1/4	1-5/8-12	**$253.95**

Corresponds to tube O.D. of AN-type flared tube fittings. Not an Aeroquip dimension. ** Same thread size as AN818 nut of same dash no.
Less 10%, 6 - 11 Aeroquip fittings; Less 15%, 12 - 24 Aeroquip fittings; Less 20%, 25 or more Aeroquip Fittings May be assorted sizes and types.

AEROQUIP FIRE SLEEVE



Aeroquip Firesleeve was specially developed to meet the fire resistance requirements of FAATSO - C53a OR TSO - C75. May be used for all fuel, oil, hydraulic, fire extinguisher & propeller feathering lines. "Fire-proof" hose lines as defined by FAA must withstand a direct flame for fifteen minutes under specified flow conditions without failure. "Fire-resistant" lines must withstand a 5-minute exposure under these conditions. "Fire-proof" hose lines are obtained when the proper size Aeroquip Firesleeve is selected from the chart below and properly assembled. 900591B Clamps - used to secure firesleeve material on each end over the basic hose assembly. See chart for correct size.

900591B-1C ..... Clamp I.D.= 1" ..... P/N 05-02653..... **$2.60**
900591B-2C ..... Clamp I.D.= 1.5" ..... P/N 05-02652..... **$2.95**
900591B-3C ..... Clamp I.D.= 2" ..... P/N 05-02654..... **$3.45**

Part No.	Use With Hose # 303	601	900591B Clamp Dash #	Price Per Ft.	Part No.	Use With Hose # 303	601	900591B Clamp Dash #	Price Per Ft.
AE102-8	-3	-4	-1C	**$10.75**	AE102-16	-10	-10	-3C	**$16.50**
AE102-9	-4	-5	-2C	**$10.50**	AE102-18	-12	-	-3C	**$17.50**
AE102-10	-5	-	-2C	**$11.80**	AE102-20	-	-12	-3C	**$21.50**
AE102-12	-6	-6	-2C	**$11.95**	AE102-22	-16	-16	-3C	**$25.50**
AE102-14	-8	-8	-2C	**$14.75**	AE102-24	-	-	-3C	**$28.55**

Quantity Discounts Same As Aeroquip Hose

Firesleeve Clamp Installation Tool - Band Width: 1/4 in - 3/8 in
P/N 05-00447 ..... **$134.75**

Economy Firesleeve Clamp Tool - for 3/8" or 1/4" roll band.
P/N 12-00684 ..... **$26.65**

AEROQUIP AE466

Integral silicone firesleeves on Teflon 666 hose assemblies.



This hose/sleeve combination meets the test requirements of TSO-C53A Type D and TSO-C75 Type IIIA and IIIB. The Silicone sleeve is applied directly onto the metal braid an fittings to form a smooth, tight bond. Hose flexibility is not impaired. Non-age sensitive for extra-long service life. Eliminates the use of band clamps. Temperature range -65°F to +450°F. Specify hose size and length of assembly in inches and eighths of an inch from sealing surface to sealing surface. Available in blue, brown, orange, or purple. Purple is lightweight.

Call 877-4-SPRUCE (777823), or email info@aircraftspruce.com for pricing and availability.

Size	Aeroquip P/N
-3	AE3663161BXXXX
-4	AE3663161EXXXX
-5	AE3663161FXXXX
-6	AE3663161GXXXX

Size	Aeroquip P/N
-8	AE3663161HXXXX
-10	AE3663161JXXXX
-12	AE3663161KXXXX

AEROQUIP 8846 HOSE FITTINGS



Aeroquip 8846 45° Fitting. Swivel Flared UNJF Threads - Little Gem Reusable Fittings are noted for their outstanding performance as a result of a unique lipseal design concept. During assembly the nipple spur cuts a lip in the tube stock of the hose forming the fluid seal.

Part No.	Tube Size	Thread	Price
8846-6D	3/8	9/16-18	**$83.75**
8846-8D	1/2	3/4-16	**$96.25**
8846-10D	5/8	7/8-14	**$101.95**
8846-12D	3/4	1-1/16-12	**$116.95**
8846-16D	1	1-5/16-12	**$198.95**
8846-20D	1-1/4	1-5/8-12	**$201.95**

AEROQUIP 601/AE701 HOSE



An inner tube of seamless, specially formulated synthetic rubber reinforced with a stainless steel partial inner braid and full-coverage stainless steel outer braid. Operating temperature -65 to 300F. Aeroquip 601 hose is widely used for aircraft fuel and oil lines where flexibility and light weight are prime considerations. Because of its lighter weight and lower operating pressure than type 303 hose, it is not recommended for hydraulic lines. Use with Aeroquip 816 hose fittings. Aeroquip 601/AE701 is a direct replacement for old 601 hose. AE701 hose has no shelf life and is the upgraded version of 601 hose.

Hose Part Part No.*	For Tubing Size	Hose I.D.	Max. Oper. Pressure** (PSI)	Wt. per Ft. (Lb.)	Price Per Ft.
601-4	1/4	7/32	1500	.114	**$14.90**
601-6	3/8	11/32	1500	.155	**$19.90**
601-8	1/2	7/16	1200	.170	**$18.95**
601-10	5/8	11/16	1200	.207	**$21.99**

**** Corresponds to dash no. of Aeroquip 816 hose fittings. ** Safety factor of 4.***



CUSTOM AEROQUIP 666 TEFLON HOSE ASSEMBLIES

Aeroquip Teflon hose is constructed with a conductive, seamless smooth bore inner tube covered with a stainless steel braid. Unattracted by fuel, oil, coolants and solvents used in aircraft systems. Service and shelf life of Aeroquip Teflon hose is unlimited for all practical purposes. They can be used in fuel, hydraulic and pneumatic applications at working pressures to 1500psi. Minimum burst pressures are 8000 psi sizes -3 to -8. Temperature range is -65° to +450° F. Hose assemblies prices are straight to straight. Call for 45° and 90° elbow pricing.Measurements are taken as follows:

Fittings	Measurement
Straight to Straight	End to end (overall length)
Straight to 45°	End of straight fitting to top of b-nut on 45° fitting
Straight to 90°	End of straight fitting to center of 90° fitting
45° to 45°	Top of b-nut on 45° fitting to Top of b-nut on 45° fitting
45° to 90°	Top of b-nut on 45° fitting to center of 90° fitting
90° to 90°	Center of 90° fitting to Center of 90° fitting

Call 877-4-SPRUCE (777823), or email at info@aircraftspruce.com for pricing and availability.

Size	Aeroquip P/N
-3	AE3660000BXXXX
-4	AE3660000EXXXX
-5	AE3660000FXXXX
-6	AE3660000GXXXX

Size	Aeroquip P/N
-8	AE3660000HXXXX
-10	AE3660000JXXXX
-12	AE3660000KXXXX

CUSTOM CONDUCTIVE TEFLON HOSE ASSEMBLIES

Stainless braid conductive Teflon hoses are among the highest quality aircraft hoses that exist. Not "Certified" but are similar in construction to high end certified aircraft hoses. Used extensively on Experimental Aircraft. To use these on a certified aircraft, please discuss with your mechanic and see AC 23-27. Rated continuous working pressure is between 2,000 and 3,000 PSI depending on dia. Rated Bursting pressure is between 8,000 and 12,000 PSI. ALL hoses are pressure tested prior to shipment. Stainless Steel Fittings are used on all hoses. Typical uses for Aircraft with 300hp and less. (Please make sure that hose diameter is suitable for your application) 3 (Primer and Brake lines) 4 (Brake Lines, Oil and Fuel Pressure lines, and certain fuel lines) 6 (Fuel Lines) 8 (Oil Lines).

See these hose assemblies at www.aircraftspruce.com for price and availability.

BLACK SILICONE FIRE SLEEVE



This black silicone fire sleeve has a temperature range of -65°F to +2000°F. The 5/8" I.D. Fits all E185, E225 & 0-300 engine breather tubes. The 3/4" I.D. fits O-470 l IO470 breather tubes. Sold by the foot.

1/4"..... P/N 05-06832 ..... **$8.55**
5/8"..... P/N 05-00672 ..... **$10.50**
3/4"..... P/N 05-04549 ..... **$11.50**

BLUE FIRE SLEEVE



1/2 ID size for wires or other sizes for wire insulation or firesleeve for aircraft hose assembly. Colors: Blue

Size	Part No.	Price
1/2"	05-04712	**$9.60**
5/8"	05-04713	**$9.65**
3/4"	05-04714	**$11.50**
7/8"	05-04715	**$13.50**
1"	05-04716	**$15.50**

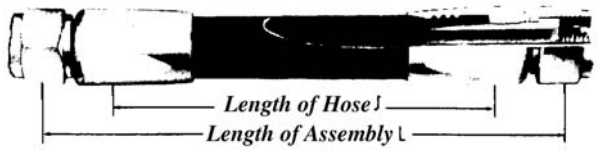
Prices Subject to Change Without Notice

HOSE ASSEMBLY

ASSEMBLY INSTRUCTIONS

USING 303 HOSE AND 491 FITTINGS

To make hose assembly of length "L", cut hose to length "J". Obtain "J" length by subtracting proper fitting allowances.



Hose & Fitting Dash No.	-3	-4	-5	-6	-8	-10	-12
Fitting Allowance* (In.)	1.30	1.30	1.48	1.54	1.88	2.00	2.00

***Allowance for 2 fittings.**

step 1 Cut hose squarely to length. Use hose cut-off machine or fine tooth hacksaw. Do not remove cover.

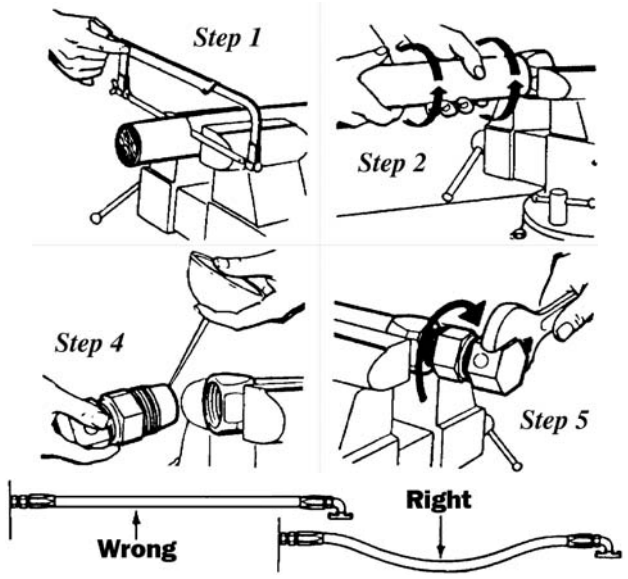
step 2 Place socket in vise. Do not overtighten vise on thin-walled sockets of lightweight fittings. Screw hose into socket until it bottoms. Back-off 1/4 turn.

step 3 Tighten nipple and nut on assembly mandrel.

step 4 Lubricate inside of hose and nipple threads liberally. Use lubricating oil, petrolatum or light grease.

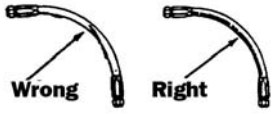
step 5 Screw nipple into socket and hose using wrench on ass'y tool hex. Nut must swivel freely when assembly tool is removed. Maximum allowable gap is 1/16 inch. L.P.S.-1 is an excellent lubricant for use in hose assembly.

CLEAN, INSPECT, PROOF TEST



PLANNING HOSE LINE INSTALLATIONS

1. Provide slack or bend in the hose line to provide for changes in length that will occur when pressure is applied.



2. Observe linear stripe. Hose must not be twisted. High pressures applied to a twisted hose may cause failure or loosen the nut.



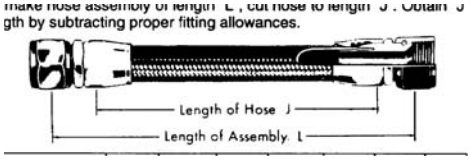
****10781-4 Clamp to be used to secure the Firesleeve material on each end over the basic hose assembly. Specify size. -22CR or -32CR***
$4.35 - $4.80



End Dip for Firesleeve -
P/N 5027 ..... **$145.75**

USING 601 HOSE AND 816 FITTINGS

To make hose assembly of length "L", cut hose to length "J". Obtain "J" length by subtracting proper fitting allowances.



step 1 - Cut hose squarely to length. Use hose cut-off machine or fine tooth hacksaw. To minimize wire braid flare-out, wrap hose with masking tape and saw through tape. Remove tape before step 2.

step 2 - Insert hose in socket with a twisting, pushing motion until hose is in line with back of socket threads.

step 3 - Important-mark hose position around hose at rear of socket. Use a grease pencil, painted line or tape.

step 4 - Lubricate inside of hose & nipple threads liberally. Use SAE 30 lubricating oil. Avoid getting oil in the cutting spur of the nipple.

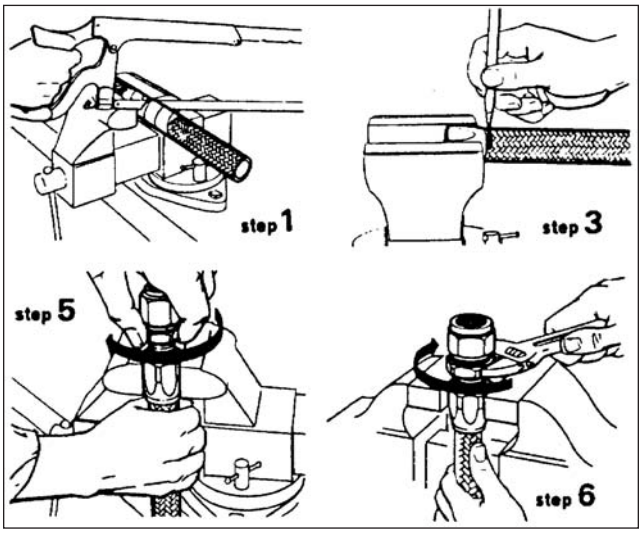
step 5 - Carefully insert nipple and engage nipple and socket threads while holding hose in position with other hand. Make sure that hose does not push out of socket by observing mark made in step 3.

step 6 - Complete assembly using wrench while continuing to hold in position. Maximum allowable gap is .041" in sizes 3, 4, & 5, and .031" in size 6 & up.

step 7 - IMPORTANT—check for hose push-out by observing hose position mark. None should be evident.

CLEAN, INSPECT, PROOF TEST

Note: Hose push out after proof test should not exceed 1/32" on sizes 12 and up. None is allowable on smaller sizes.



AP

STRATOFLEX HOSE & FITTINGS

STRATOFLEX 111 HOSE



Part No	Tube O.D.	Hose ID.	Max Press	Wt Per lb./In.	Price Per Ft.
111-4	.250	.188	3000	.0120	**$10.60**
111-5	.312	.250	3000	.0130	**$11.90**
111-6	.375	.312	2000	.0190	**$11.50**
111-8	.500	.406	2000	.0220	**$11.95**
111-10	.625	.500	1750	.0310	**$13.50**
111-12	.750	.625	1500	.0380	**$16.70**
111-16	1.00	.875	800	.0368	**$19.75**

STRATOFLEX 300 STRAIGHT FLARED FITTINGS FOR 111 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
300-3S	.188	3/8-24	**$22.99**
300-4S	.200	7/16-20	**$17.95**
300-5S	.312	1/2-20	**$23.95**
300-6S	.375	9/16-18	**$21.90**
300-8D	.500	3/4-16	**$26.50**
300-10D	.625	7/8-14	**$36.50**
300-12D	.750	1-1/16-12	**$47.50**
300-16D	1.00	1-5/16-12	**$53.90**

STRATOFLEX 124 HOSE



Description	Part No.	Price
124-3 Hose	124-3	**$14.85**
124-4 Hose	124-4	**$12.95**
124-6 Hose	124-6	**$16.50**
124-10 Hose	124-10	**$14.95**

STRATOFLEX 156 MEDIUM PRESSURE HOSE



Part No	Tube O.D.	Hose ID.	Max Press	Mini Blend	Price/Ft.
156-3	.188	.156	1500	1.75	**$17.85**
156-4	.250	.219	1500	2.00	**$18.90**
156-5	.312	.281	1500	2.25	**$19.50**
156-6	.375	.344	1500	2.50	**$19.50**
156-8	.500	.438	1250	3.50	**$22.70**
156-10	.625	.562	1250	4.00	**$25.50**
156-12	.750	.688	1250	4.50	**$28.50**
156-16	1.000	.875	1000	5.50	**$33.50**

STRATOFLEX 678 45° ELBOW FLARED FITTINGS FOR 156 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
678-3S	.188	3/8-24	**$122.75**
678-4S	.250	7/16-20	**$108.75**
678-6D	.375	9/16-18	**$145.75**
678-8D	.500	3/4-16	**$133.75**
678-10D	.625	7/8-14	**$182.75**
678-12D	.750	1-1/16-12	**$171.75**
678-16D	1.00	1-5/16-12	-

STRATOFLEX 193 HOSE



Specifications: Hose meets or exceeds the requirements of MIL-H-5593. Construction: Tube - Seamless Buna - N. Reinforcement - One braid of high tensile fiber cord. Cover - Synthetic rubber. Identification: LP-MIL-H-5593-size, date of manufacture, manufacturer's code (CAGE) marked on one side of the hose. Stratoflex 193-size marked on other side of hose. Yellow markings are repeated every 12 inches. Application: Low pressure air and vacuum instrument systems. Vacuum service 20"Hg sizes -2 thru -6; 10"Hg sizes -8and -10. Temperature range: -65 to +165°F / (-54 to +74°C).

Part No	Tube O.D.	Hose ID.	Max Press	Weight per In. (l.b.)	Price Per Ft.
193-2	.35	.125	300	.0038	**$8.50**
193-3	.41	.188	250	.0050	**$4.50**
193-4	.48	.250	200	.0058	**$3.95**
193-6	.60	.375	150	.0079	**$4.85**
193-8	.75	.500	150	.0015	**$8.50**
193-10	.87	.625	150	.0138	**$9.70**

ALUMINUM FLANGES FOR DUCTING

Simplify installation of cabin, carb. heat, cabin vent lines. Aluminum flange may be welded or riveted in place. Slip ducting over outlet and secure with clamp.



Made in the USA

Flange Size	Part No.	Price
1"	10350-4	**$8.75**
1-1/4"	10350-5	**$10.50**
1-1/2"	10350-6	**$9.50**
1-3/4"	10350-7	**$12.50**
2	10350-8	**$9.50**
2-1/4"	10350-9	**$13.50**
2-1/2"	10350-10	**$9.50**
2-3/4"	10350-11	**$11.75**
3"	10350-12	**$10.55**

Discount: 10% On 20; 15% On 50, 20% On 100 (Assorted)

2 INCH ALUMINUM SCAT TUBE INLET



This 2" Scat Tube Inlet is fabricated from 6061 Aluminum with per-drilled 3/32 rivet holes, ready to rivet to baffling.

P/N 05-12782..... **$48.75**

STRATOFLEX 646/640 45° ELBOW FLARED FITTINGS FOR 111 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
646-4S	.250	7/16-20	**$95.75**
646-6S	.375	9/16-18	**$131.90**
646-8D	.500	3/4-16	**$205.95**
646-10D	.625	7/8-14	**$214.95**
640-12D	.750	1-1/16-12	**$268.95**
640-16D	1.00	1-5/16-12	**$336.00**

STRATOFLEX 649/643 90° ELBOW FLARED FITTINGS FOR 111 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
649-4S	.250	7/16-20	**$108.75**
649-6S	.375	9/16-18	**$123.75**
649-8D	.500	3/4-16	**$156.75**
649-10D	.625	7/8-14	**$204.95**
649-12D	.750	1-1/16-12	**$166.75**

STRATOFLEX 676 STRAIGHT FLARED FITTINGS FOR 156 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
676-3S	.188	3/8-24	**$41.60**
676-4S	.250	7/16-20	**$43.60**
676-5S	.312	1/2-20	**$80.75**
676-6D	.375	9/16-18	**$34.90**
676-8D	.500	3/4-16	**$37.80**
676-10D	.625	7/8-14	**$47.60**
676-12D	.750	1-1/16-12	**$52.99**
676-16D	1.000	1-5/16-12	**$74.75**

STRATOFLEX 680 90° ELBOW FLARED FITTINGS FOR 156 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
680-3S	.188	3/8-24	**$208.65**
680-4S	.250	7/16-20	**$74.75**
680-5S	.312	1/2-20	**$197.99**
680-6D	.375	9/16-18	**$154.75**
680-8D	.500	3/4-16	**$130.99**
680-10D	.625	7/8-14	**$137.80**
680-12D	.750	1 1/16-12	**$159.90**
680-16D	1.000	1 5/16-12	**$221.95**

STRATOFLEX 311 STRAIGHT FLARED FITTING FOR 193 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
311-2D	.125	5/16-24	**$20.50**
311-3D	.188	3/8-24	**$15.70**
311-4D	.250	7/16-20	**$13.85**
311-6D	.375	9/16-18	**$24.75**
311-8D	.500	3/4-16	**$44.50**
311-10D	.625	7/8-14	**$133.75**

STRATOFLEX 2650 FIRESLEEVE



Part No.	Use With Hose No. 124	193	111	156	*10781-4 Clamp	Price Per Ft.
2650-6	-4	-	-	-	-	-
2650-8	-6	-3	-	-4	22CR	**$10.85**
2650-9	-	-4	-	-5	22CR	**$11.60**
2650-10	-8	-	-4	-6	22CR	**$11.75**
2650-11	-	-6	-	-	-	-
2650-12	-10	-	-5,-6	-8	22CR	**$14.45**
2650-13	-	-8	-8	-	-	-
2650-14	-12	-	-	-	22CR	**$15.75**
2650-16	-	-10	-10	-10	32CR	**$17.50**
2650-18	-	-	-	-12	32CR	**$19.99**
2650-20	-16	-	-12	-	32CR	**$21.80**
2650-22	-	-	-16	-16	32CR	**$26.50**

STRATOFLEX FLARED HOSE ASSEMBLIES

Call for quote on Stratoflex 111, 156, 193 and 124 PTFE flared hose assemblies. Our hose assemblies are competitively priced and available for immediate shipment.

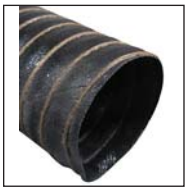
GENERAL AVIATION STRATOFLEX HOSE ASSEMBLIES

Parker Stratoflex hose assemblies can be purchased by aircraft make, model, serial number and system, and also for custom applications. Aircraft Spruce's Supplier is an FAA approved hose assembly fabricator of Parker Stratoflex products with a certified hose shop for fabricating to specification. These include hoses for manifold pressure, master cylinders, controls, coolers, fuel pumps, fuel lines, carburetors, landing gears, gascolators, brake lines, engine hoses, dehydrators, strainers, turbochargers, vacuum lines, oil lines, and more.

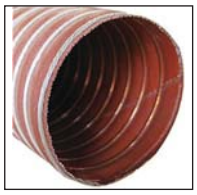
SEE GENERAL AVIATION STRATOFLEX HOSE ASSEMBLIES AT WWW.AIRCRAFTSPRUCE.COM

AIRCRAFT FLEXIBLE DUCTING (SOLD PER FOOT)

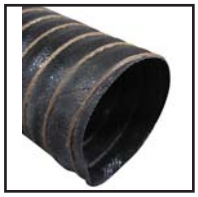
CAT



SCAT



CEET



SCEET



"CAT" - "CAT" type flexible hot or cold air ducting is extremely lightweight and highly flexible. Short lengths can be joined together to form a continuous length. Made of a single ply black neoprene-impregnated fiberglass with a spiral copper coated steel wire inside and wrapped with fiberglass cord on the outside. Suitable for conveying fumes and air a temperatures from -65° to over 350°F. Not recommended for handling liquids or highly abrasive materials, or for negative pressure applications.

"SCAT" - "SCAT" type ducting has the same type construction as "CAT" except with red silicone rubber impregnation. For use in conducting extremely cold or hot air with temperatures from -65° to over 550°F. Not recommended for negative pressure applications.

"CEET" - "CEET" type ducting has two plies of neoprene-impregnated fiberglass, similar to CAT except wire between plies. For use in hot or cold air applications and for conveying fumes at temperatures ranging from -65° to over 350°F. Not recommended for handling liquids or highly abrasive materials, or for negative pressure applications.

"SCEET" - "SCEET" type ducting has two plies of silicone rubber-impregnated fiberglass, similar to SCAT except wire between plies. Ideal for use in conducting extremely cold or hot air at temperatures from -80° to over 550°F, and for conveying fumes. Not reccomended for handling liquids or highly abrasive materials, or for negative pressure applications.

Dash No.	Inside Diameter	CAT		SCAT		CEET		SCEET	
		Part Number	Price Per Foot	Part Number	Price Per Foot	Part Number	Price Per Foot	Part Number	Price Per Foot
-2A	5/8"	05-29801	$5.80	05-29901	$5.85	05-30501	$6.50	05-30601	$5.70
-3	3/4"	05-29802	$3.85	05-29902	$3.85	05-30502	$4.60	05-30602	$4.50
-3A	7/8"	05-29803	$2.75	05-29903	$3.65	05-30503	$3.90	05-30603	$4.55
-4	1"	05-29804	$2.85	05-29904	$4.40	05-30504	$4.35	05-30604	$4.80
-5	1-1/4"	05-29805	$3.55	05-29905	$5.40	05-30505	$4.35	05-30605	$6.50
-6	1-1/2"	05-29806	$7.75	05-29906	$4.80	05-30506	$5.35	05-30606	$6.50
-7	1-3/4"	05-29807	$4.35	05-29907	$6.50	05-30507	$5.70	05-30607	$7.60
-8	2"	05-29808	$4.40	05-29908	$5.95	05-30508	$6.50	05-30608	$9.50
-9	2-1/4"	05-29809	$4.99	05-29909	$6.99	05-30509	$6.80	05-30609	$10.50
-10	2-1/2"	05-29810	$5.40	05-29910	$11.60	05-30510	$7.85	05-30610	$10.80
-11	2-3/4"	05-29811	$5.40	05-29911	$8.50	05-30511	$8.65	05-30611	$11.85
-12	3"	05-29812	$6.60	05-29912	$8.65	05-30512	$8.85	05-30612	$12.00
-13	3-1/4"	05-29813	$7.50	05-29913	$10.60	05-30513	$9.90	05-30613	$12.95
-14	3-1/2"	05-29814	$6.95	05-29914	$10.50	05-30514	$10.50	05-30614	$14.50
-15	3-3/4"	05-29815	$7.50	05-29915	$10.50	05-30515	$10.60	05-30615	$15.90
-16	4"	05-29816	$7.75	05-29916	$10.85	05-30516	$10.70	05-30616	$16.90
-18	4-1/2"	05-29818	$8.50	05-29918	$12.90	05-30518	$10.90	05-30618	$16.90
20	5"	05-29820	$8.95	05-29920	$13.55	05-30520	$12.70	05-30620	$18.50
24	6"	05-29824	$9.99	05-29924	$14.95	05-30524	$13.65	05-30624	$20.85

Diameters not listed are available as a special order in full lengths only. Order CAT 2-3/4" diameter for Whisperflow air vents. Full factory lengths are 10 ft to 13 ft pieces on CAT, CEET, SCAT, & SCEET, except 5/8" id (PN 05-30501 is only 9ft).

THERMOID AERODUCT DUCTING (SOLD IN FULL LENGTH)

Dash No.	Inside Diameter	CAT		SCAT		CEET		SCEET	
		Part Number	Price Per 10 Foot	Part Number	Price Per 11 Foot	Part Number	Price Per 10 Foot	Part Number	Price Per 11 Foot
-2A	5/8 *	05-11867	$63.75 *	05-11864	$64.75 *	05-11888	$80.75 *	05-11871	$73.95 *
-3	3/4	05-11878	$56.95	05-11869	$76.75	05-11879	$72.90	05-11874	$118.75
-4	1	05-11862	$60.75	05-11851	$79.85	05-11875	$77.75	05-11855	$114.75
-5	1-1/4	05-11863	$60.90	05-11856	$89.90	05-12455	$74.75	05-11861	$130.75
-6	1-1/2	05-12437	$61.75	05-11852	$98.75	05-12443	$74.75	05-11857	$152.75
-7	1-3/4	05-12447	$60.90	05-12439	$106.95	05-12441	$75.75	---	---
-8	2	05-12433	$65.90	05-11848	$113.75	05-12436	$76.75	05-11853	$181.75
-9	2-1/4	05-12449	$65.75	05-11859	$127.75	05-12445	$79.75	05-11876	$187.75
-10	2-1/2	05-12434	$76.75	05-11850	$137.75	05-12446	$85.85	05-11858	$213.95
-11	2-3/4	05-12450	$79.75	05-11865	$148.95	05-12452	$95.00	05-11877	$236.95
-12	3	05-12438	$90.75	05-11849	$156.75	05-12435	$99.75	05-11854	$246.95
-13	3-1/4	05-12459	$97.75	05-11868	$169.75	05-12453	$104.75	05-11881	$245.95
-14	3-1/2	05-12458	$99.75	05-11872	$171.75	05-12456	$109.99	05-11880	$258.95
-15	3-3/4	05-12463	$104.75	05-11887	$185.75	05-12462	$115.75	05-11889	$277.95
-16	4	05-12442	$106.85	05-11860	$198.75	05-12440	$124.85	05-11866	$293.95
-18	4-1/2	05-12457	$108.99	05-11882	$208.95	05-12451	$135.75	05-11886	$322.00
-20	5	05-12448	$116.75	05-11873	$243.95	05-12461	$146.75	05-11883	$391.00
-24	6	05-12454	$128.99	05-11885	$290.95	05-12460	$182.95	05-11884	$437.00

*** 5/8 DIAMETER PIECES ONLY COME IN 5 FOOT LENGTHS.**

SOUNDPROOFING – INSULATION

AP

E-A-R-COMPOSITE DAMPING FOAM



ADC-224 is a mid-temperature skin damping composite of 0.25" thick damping foam fixed with 0.005" thick aluminum foil and backed with pressure sensitive adhesive. Used in aircraft for weight efficient damping and to reduce radiated noise. Meets FAR 25.853 (A) for fire resistance. Furnished in 27" x 48" sheets.

P/N 09-00181....**$209.00 / sheet**

Less 10% discount on 10 or more sheets

3M™ SOUND & VIBRATION DAMPING PANELS



Designed for damping resonant vibrations of thin sheet metal, these panels are pressure sensitive, specially compounded polyurethane damping foam with an aluminum foil backing. The adhesive on the foam is protected by a peel-off paper covering. It is an excellent insulator for conducted heat and is an excellent heat reflector. Fire-resistant and self-extinguishing per FAA test procedure. Excellent moisture resistance. Resistant to most solvents. Easily applied with only hand pressure for a permanent bond even on rough, irregular surfaces. Used extensively in commercial aircraft and highly recommended for metal home builts. Apply to firewall, fuselage — anywhere a vibration problem exists. Wt.4 oz./sq. ft., 1/4" thick. Meets FAR 25.853

3M Sound Damp Panel 6" x 48"..... P/N 09-30206 ..... **$36.50 ea.**
3M Sound Damp Panel 12" x 48"..... P/N 09-30212 ..... **$67.95 ea.**
3M Sound Damp Panel 18" x 48"..... P/N 09-30218 ..... **$92.75ea.**

Less 15% on 12 or more pieces

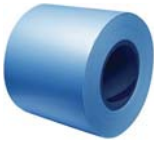
ALUMINUM FOIL TAPE



A 2 Mil. (50 micron) high strength aluminum foil coated with an aggressive, high temperature acrylic adhesive system. The foil conforms well to both fibrous and sheet metal ducts, providing an excellent vapor seal. The malleable foil also conforms well around corners and to irregular surfaces. Coated with a special cold weather acrylic pressure sensitive adhesive system which combines superior quick stick at normal temperature with superior low temperature performance below freezing - this is the ultimate in cold weather tapes. Recommended for use at normal and elevated temperatures also. **Applications**: Primarily used for vapor sealing fiberglass ductboard and sheet metal ducts; can also be used on FSK systems.tape described above.2" x 25 Yd. Roll.

Description	Part No.	Price	Description	Part No.	Price
1"X 25YD	09-01273	**$11.95**	4"X25 YD	09-01275	**$39.95**
2"X 25 YD	09-01274	**$15.25**			

TEFLON CHAFE TAPE



The T-300 is a Milky/Clear Teflon Chafe Tape that has an adhesive backing on one side. It is sold in a 1" x10' Package and is used between Aluminum Skins as a chafe tape.

P/N 05-11196 .....**$23.50**

TEFLON ANTI-CHAFE TAPE



ISD Chafe Tape is a durable Teflon material with a pressure sensitive adhesive which resists solvents, and oils. Designed specifically to prevent aluminum chafing between airframes and engine cowls. It helps prevent black streaking on aircraft exterior due to cowl chafing. Not FAA/PMA approved. Operable temperature range: -100°F to +500°F. Width: 1". Roll length: 6 yds. Tkns: .012" P/N 09-31805 .....**$45.50/roll**

TEFLON COATED FIBERGLASS ANTI-CHAFE TAPE



These 1' wide rolls of Teflon on fiberglass anti-chafe tape are excellent for use on engine cowlings to keep cowl components from chafing. The tape is available in 5 mil thick and 10 mil thick and comes with a silicone adhesive on the tape. Just peel back liner and install. Rolls are 1" wide x 36 yds long.

5 Mil Anti-Chafe tape..... P/N 05-01024.....**$48.85/roll**
10 Mil Anti-Chafe tape..... P/N 05-01025.....**$65.90/roll**

UNI-WRAP SILICONE TAPE

RUBBER SELF-BONDING TAPE



UniWrap silicone rubber sealing tape bonds to itself permanently to protect, repair, join, or insulate virtually any type of part on which ordinary tape can be used. But the big difference between UniWrap and ordinary tape is that it fuses to itself permanently to form a homogenous mass and provides unprecedented protection and insulating characteristics. UniWrap uses no adhesives so it is non-tacky. It has a 12 month shelf life and after fusing is unaffected by moisture, cold, heat, ozone shock, or vibration. Meets MIL-I-46852 Type II as well as strict aerospace industry performance requirements. Available in red, black, gray, or white. Furnished in 10 yard rolls, UniWrap is 1" wide and 0.020" thick UniWrap (red) P/N 09-30450.....**$13.80**

NOXUDOL SOUNDPROOFING LIQUID



A paint-on soundproofing material that is applied to metal surfaces to reduce vibration and reverberant noise. Use to fill cracks and spaces where noise can enter. Buff color and can be painted. Paint engine mounts to increase fire resistance! Odorless and non-toxic when dry. Waterbased product. Non-Flammable. Shelf life: 1-year. Not FAA approved.

Quarts ..... P/N 09-42740 .....**$48.90**
Gallon..... P/N 09-00772 .....**$185.00**

SUPER SOUNDPROOFING TAPE



This is a 1/8" thick by 2" wide self adhesive tape that can be placed on metal panels and wrapped around ducts to reduce vibration and reverberant noise transfer. Not FAA approved. 30 ft. rolls.

1" wide ..... P/N 09-00381 .....**$8.65/ea.**
2" wide ..... P/N 09-42745 .....**$23.75/ea.**
4" wide ..... P/N 09-00433 .....**$46.50/roll**

SUPER SOUNDPROOFING FLOOR MAT



This heavy duty, wear resistant vinyl mat with foam backing can be placed on aircraft floors to reduce noise & vibration. 48" width

Without foam backing .... P/N 09-42751... **$10.70/lin.ft.**
With foam backing ..... P/N 09-04686... **$20.75/lin.ft.**

HOW TO SOUNDPROOF LIGHT AIRCRAFT



Sound measurement indicates that sometimes the noise levels are so high in some aircraft that damage to hearing over time can result. This "How-To" manual discusses the advanced techniques to sound proofing the light aircraft and drastically reducing such noise. Information presented is applicable to all types of planes from "puddle-jumpers" to jets. P/N 09-42755 ..... **FREE**

SUPER SOUNDPROOFING SHEET WITHOUT ADHESIVE

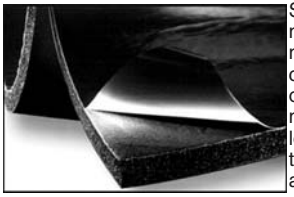


This material is excellent for reducing noise levels in all types of certificated and home-built aircraft. It is a closed cell vinyl insulating material which will not absorb water or oil. Has fire retardant qualities and meets FAR 25.853a Appendix F, Pt1. It is smooth on one side for easy attachment to the inside cabin skins, sides, top and front firewall. Excellent for helicopters as well. Furnished in bulk 48" wide sheet, it is easily cut by scissors and attached with contact cement. Available in black only.

The Flammability Report (Burn Certs) are available on request.

Thick-ness	Wt. / Lineal ft.	P/N 09-	Price Per. Lineal Ft.	Thick-ness	Wt. per Lineal ft.	P/N 09-	Price Per. Lineal Ft.
1/8"	.25 lbs.	42719	**$5.45**	3/4"	1.4 lbs.	42727	**$22.50**
1/4"	.60 lbs.	42720	**$13.50**	1"	2.0 lbs.	42730	**$21.85**
3/8"	.80 lbs.	42723	**$12.65**	1-1/2"	3.0 lbs.	72731	**$31.85**
1/2"	1.0 lbs.	42725	**$14.85**	2"	4.0 lbs.	42760	**$34.50**

SUPER SOUND PROOF WITH ADHESIVE



Super Soundproofing Foam Mat for noise control: A closed cell vinyl-nitride noise control FOAM suitable for application to cars, boats, planes, home and office, anywhere a noise control mat is needed. Won't absorb moisture or odor, long lasting and durable. An excellent thermal insulator! (FAA Approved for aircraft, too!) Just apply with vinyl or contact cement to reduce and absorb sound. There may be small variances in the width of this product.

1/8" w/adhesive ..... P/N 09-01243 .....**$8.75**
1/4" w/adhesive ..... P/N 09-01244 .....**$12.95**
3/8" w/adhesive ..... P/N 09-00443 .....**$16.65**
1/2" w/adhesive ..... P/N 09-00444 .....**$21.50**
3/4" w/adhesive ..... P/N 09-01245 .....**$27.50**
1" w/adhesive ..... P/N 09-01246 .....**$27.50**
2" w/adhesive ..... P/N 09-01247 .....**$39.50**

SEE THE ENGINE PARTS SECTION OF THE CATALOG FOR MORE INSULATION PRODUCTS!

Prices Subject to Change Without Notice





SOUNDEX PREMIUM AIRCRAFT SOUNDPROOF AND MATERIALS PACKAGES

SoundEx™ is a premium aircraft soundproofing / insulation that incorporates excellent vibration damping and noise absorption properties. SoundExTM is a superior product compared to other products on the market because of its thermal qualities, adds less weight to aircraft (6.11oz. per sq. ft. for 1" thickness and 5.8 oz. per sq. ft. for 3/4" thickness), and affordability. Stop the yelling and make flying fatigue a thing of the past. Improve your quality of flight with SoundExTM.

Decibel Reduction Data - Decibel reductions will vary depending upon how well your aircraft is currently insulated. Our latest data indicate that you should expect noise level reduction from 4-7 dB(a) and 10-15 dB(c). From singles and light twins to corporate jets, SoundEx™ is the noise reduction option of choice. Pilots and passengers can fly and communicate in comfort.

Flammability Requirements - All materials are manufactured to meet requirements for FAR 23:856 / FAR 25:856 Part II. Aircraft specific testing may be required for return to service.

No.	Aircraft Model	Basic Materials (sidewall above floor/roof)		Deluxe Materials (basic + floor/belly)		SX-250 Footage (black mat for under carpet)
BEECHCRAFT						
SX-01	Bonanza 35-E35	05-04256	**$970.00**	05-04256-1	**$985.00**	N/A
SX-02	Bonanza F35-M35	05-10770	**$779.00**	05-10770-1	**$1,195.00**	N/A
SX-03	Bonanza N35-P35, C33-E33, and F33C (and older with long 3rd window added)	05-04312	**$721.00**	05-04312-1	**$1,146.00**	N/A
SX-04	Bonanza/Baron S35-V35/F33/A55-B55 (and older with large baggage and long 3rd window added)	05-04313	**$895.00**	05-04313-1	**$1,395.00**	N/A
SX-05	Bonanza/Baron F33-G33 and B55-E55 (with extended baggage)	05-04314	**$1,071.00**	05-04314-1	**$1,585.00**	N/A
SX-06	Bonanza/Baron 36-A36 and B58 (through 1978	05-04315	**$1,158.00**	05-04315-1	**$1,584.00**	N/A
SX-07	Bonanza/Baron A36-B36 and B58 (1978 and newer) (with extended baggage)	05-04316	**$1,534.00**	05-04316-1	**$1,847.00**	N/A
SX-08	Bonanza 33/35/36 Windsh/d set (without factory speedslope) Includes upper material forward of instrument panel	05-04317	**$203.95**	N/A	N/A	N/A
SX-09	Bonanza 33/35/36 Windsh/d set (with factory speed-slope) Includes upper material forward of instrument panel	05-04318	**$194.75**	N/A	N/A	N/A
SX-10	Duke	05-04319	**$1,775.00**	N/A	N/A	**9 ft.**
CHEYENNE						
SX-42	Cheyenne I & II	05-07161	**$2,120.00**			
KING AIR 90						
SX-44	King Air 90	05-07158	**$3,185.00**	N/A	N/A	-
KING AIR 300 COMING SOON						
*Ensure you order the correct Bonanza Materials by checking the following modifications: • Bonanza 35-E35 with tiny 3rd window modification, order Materials for F35-M35. • Bonanza 35-M35 (or A33-B33) with large third window and hat shelf modification, order Materials for N35-P35. • Bonanza 35-P35 (or A33-E33) with large third window and expanded baggage modification, order Materials for S35-V35B.						
PIPER						
SX-11	Comanche PA24/PA30 (through 1963) (*Floor not drilled for access)	05-04320	**$1,065.00**	05-04320-1	**$1,531.00**	N/A
SX-12	Comanche PA24/PA30 (1964 and 1965)	05-04321	**$993.00**	05-04321-1	**$1,698.00**	N/A
SX-13	Comanche PA24/PA30 (1966 and newer)	05-04322	**$905.00**	05-04322-1	**$1,495.00**	N/A
SX-14	Early Arrow, Cherokee, Warrior PA28-160, 180, 235	05-04323	**$893.00**	N/A	N/A	**9 ft.**

No.	Aircraft Model	Basic Materials (sidewall above floor/roof)		Deluxe Materials (basic + floor/belly)		SX-250 Footage (black mat for under carpet)
SX-15	Arrow, Cherokee, Warrior PA28-160, 180, 235	05-04324	**$968.00**	N/A	N/A	**9 ft.**
SX-16	Cherokee Six, Seneca, Lance, Saratoga PA32, PA34	05-04325	**$1,534.00**	N/A	N/A	**11 ft.**
PIPER CONT.						
SX-18	Navajo	05-04327	**$2,479.00**	N/A	N/A	**12 ft.**
SX-34	Aztec	05-04329	**$1,414.00**	N/A	N/A	**13 ft.**
Tomahawk						
SX-29	Tomahawk	05-07159	**$714.00**	N/A	N/A	-
CESSNA						
SX-35	150	05-04330	**$707.00**	N/A	N/A	**6 ft.**
SX-36	152	05-04331	**$707.00**	N/A	N/A	**6 ft.**
SX-24	170	05-04332	**$880.00**	N/A	N/A	**8 ft.**
SX-20	172	05-04333	**$970.00**	N/A	N/A	**8 ft.**
SX-32	177, 177 RG	05-04334	**$1,156.00**	N/A	N/A	**9 ft.**
SX-37	180/185	05-04335	**$946.00**	N/A	N/A	**8 ft.**
SX-21	182 (except earliest without rear window)	05-04336	**$897.00**	N/A	N/A	**8 ft.**
206	Coming Soon!					
SX-22	210 (except earliest without rear window)	05-04337	**$1,163.00**	N/A	N/A	**8 ft.**
SX-23	310 (without rear window)	05-04338	**$1,398.00**	N/A	N/A	**10 ft.**
SX-24	310	05-04339	**$1,414.00**	N/A	N/A	**10 ft.**
SX-26	337, 337P	05-04340	**$1,071.00**	N/A	N/A	**8 ft.**
SX-25	340	05-04341	**$1,979.00**	N/A	N/A	**12 ft.**
SX-33	414A	05-04342	**$2,312.00**	N/A	N/A	**13 ft.**
COMMANDER						
SX-43	112/114	05-06834	**$1,392.00**	N/A	N/A	**8 ft.**
MOONEY						
SX-27	M20 to M20E	05-04344	**$895.00**	N/A	N/A	**6 ft.**
SX-28	M20F to M20K	05-04345	**$970.00**	N/A	N/A	**7 ft.**
M20L to M20S Coming Soon!						
NAVION						
SX-31	A, B	05-04346	**$1,354.00**	N/A	N/A	N/A
VAN'S RV (EXPERIMENTAL)						
SX-30	RV-8 (Firewall, Sidewalls, Belly)	N/A	N/A	05-04349-1	**$880.00**	N/A
SX-40	RV-10 Firewall Sidewalls, Belly	N/A	N/A	05-04350-1	**$1,567.00**	N/A
BULK MATERIAL						
SXE-1125	1-1/8" x 36" x 48" SoundEx Sheet			05-04353	**$152.80**	**per sheet**
SXE-875	7/8" x 36" x 48" SoundEx Sheet			05-04354	**$149.75**	**per sheet**
SX-600	3/4" x 36" x 48" Black Mat			05-04357	**$93.75**	**per sheet**
SX-500	1/2" x 48" Black Mat			05-04358	**$29.90**	**per roll ft.**
SX-250	1/4" x 48" Black Mat			05-04359	**$21.50**	**per roll ft.**
SX-125	1/8" x 36" x 48" Black Mat			05-04360	**$16.75**	**per sheet**
SXT-200	2" Aluminum Foil Tape			05-04364	**$15.95**	**per roll ft**
SX-1357	SoundEx Glue			05-04365	**$7.50**	**per 6oz. tub**

THE INSULATOR
AIRCRAFT INSULATOR MATERIAL



The Insulator is one of the finest sound proofing and thermal insulation materials available, and will last the life of the aircraft. The dual sided Insulator panels are ideal for installation on interior skin, floor, engine covers, doors, headliners, and bulkheads. The Insulator uses multi - layered fiber plys bonded to reinforced high performance foil to provide optimum barrier to acoustics, radiant heat, thermal heat, and moisture. Insulator is available in 4'x 6' panels or by the lineal foot (4' wide). Install Insulator with Sticky Stuff spray adhesive (shown below) and Insul-Tape. Not FAA approved.

INSULATOR PANELS

Insulator – one ply 4' x 6' sheet. Single sided only.
3/8" thick.....P/N 09-27400 .. **$24.65 ea**

Discount: less 15% on orders for 20 sheets (assorted)

INSULATOR BY THE FOOT

Single side foil, single layer #6014; 4 ft. wide.
P/N 09-06014.....**$3.90 /ft.**
Double side foil, single layer #6016;
4 ft wide..... P/N 09-06016.....**$5.90 /ft.**
Discount: less 15% for 100 ft. (per P/N)



STICKY STUFF ADHESIVE

Stick Stuff is one of the best performing spray adhesives available. It is ideal for installing the Insulator and has many other uses. One spray can will install two 4' x 6' panels.
P/N 09-27415.....**$12.95/ea.**



INSUL-TAPE
AIRCRAFT INSULATOR MATERIAL

This pressure sensitive aluminized foil tape conforms to irregular surfaces, seals seams and joints and provides a vapor barrier. Also mends damaged Insulator foil. Cuts easily with household scissors.
30' roll .....P/N 09-27420 ..... **$5.35/ea.**



INSULATION TAPE

Insulation Tape. This item is a commercial version of the government specification Mil-P-15280. It is an adhesive backed tape with a smooth upper surface.

Size	Part No.	Price
1/8"X1"X30ROLL	05-11197	**$49.50**
1/8"X2"X30ROLL	05-11198	**$92.75**
1/8"X1/4"X10ROLL	05-11199	**$24.50**
1/8"X1/2"X30ROLL	05-11200	**$34.90**

BLANKET IN-A-BOX



Insulating your aircraft made easy! Blanket is ready to install as is or can be modified to fit special areas. Each box contains all the materials to insulate your aircraft including an Orcotek strip blanket, tape, cutting knife, instructions and built-in work surface with measuring grid.
Furnished as follows:
1" blanket-in-a-box contains 1 roll (1"x20"x100') Orcotek strip blanket, 2 rolls of Orcotape OT-16A (2"), utility knife, dispenser box-work platform P/N 09-45005..... **$2,693.00/box**
2" blanket-in-a-box contains 1 roll (2"x20"x50') Orcotek strip blanket 1 roll of Orcotape OT-16A (3"), utility knife, dispenser box/work platform P/N 09-45010..... **$1,932.00/box**

CONTEGO FIRE BARRIER LATEX PRIMER
-THE FIRE STOPS HERE-



Contego protects most building materials from the ravages of fire. Contego intumescent fire barrier products are all non-toxic, non-dermatic, and safe for pets. When exposed to fire, Contego fire retardant coatings expand to form a tough char barrier fire cannot penetrate. Deprived of fuel, the fire quickly dies. Contego not only helps prevent fires, it minimizes deadly smoke production, one of the leading causes of fatalities in residential and commercial fires. Intumescent fire barriers are nothing new, but Contego Passive Fire Barrier Latex represents a quantum leap forward in terms of quality, versatility, affordability and fire safety-all in one truly impressive fire proofing product. Size: Quart.
P/N 05-02615.....**$28.65**

3M™ CARPET TAPE 9377 2 INCH X 25 YARD



3M 9377 Tape has a differential adhesive system with a high-tack acrylic that bonds to the top-layer substrate and a rubber-based adhesive system that attaches to the flooring material. One side is black and attaches to the flooring material with an acrylic-based adhesive. The white side of the tape is a rubber-based adhesive that provides a bond to the floor surface.Will build over time reaching maximum strength at 72 hours. FAR-25-.853 P/N 09-02133 .... **$41.75**

INSULATION REPAIR & FABRICATION TAPE



Orcotape OT-16A is a lightweight, pressure sensitive, reinforced, metallized polyvinyl fluoride tape which is designed to be used in the fabrication, repair & installation of thermal/acoustic blankets. It is the companion tape to be used with the Orcotek strip blanket to seal the edges. Furnished in 60yd rolls.
2" width..... P/N 09-04565.....**$162.75/ea.**
3" width..... P/N 09-04566.....**$306.00/ea.**

ORCOTEK STRIP BLANKET



Aircraft insulation by the foot. This durable, state-of-the-art, light weight blanket meets the thermal and acoustic requirements of the major aircraft manufacturers and is now available for your airplane. The blanket consists of fiberglass enclosed in moisture barrier. It can be used as is or cut in special shapes. Use Orcotape OT-16A 2" or 3" tape to seal the open edge(s) of the blanket. Strip blanket available in 1" thick x 20" wide or 2" thick x 20" wide. Complete 50ft rolls available.
2" thick x 20" wide.....P/N 09-45020 .....**$34.65/linear ft.**

FIBERGLASS INSULATION BLANKET



Ultra-light FAA compliant Thermal/Acoustic Insulation by the foot. The blanket consists of a covering film qualified to Boeing Material Spec. (BMS) BMS8-377 Ty I & II, Cl 1 and fiberglass qualified to BMS8-48 Ty III, Cl 2, Gr A. These materials meet the FAR25.856(a) flammability regulations as required per the BMS and are available in 1 " or 2" thickness. The generic blanket can be cut to shape and edges sealed with BMS5-157 Ty 1, Cl 1 2 or 3, Gr A, Form 1 Tape. Complete 50ft. rolls available.
1" X 20" ..... P/N 09-04520.....**$23.55**
2" X 20" ..... P/N 09-04521.....**$27.75**

3M™ INTERAM CERAMIC BLANKET 49 INCHES BY 25 FEET



3M Interam Mat I-10A, 49 inches by 25 feet (one roll): Ceramic fiber based material that expands into low-density insulation blankets when exposed to high temperatures or flames. Outer foil layer is aluminum.. P/N 03-00136.....**$747.00**

VALCO CINCINNATI MULTI-PURPOSE SEALANT



Valco Cincinnati multi-purpose sealant is a paste-like, one component material that cures to a tough, rubbery solid upon exposure to moisture in the air. This sealant can be applied overhead or on sidewall joints and surfaces without sagging, slumping or running off. It adheres to clean metal, glass, most types of wood, silicone resin, vulcanized silicone rubber, ceramic, natural and synthetic fiber, and painted and many plastic surfaces.
Effective to -46°C (-50°F). Fully cured Valco multi-purpose sealant can be used for extended periods at temperatures up to 204°C (400°F), and for shorter periods as high as 218°C (425°F)
2 oz. tube..... P/N 09-00277.....**$7.80**
7 oz. tube..... P/N 09-00278.....**$16.75**

VHT FLAMEPROOF COATINGS



Originally designed for NASA's reentry spacecraft, VHT FlameProof is a scientifically formulated compound designed to withstand temps. up to 1500°F (816°C) VHT It survives where other paints can't, shields & protects, maintains the finish, prevents rust & corrosion, and resists oils & solvents. For aircraft applications the typical use is on high temperature steel components such as exhaust & turbocharging systems. Excellent for use as a heat resistant & anti-corrosion coating on exhaust manifolds and turbine casings. Both Flat Aluminum and Flat Black are non-facing colors.

Flat Aluminum 16 oz. aerosol spray.....P/N 08-00713 ..... **$14.55**
Flat Black 16 oz. aerosol spray.....P/N 08-00714 ..... **$14.50**

Prices Subject to Change Without Notice

BAFFLING MATERIAL



FIBERFRAX

A new material made from washed ceramic fibers with binders added to form a lightweight, flexible asbestos-free insulation. Withstands temperatures to 2300° F. Excellent for aircraft firewalls. Available in 24" wide rolls in 1/16" and 1/8" thicknesses.

1/16" Thick..... P/N 05-02678.....**$8.80 Lin ft.**
1/8" Thick..... P/N 05-02679.....**$15.50 Lin ft.**
Discount Less 15% On 50Ft. Per Size



FIBERFRAX HI TEMP COATING

Used as a hi temp coating over Fiberfrax, or other porous materials. Can also be used as an adhesive to bond Fiberfrax or other porous material together. Coverage: 15 sq. ft. per pint & 120 sq. ft per gallon.

Fiberfrax Adhesive Pt..... P/N 05-00800..... **$26.25**
Fiberfrax Adhesive Gal..... P/N 05-00900.....**$210.95**

NEOPRENE BAR



Neoprene bar of proper Shore hardness for fabrication of shock absorber donuts. Used in Osprey II nose gear. Available in 2 sizes:

1/2" Th x 2" W..... P/N 05-02000..... **$11.95/ft.**
3/4" Th x 3" W..... P/N 05-02100..... **$21.50/ft.**

RUBBER SHEET PACKING



Will not deteriorate in petroleum products. Recommended for oil and solvent service. Wt. 6 oz. per sq. ft. 1 Size: 1/16" thick x 36" wide roll. Sold in 36" 1 width only. Price is per Lin. Ft. P/N 05-01000 .....**$5.80**

Discount: Less 15% On 20 Ft.

HEAT-PROOF TAPE



Heat-proof and fire resistant. Made of woven fiberglass. Non-metallic, commercial grade. Withstands up to 1000°F. 2" wide x 1/16" thick. Wt. 4-1/2 lbs. per 100 ft. roll. ..... P/N 09-31500..... **$0.80/ft.**

Less 15% On 100 ft.

FIREWALL 2000 CERAMIC BLANKET



This blanket has been known to be flexible enough to cover compound curves. The heat side of the blanket is covered with stainless steel, the other side is aluminum It is easy to rivet or can be glued into position. Sold by the running foot. Temp. range up to 1000F. 24 inch wide. Note: There is a stainless steel sheet glued on to one side for extra protection. Tech Data Sheet does not include any info on this extra steel sheet. P/N 05-00948.....**$26.65**

Less 15% on 25ft. roll

3M™ FIRE BARRIER 2000



A premium nonslump sealant bonds to most common construction material to form a flexible seal. Superior Adhesion. Remains elastomeric and is weather resistant. This product is great for through penetrations and may also be used for fire rated construction joints. P/N 05-00949 .....**$34.50**

FIREWALL 2000 KIT

Contains 24"x48" sheet of Firewall 2000 and one tube of firewall caulk P/N 05-00950 .....**$140.95**

FIREWALL BLANKET



Firewall blanket is black in color. Note: This material is used for cosmetic purposes on the inside portion of a firewall to cover up an unsightly firewall. It is not fireproof and is not an actual firewall material. The maximum sheet size is 36" x 48"

36" x 48" sheet ..... P/N 09-00276.....**$124.95**
24" x 48" sheet ..... P/N 09-00276-2.....**$92.75**
12" x 48" sheet ..... P/N 09-00276-1.....**$58.50**

KOOLMAT HEAT BARRIER



A .070 thick fiberglass textile cured to a 1/8" silicone substrate. The latter providing a good wear resistant surface. Can be used on steel, aluminum, fiberglass, wood and plastic surfaces. It is good to temperatures up to 1000° F and reduces cockpit heat up to 75%. Contains no asbestos. Can be used to insulate cowl and firewall forward area. (Not used on exhaust) Color: gray on top side (silicone) and white woven cloth (fiberglass). Wt: .72 lbs. per sq. ft. Sold in 30" width by the lineal foot. Gray..... P/N 09-24730.....**$32.75/lin ft.**

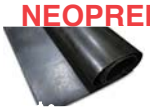
ENGINE BAFFLE TEXTURED FINISH



FAA approved replacement Engine Baffle. This material is easily identifiable by its textured finish. 32oz fiberglass reinforcement mat. Boasts a -60 to 550°F range.

Color	Size	Part No.	Price	Size	Part No.	Price
Black	1/8" x 3" x 9'	05-04656	**$96.75**	1/8" x 36" x 40"	05-04657	**$204.95**
Red	1/8" x 3" x 9'	05-04658	**$126.75**	1/8" x 36" x 40"	05-04659	**$235.95**
Blue	1/8" x 3" x 9	05-04660	**$122.75**	1/8" x 36" x 40"	05-04661	**$216.95**

NEOPRENE COATED PYROGLASS CLOTH



This neoprene coated cloth is designed for applications where its superb heat and flame resistance provide an extra margin of protection for people and equipment. Self-extinguishing, it is used as aircraft firewall barriers, protective sleeves and tadpole tape covers, flat seals, gaskets, mounts and door seals. It is ozone and weather resistant, and can be used against caustics, gasoline, oil, water and steam. It does not support combustion and will operate in continuous temperatures from -40°F to +200°F. Thickness .070". Sold in 60" Width only.

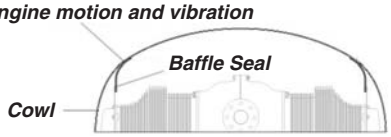
P/N 05-00600..... **$69.85 ft.**

PRE-CUT PYROGLASS CLOTH BAFFLE STRIP

Cut from Pyroglass cloth above. 3"x 84" ..... P/N 05-00700..... **$24.85**

COWL SAVER BAFFLE SEAL MATERIAL

Friction between baffle seal and cowl transfers engine motion and vibration



Cowl Saver™ Baffle Seal Material has 10 times Less Friction! - One side is silicone and the other is the revolutionary friction free surface unique to the patent pending Cowl Saver™. Cowl Saver™ dramatically reduces the friction between your cowl and baffle seals.

Low Friction Saves You Money! - Reduces transfer of damaging engine vibration to the engine cowl Minimizes cowl chaffing and erosion from baffle seals. Extends baffle seal life. Reduces expensive cowl and cowl fastener repairs. Reduces fatigue and cracking in aluminum baffles and cowl skins.

The cowling even goes on easier! - Unbeatable Performance. Ideal balance of flexibility and stiffness to insure a proper seal. Fiberglass reinforced. Meets industry standard AMS3320G specification. McFarlane quality you can count on! Not FAA-PMA approved

Accessories

6036 BAFFLE SEAL RETAINER STRIP - A baffle seal retainer strip used as a retainer for riveting baffle seals to baffles. 7/16 inch x 12 inch

Part Number	Thickness	Size	Color	Spruce	Price
CS085X36X36G	.085"	36" x 36"	Gray	05-03403	**$260.95**
CS085X18X36G	.085"	18" x 36"	Gray	05-03404	**$146.75**
CS085X3X108G	.085"	3" x 108 "	Gray	05-03405	**$72.75**

strips - Cut to desired length during installation.

P/N 05-03399 .....**$2.38**

RIVET KIT 2 - A baffle seal rivet kit containing soft Mil-Spec rivets that will not deform the baffles. Several sizes are included for various baffle thickness and hole sizes. P/N 05-03401 .....**$20.70**

BAFFLE-KIT-1 - A convenient kit that includes (1) CS085X3X108G Cowl Saver™ Baffle Seal Material, (1) RIVET-KIT-2 Soft Rivets, (5) 6036 Retainer Strip P/N 05-03402 .....**$106.75**

BAFFLE-KIT- 2 - This new baffle kit with more material. This kit is best for larger aircraft or curved baffle seals that cannot be cut from three inch strips. The new kit includes (1) 18x36 inch piece of Cowl Saver™ material, (2) Baffle Seal Rivet Kits and (10) Baffle Seal Retaining Strips. P/N 05-04108 .....**$197.75**

BAFFLE-KIT- 3 - Part number Baffle-Kit-3 is a convenient kit that includes (1) 3" x 156" (13ft) Cowl Saver™ Material, (1) Baffle Seal Rivet Kit, and (7) Baffle Seal Retainer Strips P/N 05-04557 .....**$160.75**

INSPECTA-SHIELD

FIRE RETARDANT PENETRANT



Inspecta-Shield is a durable, non-toxic, fire retardant chemical penetrant which when cured and dried, is odorless and colorless. Will retard flame in materials such as fabrics, poly foam, paper, and wood. Will generally last for the life of the product to which it has been applied. Inspecta-Shield is environmentally compatible and will protect surfaces up to 2,200°. These surfaces will retain their color and resist sun rot up to 50% longer. A Class A rated flame retardant that meets F.A.R. 25.853 (a & b). 1qt. spray bottle will treat an area of 150 sq. ft. Can be applied with most garden and household sprayers.

Note: Inspecta-Shield is corrosive to aluminum and other metals. If it comes in contact with metals be sure to wipe off metal and clean thoroughly Qt. ..... P/N 09-05760 .....**$16.95**
Gal. ..... P/N 09-00274 .....**$63.75**

AP

SEE THE ENGINE PARTS SECTION OF THE CATALOG FOR MORE INSULATION PRODUCTS!

BAFFLE SEALS – CHAFE SEALS

SILICONE BAFFLE SEALS



Excellent for replacement of baffle seals. It exceeds asbestos type seals in durability and flexibility over its entire operating heat range of -80 F to +425 F..
Available in red, blue & black.
IRON OXIDE RED - Meets Mil Spec ZZR765B. ISR3 meets Mil Spec AMS3320 (PN 05-00770, 05-00771-3, 05-00771) AMS3303 for all others.

3/32" thick x 3" wide x 9' long ..... P/N 05-00775 ..... **$19.26**
3/32" thick x 36" wide ..... P/N 05-00781 ..... **$28.50 /ft**
3/32" thick x 3" wide ..... P/N 05-00781-3 ..... **$2.14 /ft**
1/8" thick x 2" wide x 9' long ..... P/N 05-00795 ..... **$16.65**
1/8" thick x 3" wide x 9' long ..... P/N 05-00755 ..... **$31.95**
1/8" thick x 4" wide x 9' long ..... P/N 05-00760 ..... **$29.95**
1/8" thick x 36"wide ..... P/N 05-00772 ..... **$27.70 /ft**
1/8" thick x 2" wide ..... P/N 05-00772-2 ..... **$1.85 /ft**
1/8" thick x 3" wide ..... P/N 05-00772-3 ..... **$3.55 /ft**
1/8" thick x 4" wide ..... P/N 05-00772-4 ..... **$3.35 /ft**
1/8" thick x 3"W x 9' w/ fiberglass insert. ..... P/N 05-00770 ..... **$44.55**
1/8" thick x 36"W w/ fiberglass insert ..... P/N 05-00771 ..... **$59.50 /ft**
1/8" thick x 3" wide w/ fiberglass insert ..... P/N 05-00771-3 ..... **$4.95 /ft**
LIPSTICK RED - Meets Mil Spec ZZR765B. ISR3 meets Mil Spec AMS3303.
3/32" thick x 36" wide ..... P/N 05-00786 ..... **$28.90 /ft**
3/32" thick x 3" wide ..... P/N 05-00786-3 ..... **$2.35 /ft**
DARK BLUE - Meets Mil Spec ZZR765B. ISR3 meets Mil Spec AMS3303.
3/32" think x 3" wide x 9' long ..... P/N 05-03055 ..... **$26.28**
3/32" thick x 3" wide ..... P/N 05-01831-3 ..... **$2.92 /ft**
3/32" thick x 36" wide ..... P/N 05-01831 ..... **$29.50 /ft**
BLUE - Meets Mil Spec ZZR765B. ISR3 meets Mil Spec AMS3303.
3/32" thick x 3" wide x 9' long ..... P/N 05-00790 ..... **$19.80**
3/32" thick x 36" wide ..... P/N 05-00806 ..... **$24.99 /ft**
3/32" thick x 3" wide ..... P/N 05-00806-3 ..... **$2.20 /ft**
1/8" thick x 3"W x 9' w/ fiberglass insert ..... P/N 05-00792 ..... **$69.30**
1/8" thick x 36"W w/ fiberglass insert ..... P/N 05-00791 ..... **$57.75 /ft**
1/8" thick x 3" wide w/ fiberglass insert ..... P/N 05-00791-3 ..... **$7.70 /ft**
BLACK - Meets Mil Spec ZZR765B. ISR3 meets Mil Spec AMS3303 (PN 05-00810, 05-00811, 05-00811-3) AMS3320 for all others.
3/32" thick x 3" wide x 9' long ..... P/N 05-00810 ..... **$17.95**
3/32" thick x 36" wide ..... P/N 05-00811 ..... **$24.55 /ft**
3/32" thick x 3" wide ..... P/N 05-00811-3 ..... **$1.99 /ft**
1/8" thick x 3"W x 9' w/ fiberglass insert ..... P/N 05-00826 ..... **$44.55**
1/8" thick x 36"W w/ fiberglass insert ..... P/N 05-00825 ..... **$57.75 /ft**
1/8" thick x 3" wide w/ fiberglass insert ..... P/N 05-00825-3 ..... **$4.95 /ft**
ASSORTED SILICONE 50 FEET - This is a 50 foot assortment of silicone lengths, thicknesses and colors. ..... P/N 05-04565 ..... **$19.95**

AIRCRAFT BAFFLE SEAL KITS

These pre-cut baffle seal kits are cut to original specifications. Please specify aircraft make, model, serial number, and color of seal. Kits are furnished with rivets, washers, drill bits, & silicone. **P/N 00-00103**
CALL FOR PRICE AND P/N OF KIT FOR YOUR AIRCRAFT or VISIT www.aircraftspruce.com FOR BAFFLE KIT INFORMATION.



BAFFLE FASTENER KIT

Screw Fastener (Post Type) for joining sides or overlapping of baffle material. Includes one male and one female piece. GB-SF-3/16 8-32 Threads.
P/N 05-01829 ..... **$10.50**

INDIVIDUAL FASTENERS

Male 8-32 Thread ..... P/N 05-01235 ..... **$0.45**
Female 8-32 Thread ..... P/N 05-01236 ..... **$0.45**

COWL SEAL HARDWARE & TOOLS

GB4-4A: Baffle Seal Pop Rivet, Button Head. 1/8" Dia. x 3/16" Grip Requires a metal baffle strip or back-up washer to secure. Pkg. of 100 ..... P/N 05-56100 ..... **$7.85**
GB-A4: Back-up Washers Pkg of 150 ..... P/N 05-56130 ..... **$5.90**
GB-SF- 3/16: Baffle Seal Fastener (Post Type) for joining sides or overlapping of baffle material. Includes one male and one female piece. 1/8" NPT. Each ..... P/N 05-56140 ..... **$0.90**
GB4-3AW: Baffle Seal Pop Rivet, Button Head, White. 1/8" Dia. x 3/16"Grip. Pkg. of 100 ..... P/N 05-00132 ..... **$7.50**
GBL4-4A: Baffle Seal Pop Rivet, Large Flange, Silver. 1/8" Dia. x .187" - .250" grip range Qty. 100 ..... P/N 05-00134 ..... **$6.85**
GBL4-4AB - Black Pop Rivet, large flange for black baffle seal 1/8" x 3/16" grip. GBL4-4AB. Qty 100 ..... P/N 05-00483 ..... **$6.95**
GBL4-3AW: Baffle Seal Pop Rivet, Large Flange, White. 1/8" Dia. x 3/16"Grip Qty. 100 ..... P/N 05-00135 ..... **$9.95**
Silicone Revolving Punch Tool: Makes various size holes in baffle material. Each ..... P/N 72 ..... **$9.90**



BLACK COWL SEAL

1/16" x 3" x 9' Cowl & Engine Baffle Seal First quality woven fiberglass cloth heavily impregnated with neoprene for unsurpassed durability. -40° to 300°. Black. TA-8071. MIL-R-6855.
1/16" x 3" x 9' Roll
P/N 06-02461 ..... **$61.75**
1 Square Yard
P/N 04-02620 ..... **$229.00**



COWLING CHAFE CLOTH

Off-white, 100% non-asbestos woven tape. Unaffected by most chemicals and temperatures. 1" x 15 ft. Roll
P/N 09-31800 ..... **$14.85 rl**



GB56 SILICONE ANTI-CHAFE COWL SEAL

The kit includes: 15 Foot Roll with Adhesive, Anti-Chafe Seal and Catalyst, Sold in 15ft. rolls, Gloves, Cement, and Acid Brush.
P/N 05-00664 ..... **$98.75**

A-56-12 COWL CHAFE SEAL 3/4"



Phenolic-cure Nigen Cotton Webbing used on engine cowls to protect where overlapping the airframe. Not affected by cold, heat or most solvent chemicals. 1/16" thick.
P/N 05-11171 ..... **$82.75**

CESSNA COWL CHAFE SEAL



This seal is riveted to the firewall on the Cessna 150, 152, 172, and 182. Meets MIL SPEC: AMS3320-.093 black. 1-1/2" wide x 84" long. Product is not FAA/PMA approved. Please consult your A&P/1A for guidance regarding installation and use on certified aircraft.
P/N 05-04489 ..... **$58.75**

SILICONE BAFFLE



Fiberglass reinforced (VISR) silicone engine baffle seal exceeds the neoprene fiberglass fabric seals in durability and flexibility over its entire operating heat range of -80°F to +425°F. VSR material does not have fiberglass reinforcement.

Model No.	Dimensions	Description	Part No.	Price
VISR3	1/8"x 3"x 9'	Red and Orange	13-18527	**$43.60**
VISR3	1/8"x 3"x 9'	Black	13-18528	**$43.60**
VISR3	1/8"x 3"x 9'	Blue	13-18529	**$43.60**
VISR3640	1/8"x36"x40"	Black	13-18530	**$115.75**
VISR3640	1/8"x36"x40"	Blue	13-18531	**$115.75**
VSR3640	1/8"x36"x40"	Red and Orange	13-18532	**$68.75**
VSR4	1/8"x4"x9'	Red and Orange	13-18533	**$26.50**

FIBERGLASS CLOTH BAFFLE MATERIAL



The same material used by several OEM aircraft manufacturers. Neoprene coated fiberglass cloth is heat & flame resistant, self-extinguishing, ozone & weather resistant, & will not support combustion. Temperature range -40F to +200F. AMS3783.

AMS3783 Black 3in X 9ft Roll ..... P/N 05-12642 ..... **$49.75**
AMS3783 Black 36in X 36in Sheet ..... P/N 05-12643 ..... **$209.95**

SILICONE BAFFLE SEAL



Silicone (reinforced) with fiberglass cloth. Mil spec: AMS3320 Rev. G; Material Thickness: .093 (3/32) O.E.M Spec; Temp Range: -65 to + 550
.093"X3" Scat Orange
P/N 05-04717-1 ..... **$3.95**
.093"X3" Black P/N 05-04717-3 ..... **$5.75**
.093"X3" Medium Blue
P/N 05-04717-4 ..... **$4.95**

SILICONE CEMENT



This silicone cement is the same cement that is included with some of the chafe seals and is excellent for attachment of any silicone seal. 2.5oz. Note: GBSC-2 or GBSC-4 silicone cement to apply silicone seals requires silicone cement only for application. Storage & Shelf Life: • Best if refrigerated under 70° • 18 months shelf life when stored properly • Easier to fill • Metal screw cap.
2.5 oz. Can..... P/N 05-13310 ..... **$54.65**

Prices Subject to Change Without Notice

PLIOBOND



Pliobond #20 is a viscous, quick setting highly versatile adhesive. Bonds metal; wood, plastics, fabrics; ceramics, glass, vulcanized rubber, paper, leather and concrete. Thin with MEK.

1/2 Pt. Brush Top Can ... P/N 09-28000 .....**$9.85**
Pt. Can ..... P/N 09-28100 .....**$17.50**
Qt. Can ..... P/N 09-28200 .....**$28.50**

PLIOBOND 25 LV



Pliobond #25 LV is a viscous, quick setting highly versatile adhesive. Bonds metal; wood, plastics, fabrics; ceramics, glass, vulcanized rubber, paper, leather and concrete. Thin with MEK.

1/2 Pint ..... P/N 09-03812 .....**$11.99**
Pint ..... P/N 09-03813 .....**$21.65**
Quart ..... P/N 09-03814 .....**$36.65**

PLIOBOND 30



PLIOBOND 30 is a general purpose thermosetting adhesive, it provides tough, chip resistant bonds that remain flexible over a wide temperature range; excellent resistance to mechanical shock, oxidation, fungi, mold and bacteria. Typically used as a sealer, primer, water repellant, or coater. 1/2 Pint Top Can. P/N 09-04669 .....**$11.55**

PLIOBOND 35



For seaming, splicing and bonding of gaskets, rubber matting, belts and hose to rubber, wood, metal, some plastics, glass and fabrics and to themselves. Provides permanent, flexible bonding. Can be brushed, spread or roller coated. Will not get hard or brittle with age and resists most acids, oil, gasoline, grease, water and salt. P/N 09-04670.....**$12.50**

3M™ WINDOW SEALANTS



3M STRIP CAULK - This black, nonhardening compound in 12" strips is the most satisfactory product for sealing windshields and windows. 61 strips per box, more than enough for an average, leakproof windshield installation.

P/N 08578 .....**$22.75/Box**

DOW CORNING® 730 FS SOLVENT RESISTANT SEALANT



Dow Corning®730 FS Solvent Resistant Sealant is a ready-to-use, solventless, non-slumping fluorosilicone rubber paste that reacts with moisture in the air to form a tough, rubbery solid. It is a fluid-resistant material that is ideally suited for use in many applications where resistance to fumes, splash, and sometimes even total immersion in fuels, oils and solvents is needed. Dow Corning 730 FS Solvent Resistant Sealant features good resistance to weathering, vibration, moisture, ozone, and temperature extremes. It retains its flexibility over a wide temperature.

3 oz. tube.....P/N 09-00383 .....**$96.95**

DOW SILASTIC RTV



General-purpose single-component silicone rubber. Adheres to metals, glass, paint, ceramics, most plastics, and wood. Cures to a firm silicone rubber in 24 hours at room temperature. Seals windshield glass, windows, repair worn rubber parts.

#732 RTV (Clear), 3 Oz. Tube .....P/N 09-04406 .....**$4.95**
#732 RTV (White), 3 Oz. Tube .....P/N 09-04407 .....**$4.95**
#732 RTV (Clear), 4.7 Oz. Tube .....P/N 09-27800 .....**$8.50**
#732 RTV (White), 4.7 Oz. Tube .....P/N 09-27810 .....**$8.75**
#732 RTV (White), 10.10 Oz. Tube .....P/N 09-27810 .....**$8.75**
#732 RTV (Black), 4.7 Oz. Tube..... P/N 09-27815..... **$8.50**
#732 RTV (Black), 3 Oz. Tube..... P/N 09-27815..... **$8.50**
#736 Red Silicone, 3 Oz. Tube.....P/N 09-27900 .....**$13.75**
#736 Neutral Cure Sealant (Clear).....P/N 09-05339 .....**$9.85**

DOW CORNING RTV-3145 ADHESIVE / SEALANT



Sealing openings in modules and housings; adding mechanical stability to individual components; assembly of components on PWBs; sealing in and around wires and electrical leads; yoke assembly.

Clear .....P/N 09-02041 .....**$39.50**
Gray .....P/N 09-02042 .....**$39.50**

CRC RTV SILICONE SEALANT



For general-purpose sealing, bonding, protecting and waterproofing applications. Clear formulation forms a barely visible, water-tight seal. Sealing, bonding, protection & waterproofing in HVAC, electrical, construction, metal working, for filling gaps between mating parts, gearboxes, pumps, motors & for general gasket sealing.

Clear 8oz. ..... P/N 09-04719 ..... **$26.50**
Clear 12oz. ..... P/N 09-04677 ..... **$9.80**
Blue 8oz. ..... P/N 09-04720 ..... **$23.75**
Red 8oz. ..... P/N 09-04721 ..... **$23.85**

HOMEBUILDERS GAP SEAL KIT FOR EXPERIMENTAL AIRCRAFT



Designed for experimental aircraft that have been identified as needing gap seals to improve control response and effectiveness. Features transparent, UV stable film with a long aging, acrylic adhesive. Remains flexible down to -40 deg. F. Easy to install with the use of simple hands tools. Kit includes 3M 8674 Film (PN 09-01643}, 86A Adhesion Promoter to ensure maximum adhesion, Scotchbrite pad (PN 09-01753) and 3M Application Solution (PN 06-00604)

P/N 05-03480 .....**$124.95**

AVTEK GAP SEAL



The "Spring-Steel" reinforcement channel has "Gripper" teeth to hold firmly in place. And when your door is closed the seal is pinched between the airframe. You can not pull the seal out when the door is closed...however applying adhesive into the channel is recommended. Length: 9ft.

P/N 05-02203.....**$159.75**

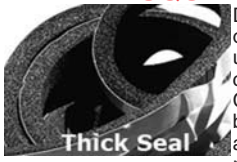
GAP SEAL



Gap Seal for rudder and elevator of your aerobatic aircraft! It can also be used on other aerobatic aircraft if the horizontal stabilizer, elevator, vertical fin and rudder spar is made from a 7/8 inch diameter tube with at least 1/8 inch gap and is equipped with strap hinges. Comes in 3 foot strips. It is cut and glued to the trailing edge of the horizontal stabilizer and vertical fin. Any good quality contact cement can be used to bond the Gap Seal.

NOTE: The Gap Seal is not designed for tail surfaces that are pin hinged however some homebuilt aircraft (Pitts S-1C) with pin hinges have been used successfully. Typically 3 strips for Pitts S-1, 4 strips for Pitts S-2 and Eagle, 5 strips for Pitts Model 12 P/N 05-04616.....**$38.75**

AVTEK SQUEEZE-OUT DOOR SEAL KITS



Door Seal keeps water, cold, wind and noise out of your aircraft. The seal is designed for use on multiple aircraft make/model applications. The -02 is shipped with dual Air-Chambers.The installer can split the chambers using one near the hinges, where gaps are small, use two of three chambers in the rear where the gaps are larger. The -02 is very versatile, and works great on every aircraft, whereas the -01 may not. Get the -01/-02 combination kit if you are unsure!

*While the -02 kit contains enough seal material to seal all General Aviation Doors, the purchase of the -02/-02 Kit will give you extra -02 in case something unexpected happens during installation. Extra can also be used for the baggage door.

Description	Use	Features	Part No.	Price
AvTek Air Chamber Door Seal -02	Recommended for All Aircraft. Fwd-Aft Cabin Doors & Bag Door.	Flex, E/Z Conform Will Not Push Door-Out	05-02198	**$118.85**
AvTek Thin Seal (Window) -03	Recommended for Cessna & Beech. Use for Windows, Paper-Thin Door-Gaps	Seals When No Other Seal Will	05-02199	**$49.75**
AvTek Thin Seal (Door) -03	Recommended for All Aircraft. Use for Very Small Gaps in Doors	Seals When No Other Seal Will	05-02201	**$79.95**
AvTek Thicker Seal (Door)	Recommended for All Aircraft. Seal installed on the door.	Resist Mildew, Mold, & Tearing	05-02202	**$69.95**
Door & Airframe Air-Seal Kit	The -02/-02 Air-Chambers on both the Door & on the Door-Way work together. Much like Car-Doors do. Compressing and expanding as your door does, for a "Water-Tight" fit.	N/A	05-04105	**$129.95**

AP

RUBBER CHANNEL - COWL SEAL

HIGH QUALITY RUBBER CHANNEL



Good-grade neoprene. Soft, flexible, oil-resisting. **Full lengths are 15' strips from manufacturer. Priced and sold above by the foot.**

Style B: 1/2" high - right, 3/8" high-left, 1/16" Groove 05-00596..**$1.60/ft**
Style C: 3/8" high, 1/8" groove, 1/4" across bottom .05-00597..**$1.20/ft**
Style D: 1/2" high - left, 3/16" - right 1/32" Groove...05-00598..**$0.68/ft**
Style E: 1-1/8" high, 1/4" lip right side, 1/16" Groove..05-00599..**$1.34/ft**



T-897 NEOPRENE RUBBER TRIM AND FERRIN SEAL

The T-897 is a Neoprene Rubber Seal that is used in various different applications on the aircraft. It is manufacture from a 60 Durometer Neoprene Rubber material. It is sold per Foot with a 10 Ft min. 1/16" opening. 1" Tall. 60 Duro Neoprene Rubber.....P/N 05-11202..... **$4.65**



K-15 NEOPRENE RUBBER TRIM AND FERRIN SEAL

The K-15 is a Neoprene Rubber Seal that is used in various different applications on the aircraft. It is manufacture from a 60 Durometer Neoprene Rubber material. It is sold per foot. 1/16" opening. 1 1/8" Tall. 60 Duro Neoprene Rubber.
P/N 05-11192..... **$5.85**



BA-200 VINYL U-CHANNEL 3/8

The ba-200 is vinyl U-Channel that is used as a trim seal in various applications throughout the aircraft. It is manufactured from a vinyl material that meets the requirements of the FAR 25.853 B burn test. It is available in a Black or White color and comes in a 25Ft package.

Black.....P/N 05-11174..... **$48.95**
White.....P/N 05-11452..... **$49.50**



T-8301 1/2 INCH J-CHANNEL 25 FOOT PACKAGE

The T-8301 is vinyl U-Channel that is used as a trim seal in various applications throughout the aircraft. It is manufactured from a vinyl material that meets the requirements of the FAR 25.853 B burn test. It is available in a Black or White color and comes in a 25Ft package.

Black.....P/N 05-11201..... **$57.75**
White.....P/N 05-11456..... **$58.75**



3/4 INCH BULB FOOT TADPOLE TAPE

The VC-150 is a tadpole tape that is silicone coated for added protection. It has a solid 3/4" bulb with a 1 1/4" flap x 10Ft
P/N 05-11203..... **$150.75**



WB-1310 WINDSHIELD WIPER REPLACEMENT BLADE

The WB-1310 is a silicone Replacement blade and is sold per foot.
P/N 05-11204..... **$26.50**



WB-665 WINDSHIELD WIPER REPLACEMENT BLADE

The WB-665 is a silicone Replacement blade and is sold per foot.
P/N 05-11205..... **$20.50**



T-4096 QUARTER ROUND DOOR SEAL WITH RIDGES

The T-4096 is a Hollow Quarter round door seal that has four ridges that runs down the sealing surface of it. It is constructed of a medium density sponge material and has been used in applications like the cessna door seal and others.
P/N 05-15277..... **$6.50**

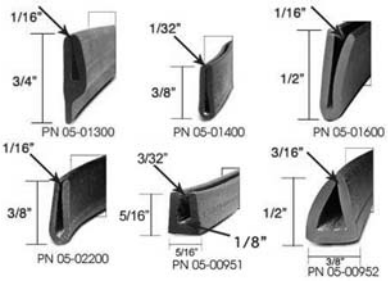


HOPPER SILICONE SEAL

Medium Density silicone sponge material manufactured to meet the MIL-R-46089 C. The material has a Smooth finish to it. 1/2" x 1".
P/N 05-11194..... **$6.50**

U CHANNEL

BLACK 65 DURO EPOM U-CHANNEL.



Use CRL Glass and Acrylic Setting Rubber Channels if you have acrylic or glass panels you need to protect. Our Glass Setting Rubber Channels will provide you with the product you need. Available in multiple sizes for most applications.

Sold per foot

Groove	Height	Complete Roll Length	P/N	Price
1/16"	3/4"	12 Ft.	05-01300	**$1.26**
1/32"	3/8"	15 Ft.	05-01400	**$0.54**
1/16"	1/2"	25 Ft.	05-01600	**$1.39**
1/16"	3/8"	100 Ft.	05-02200	**$1.35**
1/8"	5/16"	50 Ft.	05-00951	**$0.99**
3/16"	1/2"	50 Ft.	05-00952	**$1.70**



OPEN CENTER CHANNEL

1/2" Legs 3/4" Curve 3/8" Radius
Made in 12' Lengths -
#4.....P/N 05-01500..... **$2.27 Ft.**



Neoprene sponge rubber 1/4-round door seal. Hollow core makes a better seal. Manufactured in 25 Ft. lengths. Sold per foot #7 ..... P/N 05-01700..... **$2.48 Ft**



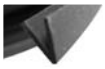
SILICONE P-SEAL 50 DURO

Silicone P-seal 50 duro for battery box application/lighter wall thickness 1-1/2 x 5/8 bulb. Sold by foot.
Use GBL4-4AB large flange (black) pop rivets to install (PN 05-00483). P/N 05-04704..... **$12.50**



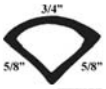
ANTI-CHAFE MOLDING

Anti-Chafe Molding for fuel tank straps. Neoprene channel accommodates metal straps 1" wide.
#9.....P/N 05-01800..... **$1.67 ft**



"V" STRIP

"V" Strip Canopy Channel 20 Ft. required for Long-EZ.
#10.....P/N 05-01900..... **$0.83 ft**



QUARTER ROUND DOOR SEAL

Hollow Quarter round door seal. Medium density sponge material. Use 1100-2 contact cement.
BA-10012.....P/N 05-11173..... **$4.35 ft**



CESSSNA/PIPER QUARTER ROUND DOOR SEAL

Constructed of a medium density solid sponge material that offers excellent compression ability and resiliency when installed correctly. Use 1100-2 contact cement.
RB-5022 .....P/N 05-11193..... **$5.55 ft**



QUARTER ROUND SOLID DOOR SEAL - Closed cell black neoprene with smooth outer surface. 1/2" Legs, 3/4" Curve, 1/2" Radius. 25 ft. Roll
Solid .....P/N 05-00000..... **$28.75**
Hallow.....P/N 05-12641..... **$28.75**



PIPER DOOR SEAL - Small cell sponge rubber. 25 foot rolls JM189139. P/N 05-00010..... **$62.50**



BAGGAGE DOOR SEAL - Flexible small cell sponge rubber seal used on many aircraft baggage doors. Packaged in 25 foot rolls. 25 ft. Roll
P/N 05-00020 ..... **$59.85**



PIPER WING ROOT SEAL - Black packaged in 12-foot lengths, adequate for one wing root. 12 ft. Roll
P/N 05-00030 ..... **$47.50**



PIPER WING ROOT SEAL - 12 foot. Enough seal to replace the seal on one wing of your Piper aircraft, it is made of a Black neoprene rubber material.
P/N 05-13058 ..... **$58.75**



BEECH WING ROOT SEAL - Black, packaged in 12-foot lengths, adequate for one wing root. 12 ft. Roll
P/N 05-00040 ..... **$59.75**



J-3, PA-18 DOOR GAP SEAL - 24" length Standard color, black. P/N 05-00953 ..... **$15.75**

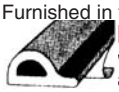
Note: The above moldings are not FAA approved.

Prices Subject to Change Without Notice

CHAFE SEAL - DOOR SEALS

EPDM WEATHERSTRIP

Self-adhesive rubber strip, made in Sweden of 100% EPDM rubber. Resistant to aging, weather, ozone, ultraviolet sun rays and many chemicals and solvents. Retains resilience at low temperatures (to - 45°F). Excellent for all types of weatherstripping and canopy installations. Furnished in three sizes



P-STRIP - Furnished in full rolls as a double-width strip which splits in the middle to give two single-width P-strips as illustrated. 17 Ft. Roll 1/4" thick x 3/8" wide. ***COLOR: WHITE*** P/N 05-01200 ..... **$7.95 Ea.**



D-STRIP WEATHERSEAL - 17' Roll 5/16" thick x 23/64" wide. (2) 8-1/2' strips. P/N 05-00897 ..... **$8.65**



ALL STRIP WEATHERSEAL - 10' Roll 5/16" thick x 19/64" wide. P/N 05-00898 ..... **$12.50 Ea.**

THESE PRODUCTS ARE NOT FAA/PMA APPROVED. PLEASE CONSULT YOUR A&P/IA FOR GUIDANCE REGARDING INSTALLATION AND USE ON CERTIFIED AIRCRAFT.

BEECHCRAFT COWL DOOR CHAFE SEAL



A Complete set of black silicone chafe seal for the upper cowl doors for Beech models 33, 35, 36. 3/8" wide X .020 thick. Kit includes silicone cement.
P/N 05-00665 ..... **$57.75**

BEECHCRAFT MAIN LANDING GEAR DOOR CHAFE SEAL



A Complete set of black silicone chafe seals cut to the original design. These seals are cemented to the underside of the wing to reduce the chafing of the main landing gear doors when closed. Adhesive is included. Full kit contents on web. P/N 05-00667 .. **$79.75**

BEECHCRAFT TAIL ROOT SEAL



A set of two tail root seals for models 33–36.
P/N 05-00669 ..... **$145.75**

BEECHCRAFT RUDDERVATOR SEAL



A set of two ruddervator seals for model 35.
P/N 05-00670 ..... **$78.75**

BEECHCRAFT UPPER WING SEAL



Includes 2 (12ft) Upper Wing, 2 lower wing seals and 4 oz of cement. (2). Applicable models: 33, 35, 36, 55, 58.
P/N 05-00668 ..... **$307.00**

SILICONE ANTI-CHAFE SEAL



Anti-Chafe Seal AMS3303-.032. Silicone, Black, 1-1/2" wide x 15' long. Silicone Anti-Chafe Material: Mooney and Early Cessna Models. Piper: Malibu and Mirage. Replaces the use of Teflon Tape. Reduces vibration on the cowling, reduces wear on the contact surfaces. Seals the aircraft cowl from rain and water. Can also be used for fuel straps. Silicone cement must be used to install silicone based seals. Silicone Cement required for Installation.
Black 1 Inch ..... P/N 05-06916 ..... **$33.50**

BEECH FRAMED SILICONE FOAM DOOR SEAL



Original Design. Fits 33-35-36-50-55-56TC-58-95 and includes Door Seal, Silicone Cement, Acid Brush, pair of Gloves and a Razor.
P/N 05-10740 ..... **$56.75**

BEECHCRAFT TAIL ROOT SILICONE SEAL



AMS3303 silicone seal temperature range -65 to +350. Beechcraft tail root seal. 15 foot length.
P/N 05-00669 ..... **$145.75**

SILICONE AIRBOX & HEATER SEAL



This fiberglass reinforced silicone seal (1/16" thick) makes an excellent replacement for various airbox and heater box seals used in a variety of aircraft. Furnished as a 6" x 6" piece; Black. P/N 05-00662 ..... **$18.50**

BLACK SILICONE P SEAL WITH 5/8" BULB



This seal makes an excellent replacement for felt type seals or other neoprene P-seals found in various aircraft. Overall size is 1-3/8" with a 5/8" bulb. Similar to Cessna #S2729-1. Note: Use GBL4-4AB large flange (black) pop rivets to install (PN 05-00483).P/N 05-00663..... **$11.50/ft.**

BLACK SILICONE P SEAL WITH 7/8" BULB



This seal makes an excellent replacement for felt type seals or other neoprene P-seals sound in various aircraft. Overall size is 1-3/8" with a 7/8" bulb. Sold by the foot. Note: Use GBL4-4AB large flange (black) pop rivets to install (PN 05-00483). P/N 05-02144 ..... **$16.65/ft.**



BEECHCRAFT STORM WINDOW SEAL

19/23/24/33/35/36/50/55/58/76/77/95 Series Window Seal, Storm Window.(Frameless)
P/N 05-03613 ..... **$19.95**



SOCATA TB REPLACEMENT WING ROOT

Easy to fit wing root package contains two strips at 1.75m each plus instructions, meaning you can complete both wings at the same time.
P/N 05-15349 ..... **$69.95**



PIPER/MOONEY DOOR SEALS

Developed from a special rubber compound that meets military specifications and FAA requirements for aircraft seals. Has a memory, compresses and conforms to the sealing surface providing a perfect seal. Comes with pressure sensitive adhesive that makes it easy to apply and bonds well with any metal surface painted or bare. Installs in the channel on the fuselage opening. Provides for an air- and water-tight seal. Detailed instructions, an engineering drawing for installation of the new seal, including instructions for adjustment of the door as well as removal of the old seal from the door(s). **Please call or visit our website for additional photos and models.**

Description	Part No.	Price
PA-28 Front Entry Door	05-01240	$79.95
PA-28 Rear Baggage Door	05-01241	$49.95
PA-28/32/34 Front Entry Door	05-01240	$79.95
PA-32 Rear Entry Door w/Cargo Door	05-01245	$89.95
PA-34 Front Entry Door	05-01240	$79.95
Mooney Aft Baggage Door	05-04859	$49.95
Mooney Storm Window Seal	05-02483	$19.95
Mooney Front Entry Door - Not Recommended for years 1998 - 2009.	05-03626	$129.95
Mooney All MK20 Series Front Entry Door	05-04858	$79.95



PIPER AIRCRAFT FRONT MOUNTED DOOR SEAL

Piper Aircraft Front Mounted Door Seal P301-1. Nearly a year of development and testing went into creating this revolutionary new Entry Door Seal for aircraft. Custom extruded from a special hybrid rubber compound, the new seal is superior to any seal on the market.
P 301-1 Seal for PA 28/32/34 ..... P/N 05-03628 ..... **$129.95**
P 301-23 Seal for PA 28/32/34 ..... P/N 05-06859 ..... **$129.95**
See our website for application chart.



CESSNA DOOR SEALS

The new seal installed on the fuselage enables the door to fully close and be air and water tight. The seal is easy to install; with its own adhesive strip and is FAA-PMA approved for all single-engine Cessna aircraft. Please visit our website for a complete selection of door and baggage seals.

Cessna Entry Door Seal ..... P/N 05-01610 ..... **$79.95**
Cessna Window Seal ..... P/N 05-01611 ..... **$49.95**
Cessna Baggage Door Seal ..... P/N 05-01612 ..... **$49.95**
Cessna AFT ENT/CARGO Door Seal ..... P/N 05-01613 ..... **$89.95**
Cessna 207 Front Bag Door Seal ..... P/N 05-01614 ..... **$49.95**

SILICONE GLUE - This pure silicone lubricant will greatly improve the life and sealing ability of door seals and rubber gaskets.
P/N 05-04641 ..... **$4.95**

CESSNA DOOR SEAL (FRONT ENTRY) - A great seal for Cessna 120, Cessna 140, Cessna 150, Cessna 152, Cessna 170, Cessna 172, Cessna 175, Cessna 180, Cessna 185, Cessna 190, Cessna 195, Cessna 206, Cessna 207, Cessna 210, Cessna 336, Cessna 337. Sold as each (per door) P/N 05-03621 ..... **$129.95**

CESSNA DOOR SEAL (FRONT ENTRY) - A great seal for Cessna 177 Sold as each (per door) P/N 05-03622 ..... **$129.95**

CESSNA VENT WINDOW SEAL- A great seal for Cessna Cessna 177, 337. Sold as each. Installs easily with its pressure sensitive strip.
P/N 05-03625 ..... **$129.95**

AP

BAGGAGE COMPARTMENTS



Our Baggage Compartments are custom designed and manufactured to provide your aircraft with a sturdy and attractive area for storing baggage, books, charts, etc. If your aircraft is not listed, please send us the old baggage compartment to use as a pattern for a new one. Available in two colors: off-white or olive drab canvas.

Note: Complete the part number with color choice. Use -1 for off-white, -2 for olive drab. Baggage Compartments are special order & non-returnable

Aircraft	Part No.	Price
Aeronca 7AC	09-17265-	$35.50
Aeronca 11AC	09-17270-	$138.95
Cessna 120/140*	09-17275-	$125.95
Cessna 150*	09-17280-	$128.95
Cessna 172*	09-17285-	$119.95
Cessna 310*	09-17290-	CALL
Ercoupe	09-17295-	$113.95
Fairchild 24	09-17300-	$128.95

Aircraft	Part No.	Price
Luscombe 8A	09-17302-	$68.75
Piper J3	09-17305-	$34.50
Piper J4	09-17307-	$69.75
Piper J5	09-17310-	$58.50
Piper PA12	09-17312-	$92.75
Stearman	09-17315-	$54.00
Taylorcraft	09-17317-	$43.25



MAP POCKET

10' elastic mouth, square black vinyl pocket mounted on fiberboard. Includes hardware. .....P/N 09-17415 ..... **$65.25**



TAIL WHEEL BOOTS

To keep your aircraft components clean from contamination by dust, grime and dirt, install these quality covers made from black vinyl. No mounting hardware included.

Cessna 195 .....P/N 09-17350 ..... **$48.50**
Staggerwing .....P/N 09-17352 ..... **$90.25**
Stearman.....P/N 09-17355 ..... **$82.50**



CESSNA 150 STEERING LINKAGE COVERS

Linkage Covers for the Cessna 150 Steering Cover. Not FAA Approved. .....P/N 09-04051 ..... **$38.25**

PIPER SHOCK BOOTS / COVERS

P/N 09-17410



P/N 09-17360

P/N 09-17365

To keep your aircraft components clean from contamination by dust, grime and dirt, install these quality covers made from black vinyl. No mounting hardware included.

Aircraft	Description	Qty	Part No.	Price
PA-22	1 Pc. Control Column Boot	Each	09-17410	$19.75
PA-25	Gate Control Rod Boot	Each	09-17357	$40.00
J-3	Piper Shock Boots	Pair	09-17360	$59.50
PA-25	Gate Control Rod Boot	Each	09-17375	$17.00
PA-25, SN25-2000 to -4171	Shock Strut Boots, pair	Pair	09-17377	$39.75

MISCELLANEOUS BOOTS / COVERS

Aircraft	Description	Qty	Part No.	Price
Aeronca 7AC	Joy Stick Covers	Pair	09-17362	$22.95
Cessna172 (also fits 182)	Steering Linkage Covers	Pair	09-17365	$17.95
Citabria	Interior Boots	Each	09-17367	$38.50
Beech Bonanza	Gear Boots for Main Gear	Pair	09-17370	$38.50
Beech Bonanza	Dust Boot for Retractor Nose Gear	Pair	09-17372	$27.50



PIPER SHOCK CORD COVER

Applicability: Piper PA-18. 16.75" Aluminum Shock Cord Cover. Used with Hydrasorb. FAA/PMA Approved
P/N 05-14960.....**$136.75**



SEAT SLINGS

These canvas slings are available in Off-White or Olive Drab. All seat slings include front and rear slings except:
Aeronca 65CA..... 1pc PA-12 ..... 3 pcs
Piper J-3..... 3 pcs Taylorcraft ..... 1 pc
PA-22 ..... 1 pc

Note: Complete Part Number with color. Use -1 for Off White or -2 for Olive Drab.

Aircraft	Part No.	Price
Aeronca 65CA	09-17320-	$129.95
Bellanca	09-17322-	$68.00
Citabria	09-17325-	$122.75
KR-1 & 2	09-17327-	$61.00

Aircraft	Part No.	Price
Piper J-3	09-17330-	$70.00
Piper J-5	09-17332-	$102.95
Piper PA-12	09-17335-	$101.95
Piper PA-22	09-17337-	$99.95
Taylorcraft	09-17340-	$131.95

WINDLACE INTERIOR DOOR SEAL WELT



1/2" diameter vinyl covered material that provides additional sealing and ornamental edging for the door opening. The windlace is mounted between door post structure and upholstery panels or trim. Install with sheet metal screws. Black color only.
P/N 09-00281..... **$8.75 / ft.**



ANTIQUE PIPER WING ROOT FRAME COVERS

This cover is constructed of a lightweight stiffener panel, 1/2" foam padding and headliner fabric. A flap extends into the back side of the wing root frame and glues in place for a professional finish. P/N 09-17345..... **$84.75**



3M™ SUPER WEATHERSTRIP ADHESIVE

For adhering all types of rubber weatherstripping to metal. Light colored adhesive, very fast drying, exceptional bonding strength. Can be used for adhering vinyl trim head liners and side panels.
5 oz. tube, #8001.....P/N 09-27200.....**$7.50**

3M™ GENERAL TRIM SPRAY ADHESIVE



This convenient sprayable adhesive is used for bonding a variety of trim fabrics. It is non-misting, very strong, light colored, and has a controllable spray pattern.
19.75 oz. Aerosol Can..... P/N 09-28330 .....**$15.90**



3M™ SCOTCH GRIP RUBBER ADHESIVE

This fast drying adhesive develops strength very quickly. It has excellent heat resistance; temperature performance is from -5 to 300°F. Meets specification requirements of MIL-A-1154C. Bonds neoprene, reclaim, SB-R, and butyl rubber to metal, wood, most plastics, and many other products. #1300L Qt Can
P/N 09-27220.....**$51.90**



GORILLA CLEAR REPAIR TAPE

Features the strength of Gorilla Tape in a weatherproof, airtight, crystal clear tape. Fix, patch, seal, hold, and protect almost any surface with a crystal clear appearance for a perfect fix every time. P/N 09-04029..... **$5.95**



AERO-SEAL CEMENT

Designed for door seals and moldings. Adheres rubber to wood, other rubber, fiberglass or metal. 4 oz. brush-top container. P/N 05-00955..... **$13.95**

Prices Subject to Change Without Notice

HEADLINERS - INTERIOR MATERIALS

HEADLINERS

A sagging or torn headliner can make even the nicest airplane look unattractive and worn out. Headliners are actually quite inexpensive and easier to replace than many pilots realize. Our headliners are professionally manufactured and every headliner set comes with complete instructions. Available in Excell stretchable vinyl or wool. Specify fabric type and color as noted below the chart.Headliners are special order & non-returnable.

Aircraft	Part No.	Price
Aeronca		
7AC	09-17454	**$223.95**
11AC	09-17455	**$231.95**
15AC	09-17456	**$282.95**
Chief 65CA	09-17458	**$160.95**
Chief LA65	09-17460	**$160.95**
L-3 Defender	09-17462	**$172.95**
Bellanca Scout		
w/Greenhouse	09-17464	**$152.95**
Super Viking 1730	09-17466	**$204.95**
Cessna		
120/140	09-17468	**$275.95**
150 (59)	09-17470	**$134.95**
150 (60)	09-17472	**$148.95**
150 (61-63)	09-17474	**$148.95**
150 (64-65)	09-17475	**$111.95**
150 (66-68)	09-17476	**$134.95**
150 (69)	09-17478	**$134.95**
170A	09-17480	**$235.95**
170B	09-17481	**$281.95**
172 (56-58)	09-17482	**$223.95**
72 (59-60)	09-17484	**$195.95**
72 (61-62)	09-17485	**$195.95**
172 (63-70)	09-17486	**$146.95**
172 (64) Off-White Vinyl	09-04589-1	**$135.95**
172 (64) Off-White Wool	09-04589-2	**$162.95**

Aircraft	Part No.	Price
172 (64) Tan Wool	07-04589-3	**$142.95**
174(64)	09-04589-4	**$188.95**
175	09-17488	**$183.95**
180	09-17490	**$195.95**
Cessna		
182 (56)	09-17492	**$223.95**
182 (57-59)	09-17494	**$223.95**
182 (60-61)	09-17495	**$195.95**
182 (62, Omnivision)	09-17496	**$150.95**
185 (75)	09-17498	**$195.95**
206/207	09-17510	**$184.95**
210 (66-68)	09-17512	**$222.95**
310	09-17514	**$439.95**
Citabria		
w/Greenhouse	09-17515	**$148.95**
w/o Greenhouse	09-17516	**$172.95**
Commonwealth		
Skyranger	09-17518	**$270.95**
Fairchild		
24	09-17520	**$200.95**
Maule		
M4	09-17522	**$250.95**
M5	09-17524	**$233.95**
Piper		
J-4 Coupe	09-17525	**$160.95**
PA-121/J-5*	09-17526	**$210.95**

Aircraft	Part No.	Price
PA-14	09-17528	**$184.95**
PA-15 Vagabond	09-17530	**$195.95**
Piper		
PA-16 Clipper	09-17532	**$158.95**
PA-18 Super Cub	09-17534	**$121.95**
PA-20/22 (51-52) 6 bows, 2 zippers	09-17535	**$174.95**
PA-20/22 (52-58) 8 bows, 3 zippers	09-17536	**$222.95**
Colt 108	09-17538	**$195.95**
PA-23/250 (early 1960)	09-17540	**$301.95**
PA-242 (thru 1965)	09-17542	**$345.95**
PA28/323	09-17544	**$310.95**
Stinson		
108-2	09-17546	**$211.95**
108-3	09-17565	**$173.95**
10A	09-17548	**$223.95**
105-HW75	09-17550	**$223.95**
Taylorcraft		
BC12	09-17552	**$298.95**

* 1 Specify round or square windshield Round: S/N 12-01 thru 12-2903.-2907, -2914, -2915, -2917, -2925, -2950, -3028-S, -3901 -3902, -3903; Square: S/N 12-2904 and up except those listed above.

Note: Complete Part No. with Fabric & Color. Excell stretchable vinyl off white -1, wool off white -2, Tan -3, Gray -4.

HEADLINER FABRIC SWATCH SAMPLE



Wool Fabrics - Wool headlining fabrics are available in Off White, Tan or Grey. The fit is in the quality of the workmanship, therefore it can be made to conform to almost any curve.

Mellohide VFR - Mellohide VFR vinyl has a unique four-way stretch which easily eliminates tension wrinkles and produces a smooth, professional finish. Backing and facing aremildrew resistant.

All materials exceed FAR 23-853

P/N 09-02004 ..... **FREE**

ANTIQUE PIPER WING ROOT FRAME COVERS



This cover is constructed of a light-weight stiffener panel, 1/2" foam padding and headliner fabric. A flap extends into the back side of the wing root frame and glues in place for a professional finish.

P/N 09-17345..... **$84.75**

FIREWALL SETS

Vinyl outside, backed with 1/4" closed-cell insulation. If your aircraft is not listed, please send us your current firewall set to use as a pattern.

1-Piece Bulkhead Firewall



Aircraft	Part No.	Price
Aeronca 7AC	09-01324	$137.95
Aeronca 11AC Chief	09-04440	$137.95
Aeronca 11AC	09-35910	$137.95
Cessna 120/140	09-35915	$137.95
Piper PA20/22	09-35925	$137.95
Piper PA18	09-35930	$137.95
Piper PA28/140	09-35935	$137.95

CITABRIA



Bulkhead and wrap-around pad 3 piece set.

P/N 09-35950..... **$233.95**

LUSCOMBE 8A & 8E

Please specify model. Also specify if 8A is with or without dishpan. If "with dishpan", specify if round or oblong.

Standard..... P/N 09-35940..... **$137.95**

With Dishpan ..... P/N 09-35945..... **$134.95**

UPHOLSTERY HARDWARE

82° Countersunk Washers

Size 4 ..... P/N 04-03898 ..... **$0.06** Size 6 .....P/N 04-03899..... **$0.05**

82° Oval Head Screw

4x1/2 - A-OV.... P/N O4X8..... **$0.03** 6x1/2 - A-OV.... P/N O6X8... **$0.04**

6x3/3 -A-OV..... P/N O6X12... **$0.04** 6x1.....P/N O6X16..... **.$0.05**



Snap Studs - Males snaps attached to self-tapping phillips head screws. For canopies

#7 x 3/8".....P/N 04-01520..... **.$0.37**

#7 x 5/8".....P/N 13-03296..... **.$0.10**

HEADLINER WOOL

This is a quality versatile wool headlining fabric. Wrinkles can be removed by applying water in a fine mist then using heat, such as a hair dryer, allowing wool to shrink. This gives a nice tight fit. Colors: Off-white, tan and gray. Complete P/N with color choice using (-2) for Off white, (-3) for tan, or (-4) for gray. 54 inches wide; sold by the yard.

P/N 09-17566-X..... **$38.90/yd.**



3M™ HEADLINER CEMENT

Headliner, rubber & gasket adhesive.

Quart..... P/N 09-17570..... **$47.75**

SUPER TRIM ADHESIVE #1081



A high temp high strength contact type adhesive. Bonds metal, foam, decorative laminates, fabrics, headliners. Variable width spray pattern. Meets Fed. Spec. MMM-A-130B.

16.5 Oz. Can P/N 09-42652..... **$8.50 ea.**

HEADLINER EXCELL STRETCHABLE VINYL

Unique four-way stretch that easily eliminates tension wrinkles, producing a smooth professional finish. Backing and facing are mildew resistant. 54" width. Color: Off white.

P/N 09-17564 ..... **$25.55/yd.**

FELT



All wool, 1/4" thick felt for paddings. Firm but resilient construction for many aircraft applications. Gray/ brown mix. NOTE: Sold in Full 36" Width only. Sold per foot.

P/N 09-31600 ..... **$17.50/Lineal Ft.**

FAUX LEATHER UPHOLSTERY MATERIAL



Superior Panel Technology's offers the latest technology in Faux Leather without the leather cost. It can be used for seats, wall panels and headliners. It meets FAR 23.853(a) flammability requirements. It provides superior wear resistance (100,000 cycles), stretchable (which is great for headliners), abrasion resistance and excellent tailorability. Width is 54", weight is 28 oz/linear yard and it is available in seven colors. See additional image for color chart or download PDF below. Pricing is per linear yard. Request the sample by color number. Burn certificate is included with each order.

Faux Upholstery			Color Samples		
Color	Part No.	Price	Color	Part No.	Price
Sand 220	09-04731	$45.75	Sand 220	09-04737	FREE
Cream 500	09-04734	$45.75	Cream 500	09-04740	FREE
Coffee 800	09-04733	$45.75	Coffee 800	09-04738	FREE
Iron (Gray) 410	09-04730	$45.75	Iron (Gray) 410	09-04742	FREE
Blueberry 600	09-04732	$45.75	Blueberry 600	09-04743	FREE
Onyx Black 910	09-04736	$45.75	Onyx Black 910	09-04739	FREE
Cranberry 710	09-04735	$45.75	Cranberry 710	09-04741	FREE

AP

3M™ LEADING EDGE TAPES - PROTECTIVE BOOTS



3M™ 8672 POLYURETHANE PROTECTIVE TAPES

3M™ Polyurethane Protective Tape 8672 is made from a tough abrasion resistant polyurethane elastomer that resists punctures, tearing, abrasion and erosion. It is formulated for resistance to ultraviolet light. Polyurethane Protective Tape 8672 provides a simple, easy method of protecting a surface from corrosion, abrasion and minor impact damage. It can be installed in a minimum amount of time with simple tools. It can be painted or applied over painted surfaces. Polyurethane Protective Tapes 8672 and 8672 GB are constructed with a long-aging, solvent resistant, pressure sensitive acrylic adhesive that is protected with an easy release paper liner. Polyurethane Protective Tape 8672 is a trans-

W	L	Color	Description	Part No.	Price
1”	12yd	Clear	3M™ 8672 Tape	09-01632	**$28.65**
2:	12yd	Clear	3M™ 8672 Tape	09-01633	**$44.95**
4’	12yd	Clear	3M™ 8672 Tape	09-01635	**$91.85**
1”	36yd	Clear	3M™ 8672 Tape	09-00841	**$84.80**
2”	36yd	Clear	3M™ 8672 Tape	09-20140	**$158.75**
3”	36yd	Clear	3M™ 8672 Tape	09-00843	**$242.95**
4”	36yd	Clear	3M™ 8672 Tape	09-20145	**$329.00**
6”	36yd	Clear	3M™ 8672 Tape	09-00845	**$458.00**



3M™ 8674 POLYURETHANE PROTECTIVE TAPES

3M™ Polyurethane Protective Tape 8674 is made from a tough abrasion resistant polyurethane elastomer that resists punctures, tearing, abrasion and erosion. it is formulated for resistance to ultraviolet light. Polyurethane Protective Tape 8674 provides a simple, easy method of protecting a surface from corrosion, abrasion and minor impact damage. It can be installed in a minimum amount of time with simple tools. It can be painted or applied over painted surfaces. Polyurethane Protective Tape 8674 is constructed with a long-aging, solvent resistant, pressure sensitive acrylic adhesive that is protected with an easy release poly liner. This tape is a transparent film and available in 2 liner configuration: Protective Tape 8674 has a single poly liner on the adhesive side. Protective Tape 8674DL has dual liners, one on each side of the tape. The adhesive side has a poly liner, and the liner on the top of the urethane tape is polyester.

W	L	Color	Description	Part No.	Price
1”	12yd	Clear	3M™ 8674 Lead Edge Tape	09-01642	**$30.95**
1”	36yd	Clear	3M™ 8674 Lead Edge Tape	09-00847	**$89.99**
2”	12yd	Clear	3M™ 8674 Lead Edge Tape	09-01643	**$61.85**
2”	36yd	Clear	3M™ 8674 Lead Edge Tape	09-00813	**$182.75**
3”	12yd	Clear	3M™ 8674 Lead Edge Tape	09-01644	**$66.75**
3”	36yd	Clear	3M™ 8674 Lead Edge Tape	09-00849	**$249.95**
4”	12yd	Clear	3M™ 8674 Lead Edge Tape	09-01645	**$89.75**
4”	36yd	Clear	3M™ 8674 Lead Edge Tape	09-00814	**$342.00**
6”	36yd	Clear	3M™ 8674 Lead Edge Tape	09-00850	**$472.00**



3M™ POLYURETHANE PROTECTIVE BOOTS

3M™ Polyurethane Protective Boots SJ8665 are pre-formed and used extensively in private, commercial and military aircraft to fit the complex curvatures of a variety of applications. These boots are designed to help provide long lasting protection of radomes, wing and stabilizer tips, landing gear pods, composite parts, and other portions of aircraft from rain, moisture ingression, UV light, insects, sand, sleet, snow, and most other airborne particle erosion damage. The boots are part of a 3M family of high performance surface protection products available for various aerospace applications worldwide.

Boot Application	3M P/N	Our P/N	Price
Aerostar			
601 P Radome	FP-127	09-00856	**$338.95**
Beechcraft			
Baron Non-Honeycomb (#58-410015-613)	FP-68	09-00858	**$339.00**
Beech/Mitsubishi Diamond Radome	FP-84	09-00860	**$422.00**
90,100,200,1300,1900,Most King Air, 65/A65,70,80, A80,B80,U-8F, U-21A	FP-5	09-00863	**$568.00**
1900& King Air Series Vertical Fairing Dome	FP-173	09-00865	**$255.95**
Bombardier			
Learjet 23,24,25,Radome (PN2411241-1)	FP-7-1	09-00866	**$307.00**
Learjet 33, 36 Wing Tip	FP-13-1	09-00867	**$289.00**
Learjet M-45 Radome	FP-174-1	09-00869	**$409.00**

Boot Application	3M P/N	Our P/N	Price
Cessna			
208 Wing Mounted Radome	FP-34	09-00871	**$315.00**
208 Prop Spinner	FP-87	09-00872	**$439.95**
Citation II, IV, VII	FP-70	09-00879	**$621.00**
Embraer			
Embraer Radome Boot	FP-405	09-04694	**$455.00**
Canadair	FP-22	09-05317	**$332.00**
Canadair	SJ8663	09-05318	**$327.00**

3M™ POLYURETHANE PROTECTION TAPE APPLICATION SOLUTION.



A pre-mixed, water-based solution for applying 3M Polyurethane Protective Tape and Boots. Solution is provided pre-mixed in a ready to use squirt bottles. Allows wide width and contoured performed boots to be easily installed. P/N 06-00604 ..... **$50.55**



06-00605

05-03479

3M™ TAPE ADHESION PROMOTER 86A & CLOTH

Tape Adhesion Promoter 86A is intended for use in enhancement of 3M Polyurethane Protective Tape adhesion levels to certain types of surfaces. It is most effective when used over polyurethane enamel surfaces.16 oz. P/N 06-00605 ..... **$62.75**
Adhesion Promoter Cloth (Sold Each) .....P/N 05-03479 ..... **$34.95**
5 Pack .....P/N 05-03479-5 .. **$158.75**



3M POLYURETHANE 8561 / 8562 PROP TAPE

Note: For Experimental Aircraft Only
Clear 2” wide polyurethane tape stretches to conform to curved or straight leading edges without wrinkling. Thick for greatest protection from any in the field applied surface. ** Sold by the foot. .008” Thick x 2” Wide. P/N 15-05829 ..... **$1.87**
.014” Thick x 2” Wide. P/N 15-04832 ..... **$2.27**



ALLPROTECT™ AVIATION NON-SLIP COVERING MATERIAL

LLProtect is a padded, non-slip protective covering for use on interior and exterior surfaces of all types of aircraft during building, maintenance and repairs. Nonwoven with an adhesive PE film and non-slip surface. The backing is a PE film that creates a liquid barrier against spills, and it has a strong adhesive composite that leaves absolutely no residue on removal. Reusable • Slip-proof • Waterproof • Leaves no residue • Strong & tear-resistant • 98 mil (2.5mm) padded grey felt • PE film backing with strong adhesive • Custom sizes available, please inquire • Interior uses: sticks to carpet, tile, wood • Exterior uses: fold down stairs, wrap around wings. • Maximum protection against paint, liquid spills, dirt, scratches & more. ALLPROTECT is a hard-wearing nonwoven made of synthetic fibres. The underside features an adhesive laminated composite that serves as a liquid barrier and leaves absolutely no residue on removal. Its outstanding adhesive strength enables horizontal and vertical applications.
Small Roll 39” x 32” .....P/N 05-15424 ..... **$239.00**
Half-Width Roll 20” x 82” .....P/N 05-15425 ..... **$295.00**
Full Roll 39” x 82” .....P/N 05-15081 ..... **$295.00**

Prices Subject to Change Without Notice

LEADING EDGE TAPE - WINGWALK



LEADING EDGE TAPE

Clear plastic tape with adhesive backing for application to wing and tail leading edges for protection against nicks caused by stones and gravel. 100 Ft. Rolls.

Width	Color	P/N	Price/ roll
2”	Clear	09-31610	**$11.85**
3”	Clear	09-31615	**$15.85**
4”	Clear	09-31620	**$19.50**
6”	Clear	09-31625	**$29.70**

3M™ POLYURETHANE LEADING EDGE TAPE



Designed to help protect light aircraft from the damaging effects of rain, insects, sand, snow and sleet. A tough durable, protective tape for exposed surfaces. 3M #8672 Polyurethane Protective Tape is designed to help protect the leading edges of aircraft wings, struts, and horizontal and vertical stabilizers from airborne particle damage. Versions of this tape are used extensively for surface protection in both military and commercial aircraft applications. May be applied to clean metal or to commonly used aircraft paints over metal or fabric. Not to be used on props, helicopter rotors or balanced surfaces such as elevators or ailerons. Clear in color. Sold in full rolls only.

2” wide..... P/N 09-20140.....**$158.75**
4” wide..... P/N 09-20145.....**$329.00**



MD FOAM TAPE

An excellent canopy seal which helps stop vibration. Recommended for use on Quickie. Size: 3/8” thick x 1/2” wide x 10 ft. P/N 05-01100.....**$2.45**



3M™ DUCT TAPE

A general-purpose gray cloth tape with good adhesive qualities.

2” x 60 Yd. Roll ..... P/N 09-30900 .....**$13.95**



MASKING TAPE

Armak general or 3M purpose crepe masking tape. Long shelf life.

1/4” x 60 yd. Roll..... P/N 09-20101..... **$1.80 ea.**
1” x 60 Yd. Roll ..... P/N 09-20100..... **$3.55 ea.**



CLOTH TAPE

Has many uses in aircraft maintenance work. Strip over sharp corners to protect fabric. Strips under doped fabric will prevent fabric from sticking to parts. Pressure-sensitive adhesive backing. Easily applied, easily removed.1” x 60 Yd. Roll P/N 09-17100 **$10.50**



GORILLA TAPE

Camouflages repairs on white surfaces, and won’t yellow outdoors due to its superior UV resistance. Perfect for both indoor and outdoor use with its superior UV resistance and ability to grip to rough, uneven, unforgiving surfaces like wood, stone, stucco, plaster, brick and more. 30 yard rolls.

Standard Width ..... P/N 09-04091.....**$8.85**
Tough and Wide ..... P/N 09-04092.....**$12.95**

GLASS STRAPPING TAPE

A pressure-sensitive transparent acetate film tape reinforced with glass strands. Possesses high tensile strength (375 lbs./inch width) and good impact strength. Especially effective for carton sealing applications.

#RG-2A, 3/4” x 60 Yd. Roll..... P/N 09-31200.....**$3.50**

POLYPROPYLENE TAPE

A pressure-sensitive transparent polypropylene plastic tape for packaging & edging. Outstanding stretchiness/conformability. Waterproof, flame, abrasion and solvent resistant.

#371, 2” x 110 Yd. Roll..... P/N 09-31300.....**$1.93**



RESCUE TAPE

Rescue Tape is a self-fusing silicone repair product with infinite uses. Most versatile and easy to use emergency repair product available. You can repair leaks on plumbing and hoses in a flash, use for electrical wiring or as shrink wrap, wrap tool handles, and much, much more. Incredible 700 PSI Tensile Strength, Insulates 8,000 Volts per layer, Withstands 500° F Degrees of heat! (260° C) ~ Remains flexible to -85° F! (-60° C), Creates a Permanent Air-Tight, Water-Tight Seal in seconds, Resists Fuels, Oils, Acids, Solvents, Salt Water, Road Salt, UV Rays.

Description	Color	Part No.	Price
Rescue Tape Standard Roll 1”x12’x.020”	Red	01-00989	**$9.95**
Rescue Tape Standard Roll 1”x12’x.020”	Black	01-00990	**$9.95**
Rescue Tape Standard Roll 1”x12’x.020”	Clear	01-00991	**$9.95**
Rescue Tape Industrial Roll 2”x36’x.030”	Black	01-00992	**$39.95**
Rescue Tape Industrial Roll 2”x36’x.030”	Red	01-00993	**$39.95**



LEADING EDGE TAPE

Clear adhesive 0.012 thick polyurethane film is available in un-formed (straight) tape for erosion protection on any flat leading edge. Ideal for erosion protection on numerous aircraft leading edges including wing leading edges, horizontal tail, landing gear, etc. Also works great for many other applications including automotive erosion protection. Available in five different widths. 100 feet per roll.

Description	Part No.	Price
PM-t1 1” Tape For Antenna Bases	08-12446	**$79.75**
PM-t2 Leading Edge Tape 2”Roll	08-12447	**$175.00**
PM-t3 Leading Edge Tape 3”Roll	08-12448	**$263.95**
PM-t4 Leading Edge Tape 4”Roll	08-12449	**$295.00**
PM-t6 Leading Edge Tape 6”Roll 36 Yd	08-12450	**$429.00**

MACH TAPE PAINT PROTECTION TAPE



NOT FAA APPROVED. INTENDED FOR USE ON EXPERIMENTAL AIRCRAFT ONLY. MachTape™ is an easy to apply temporary self-adhesive protective, clear film to protect painted surfaces. MachTape’s™.

3in x 100ft..... P/N 09-05280.....**$49.00**
6in x 100ft..... P/N 09-05281.....**$84.95**
6in x 600ft..... P/N 09-05283.....**$210.00**



NON-SKID WING WALK TAPE

The non-skid adhesive tape is excellent for wing walk applications. The clear is perfect for pilots wishing their step areas to blend in, not stand out. This tape meets all applicable Mil Specs and has superior adhesion qualities. Sold by linear foot. Material is translucent and will allow the underlying color to show through, but is not optically transparent.

24” Wide Clear..... P/N 09-31685.....**$5.55**
6” Wide Clear..... P/N 09-31645.....**$1.79**
24” Wide White..... P/N 09-31680.....**$5.35**



ULTRA WING WALK COATING

Developed exclusively for Aircraft Door Seals by a major chemical company, this phenomenal new wing walk coating reduces the chance of slipping when climbing up on the wing. Unlike the mundane wing walk coating found on most aircraft, ULTRA WING WALK is a fast-drying polyurethane-based semi-gloss black coating with fine particles of rubber that adds class to any plane. .....P/N 05-04366 .....**$38.85**



3M™ SAFETY WALK SHEET

A durable, mineral coated, non-slip fabric for wing walks. Waterproof, weatherproof and unaffected by vibrations, heat, cold, gasoline or oil. Assures safe footing. Pressure-sensitive backing should have additional coating of Pliobond to assure adhesion for aircraft applications. Sold by lineal foot.

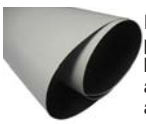
12” Width (3M)..... P/N 09-32250.....**$5.80 /Ft.**
1/2 pt..... P/N 09-28000..... **$9.85**
1 pt..... P/N 09-28100..... **$17.50**
1 qt..... P/N 09-28200..... **$28.50**



3M ™ SAFETY-WALK™ TAPE

High-friction, fine-resilient textured, slip-resistant material. Reverse side coated with pressure-sensitive adhesive protected by a removable liner. Good for wet, barefoot traffic areas. Clear vinyl, light duty, 12 inches wide. Sold by the linear foot.

12” wide Clear .....P/N 09-31650 ..... **$5.60**
6” wide White.....P/N 09-31655 ..... **$2.89**
12” wide White.....P/N 09-31660 ..... **$5.60**
6” wide Black.....P/N 09-31665 ..... **$2.91**
24” wide Black .....P/N 09-31675 ..... **$10.75**



RAC WING WALK

RAC wing walks are not made from the usual, sandpaper-like material, which can decompose and scratch both the wing surface and your knees. Instead, they use a low profile, synthetic rubber, that combines a comfortable feel with good gripping power.The RAC wing walk comes pre-cut to 26 1/2” x 9 1/2”. Installation is easy with the aggressive, self-adhering backing. Each wing walk comes rolled in its own, 4”x4”x10” box and installation instructions are also provided with each box. Black P/N 09-28210.....**$20.85 ea.**



HEAVY DUTY WING WALK

This is a Heavy duty Non-Skid or Wing Walk material that must be glued in with a heavy duty contact cement, it is used to prevent falls and slips on slippery surfaces and give added traction when needed it is able to be used on steps, wings and many other places around the airplane or hangar.

24” x70”.....P/N 05-11172 .....**$164.75**

AP



MS35769 GASKETS

AN900 (MS35769) annular copper-asbestos gaskets are suitable for temperatures up to 500° F. and pressures up to 200 PSI. Ring width is 1/8"; thickness is 3/32.

AN900 Dash No.	MS35769 Dash No.	I.D. (In.)	Price Each	AN900 Dash No.	MS35769 Dash No.	I.D. (In.)	Price Each
-3	-1	3/16	*	-17	-24	1-1/16	$0.69
-4	-2	1/4	$4.40	-18	-26	1-1/8	$0.84
-5	-5	5/16	$2.20	-19	-29	1-3/16	$1.31
-6	-6	3/8	$0.59	-20	-31	1-1/4	$0.64
-7	-8	7/16	$0.64	-21	-33	1-5/16	$2.75
-8	-9	1/2	$0.90	-22	-35	1-3/8	$0.84
-9	-10	9/16	$0.45	-23	-38	1-7/16	$7.65
-10	-11	5/8	$0.46	-24	-39	1-1/2	$1.06
-11	-13	11/16	$0.60	-25	-41	1-9/16	$1.42
-12	-15	3/4	$0.66	-26	-42	1-5/8	$1.84
-13	-17	13/16	$0.87	-27	-46	1-11/16	$4.35
-14	-18	7/8	$0.50	-28	-48	1-3/4	$0.89
-15	-20	15/16	$3.35	-29	-51	1-13/16	$1.96
-16	-21	1	$0.44	-30	-52	1-7/8	$1.67

*AN900-3 New Surplus ..... P/N 04-02027 ..... $1.64

Discount Less 20% For 100 Per Size



AN900 GASKET KIT

144 piece kit of copper crush washers in common sizes. Complete with durable plastic case with dividers and size chart..... P/N 05-02220 ....**$125.95**

Plastic Case Only..... P/N 13-03017 .....**$9.50**

AN900 Gasket Organizer.... P/N 13-19792 .....**$6.95**

AN901 O-RINGS

AN901 tube connection seals are fabricated from type1100 alum., H14 temper.



Discount Less 20% For 100 Per Size

AN901 Dash No.	Tube O.D.	Price Each	AN901 Dash No.	Tube O.D.	Price Each
-4A	1/4	$0.98	-8A	1/2	$0.36
-5A	5/16	$0.53	-10A	5/8	$0.67
-6A	3/8	$0.52	-12A	1-1/16	$0.39
-4C	1/4	$1.15	-10C	5/8	$3.90
-5C	5/16	$5.75	-12C	3/4	$8.50
-6C	3/8	$3.35	-16A	1	$1.40

MS28778 TUBE FITTING BOSS GASKET
(FORMERLY AN6290)

Straight-thread tube fitting boss gaskets are used to provide a seal between straight-thread fittings, such as AN815, and ports of instruments with female straight threads instead of the more common female tapered pipe threads.

Dash No.	Tube O.D.	Price Ea.	Dash No.	Tube O.D.	Price Ea.
-2	1/8	$1.00	-10	5/8	$0.91
-3	3/16	$0.79	-12	3/4	$1.43
-4	1/4	$0.78	-14	$0.78	$2.29
-5	5/16	$0.80	-16	1	$2.15
-6	3/8	$1.25	-20	1-1/4	$1.80
-8	1/2	$1.79			



AN931 ELASTIC GROMMETS
(MS35489)

Flexible grommets, made of black synthetic rubber to specification MIL-G-3036. Resistant to hot oil & coolant. Used to protect tubing, wiring and control cables where they pass through bulkheads & firewalls.

PN	MS35489	ID	OD	Hole Size	Thickness	Price
AN931-2-9	-2	1/8	3/4	9/16	3/16	$0.52
AN931-2-16	-3	1/8	1-1/4	1	1/4	$0.99
AN931-3-5	-4	3/16	7/16	5/16	3/16	$0.17
AN931-3-9	-134	3/16	3/4	9/16	3/16	$0.62
AN931-4-7	-6	1/4	5/8	7/16	3/16	$0.16
AN931-4-12	-7	1/4	1	3/4	1/4	$0.70
AN931-4-16	-8	1/4	1-1/4	1	1/4	$0.58
AN931-5-9	-9	5/16	13/16	9/16	5/16	$0.32
AN931-5-12	-10	5/16	1	3/4	5/16	$1.24
AN931-6-10	-11	3/8	7/8	5/8	5/16	$0.40
AN931-6-16	-12	3/8	1-1/4	1	1/4	$0.45
AN931-7-11	-13	7/16	15/16	11/16	5/16	$0.38
AN931-8-13	-14	1/2	1-1/16	13/16	5/16	$0.31
AN931-8-20	-15	1/2	1-1/2	1-1/4	1/4	$0.44
AN931-9-13	-16	9/16	1-1/16	13/16	5/16	$0.39
AN931-10-14	-17	5/8	1-1/8	7/8	5/16	$0.52
AN931-10-20	-18	5/8	1-1/2	1-1/4	1/4	$1.29
AN931-11-16	-19	11/16	1-5/16	1	3/8	$0.45
AN931-12-17	-20	3/4	1-3/8	1-1/16	3/8	$0.46
AN931-12-20	-135	3/4	1-5/8	1-1/4	1/4	$1.25
AN931-12-23	-21	3/4	1-13/16	1-7/16	3/8	$2.90
AN931-14-20	-22	7/8	1-5/8	1-1/4	7/16	$0.98
AN931-16-22	-23	1	1-3/4	1-3/8	7/16	$0.98
AN931-20-38	-25	1-1/4	2-3/4	2-3/8	7/16	$6.85



AN6227B O-RINGS

AN6227B and AN6230B 0-rings are manufactured to Spec. MIL-P 25732 for use in hydraulic systems using MIL-0-5606 hydraulic oils. MS28775 O-rings meet Spec. MIL-P- 5510A and are suitable for MIL-0-5606 hydraulic fluid at 160 F.

Part No.	MS Equivalent	Width	ID	OD	Price
AN6227B-1	MS28775-6	1/16	1/8	1/4	$0.56
AN6227B-2	MS28775-7	1/16	5/32	9/32	$0.58
AN6227B-3	MS28775-8	1/16	3/16	5/16	$0.59
AN6227B-4	MS28775-9	1/16	7/32	11/32	$0.44
AN6227B-5	MS28775-10	1/16	1/4	3/8	$0.61
AN6227B-6	MS28775-11	1/16	5/16	7/16	$0.66
AN6227B-7	MS28775-12	1/16	3/8	1/2	$0.45
05-04892	MS28775-13	1/16	7/16	9/16	$0.38
05-04893	MS28775-14	1/16	1/2	5/8	$0.69
05-04646	MS28775-015	1/16	9/16	11/16	$0.48
05-04894	MS28775-16	1/16	5/8	3/14	$0.40
05-04895	MS28775-17	1/16	11/16	13/16	$0.29
05-04896	MS28775-18	1/16	3/4	7/8	$0.32
05-04897	MS28775-19	1/16	13/16	15/16	$0.52
05-04898	MS28775-20	1/16	7/8	1	$0.49
05-04899	MS28775-21	1/16	11/16	1-1/16	$0.78
MS28775-022	MS28775-022	1/16	1	1-1/8	$0.60
05-04901	MS28775-23	1/16	1-1/16	1-3/16	$0.66
05-04902	MS28775-24	1/16	1-1/8	1-1/4	$0.72
05-04903	MS28775-25	1/16	1-3/16	1-5/16	$0.52
05-04911	MS28775-026	1/16	1-1/4	1-3/8	$0.58
05-04912	MS28775-027	1/16	1-5/16	1-7/16	$0.75
05-04913	MS28775-028	1/16	1-3/8	1-1/2	$1.40
AN6227B-8	MS28775-110	3/32	3/8	9/16	$0.40
AN6227B-9	MS28775-111	3/32	7/16	5/8	$0.62
AN6227B-10	MS28775-112	3/32	1/2	11/16	$0.60
AN6227B-11	MS28775-113	3/32	9/16	3/4	$0.47
AN6227B-12	MS28775-114	3/32	5/8	13/16	$0.29
AN6227B-13	MS28775-115	3/32	11/16	7/8	$0.59
AN6227B-14	MS28775-116	3/32	3/4	15/16	$0.43
05-04914	MS28775-117	3/32	13/16	1	$0.58
MS28775-118	MS28775-118	3/32	7/8	1-1/16	$0.42
05-04915	MS28775-119	3/32	15/16	1-1/8	$0.32
05-04916	MS28775-120	3/32	1	1-3/16	$0.49
05-04917	MS28775-121	3/32	1-1/16	1-1/4	$0.76
05-04918	MS28775-122	3/32	1-1/8	1-5/16	$0.52
05-04919	MS28775-123	3/32	1-3/16	1-3/8	$0.49
05-04920	MS28775-124	3/32	1-1/4	1-7/16	$0.52
05-04921	MS28775-125	3/32	1-5/16	1-1/2	$0.66
05-04922	MS28775-126	3/32	1-3/8	1-9/16	$0.58
05-04923	MS28775-127	3/32	1-7/16	1-5/8	$0.58
05-04924	MS28775-128	3/32	1-1/2	1-11/16	$1.72
05-04925	MS28775-129	3/32	1-9/16	1-3/4	$1.20
05-04926	MS28775-130	3/32	1-5/8	1-13/16	$0.38
05-04927	MS28775-131	3/32	1-11/16	1-7/8	$1.92
05-00850	MS28775-132	3/32	1-3/4	1-15/16	$0.81
05-05142	MS28775-134	3/32	1-7/8	2-1/16	$0.72
05-05143	MS28775-135	3/32	1-15/16	2-1/8	$0.89
05-05144	MS28775-136	3/32	2	2-3/16	$0.80
05-05145	MS28775-137	3/32	2-1/16	2-1/4	$1.10
05-05146	MS28775-138	3/32	2-1/8	2-5/16	$0.92
05-05147	MS28775-139	3/32	2-3/16	2-3/8	$1.16
05-05148	MS28775-140	3/32	2-1/4	2-7/16	$1.00
05-05149	MS28775-141	3/32	2-5/16	2-1/2	$1.18
05-05150	MS28775-142	3/32	2-3/8	2-9/16	$1.09
05-05151	MS28775-143	3-32	2-7/16	2-5/8	$0.72
05-05152	MS28775-144	3/32	2-1/2	2-11/16	$0.88
05-05153	MS28775-145	3/32	2-9/16	2-3/4	$1.18
05-05154	MS28775-146	3/32	2-5/8	2-13/16	$1.00
05-05155	MS28775-147	3/32	2-11/16	2-7/8	$0.86
05-05156	MS28775-148	3/32	2-3/4	2-15/16	$1.22
05-05157	MS28775-149	3/32	2-13/16	3	$1.35
AN6227B-15	MS28775-210	1/8	3/4	1	$0.50
AN6227B-16	MS28775-211	1/8	13/16	1-1/16	$0.67
AN6227B-17	MS28775-212	1/8	7/8	1-1/8	$0.47
AN6227B-18	MS28775-213	1/8	15/16	1-3/16	$1.04
AN6227B-19	MS28775-214	1/8	1	1-1/4	$0.43
AN6227B-20	MS28775-215	1/8	1-1/16	1-5/16	$0.58
AN6227B-21	MS28775-216	1/8	1-1/8	1-3/8	$0.58
AN6227B-22	MS28775-217	1/8	1-3/16	1-7/16	$0.58
AN6227B-23	MS28775-218	1/8	1-1/4	1-1/2	$0.49
AN6227B-24	MS28775-219	1/8	1-5/16	1-9/16	$0.99
AN6227B-25	MS28775-220	1/8	1-3/8	1-5/8	$0.75
AN6227B-26	MS28775-221	1/8	1-7/16	1-11/16	$0.58
AN6227B-27	MS28775-222	1/8	1-1/2	1-3/4	$0.69
05-01013	MS28775-233	1/8	2-7/8	3-1/8	$1.29
05-05158	MS28775-236	1/8	3-1/4	3-1/2	$3.60
05-05159	MS28775-237	1/8	3-3/8	3-5/8	$1.49
05-05160	MS28775-238	1/8	3-1/2	3-3/4	$2.00
05-05161	MS28775-239	1/8	3-5/8	3-7/8	$1.86
05-05162	MS28775-240	1/8	3-3/4	4	$2.95
05-05163	MS28775-241	1/8	3-7/8	4-1/8	$1.89
05-05164	MS28775-242	1/8	4	4-1/4	$4.35
05-05165	MS28775-243	1/8	4-1/8	4-3/8	$2.38
04-03882	MS28775-244	1/8	4-1/4	4-1/2	$1.71
05-05166	MS28775-245	1/8	4-3/8	4-5/8	$2.03
05-05167	MS28775-246	1/8	4-1/2	4-3/4	$2.69
05-05168	MS28775-247	1/8	4-5/8	4-7/8	$2.29
MS28775-261	MS28775-261	1/8	6-3/4	7	$6.50
MS28775-267	MS28775-267	1/8	8-1/4	8-1/2	$4.35
MS28775-272	MS28775-272	1/8	9-1/2	9-3/4	$6.95
AN6227B-28	MS28775-325	3/16	1-1/2	1-7/8	$1.12
AN6227B-29	MS28775-326	3/16	1-5/8	2	$1.15
AN6227B-30	MS28775-327	3/16	1-3/4	2-1/8	$2.58
AN6227B-31	MS28775-328	3/16	1-7/8	2-1/4	$2.66
AN6227B-32	MS28775-329	3/16	2	2-3/8	$1.29
AN6227B-33	MS28775-330	3/16	2-1/8	2-1/2	$1.37
AN6227B-34	MS28775-331	3/16	2-1/4	2-5/8	$1.29
AN6227B-35	MS28775-332	3/16	2-3/8	2-3/4	$1.90
AN6227B-36	MS28775-333	3/16	2-1/2	2-7/8	$1.77
AN6227B-38	MS28775-335	3/16	2-3/4	3-1/8	$1.68
AN6227B-39	MS28775-336	3/16	2-7/8	3-1/4	$1.85
AN6227B-40	MS28775-337	3/16	3	3-3/8	$2.76
AN6227B-41	MS28775-338	3/16	3-1/8	3-1/2	$2.73
AN6227B-42	MS28775-339	3/16	3-1/4	3-5/8	$2.58
AN6227B-43	MS28775-340	3/16	3-3/8	3-3/4	$1.30
AN6227B-44	MS28775-341	3/16	3-1/2	3-7/8	$1.93
AN6227B-45	MS28775-342	3/16	3-5/8	4	$1.92
AN6227B-46	MS28775-343	3-16	3-3/4	4-1/8	$2.36

Prices Subject to Change Without Notice

O-RINGS

AN6230B O-RINGS

Part No.	MS Equivalent	Width	ID	OD	Price
AN6230B-1	MS28775-223	1/8	1-5/8	1-7/8	**$1.99**
AN6230B-2	MS28775-224	1/8	1-3/4	2	**$0.70**
AN6230B-3	MS28775-225	1/8	1-7/8	2-1/8	**$0.93**
AN6230B-4	MS28775-226	1/8	2	2-1/4	**$0.93**
AN6230B-5	MS28775-227	1/8	2-1/8	2-3/8	**$0.97**
AN6230B-6	MS28775-228	1/8	2-1/4	2-1/2	**$0.91**
AN6230B-7	MS28775-229	1/8	2-3/8	2-5/8	**$1.15**
AN6230B-8	MS28775-230	1/8	2-1/2	2-3/4	**$0.93**
AN6230B-9	MS28775-231	1/8	2-5/8	2-7/8	**$1.44**
AN6230B-10	MS28775-232	1/8	2-3/4	3	**$3.90**

MS29513 FUEL RESISTANT O-RINGS

These MS29513 series O-rings are resistant to fuel and are ideal for applications such as fuel injection connections and primers. A small amount of fuel proof grease applied to these O-rings helps the installation and operation of primers. Not resistant to automotive fuels.

Part Number	Nominal Size			Price Each
	I.D.	O.D.	W	
MS29513-005	3/32	7/32	1/16	**$0.43**
MS29513-006	1/8	1/4	1/16	**$0.37**
MS29513-007	5/32	9/32	1/16	**$0.38**
MS29513-008	3/16	5/16	1/16	**$0.39**
MS29513-009	7/32	11/32	1/16	**$0.40**
MS29513-010	1/4	3/8	1/16	**$0.38**
MS29513-011	5/16	7/16	1/16	**$0.79**
MS29513-012	3/8	1/2	1/16	**$0.44**
MS29513-013	7/16	9/16	1/16	**$0.49**
MS29513-014	1/2	5/8	1/16	**$0.49**
MS29513-015	9/16	11/16	1/16	**$0.49**
MS29513-016	5/8	3/4	1/16	**$0.40**
MS29513-017	11/16	13/16	1/16	**$0.52**
MS29513-020	7/8	1	1/16	**$0.32**
MS29513-028	1-3/8	1-1/2	1/16	**$0.60**
MS29513-031	1-3/4	1-7/8	1/16	**$0.59**
MS29513-033	2	2-1/8	1/16	**$0.95**
MS29513-110	3/8	9/16	3/32	**$0.39**
MS29513-111	7/16	5/8	3/32	**$0.48**
MS29513-112	1/2	11/16	3/32	**$0.42**
MS29513-113	9/16	3/4	3/32	**$0.50**
MS29513-114	5/8	13/16	3/32	**$0.50**
MS29513-115	11/16	7/8	3/32	**$0.49**
MS29513-116	3/4	15/16	3/32	**$0.41**
MS29513-130	1-5/8	1-13/16	3/32	**$0.60**
MS29513-137	2-1/16	1/4	3/32	**$0.84**
MS29513-138	2-1/8	2-5/16	3/32	**$0.89**
MS29513-148	2-3/4	2-5/16	3/32	**$1.12**
MS29513-155	4	4-3/16	3/32	**$1.95**
MS29513-214	1	1-1/4	1/8	**$0.52**
MS29513-220	1-3/8	1-5/8	1/8	**$1.00**
MS29513-232	2-3/4	3	1/8	**$1.50**
MS29513-233	2-7/8	3-1/8	1/8	**$1.46**
MS29513-237	3-3/8	3-5/8	1/8	**$1.55**
MS29513-337	3-3/8	3-3/8	3/16	**$2.43**
MS29513-338	3-1/8	3-1/2	3/16	**$2.06**
MS29513-339	3-1/4	3-5/8	3/16	**$2.23**
MS29513-241	3-7/8	4-1/8	1/8	**$2.32**



AN/MS O-RING KIT

This AN/MS O-Ring Kit includes over 382 O-rings made of Nitrile Buna N 70 duro material. These rings have a temperature range of -6 to 275°F and are for use with petroleum oils and fluids. Size range in kit is 0 through 30.(O-Ring Set An6227B-1, -30).....P/N 05-02210. **$141.95**

AS568A O-RING KIT

- 70 Duro Nitrile
- 382 O rings
- Great kit for the homebuilder
- Sizes: -06 to -32

TP/N 13-02804.....**$21.85**





VITON MS83248 O-RINGS

Fluorocarbon rubber o-rings. Fluorocarbon rubber is commonly known as Viton. It is an advanced rubber that has extremely good fuel and heat resistance and is ideally suited for aircraft fuel system applications.

Model	Specifications	PN	Price
M83248-1-008	3/16 ID x 5/16 OD x 1/16 W	05-12761	**$0.29**
M83248-1-010	1/4 ID x 3/8 OD x 1/16 W	04-03305	**$0.38**
M83248-1-011	5/16 ID x 7/16 OD x 1/16 W	08-13085	**$0.43**
M83248/1-015	9/16 ID x 11/16 OD x 1/16 W	04-03836	**$0.43**
M83248-1-019	13/16 ID x 15/16 OD x 1/16 W	05-14681	**$0.46**
M83248-1-111	7/16 ID x 5/8 OD x 3/32 W	04-02549	**$0.49**
M83248-1-113	9/16 ID x 3/4 OD x 3/32 W	04-02551	**$0.55**
M83248/1-115	11/16 ID x 7/8 OD x 3/32 W	04-03837	**$0.60**
M83248-1-116	3/4 ID x 15/16 OD x 3/32 W	01-01356	**$9.60**
M83248-1-117	13/16 ID x 1 OD x 3/32 W	08-10794	**$0.55**
M83248/1-120	1 ID x 1-3/16 OD x 3/32 W	04-03833	**$0.69**
M83248/1-126	1-3/8 ID x 1-9/16 OD x 3/32 W	04-03835	**$0.89**
M83248-1-138	2-1/8 ID x 2-5/16 OD x 3/32 W	01-01357	**$16.50**
M83248/1-143	2-7/16 ID x 2-5/8 OD x 3/32 W	04-03840	**$1.60**
M83248/1-224	1-3/4 ID x 2 OD x 1/8 W	04-03842	**$1.58**

M83461/1-222 MILITARY NITRILE O-RING



Used in MIL-H-5606 Fluid; Aircraft Hydraulic Fluid. Better dynamic performance than MS28775. Excellent resistance to petroleum-based products; hydraulic fluids; most silicone fluids; and fuels. Excellent resistance Dimensions: (1-1/2 ID X 1-3/4 OD X 1/8 W)

P/N 04-03601..... **$1.66**



AS3569-232 O-RING

O-Ring AS3569-232. (2-3/4 ID X 3 OD X 1/8 W).

P/N 04-02528..... **$3.35**

MS28776M2-22 METAL SCRAPER RING



MS28776M2-22 Metal Scraper Ring

P/N 05-15260 .....**$26.50**

NAS1611 O-RINGS



O-rings give effective sealing over wide ranges of pressure, temperature, and movement, with the advantage of sealing pressure in both directions and reducing friction and wear on moving parts. The use of O-rings as gaskets or static seals permits metal-to-metal contact and allows almost unlimited pressures under extreme vibration.

PN	MS Equivalent	Width	ID	OD	Price
NAS1611-220	MS28775-220	1/8	1-3/8	1-5/8	**$0.75**
NAS1611-268	MS28775-268	1/8	8-1/2	8-3/4	**$7.75**



M25988 O-RINGS

M25988 O-Rings, these O-Rings are intended for packing and are oil & fuel resistant.

Description	Part No	Price
M25988/1-022 Packing O-Ring	08-10778	**$3.65**
M25988/1-212 Packing O-Ring	08-10779	**$3.65**
M25988/1-902 Packing O-Ring	08-10780	**$1.46**
M25988/1-928 Packing O-Ring	08-10782	**$8.80**
M25988/1-010 Packing O-Ring	05-12763	**$0.49**
M25988-1-022 Packing O-Ring	04-03839	**$1.06**
M25988-1-114 Packing O-Ring	04-02534	**$2.40**
M25988/1-212 Packing O-Ring	04-03831	**$1.72**
M25988/1-904 Packing O-Ring	04-03884	**$0.52**
M25988/1-905 Packing O-Ring	04-03885	**$0.48**
M25988/1-916 Packing O-Ring	04-03832	**$2.03**
M25988/1-928 Packing O-Ring	04-03841	**$3.70**
M25988/1-904 Packing O-Ring	04-03884	**$0.52**
M25988/1-905 Packing O-Ring	04-03885	**$0.48**
M25988/1-916 Packing O-Ring	04-03832	**$2.03**
M25988/1-928 Packing O-Ring	04-03841	**$3.70**



800-0001-6 PACKING SEAL

The 800 Series Lock-O-Seal is a two piece combination seal comprised of a separately molded O-ring fitted within a surrounding metal washer. These Lock-O-Seals are intended to seal beneath the head of a fastener.

P/N 05-14698..... **$7.90**

AP

TIE RODS - GROMMET EDGING

AP



BRUNTON TIE RODS

These high quality aircraft wires and terminals are manufactured in Scotland by Bruntons Aero Products who first originated streamline wires in 1909. They feature the stronger rolled threads and are available in high polish or satin finish. Material is 316 high tensile stainless steel. Wires are also available in BSF or metric threads. Special wires with combination streamline and round section commonly used for biplane roll wires or seaplane float installations are available. Wires are manufactured to AN specifications and are 100% proof loaded. Wires ordered with terminal assemblies are supplied assembled. Quality certifications are provided with all orders.
Aircraft tie rods carry tensile loads for bracing wings, tail assemblies as well as float installations. They may be ordered separately or with terminal assemblies (AN665 terminal, clevis pin, jam nut, cotter pin). AN specs define thread lengths as well as a fixed difference in length between rod length and pin center length (K). Order pin center lengths ONLY when AN665 terminals are used on both ends of the wire. All other installations must order rod length. Due to fluctuations in international exchange rates, the prices of Brunton tie rods are subject to change. We guarantee the lowest prices and fastest delivery on all Brunton tie rods. Request current pricing. Allow 8-10 weeks for delivery of Brunton tie rods.

STREAMLINE TIE RODS



AN Number	Size & Thread	Diameter Inches	Thread Length (IN.) RH	Thread Length (IN.) LH	K	Minimum Strength Pounds
AN671AC-	6-40	.138	1 3/4	1 1/4	1 1/4	1,200
AN673AC-	10-32	.190	1 7/8	1 3/8	1 1/2	2,400
AN674AC-	1/4-28	.250	2 1/8	1 5/8	1 7/8	4,200
AN675AC-	5/16-24	.3125	2 1/4	1 3/4	2 1/8	6,900
AN676AC-	3/8-24	.375	2 3/8	1 5/8	2 1/4	10,000
AN677AC-	7/16-20	.4375	2 5/8	2 1/8	2 1/2	13,700
AN678AC-	1/2-20	.500	2 7/8	2 3/8	2 7/8	18,500
AN679AC-	9/16-18	.5625	3 1/8	2 5/8	3 1/4	24,000
AN680AC-	5/8-18	.625	3 3/8	2 7/8	3 1/2	29,500
AN682AC-	3/4-16	.750	3 3/4	3 1/4	4 3/8	42,000

CALL FOR CURRENT PRICING!

ROUND TIE RODS



AN Number	Size & Thread	Diameter Inches	Thread Length (IN.) RH	Thread Length (IN.) LH	K	Minimum Strength Pounds
AN701AC-	6-40	.138	1 3/4	1 1/4	1 1/4	1,000
AN703AC-	10-32	.190	1 7/8	1 3/8	1 1/2	2,100
AN704AC-	1/4-28	.250	2 1/8	1 5/8	1 7/8	3,400
AN705AC-	5/16-24	.3125	2 1/4	1 3/4	2 1/8	6,100
AN706AC-	3/8-24	.375	2 3/8	1 7/8	2 1/4	8,000
AN707AC-	7/16-20	.4375	2 5/8	2 1/8	2 1/2	11,500
AN708AC-	1/2-20	.500	2 7/8	2 3/8	2 7/8	15,500

CALL FOR CURRENT PRICING!

SEALS-IT GROMMET SEALS

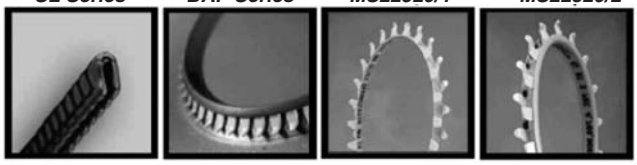


Grommet seals have many applications. In race cars they serve to keep unwanted smoke and fumes from entering the driver's area while protecting lines from chafing and abrading on rough surfaces. In hot rods and custom car applications, they provide the perfect "finishing touch" to all through panel installations. Wiring, fuel and oil lines, air and liquid hoses, and all other lines that make up your rod or custom, can make an otherwise detailed installation look unfinished. Seals-It grommet seals add the well-organized, professional appearance you want. Grommet seals also have many other applications including: marine, commercial equipment, motor homes, etc.

Grommet Seal 1 Hole Series			
Dia.	Hole	P/N	Price
1.5"	n/a	05-02493	**$12.85**
2.0"	n/a	05-02494	**$12.85**
3.0"	n/a	05-02495	**$22.50**
3.0"	.250	05-02496	**$15.95**
3.0"	.375	05-02497	**$22.50**
3.0"	.500	05-02498	**$15.95**
3.0"	.625	05-02499	**$15.95**
3.0"	.750	05-02501	**$15.90**
3.0"	.950	05-02502	**$15.90**
3.0"	1.180	05-02503	**$15.95**
4.0"	n/a	05-02504	**$26.20**
4.0"	1.00	05-02505	**$35.00**
4.0"	1.80	05-02506	**$26.20**
4.5"	1.50	05-02507	**$44.70**
4.5"	2.12	05-02508	**$51.60**
6.0"	n/a	05-02509	**$44.50**

Grommet Seal 2 Hole Series			
Dia.	Hole	P/N	Price
All Rubber Blank 5-1/4"		05-02510	**$42.50**
1-1/2"	2.125	05-02511	**$42.50**
2 Hole Blank 5-1/4"		05-02512	**$42.50**
2 Hole Blank 5-1/4"		05-2519	**$42.50**
1/4"	2.750	05-02520	**$63.75**
3/8"	2.750	05-02521	**$42.50**
1/2"	2.750	05-02522	**$42.50**
5/8"	2.750	05-02523	**$42.50**
3/4"	2.750	05-02524	**$42.50**
1"	2.750	05-02525	**$42.50**
.700	3.625	05-02526	**$43.10**

SPRING-FAST® GROMMET EDGING



Spring-Fast® Composite Grommet Edging covers sharp edges of panels that come in contact with wire and cables and mechanically lock on indefinitely with finger pressure in only seconds per foot. They provide a significant time reduction in assemblies. A long-term reliability solution that replaces nylon caterpillar plastic grommets and associated solvents, adhesives, and ancillary materials to protect critical equipment from failure due to wire chaffing.
Spring-Fast® Grommet Edging is approved by the FAA and U.S. Department of Defense per NASM 22529/a and NASM 22529/2 for all aircraft applications. Meets FAR 25.853 for flammability and MIL 1344 for shock and vibration. Spring-Fast® is available for 8 different sheet thickness ranges from 0.025 to 0.260 and can be purchased in either 10 piece packs of 12.75" long pieces, or 25 or 100-foot reels. Use Spring-Fast® BAP and SL series for flanged lightning hole and three-axis contours. The BAP Series Flexi-Grommet is perfect for roll formed edges and small lightening holes. Where wires are routed in the same plain as the sheet metal, the Spring-Fast® SL Series provides a trim characteristic for all edges with or without cabling nearby.

MFG Number	Sheet Thickness	Package Size	Our P/N	Price Ea.
M22529/2-1R	.025-.036	Per Foot	05-00673	**$5.75**
M22529/2-1C-10PK	.025-.036	10pcs/12.75"l	05-00674	**$59.85**
M22529/2-2R	.036-.063	Per Foot	05-00675	**$5.75**
M22529/2-2C-10PK	.036-.063	10pcs/12.75"l	05-00676	**$59.85**
M22529/2-3R	.059-.074	Per Foot	05-00677	**$5.50**
M22529/2-3C-10PK	.059-.074	10pcs/12.75"l	05-00678	**$59.85**
M22529/2-4R	.070-.093	Per Foot	05-00679	**$5.75**
M22529/2-4C-10PK	.070-.093	10pcs/12.75"l	05-00680	**$59.85**
M22529/2-5R	.090-.111	Per Foot	05-00681	**$5.75**
M22529/2-5C-10PK	.090-.111	10pcs/12.75"l	05-00682	**$59.75**
M22529/2-6R	.105-.134	Per Foot	05-00683	**$5.50**
M22529/2-6C-10PK	.105-.134	10pcs/12.75"l	05-00684	**$59.75**
M22529/2-7R	.178-.198	Per Foot	05-00685	**$6.50**
M22529/2-7C-10PK	.178-.198	10pcs/12.75"l	05-00687	**$86.75**
M22529/2-8R	.240-.260	Per Foot	05-00688	**$6.85**
M22529/2-8C-10PK	.240-.260	10pcs/12.75"l	05-00690	**$87.75**

See aircraftspruce.com for our complete selection of grommet edging

BAP SERIES GROMMET EDGE

Spring-Fast® BAP Flexi Wire Protection Grommet® Series has all the attributes of the "T" and "BT" Series grommet edging, but has greater gripping strength for severe shock and vibration environments with 4-axis flexibility. Heat continuous to 185°F (85°C) Low Temperature to -40°F (-40° C) High Corrosion Resistance UL94 V-0 Flammability Rating Superior Dielectric Strength High Shock and Vibration Resistance to rms G 41.7 Multi-axis flexibility for rounded inside and outside corners Continuous Edge Protection on Flanged Holes, 1/8" or greater Inside Radius and 1/4" or greater Outside Radius.

SL SERIES GROMMET EDGE

Sold by the foot or in a 10 foot roll. Spring-Fast® SL Series plastic trim has similar attributes of the "AP" and "BAP" Series grommet edging. Features: Substrate: Stainless Steel, Flammability rating: UL94 V-0, RoHS Compliant, DFARS Compliant, Multi axis flexibility, Heat continuous to 185ºF (85ºC), Low temperature to -40ºF (-40ºC), Indoor or outdoor use
High gripping strength, High corrosion resistance, High dielectric strength, High shock and vibration resistance per rms G 41.7, Multi-axis flexibility for rounded inside and outside corners, Continuous edge protections on flanged holes, 1/8" or greater inside radius and 1/4" or greater outside radius. Color: Black

SEE WWW.AIRCRAFTSPRUCE.COM FOR SL AND BAP SERIES P/N'S & PRICING



SPRING-FAST® INSTALLATION PRODUCTS

Description	Part No.	Price
DTI Shears 830 PS	05-04446	**$33.75**
Grommet Scale 860GSB	05-04448	**$17.50**
Roller Installation Tool 840R	05-04449	**$14.95**



SPECIAL SPRING-FAST FULL BYPASS CUT-OFF SHEARS

P/N 05-00689..... **$29.50**

AN100 CABLE THIMBLES



Made of cadmium plated steel or stainless steel per procurement specification MIL T-5677. Used to form sturdy eye end on control cable. Form cable around thimble and secure with Nicopress sleeve.

Cadmium Plated Steel Thimbles			Cable Size	Stainless Steel Thimbles		
AN Part No.	Price Each	Price Per 100		AN Part No.	Price Each	Price Per 100
AN100-3	$0.19	$15.20	1/16"	AN100C-3	$0.25	$20.00
AN100-4	$0.15	$12.00	3/32",1/8"	AN100C-4	$0.24	$19.20
AN100-5	$0.22	$17.60	5/32"	AN100C-5	$0.44	$35.20
AN100-6	$0.32	$25.60	3/16"	AN100C-6	$0.48	$38.40
AN100-7	---	---	7/32"	AN100C-7	---	---
AN100-8	$0.52	$41.60	1/4"	AN100C-8	$1.31	$104.80
AN100-12	$1.61	$128.80	3/8"	AN100C-12	$5.35	$428.00

AN111 CABLE BUSHINGS



Made of cadmium plated steel. Used in same manner as AN100 cable thimble.

Dash No.	Cable Size	Price Ea.
-3	1/16", 3/32"	$2.10
-4	1/8"	$2.85
-5	5/32"	$2.76
-6	3/16"	$3.60

Less 20% for 100

AN115 CABLE SHACKLES

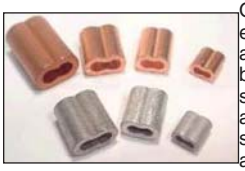


Made of cadmium plated forged steel per specification MIL-S-5675.

AN 115 Dash No.	Shackle Strength Lbs.	Cable Size	Used With		Price Each
			Thimble	Clevis Pin	
-8	800	1/16"	AN100-3	AN393-9	$13.65
-21*	2100	3/32", 1/8"	AN100-4	AN393-11	$10.85
-32	3200	5/32"	AN100-5	AN394-15	$22.75
-46	4600	3/16"	AN100-6	AN395-17	$39.90

Replaces AN115 - 16.
DISCOUNT: Less 10% for 12, 15% for 25, 20% for 50 or more. May be assorted.

WIRE ROPE SLEEVES (MS51844)



Oval shaped copper sleeves used in making eye or lap splices in flexible cable. Sleeves are slipped over the two strands of cable to be fastened and are then compressed with special Nicopress hand squeezers. Provides a bond that is even stronger than a standard splice. "18" Series sleeves are plain copper and "28" Series sleeves are zinc plated.

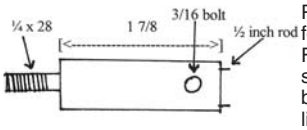
Part No	Nicopress Ref.	Cable Dia.	Matl./Finish	Price	
				Each	100
MS51844-42	18-1-C	1/16"	Copper/Plain	$0.08	$6.80
MS51844-43	18-2-G	3/32"	Copper/Plain	$0.13	$11.05
MS51844-44	18-3-M	1/8"	Copper/Plain	$0.30	$25.50
MS51844-45	18-4-P	5/32"	Copper/Plain	$0.44	$37.40
MS51844-46	18-6-X	3/16"	Copper/Plain	$0.77	$65.45
MS51844-22	28-1-C	1/16"	Copper/Zinc	$0.07	$5.60
MS51844-23	28-2-G	3/32"	Copper/Zinc	$0.13	$10.40
MS51844-24	28-3-M	1/8"	Copper/Zinc	$0.33	$26.40
MS51844-25	28-4-P	5/32"	Copper/Zinc	$0.46	$36.80
MS51844-26	28-6-X	3/16"	Copper/Zinc	$0.85	$36.80

STOP SLEEVES

These copper stop sleeves are used on the ends of bare cables.

Cable Dia.	Model No.	Part No.	Price Ea.
1/16"	ST2-2	04-00899	$0.38
3/32"	ST2-3	04-00901	$0.47
1/8"	ST2-4	04-00902	$0.47
5/32"	ST2-5	04-00903	$0.64
3/16"	ST2-6	04-02061	$0.63

ROD END SWIVEL BEARING



Permanently lubricated in-line swivel for rod end bearing or clevis fork. For applications where rod needs to swivel in a rotary motion to reduce binding while maintaining a straight line to control or stabilizer rod. For use on 1/2" rod and will fit 1/4" x 28 female rod end or clevis fork.

P/N 05-01021 ..... **$23.85**



NAS287 TERMINAL CHAIN

NAS287-25-3 3/32" cable size..... P/N 04-02064 ..... **$17.75**
NAS287-25-2 1/16" cable size..... P/N 04-02032 ..... **$11.75**
NAS287-35-4 1/8" cable size..... P/N 04-02065 ..... **$15.75**

AN481 CLEVIS FORK ROD ENDS (MS27976)



Manufactured of 1035 or 1042 carbon steel and cadmium plated. Minimum tensile strength 65,000 PSI. For welding to steel tubing or riveting to aluminum tubing. All sizes fit inside of 3/8" O.D. x .035 wall steel tubing.

Current Part No.	Old Part No.	Clevis Pin Hole Dia.	Fork Width		Price Each
			Overall	Inside	
MS27976-1	AN481-1P	1/4"	1/2"	17/64"	$21.75
MS27976-2	AN481-2P	1/4"	5/16"	9/64"	$17.75
MS27976-3	AN481-3P	3/16"	1/2"	17/64"	$21.85
MS27976-4	AN481-4P	3/16"	5/16"	9/64"	$19.50

AN486 THREADED CLEVIS FORK ROD ENDS (MS27975)



These rods ends are machined from 1035 or 1042 carbon steel and cadmium plated. Minimum tensile strength 65,000 PSI. They are internally threaded 1/4"-28. Used for engine controls.

Current Part No.	Old Part No.	Clevis Pin Hole Dia.	Fork Width		Internal Thread	Price Each
			Overall	Inside		
MS27975-1	AN486-1P	1/4"	1/2"	17/64"	1/4-28	$17.50
MS27975-2	AN486-2P	1/4"	5/16"	9/64"	1/4-28	$16.80
MS27975-3	AN486-3P	3/16"	1/2"	17/64"	1/4-28	$18.50
MS27975-4	AN486-4P	3/16"	5/16"	9/64"	1/4-28	$18.65
AN486-1032	Special	3/16"	7/16"	3/16"	10-32	$9.75

AN490 THREADED ROD ENDS

Manufactured of 4130 steel, heat-treated and cadmium plated. Minimum tensile strength 125,000 PSI. For welding to steel tubing or riveting to aluminum tubing.



Part Number	Thread Size	Used With Tube Size	Price Each
AN490HT5P	1/4-28	5/16"x.035	$19.90
AN490HT6P	1/4-28	3/8"x.035	$14.75
AN490HT8P	1/4-28	1/2"x.035	$14.90
AN490HT10P	5/16-24	5.8"x.035	$17.65
AN490HT11P	5/16-24	3/4"x.035	$16.50
AN490HT14P	3/8-24	3/4" x .035	$16.90
AN490HT15P	5/16-24	1/2"x.058	$19.50
AN490HT16P	3/8-24	1/2"x.058	$22.50

AN665 THREADED CLEVIS TIE ROD TERMINALS



These Zinc plated steel terminals are manufactured to AN specifications, with either right-hand or left-hand threads. Example: P/N AN665-10L has a 6-40 left-hand thread. AN665-34R has a 1/4-28 right-hand thread. Order Terminal Assemblies if locknut, clevis pin, and cotter pin are required along with terminal. Otherwise, only terminals are supplied.

*Note - Cad Plated Terminals are no longer being manufactured due to environmental reasons. Once the cad plated stock is depleted the zinc plated terminals will be shipped. Please note that we cannot guarantee cad plated terminals will be received.

Dash No.		Thrd. Size	Fork Pin Hole Dia.	Inside Width	Sgth. (Lbs.)	AN665 Rt. only Price Ea.	AN665 Lt. only Price Ea.
Right Hand	Left Hand						
-10R	-10L	6-40	.190"	.109"	1200	$10.50	$10.50
-21R	-21L	10-32	.190"	.150"	2400	$11.75	$11.75
-34R	-34L	1/4-28	.250"	.203"	4200	$22.50	$22.50
-46R	-46L	5/16-24	.313"	.203"	4600	$28.90	$28.50
-61R	-61L	5/16-24	.375"	.203"	6900	$32.85	$32.85
-80R	-80L	3/8-24	.375"	.266"	10000	$42.95	$44.65

AN665 TERMINAL ASSEMBLIES

These terminal assemblies include the AN665 terminals plus the appropriate lock nut, clevis pin, and cotter pin.

Description	Part No.	Price	Description	Part No.	Price
AN665-10R	05-02300	$11.00	AN665-10L	05-02400	$11.50
AN665-21R	05-02500	$12.00	AN665-21L	05-02600	$12.50
AN665-34R	05-02700	$22.75	AN665-34L	05-02800	$23.00
AN665-46R	05-02900	$29.75	AN665-46L	05-03000	$29.50
AN665-61R	05-03100	$34.00	AN665-61L	05-03200	$34.00
AN665-80R	05-03300	$44.00	AN665-80L	05-03400	$46.25

AP

CABLE TERMINALS

The finest and best means of attaching fittings to cable. Properly swaged to the cable, these terminals will maintain the minimum rated breaking strength of that cable. These terminals are made of stainless steel alloy having the best swaging and corrosion resistant properties and have a polished finish.

SA110 PLAIN BALL



Meet all requirements for Boeing's BACT14B Plain Ball End Fittings and NAS494 series Plain Ball End Fittings. All balls are manufactured from stainless steel as specified in MIL-DTL 781 and are certified to the appropriate standard(s).

Dash No.	Cable Dia.	Sphere Dia.	Strength Lbs.	Price
2	1/16	.188	80	$0.86
3	3/32	.250	735	$1.10
4	1/8	.312	1200	$1.45
5	5/32	.375	1680	$4.35
6	3/16	.437	2520	$2.58

MS20664C BALL & SINGLE SHANK



Dash No.	Cable Dia.	Sphere Dia. after Swage	Breaking Strength Lbs.	Price
2	1/16	.190	480	$0.55
3	3/32	.253	920	$0.84
4	1/8	.315	2000	$0.95
5	5/32	.379	2800	$2.12
6	3/16	.442	4200	$1.95

MS20663C BALL & DOUBLE SHANK



Dash No.	Cable Dia.	Sphere Dia. after Swage	Breaking Strength Lbs.	Price
2	1/16	.190	480	$1.19
3	3/32	.253	920	$1.79
4	1/8	.315	2000	$2.57
5	5/32	.379	2800	$4.35
6	3/16	.442	4200	$5.35

MS20667 FORK END



PN-MS20667-2

Dash No.	Cable Dia.	Breaking Strength Lbs.	Pin Hole Dia.	Fork Width "G"	Price
2	1/16	480	.190	.093	$9.60
3	3/32	920	.190	.108	$10.50
4	1/8	2000	.190	.195	$13.50
5	5/32	2800	.250	.202	$16.50
6	3/16	4200	.313	.260	$21.50

MS20668 EYE END



Manufactured from stainless steel in accordance with the requirements of MIL-DTL-781 and are certified to those standards.

Dash No.	Cable Dia.	Breaking Strength Lbs.	Pin Hole Dia.	Eye End Width "J"	Price
2	1/16	480	.190	.088	$5.35
3	3/32	920	.190	.103	$5.55
4	1/8	2000	.190	.190	$6.80
5	5/32	2800	.250	.197	$9.50
6	3/16	4200	.313	.255	$13.65

MS21259 STUD END



Manufactured from stainless steel to the strict standards of MS21259. They are certified to the MS21259 standard.

Dash No.	Cable Dia.	Breaking Strength Lbs.	Thread Size NF-3	Price
2	1/16	480	6-40	$5.35
3	3/32	920	10-32	$5.35
4	1/8	2000	1/4-28	$6.85
5	5/32	2800	1/4-28	$7.50
6	3/16	4200	5/16-24	$8.50

Add "RH" or "LH" after dash numbers for right or left hand threads

MS21260 TURNBUCKLE END



S=Short
L=Long

Dash No. Short	Price Each	Dash No. Long	Price Each	Cable Dia.	Thread Size	Min. Breaking Strength (lbs)
-S2RH	$5.75	-L2RH	$6.50	1/16"	6-40	480
-S2LH	$5.75	-L2LH	$6.80			
-S3RH	$6.65	-L3RH	$6.75	3/32"	10-32	920
-S3LH	$6.85	-L3LH	$7.50			
-S4RH	$7.50	-L4RH	$8.50	1/8"	1/4-28	2000
-S4LH	$6.95	-L4LH	$8.50			
-S5RH	$8.50	-L5RH	$8.75	5/32"	1/4-28	2800
-S5LH	$7.75	-L5LH	$8.80			
-S6RH	$8.85	-L6RH	$11.50	3/16"	5/16-24	4200
-S6LH	$9.50	-L6LH	$11.50			

** Universally replaces the canceled AN669 & NAS650 parts identified by the same dash no.*
** AN100 thimble not included.*
*** For short barrels listed above. Use two per assembly.*

SA361 EYE END & SA362 FORK END



Part No.	Cable	Hole Dia	Width	Price
SA361-2	1/16	.188	.088	$4.90
SA361-3	3/32	.188	.103	$6.50
SA361-4	1/8	.188	.190	$6.75
SA361-5	5/32	.250	.197	$10.90!
SA361-6	3/16	.313	.255	$12.00
SA362-2	1/16	.188	.093	$3.45
SA362-3	3/32	.188	.108	$3.80
SA362-4	1/8	.188	.195	$5.35
SA362-5	5/32	.250	.096	$8.50
SA362-6	3/16	.313	.125	$12.50

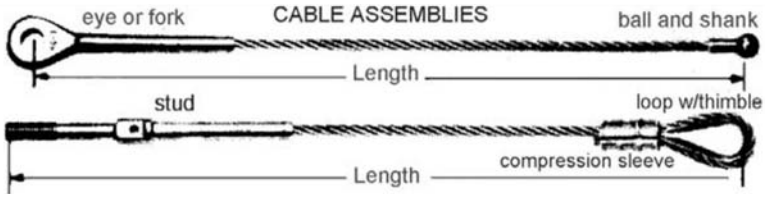
NAS1435 EYE FORKS



Part No.	Cable Dia.	A	B	C	D	E	F	Price
NAS1435K2	1/16	1-1/16	.454	.188	.042	3/8	.093	$3.95
NAS1435K3	3/32	1-1/2	.616	.188	.049	7/16	.108	$6.90
NAS1435K4	1/8	1-5/8	.638	.188	.093	1/2	.195	$5.75
NAS1435K5	5/321	-31/32	.699	.250	.096	9/16	.202	$12.50
NAS1435K6	3/16	2-3/16	.750	.313	.125	11/16	.260	$14.50

Discounts: All Items This Section:
Less 10% For 12 Ea. 15% On 50 Or More (Per Size)

CUSTOM-MADE CABLE ASSEMBLIES



Measure eye and fork terminals from center of pin holes. Measure ball fittings from center of ball. Measure stud terminals from end of terminal. Measure loop with thimble from surface of thimble.

SEE "TOOLS" SECTION FOR KEARNEY PORTABLE SWAGER.
CUSTOM-MADE CABLE ASSEMBLIES ARE SPECIAL ORDER AND NON-RETURNABLE

The terminals featured on this page must be installed with a rotary swaging tool, which is too costly for purchase by a homebuilder or small shop. We offer swaging service and custom-made cable assemblies in cable sizes of 1/16" to 5/32" diameter.

Select the cable fittings of your choice, specify cable size, cable construction, stainless steel or galvanized cable and length. Measure length of cable assembly as shown in the illustration. We will furnish complete cable assembly ready for installation. A simple drawing of the assembly required is appreciated and will expedite shipment.

The cost of custom-made cable assembly is base charge (up to 10 ft - **$10.00**, 10 to 20 ft. - **$15.00**, over 20 ft. - **$20.00**), plus the cost of selected fittings and cable plus swages at **$6.95** each. For cable assemblies requiring a third swage, such as an assembly with two end fittings plus a ball swaged at some point on the cable, add **$6.95** plus cost of the ball.

Example: The cost of a 10 ft. long cable assembly using 1/8" 7 x 19 galvanized cable, an MS20667-4 fork end and an MS21259-4RH stud end is 10 x **$0.98/ft.** for cable plus **$13.50** and **$6.85** for the fittings plus **$6.95** per swage + **$10.00** setup = **$41.15** total cost. For added MS20663C-4 ball add **$6.95** for swage plus **$2.57** for ball.

Swaging Service - For cable assemblies requiring swaged fitting on one end only. **$6.95**/swage plus cost of cable, fittings, and the base charges as described above.

Nicopress Swages - Performed for **$4.95**/Swage plus cost of Nicopress sleeve and the base charges described above.

TOLERANCE - ±1/8"

Custom Cable Assemblies are fabricated in House by Aircraft Spruce for Prompt Shipment.

Prices Subject to Change Without Notice

CABLE – FORKS – PUSHROD FITTINGS

CONTROL CABLE



Galvanized - MIL-DTL-83420 replaces MIL-2-83420
Stainless - MIL-DTL-83420 replaces both Galvanized & Stainless

Cable Dia. (In.)	Con-struc-tion	Breaking Strength (Lbs.) Galva-nized	Stainless	Part Number Galvanized	Stainless	Price/Ft. Galva-nized	Stain-less
1/16	7x7	480	480	05-03600	05-03500	**$0.48**	**$0.67**
1/16	7X19	--	480	----	05-15069	**----**	**$0.89**
3/32	7x7	920	920	05-03800	05-03700	**$0.38**	**$0.45**
3/32	7x19	1000	920	05-04000	05-03900	**$0.93**	**$0.92**
1/8 (Right Lay)	1x19	2100	2100	----	05-04100	**----**	**$1.04**
1/8	7x19	2000	1760	05-04400	05-04300	**$0.98**	**$1.18**
5/32	1x19	3300	--	05-04600	----	**$0.85**	----
5/32 (Right Lay)	1x19	--	3300	----	05-04500	**----**	**$1.59**
5/32	7x19	2800	2400	05-04800	05-04700	**$0.98**	**$1.58**
3/16	7x19	4200	3700	05-05000	05-04900	**$1.28**	**$1.75**
1/4	7x19	7000	6400	05-05200	05-05100	**$1.89**	**$3.35**

COATED CONTROL CABLES

Description	Part No.	Price/ft.
1/16" 7x7 Black Coated Stainless Steel	15-06042	**$0.74**

PRESTRETCHED CABLES

Prestretched cables are a product where the cable has been placed under a load in a reel to reel supplemental operation where either a 50% or 60% load, depending on either Stainless(50%) or Galvanized(60%) material, for a 5 second period. This is done in accordance with MIL-DTL-5688.

Cable Dia. (in.)	Con-struc-tion	Strength Galv.	Strength SS	Part No. Galv	Galv Per Ft.	Part No. SS	SS Per Ft
1/16	7X7	480	480	05-11286	**$0.62**	05-11445	**$0.88**
3/32	7X7	920	920	05-11287	**$0.78**	05-11446	**$1.22**
3/32	7X19	1000	920	---	---	05-11447	**$1.42**
1/8	7X19	2000	1760	05-11289	**$1.25**	05-11448	**$1.96**

CABLE FAIRLEADS



Nylon construction for external use. Two halves with retaining clip.
3/4"O.D. x 3/4"L
P/N 05-05500 **$2.90 Set**

3/4"O.D. x 1" L
P/N 05-05600 **$3.00 Set**

Less 15% for 12 or more.

Clips Only
P/N 05-05700 **$0.54 Ea.**

SEE TOOL SECTION FOR CABLE TENSIOMETERS

PIPER J-3 CABLE FAIRLEAD



Cable Fairleads are ideal for homebuilts and others. Fits standard 7/8" x .058 round tube. Sold as a set. FAA Approved.
P/N 05-15051..... **$2.60**

WING STRUT ADJUSTMENT FORK & BARREL SETS

Conforms to AD. 81-25-05. The heavy-duty, high tensile strength strut fork has rolled threads, an improved alloy with heartier design for added strength, and a permanent indentification mark to provide assurance of conformity for ease in field installation. Forks require a five year inspection per A.D. 93-10-06.



FAA/PMA. J-3 & PA-11. Replacement for 13770-00. Includes bolt, nut, cotter pin & jam nut. Measures 5/16" bolt hole. Measures 7/16" x 20 thread NF3. ..... P/N 05-06000 ..... **$89.80**



FAA/PMA. J-5 & PA-12, 14, 18, 20 & 22. Replacement for 4481-02. Includes bolt, nut, cotter pin & jam nut. 3/8" bolt hole. Measures 7/16" x 20 thread..... P/N 05-06100 ..... **$94.75**



Wing Strut Barrel has 7/16-20 undersize thread to permit retapping after welding. Retapping is required prior to installing wing strut forks. Made in USA.
P/N 05-05900 ..... **$19.50**

RUDDER CABLE FAIRING SETS FOR RV'S



Pre-formed .025" thick aluminum fairings for rudder cable exit on RV fuselages. (None are supplied with the RV kits). Set contains (2) identical fairings - 1 for use on cables and 1 spare (could be used on elevator trim). Each will require some trimming to fit before riveting. P/N 12-00635..... **$14.85**

CONTROL CABLE SPECIFICATIONS

- ***7 X 7 FLEXIBLE CONTROL CABLE -*** Has seven strands of seven wires each. Used for control purposes where extreme flexibility is not required but where abrasion is a factor.
- **7 X 19 FLEXIBLE CONTROL CABLE -** Has seven strands of 19 wires each. Its greater metallic area makes it stronger than 7 x 7 cable. Because of its fine wires the best service is obtained where abrasion is not too severe. These same wires, however, make it flexible to meet severe bending.
- ***1 X 19 NON-FLEXIBLE CABLE -*** Is one strand of 19 wires. It has more metallic area than 7 x 7 or 7 x 19 constructions which makes it the strongest but also the least flexible. 1 x 19 is generally used for bracing purposes, drag and anti-drag wires. It is often used with swage type terminals.
- The major difference between aircraft and commercial cable is the lubrication applied to aircraft cable, which provides substantially better fatigue life than non-lubricated commercial cable. Aircraft cable requires extensive extra testing, documentation, certification to meet military specifications. Aircraft Spruce obtains its aircraft cable from domestic sources and the cable is certified to MIL Spec MIL, W-83420 and QPL Certified.

CESSNA FLIGHT CONTROL CABLES



These FAA-PMA approved cable assemblies are available in stainless or galvanized cable and are constructed of highest quality U.S. made materials. All components are fully traceable and each assembly is load tested and length stabilized. Over 2000 cable assemblies in stock. Custom cable assemblies can be fabricated to your specification.

- ***AS0510105 Series for Cessna 170, 172, 180, 182, and 185***
- ***AS0400107 Series for Cessna 150, and 152***
- ***AS1660300 Series for Cessna 188***
- ***AS62701 Series for Piper PA28, PA32, and PA34***
- ***ACA Series for Schweizer G-164***

Call the Cessna/Piper parts specialist at 1-877-4SPRUCE with your Cessna or Piper cable assembly part number for pricing or for assistance in determining the part number you require for your aircraft.

BEECH FLIGHT CONTROL CABLES



McFarlane Beechcraft flight control cables and chains are coated with a corrosion inhibiting compound that meets Military Specification MIL-PRF-16173. This is the same compound used on all factory original Beechcraft flight control cables.FAA/PMA

Model	Part No:	Price
MCNAS30327-0590 Tab Actuating	05-04625	**$128.80**
MCNAS30434-1520	05-04624	**$127.99**
MCNAS30434-1520	05-04624	**$127.99**
MC33-524000-17	05-06981	**$164.75**
MC35-524385	05-06985	**$142.75**
MC35-524651-1	05-06986	**$171.75**
MCNAS31414-1871	05-06987	**$109.75**
MCNAS31514-1871	05-06988	**$108.85**
MCNAS30425-0100	05-06989	**$94.80**

PUSHROD THREADED END FITTING



Fits 5/8" diameter pushrods. 1/4 - 28 threaded hole. Secure to aluminum pushrod with two cross riveted or bolted fasteners. Made from 6061-T6 5/8" diameter x 1-5/8" long rod. Two sizes available.
Fits: 5/8" x .049" tube..... P/N 05-01140 ..... **$9.90**
Fits: 5/8" x .058" tube..... P/N 05-01150 ..... **$9.90**

PUSHROD BALL ROLLER GUIDES



Provides almost frictionless push – pull and rotary movement of aileron and elevator push rods. Design is similar to that used in German sailplanes. Unit contains four nylon roller balls and provides 3.5" pushrod travel. Aluminum case size, 1.25" x 3.0" long. Fits 5/8" diameter pushrods.
P/N 05-01110 ..... **$10.85 ea.**

PUSHROD FORKED END FITTING



Fits 5/8" diameter pushrods. 3/16" pivot hole with .090" wide slot for bellcrank. Secure to aluminum pushrod with two cross riveted or bolted fasteners. Made from 6061-T6 5/8" diameter x 2-3/8" long rod. Two sizes available. Fits: 5/8" x .049" tube ..... P/N 05-01120.... **$10.70 ea.**
Fits: 5/8" x .058" tube..... P/N 05-01130.... **$10.70 ea.**

AP

SADDLES - FITTINGS - TANGS - BRACKETS



SUPER-TOUGH STANDOFF SADDLES -TYPE II

P/N	Max Air #	Fits	O.D.	Hole	HT	Price
05-02052	S01-14	1.000	1.000	.266	.188	**$1.95**
05-02055	S01-24	1.500	1.000	.266	.188	**$1.95**
05-02056	S01-84	1.625	1.000	.266	.188	**$1.83**
04-00922	S01-44	1.750	1.000	.266	.188	**$1.85**
05-02060	S01-74	1.875	1.000	.266	.188	**$1.83**
05-02062	S01-94	2.000	1.000	.266	.188	**$1.85**
05-02064	S04-94	2.000	1.000	.266	.440	**$1.85**



ULTRALIGHT SADDLES

SUPER-TOUGH SADDLES - TYPE I

P/N	Max Air #	Fits	OD	Hole		HT	Price
S4436	---	.875	0.875	.260		.125	**$1.87**
S4353	---	1.00	1.00	.260		.250	**$1.93**

SUPER-TOUGH SADDLES -TYPE II

P/N	Max Air #	Fits	OD	Hole	HT	Each
S4451	S-24	1.500	1.375	.266	.188	---
S4453	S-84	1.625	1.375	.266	.188	**$2.10**
S4462	S-94	2.000	1.375	.266	.188	**$1.20**

ALUMINUM SADDLES

P/N-Type	Our P/N	Fits	Base OD	Hole	Height	Price
4300/I	04-00923	1.00	1.00	.266	.125	**$4.35**
4327/I	04-00924	1.13	1.00	.266	.125	**$4.50**
4328/I	04-00925	1.25	1.00	.266	.125	**$4.35**
4310/II	04-00926	1.50	1.00	.266	.250	**$5.25**
4315/I	04-00927	1.63	1.00	.266	.125	**$4.20**
4329/I	04-00930	2.00	1.00	.266	.125	**$4.20**



ALUMINUM TUBE CONNECTOR

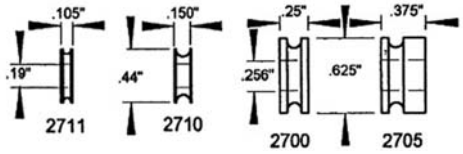
1 x .058" ..... P/N 15-05249 ..... **$8.50**
1" 1/4-20 Thread ..... P/N 15-06738 ..... **$11.25**



TUBE CONNECTORS - NYLON

Fits 1 x .049 Tube ..... P/N 05-02096 ... **$2.65**
Fits 1 x .049 (Maxair TC-1) .... P/N 05-02097 ... **$2.42**

CABLE FITTINGS



1/16" Cable, Steel, AN111-3 ..... P/N CF2710 ..... **$2.50**
3/32" Cable, Aluminum ..... P/N CF2700 ..... **$2.45**
3/32" Cable, Aluminum ..... P/N CF2705 ..... **$2.25**
1/16" Cable, Stainless, AN111C-3 ..... P/N CF2710S **$2.10**



ELBOW FITTINGS

These are tube fittings used to assemble parts to an ultralight frame. No specific ultralight or application.
1" x .083" ..... P/N 15-05250 ..... **$8.50**
1" x .058" ..... P/N 15-05249 ..... **$8.50**



POLY TIP RIB END FITTING

Maxair#PT-1. Poly Tip.
P/N 05-01932 ..... **$0.95**

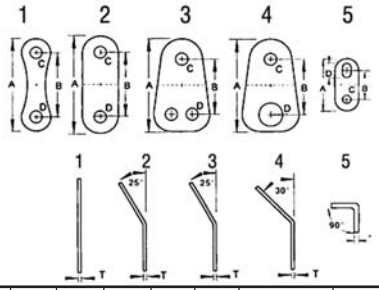


NYLON WASHERS

Model	P/N	O.D.	I.D.	Tkns	Each
NW2059	05-01970	.875	.256	.031	**$0.37**
NW2055	05-01969	.256	.500	.060	**$0.58**
NWPW-4	05-01973	.625	.250	.062	**$0.22**

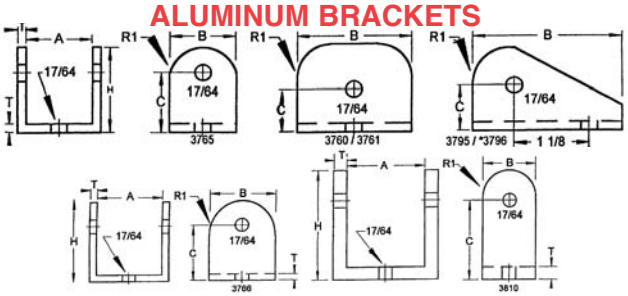
TANGS

Made of 304 stainless steel. All measurements are in inches.



No.	Maxair	Description	T	A	B	C	D	Part No.	Price
1	T12-HT4	Figure 8	14G	2.0	1.38	.26	.26	05-02076	**$1.25**
2	--	2-Hole Flat	16G	2.0	1.25	.26	.26	05-02072	**$1.35**
	T0-FT	2-Hole Flat	13G	2.0	1.25	.26	.26	05-02073	---
	T2-FLAT	2-Hole Bent	13G	2.0	1.24	.26	.26	05-02074	**$1.55**
	--	2-Hole Bent	12G	2.0	1.24	.26	.26	05-02075	**$1.55**
3	T11-DFT	3-Hole Flat	14G	1.91	1.09	.26	.26	05-02077	**$3.95**
	T8-DFT	3-Hole Flat	12G	1.91	1.09	.32	.26	05-02078	**$3.75**
	T9-DAT	3-Hole Bent	14G	1.86	1.04	.26	.26	05-02079	**$2.60**
	T6-DAT	3-Hole Bent	12G	1.86	1.04	.32	.26	05-02080	**$3.95**
5	--	SS EYE Bent	13G	1.13	.563	.188	--	05-04371	**$2.75**

ALUMINUM BRACKETS



Model	Part No.	A	B	C	H	T	R1	ALLOY	Each
B3772	05-01930	.500	.750	.500	.750	.125	---	6061-T6	**$4.20**
B3765	05-01928	1.000	1.000	.875	1.250	.125	.500	6063-T5	**$5.75**
B3760	05-01926	1.000	1.750	.625	1.250	.125	.500	6063-T5	**$5.90**
B3761	05-01927	1.000	1.750	.906	1.250	.125	.750	6063-T5	**$7.50**
B3795	---	1.000	2.250	.670	1.250	.125	.500	6063-T5	--
B3766	05-01929	1.250	1.250	1.062	1.500	.125	.750	6063-T5	**$6.50**
B3796	---	1.250	2.375	.875	1.500	.125	.500	6063-T5	--
B3810	05-01931	1.500	1.000	1.500	2.000	.250	.500	6061-T6	**$13.95**



STAINLESS STEEL BRACKETS

Fits	Model No.	Part No.	Price
1.125" Tube	B3742	05-01923	**$6.75**
Fits 1.250" Tube	B3744	05-01924	**$8.45**



PLASTIC ID TUBE CAPS

Model	Part No.	Fits Tube Size	Maxair	Each
TC4116	05-02093	1-1/2 x .083	---	**$2.90**
TC4115	05-02092	1-1/2 x .049	EC-6	**$0.96**
TC4095	05-02084	1 x .083	EC-3	**$1.07**
TC4098	05-02087	1 x .049	EC-1	**$0.58**
TC4092	05-02083	7/8 x .049	EC-78	**$1.05**
TC4090	05-02082	5/8 x .058	---	**$0.44**
TC4097	05-02086	1 x .065	EC-2	**$0.60**
TC4106	05-02089	1-5/8 x .049	EC-7	**$0.96**
TC4112	05-02091	2 x .049	EC-10	**$2.75**



CONTROL CABLE FAIRINGS

Injection molded ABS plastic fairings used to cover hole in airframe where control cables emerge such as the rudder cables at the rear of the fuselage. May be installed on any airframe surface but is most normally used on fabric covered aircraft where they are bonded on with fabric cement and covered with a fabric patch. P/N 05-05750 ..... **$5.85 pair**

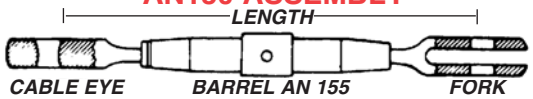
Prices Subject to Change Without Notice

TURNBUCKLE COMPONENTS

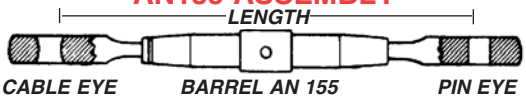
TURNBUCKLES COMPLETE ASSEMBLIES

Complete turnbuckle assemblies consist of a brass barrel and two steel ends, one with right-hand thread and the other with left-hand thread. Order by proper AN number and add dash number and a letter to indicate length and strength required.

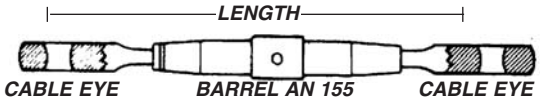
AN130 ASSEMBLY



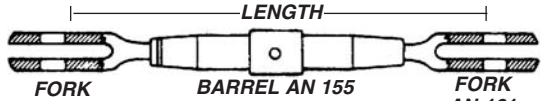
AN135 ASSEMBLY



AN140 ASSEMBLY



AN150 ASSEMBLY



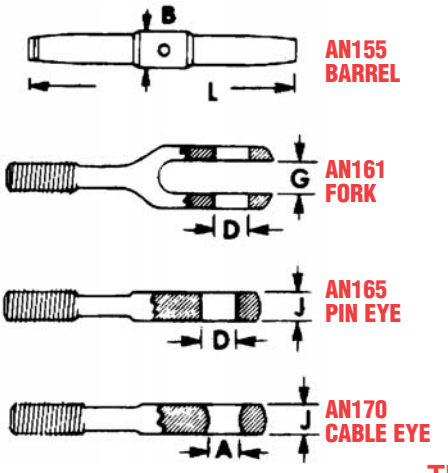
AN 146 Assembly consists of 1 - AN 155 barrel, 1-AN161 Fork and 1 MS21260 Turnbuckle End.

Complete turnbuckle assemblies consist of a brass barrel and two steel ends, one with right-hand thread and the other with left-hand thread. Order by proper AN number and add dash number and a letter to indicate length and strength required.

Part No.	Length	Strength (Pounds)	Price
AN130-8S	4-1/2	800	**$35.75**
AN130-16S	4-1/2	1600	**$30.00**
AN130-16L	8	1600	**$37.50**
AN130-22S	4-17/32	2200	**$33.25**
AN130-32S	4-19/32	3200	**$36.25**
AN130-32L	8-7/64	3600	**$43.50**
AN130-46S	4-21/32	4600	**$55.75**
AN130-46L	8-5/32	4600	**$60.50**
AN130-61L	8-9/32	6100	**$135.95**
AN135-8S	4-1/2	800	**$34.50**
AN135-16S	4-1/2	1600	**$26.50**
AN135-16L	8	1600	**$31.00**
AN135-22S	4-17/32	2200	**$30.50**

Part No.	Length	Strength (Pounds)	Price
AN135-32S	4-19/32	3200	**$32.50**
AN135-32L	8-7/64	3200	**$37.50**
AN135-46S	4-21/32	4600	**$55.75**
AN135-46L	8-5/32	4600	**$61.75**
AN135-61L	8-9/32	6100	**$152.95**
AN140-8S	4-1/2	800	**$34.50**
AN140-16S	4-1/2	1600	**$26.50**
AN140-16L	8	1600	**$30.50**
AN140-22S	4-1/2	2200	**$30.50**
AN140-22L	8	2200	**$37.50**
AN140-32S	4-1/2	3200	**$32.50**
AN140-32L	8	3200	**$37.25**
AN140-46S	4-1/2	4600	**$56.00**

Part No.	Length	Strength (Pounds)	Price
AN140-46L	8	4600	**$62.75**
AN140-61L	8	6100	**$126.95**
AN150-8S	4-1/2	800	**$36.75**
AN150-16S	4-1/2	1600	**$33.50**
AN150-16L	8	1600	**$43.50**
AN150-22S	4-17/32	2200	**$37.00**
AN150-22L	8-1/32	2200	**$45.75**
AN150-32S	4-19/32	3200	**$41.00**
AN150-32L	8-7/64	3200	**$49.75**
AN150-46S	4-21/32	4600	**$54.00**
AN150-46L	8-5/32	4600	**$58.25**
AN150-61L	8-9/32	6100	**$153.95**
AN150-80L	8-5/16	8000	**$143.95**



TURNBUCKLE PARTS DIMENSIONS

The "R" or "L" following the dash number designates "right" or "Left." The "S" or "L" (2nd letter following dash number) indicates "short" or "long." AN 161 Fork and AN 170 Cable Eye are available with either right or left-hand thread.

Dash No.	Thread Size	AN 155 Barrel		AN 161 Fork		AN 165 Pin Eye		AN170 Cable Eye	
		"L"	"B"	"G"	"D"	"J"	"D"	"J"	"A"
-8S	6-40	2-1/4	.250	.109	.188	.125	.188	.125	.188
-16S	10-32	2-1/4	.344	.156	.188	.1625	.188	.188	.219
-16L	10-32	4	.344	.156	.188	.1625	.188	.188	.219
-22S	1/4-28	---	---	.187	.188	.188	.188	.188	.219
-22L	1/4-28	---	---	.187	.188	.188	.188	.188	.219
-32S	1/4-28	2-1/4	.438	.218	.250	.219	.250	.219	.281
-32L	1/4-28	4	.438	.218	.250	.219	.250	.219	.281
-46S	5/16-24	2-1/4	.500	.250	.313	.281	.313	.281	.313
-46L	5/16-24	4	.500	.250	.313	.281	.313	.281	.313
-61L	3/8-24	---	---	.270	.375	.281	.375	.281	.344
-80L	3/8-24	4	.625	.312	.375	.328	.375	.328	.375

TURNBUCKLE PARTS PRICES

AN155 Dash No.	Barrel Price Each	TURNBUCKLE ENDS Dash No.	Price Each AN 161	AN 165	AN 170
-8S	**$9.85**	-8RS	**$13.75**	**$12.50**	**$12.50**
-8S	**$9.85**	-8LS	**$13.50**	**$12.50**	**$12.50**
-16S	**$7.90**	-16RS	**$12.95**	**$9.50**	**$9.50**
-16S	**$7.90**	-16LS	**$12.95**	**$9.50**	**$9.50**
-16L	**$9.50**	-16RL	**$17.50**	**$10.90**	**$10.40**
-16L	**$9.50**	16LL	**$16.85**	**$10.90**	**$10.90**
		-22RS	**$13.65**	**$10.85**	**$10.50**
		-22LS	**$13.85**	**$10.85**	**$10.50**
		-22RL	**$17.85**	**$13.45**	**$15.95**
		-22LL	**$17.85**	**$13.50**	**$13.50**

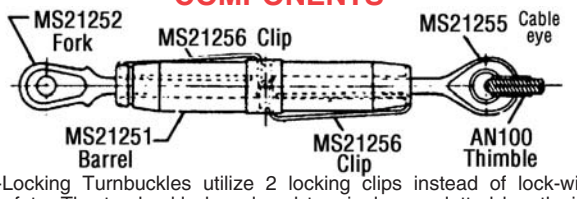
AN155 Dash No.	Barrel Price Each	TURNBUCKLE ENDS Dash No.	Price Each AN 161	AN 165	AN 170
-32S	**$9.50**	-32RS	**$15.65**	**$11.50**	**$11.50**
		-32LS	**$15.85**	**$11.50**	**$11.50**
-32L	**$10.50**	-32RL	**$19.80**	**$13.65**	**$13.50**
		-32LL	**$19.80**	**$13.65**	**$13.65**
-46S	**$12.85**	-46RS	**$21.70**	**$21.60**	**$21.50**
		-46LS	**$19.85**	**$20.50**	**$21.65**
-46L	**$13.50**	-46RL	**$22.65**	**$23.85**	---
		-46LL	**$23.80**	**$23.70**	**$24.70**
-61L	Use	-61RL	**$55.75**	**$68.00**	**$42.50**
6.95	**-80L**	-61LL	**$59.75**	**$45.65**	**$42.50**
-80L	**$26.75**	-80RL	**$49.90**	---	---
		-80LL	**$51.75**	---	---



IN-LINE CABLE TENSIONER

The in-line cable tensioner can be installed instead of turnbuckle barrels. The assembly provides a solid load transfer, while maintaining cable tension in the event of a slack control cable to avoid jamming, or derailing. Use MS21256-1 locking clip for retention. The tensioner is 6-3/16" long in its installed configuration, taking out up to .7" of slack and uses 1/4-28 thread (one end RH, other end LH). Breaking strength 2,100lbs. P/N 05-12750 ..... **$359.00**

MS CLIP-LOCKING TURNBUCKLE COMPONENTS



Clip-Locking Turnbuckles utilize 2 locking clips instead of lock-wire for safety. The turnbuckle barrel and terminals are slotted lengthwise to accommodate the locking clips. After the proper cable tension is reached the barrel slots are aligned with the terminal slots and the clips are inserted. The curved ends of the locking clips expand and latch in the vertical slot in the center of the barrel. Build up MS turnbuckle assemblies, similar to the AN assemblies listed on the preceding page, by selecting a turnbuckle barrel, 2 end fittings and 2 clips from the components listed in the Table below. The price of the complete assembly is the sum of the prices shown for the components. Example: An MS turnbuckle assembly for 3/32" dia. cable, with fork end and pin eye consists of:

1 MS21251-B3S Barrel **$8.50**
1 MS21252-3LS Fork End **$14.50**
1 MS21254-3RS Pin Eye End **$9.95**
2 MS21256-1 Clips ..... **$0.28/ea.**

Less 10% for 6 or more complete assemblies.
Less 15% for 12 or more complete assemblies.
Note: MS21256-1 clips are short (1") and MS21256-2 are long (2").

Turnbuckle Component	Part No.	Cable Dia.	Thread Size	Min. Breaking Strength(lbs)	Price Each
Barrel (supersedes AN155)	MS21251-B2S	1/16"	6-40	800	**$9.80**
	-B3S	3/32"	10-32	1600	**$8.50**
	-B5S	5/32"	1/4-28	3200	**$11.50**
	-B5L	5/32"	1/4-28	3200	**$10.50**
Fork End (supersedes AN161)	MS21252-2RS	1/16"	6-40	800	**$13.50**
	-2LS				**$13.50**
	-3RS	3/32"	10-32	1600	**$13.60**
	-3LS				**$14.50**
	-4LL	1/8"	1/4-28		**$18.50**
	-4LS				**$13.95**
	-5RS	1/8", 5/32"	1/4-28	3200	**$16.75**
	-5LS				**$16.50**
Pin Eye End (supersedes AN165)	MS21254-2RS	1/16"	6-40	800	**$12.75**
	-2LS				**$12.50**
	-3RS	3/32"	10-32	1600	**$9.95**
	-3LS				**$10.50**
	-5RS	1/8", 5/32"	1/4-28	3200	**$12.65**
	-5LS				**$12.65**
Cable Eye (supersedes AN170)	MS21255-2RS Stainless	1/16"	6-40	800	**$12.65**
	-2LS				**$12.50**
	-3RS	3/32"	10-32	1600	**$10.65**
	-C3RS	3/32"	10-32	1600	**$22.50**
	-3LS				**$7.65**
	-5RS	1/8", 5/32"	1/4-28	3200	**$11.95**
	-5LS				**$12.65**
Cable Swage End (supersedes AN669)	MS21260-S2RH	1/16"	6-40	480	**$5.75**
	-S2LH				**$5.75**
	-S3RH	3/32"	10-32	920	**$6.65**
	-S3LH				**$6.85**
	-S4RH	1/8"	1/4-28	2000	**$7.50**
	-S4LH				**$6.95**
	-S5RH	5/32"	1/4-28	2800	**$8.50**
	-S5LH				**$7.75**
Clip*-	MS21256-1	- -	- -	- -	**$0.28**
	MS21256-2	- -	- -	- -	**$0.42**

SAFETY WIRE



Available in Type 302/304 stainless steel (soft temper) per MS20995. Also, in soft annealed brass per specification QQ-W-321, Type A.Stainless steel safety wire furnished in convenient 1 lb. dispensing container. Annealed brass safety wire is furnished in a convenient 1 lb. dispensing container.

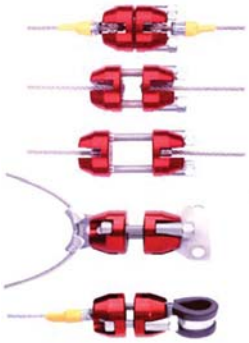
Wire Dia. In.	Wire Type	Part No.	Price Per lb.
.020	Stainless Steel	05-02684	**$9.95**
.025	Stainless Steel	05-06831	**$9.50**
.032	Stainless Steel	05-02685	**$8.50**
.032	Brass	05-02686	**$18.65**
.041	Stainless Steel	05-02687	**$8.50**
.041	Brass	05-06600	**$18.85**
.051	Stainless Steel	05-11922	**$7.50**

Less 10% on orders for 10 spools, 15% on 25 spools, 20% on 50 spools or more. May be assorted.



25 FT. COIL OF STAINLESS STEEL SAFETY WIRE:
.032" Dia. .....P/N 01-15725 ..... **$1.11**
.041" Dia. .....P/N 01-15825 ..... **$1.11**

ADJUSTABLE CABLE CONNECTOR

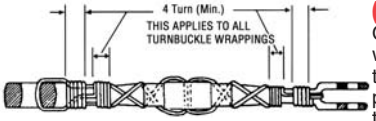


The ACC provides a strong positive connection with tensioning and maximum liner travel in a confined cable installation. Accommodates 3 standard cable terminals, (SA-110 plain ball, MS20664C ball & single shank, and AN111 cable bushing) including combinations of cable-to-cable & cable-to-bracket. It is light & compact without compromising safety. It utilizes an original design of overlapping walls and ridges to enhance the strength of each working surface. The ACC is precision CNC machined 7075 anodized aluminum. Stainless Steel Allen screws work in tandem to provide cable tensioning. 2 stainless tube-nuts provide additional structural security and prevent loosening with interlocking threads. 2 stainless steel pins are locked in place between the adjustment screws and provide an anchor for cable bushings or customized brackets. If necessary, longer adjustment screws can be used to accommodate insufficient cable lengths.

Avail. Sizes	Pin Dia.	Part No.	Price
.032	1/4"	05-01343	**$52.75**

SAFETY METHODS FOR TURNBUCKLES

Safety all turnbuckles with .040 dia. annealed safety wire using either the double or single wrap as described and illustrated. Do not reuse safety wire. Adjust the turnbuckle to the correct cable tension so that no more than 3 threads are exposed on either side of the turnbuckle barrel. Do not lubricate turnbuckles.



(A) DOUBLE WRAP (SPIRAL)

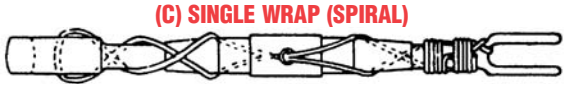
Of the methods using safety wire for safety turnbuckles, the method described here is preferred, although either of the other methods described are satisfactory. The method of double wrap safety is shown in figure (A). Use 2 separate lengths of the proper wire. Run one end of the wire through the hole in the barrel of the turnbuckle and bend the end of the wire towards opposite end of the turnbuckle. Then pass the second length of the wire into the hole in the barrel and bend the ends along the barrel on the opposite side first. Spiral the 2 wires in opposite directions around the barrel to cross each other twice between the center hole and the ends. Then pass the wires at the end of the turnbuckle in opposite directions through the holes in the turnbuckle eyes or between the jaws of the turnbuckle fork as applicable, laying one wire along the barrel and wrapping the other at least four times around shank of the turnbuckle and binding the laid wires in place before cutting the wrapped wire off. Wrap the remaining length of safety wire at least 4 turns around the shank and cut it off. Repeat the procedure at the opposite end of the turnbuckle.

(B) DOUBLE WRAP



Another satisfactory double wrap method is similar to Method A. except that the spiraling of the wires is omitted as shown in figure (B).

(C) SINGLE WRAP (SPIRAL)



The single wrap methods described and illustrated are acceptable but are not the equal of the double wrap methods.
Pass a single length of wire through the cable eye or fork at either end of the turnbuckle assembly. Spiral each of the wire ends in opposite directions around the first half of the turnbuckle so as to cross each other twice. Thread both wire ends through the hole in the middle of the barrel so that the third crossing of the wire ends is in the hole. Again, spiral the two wire ends in opposite directions around the remaining half of the turnbuckle, crossing them twice. Then, pass one wire end through the cable eye or fork in the manner described above, wrap both wire ends around the shank for at least four turns each, cutting off excess wire.

(D) SINGLE WRAP



Pass one length of wire through the center hole of the turnbuckle and bend the wire ends toward opposite ends of the turnbuckle. Then pass each wire end through cable eye or fork and wrap each wire end around the shank for at least four times, cutting off excess wire. After safety, no more than 3 threads of the turnbuckle terminal should be exposed.

Prices Subject to Change Without Notice

PULLEYS



AN210A & AN210B (MS24566)
Anti-Friction Bearing Control Pulley with phenolic body and ball bearing with seal. The AN210A pulleys are dimensionally the same as the "B" pulleys but have metal-shielded bearings rather than removable composition-seal type bearings. The low allowable design load of the -3A and -3B pulleys-is based on cable fatigue. AN210-1A, AN210-3A, AN210-1B and AN210-3B shall not be installed on frequently used aircraft controls to bend the cable more than 15° from a straight line.

MS20220 (AN220) Flight Control Pulley with phenolic body and ball bearing with seal. Also available with aluminum body (MS20220A). The low allowable load limit of the -1 pulley is based on cable fatigue. When used on frequently used aircraft controls the cable wrap angle should not be more than 15° from a straight line.

MS20219 (AN219) Aircraft Secondary Control Pulley with phenolic body and ball bearing with seal. MS20219A (AN219A) Pulley with anodized aluminum body and ball bearing with seal. The aluminum body is recommended for -1 and -3 pulleys. The -1 pulley shall not be installed in flight control systems.

Examples of Part No.: Phenolic Body - MS20219-1
Aluminum Body - MS20219A1

NAS383 Series Pulley with phenolic body and graphite impregnated bronze sleeve. This is a low cost pulley widely used in aircraft, winches, cranes and remote mechanical actuation devices.

A-223 and A-224 Pulleys with plain phenolic bore are used as guide and secondary control pulleys in production aircraft.

BB-128-1 and BB-120-1 Pulleys have high pressure phenolic bodies and ball bearings with Teflon seals. Used in Christavia and many other aircraft.

SPECIAL PULLEYS



1-1/2 Inch Pulley
For smooth control operation. Manufactured for aircraft float rudder operation, the pulleys can be used in virtually any application. Solid UHMW plastic for use in tough, caustic environments. Bushing insert is stainless steel with minimum lubrication required. Used with 1/16" thru 1/8" - 7x7 or 7x19 control cable. Bushing is clamped in pulley bracket. Pulley rotates on bushing. Pulley: 1-1/2" dia. x .283" wide. Bushing: 1/4" O.D. x 3/16" I.D. x .328" long. Weight: .26 oz. (including stainless bushing). P/N 05-29725..... **$6.50 ea.**

2 Inch Pulley
Larger cables, bigger job? Wherever you need a tough, durable pulley, look no further.Replace your old worn out, sticky pulleys with NAP UHMW plastic for smooth control operation. Used with 3/32" thru 3/16" - 7x7 or 7x19 control cable. Bushing insert is stainless steel with minimum lubrication required. Bushing is clamped in pulley bracket. Pulley rotates on bushing. Fits DeHavilland Beaver floats Pulley: 2" dia. x .470" wide. Bushing: 5/16" O.D. x 1/4" I.D. x .487" long. Weight: .58 oz. (including stainless bushing). P/N 05-29730..... **$7.95 ea.**

PIPER PULLEYS

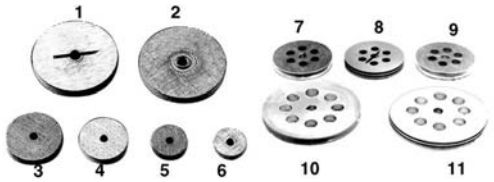


Fig.	Ref. #	Description	O.D.	I.D.	Part No.	Price
1	41171-000	Pulley, trimcrank with bushing (fiber)	2 3/4"	3/8"	05-02636	**$62.75**
1a	40991-000	Pulley (no slot)	2 3/4"	3/8"	05-02637	**$15.95**
2	41001-008	Pulley w/ bearing (fiber)(41001-010)	2 3/4"	5/16"	05-02638	**$53.75**
3	80421-000	Pulley (fiber)	1 3/4"	1/4"	05-02639	**$10.50**
4	481-609	Pulley (fiber)	1 1/2"	1/4"	05-02640	**$10.85**
5	11200-000	Pulley (fiber)	1 1/8"	1/4"	05-02641	**$14.95**
6	43001-000	Pulley (fiber)	1"	1/4"	05-02642	**$16.99**
7	43061-000	Pulley, stabilizer screw (aluminum)	2 3/4"	3/8"	05-02643	**$101.75**
8	12983-000	Pulley, double groove (aluminum)	2 3/4"	3/8"	05-02644	**$57.75**
9	10080-000	Pulley, trimcrank (aluminum)	2 3/4"	3/8"	05-02645	**$130.75**
10	11008-000	Pulley, adj. screw(alum.) single groove	4"	3/8"	05-02646	**$148.90**
11	12982-000	Pulley, adj. screw (alum.) dbl. groove	4"	3/8"	05-02647	**$110.85**



AIRCRAFT PULLEY OIL

Save the labor of re-oiling the control system every year! Aircraft pulley oil prevents pulley drag and stickiness.
Pully Oil Pint..... P/N 05-04178..... **$26.75**
Pully Oil Kit - Includes: 1 Pint of Pulley Oil, 1 Needle, 1 Each 4.5" Extension, and 1 Each 8" Extension
P/N 05-04179..... **$36.55**
Pully Oiler Kit - Includes: 1 Needle oiler with oil, 1 each 4.5" extension & 1 each 8" extension
P/N 05-04180..... **$12.50**



ALUMINUM PULLEYS

Dimensions of these aluminum pulleys are same as equivalent size of MS20219 and MS20220 Phenolic Pulleys in table.

Part No	Cable Size (in).	OD	Gro-ove Dia	Hub Dia.	Bore Dia.	Width	Price ea
MS20219A1	1/16, 3/32	1.312	1.00	.423	.2500	.438	$30.50
MS20219A3	1/16, 3/32	1.750	1.438	.769	.6250	.438	$54.75
MS20220A1	1/8, 5/32, 3/16	1.755	1.255	.475	.3125	.625	$39.50
MS20220A2	1/8, 5/32, 3/16	3.005	2.505	.115	.3125	.625	$65.75
MS20220A3	1/8, 5/32, 3/16	4.255	3.755	.115	.3125	.625	$86.75
MS20220A4	1/8, 5/32, 3/16	5.505	5.005	.115	.3125	.625	$91.95

PHENOLIC PULLEYS

Part Number	Cable Size (In.)	OD	Groove Dia	Hub Dia.	Bore Dia.	Width	Load Limit (Lbs.)	Price Each
MS24566-1B	1/16,5/64,3/32	1.250	.972	.625	.1900	.297	300	$22.70
MS24566-2B	1/16,5/64,3/32	2.500	2.222	.777	.1900	.297	500	$28.50
MS24566-3B	1/8,5/32,3/16	2.000	1.510	.901	.2500	.484	600	$20.65
MS24566-4B	1/8,5/32,3/16	3.500	3.010	.901	.2500	.484	1200	$26.50
MS20219-1	1/16, 3/32	1.312	1.000	.423	.2500	.438	480	$25.95
MS20219-2	1/16,3/32	1.750	1.438	.423	.2500	.438	480	$24.50
MS20219-3	1/16, 3/32	1.750	1.438	.769	.6250	.438	480	$47.75
MS20219-4	1/16, 3/32	2.625	2.312	.423	.2500	.438	920	$25.50
MS20220-1	1/8,5/32,3/16	1.755	1.255	.475	.3125	.625	500	$26.50
MS20220-2	1/8,5/32,3/16	3.005	2.505	.475	.3125	.625	1680	$31.50
MS20220-3	1/8,5/32,3/16	4.255	3.755	.475	.3125	.625	2500	$36.70
MS20220-4	1/8,5/32,3/16	5.505	5.005	.475	.3125	.625	2500	$47.50
A-223	1/16,3/32,1/8	1.000	.688	---	.2500	.281	---	$8.50
A-224	1/16,3/32,1/8	1.750	1.375	---	.2500	.250	---	$8.50
A-138 (NAS)	1/16,3/32,1/8	1.250	.875	---	.2500	.265	---	$11.50
A-123 (NAS)	1/16,3/32,	2.000	1.500	---	.2500	.265	---	$12.85
A-124 (NAS)	1/16, 3/32	2.500	2.000	---	.2500	.265	---	$13.50
A-130 (NAS)	1/8, 5/32	2.000	1.375	---	.3750	.438	---	$10.50
A-120 (NAS)	5/32, 3/16	3.000	2.375	---	.3750	.438	---	$16.60
BB-128	3/16	2.500	1.875	---	.2500	.440	---	$31.50
BB-120	3/16	3.000	2.375	---	.2500	.440	---	$33.50

MCS378 SERIES PULLEYS FOR CESSNAS







Aircraft Spruce stocks all pulleys required for Cessna single engine aircraft. Our MCS378 series pulleys replace the AN, NAS and S378 series pulleys commonly used on the Cessna aircraft. Pulley kits are available that contain all of the pulleys and cotter pins required for one aircraft.

Approved Replacements for Cessna Pulleys -Cessna Model/Series
120,140,140A,150,A150,A-A150,F150,FA150,FRA150,152,A152,F152,FA152,170,172,FR172,172RG,FP172,P172,R172,175,177,177RG,F177RG,180,182,A182,F182,FR182,R182, TR182,T182,185,A185,188,A188, A A188,T188,205,206,P206,TU206,T206, TP206,U206,207,T207,208,210, P210, T210, T303, 310, T310, 320, 335, 336, 337, F337, P337, FP-337, T337, O-2, 340,401,402,404,411,414,421,425,441,500,501

*Replaces the listed Cessna part numbers in the specific aircraft illustrated parts catalogs. Installer must verify applicability prior to installation.

Model No.*	Replaces Cessna Part No.*	Part No.	Price
MCS378-1	S378-1 and S378-1L	05-03422	$49.55
MCS378-2	S378-2, A124, AN210-2B and NAS383-2	05-03423	$59.75
MCS378-3	S378-3, S378-3L, A130, AN210-3B, BB-208 and NAS383-3	05-03424	$28.85
MCS378-4	S378-4, A114, AN210-4B and NAS383-4	05-03425	$41.50
S378-5	S378-5	05-03426	$68.75



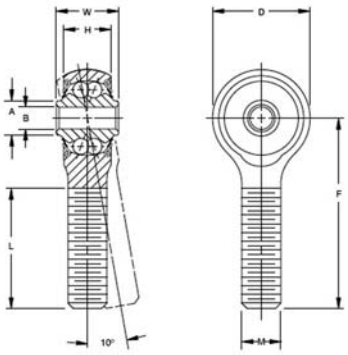
PULLEY KIT FOR CESSNAS

This kit contain all pulleys and cotter pins required to replace all flight control system pulleys in one airplane. Fits many Cessna 172 models. See our website for eligibility list. P/N 05-11977..... **$1,456.00**

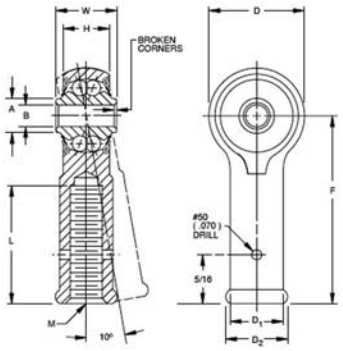
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BEARINGS

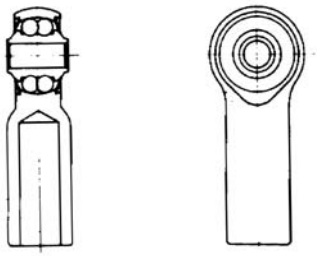
AN 946 MS 21151
MALE THREADED SHANK



AN 951 MS 21153
FEMALE THREADED SHANK



AN948 HOLLOW SHANK
SOLID SHANK
MS21152
MS21150



AP

Bearing No.	MS Dash No.	B Bore +.0000 -.0005 In.	D Outside Diam. +.010 -.010 In.	W Width Inner Ring +.000 -.010 In.	H Width Outer Ring +.010 -.010 In.	A Shoulder Diam. Inner Ring (Approx.) In.	F Bore Center to end of Shank +.010 -.010 In.	G Overall Dimension +.010 -.010 In.	L Thread Length of Shank Hole Depth In.	J Bead or Hex Diam. Across Flats In.	K Shank Diam. +.010 -.010 In.	M Thread Or Drill Size Inches Size	M Thread Or Drill Size Inches Pitch Diam.	Balls No.	Balls Size	Lbs. Approx.	Weight Type Seal	Price Each
MALE THREAD - MS 21151																		
Precision series. Double row, ball, self-aligning. 10° permissible misalignment in either direction. These bearings are manufactured with an internal play of .0004 in. (.010mm) max. Inner and outer raceway surface finish = 8 micro in. AA max. Equipped with PTFE seals. Exposed surfaces except bore, cap, and seals are cadmium plated. Outer shank – 90,000 psi min. tensile strength. Prelubricated (refer to nomenclature page)																		
												10-32	.1697	20	1/8”	.04	Solid Seal	**$59.65**
REP3ML3	-1	.1900	.781	.437	.328	.281	1.375	1.766	.750			LH	.1667					
												10-32	.1697					
REP3MR3	-2	.1900	.781	.437	.328	.281	1.375	1.766	.750			RH	.1667	20	1/8”	.04	Solid Seal	**$59.75**
												3/8”-24	.3479					
REP3M6A	-3	.1900	.969	.500	.407	.304	2.031	2.516	1.313			RH	.3449	24	1/8”	.05	Solid Seal	**$85.75**
												3/8”-24	.3479					
REP3M6-2N	-4	.1900	.781	.437	.328	.281	1.375	1.766	.750			RH	.3449	20	1/8”	.05	Solid Seal	**$54.75**
												3/8”-24	.3479					
REP4M6	-8	.2500	.938	.593	.438	.345	1.875	2.344	1.125			RH	.3449	22	5/32”	.07	Plyo-Seal	**$59.75**
												3/8”-24	.3479					
REP4ML6	-9	.2500	.938	.593	.438	.345	1.875	2.344	1.125			LH	.3449	22	5/32”	.07	Plyo-Seal	**$65.75**
REP5M6	-10	.3125	1.25	.870	.686	.506	2.438	1.563	3/8-24			3/8”-24	.4050			.24		**$88.85**
FEMALE THREAD - MS 21153																		
Precision series. Double row, ball, self-aligning. 10° permissible misalignment in either direction. These bearings are manufactured with an internal play of .0004 in. (.010mm) max. Inner and outer raceway surface finish = 8 micro in. AA max. Equipped with PTFE seals. Exposed surfaces except bore, cap, and seals are cadmium plated. Outer shank – 90,000 psi min. tensile strength. Prelubricated (refer to nomenclature page)																		
												1/4”-28	.2298					
REPB3N*	-1	.1900	.781	.437	.328	.281	1.375	1.766	.750	.438	.375	RH	.2268	20	1/8”	.05	Plyo-Seal	**$72.85**
												5/16”-24	.2884					
REPB3N2***	-2	.1900	.781	.437	.328	.281	1.375	1.766	.750	.438	.438	RH	.2854	20	1/8”	.06	Plyo-Seal	**$70.85**
												1/4”-28						
REP3F4	-3	.1900	.781	.500	.328	.281	1.375	1.766	.750	.438	.375	RH	.2268	20	1/8”	.06	Solid Seal	**$95.75**
												5/16”-24	.2884					
REP4F5	-6	.2500	.938	.593	.438	.345	1.469	1.938	.750	.438	.438	RH	.2854	22	5/32”	.07	Plyo-Seal	**$69.85**
HOLLOW SHANK - MS 21152																		
REP3H5**	-1	.1900	.781	.437	.328	.281	1.375	1.766	.875		.435		.272	20	1/8”	.06	Plyo-Seal	**$79.75**
RE4H6																	Solid Seal	**$83.85**
REP4H6	-2	.2500	.938	.593	.438	.345	1.875	2.344	1.219		.625		.386	22	5/32”	.12	Plyo-Seal	**$83.85**
REP4H8	-3	.2500	.938	.593	.438	.345	1.625	2.093	.875		.625	33/64	.515	22	5/32”	.08	Plyo-Seal	**---**
SOLID SHANK MS21150																		
REP3S7	-1	.19	.791	.437	.328	.281	1375				.430		SOLID	22	5/32”	.07	Plyo-Seal	**$92.75**
REP4S10	-2	.2500	.938	.593	.438	.345	1.875	2.344			.625		SOLID	22	5/32”	.16	Plyo-Seal	**$59.65**

***Dimensionally Same as Heim F34-14**
****Dimensionally Same as Heim F31-14**
*****Dimensionally Same as Heim F35-14**

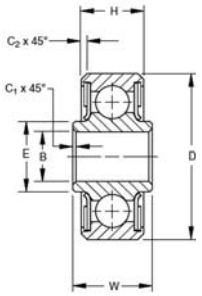
Bearings with the letter “P” in part number are new manufacture, with Plyoseals.
Bearings without the letter “P” in part number are new surplus, with solid metal seals.

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Prices Subject to Change Without Notice

KP SERIES—AN200 / MS27640

Single row, ball, heavy duty. PTFE seals and CRES sealcaps. Exposed surfaces except bore, caps, and seals are cadmium plated. Prelubricated for life. Also offered with CRES 440C material and/or zinc nickel plating per OEM specifications

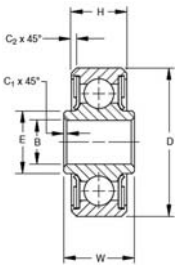


FAFNIR AND MS AFBMA Bearing No.	Bore 27640	B Dia + .0000 - .0005 (in.)	D Outside Inner Ring +.0000 -.0005 (in.)	W Width Outer Ring +.000 -.005 (in.)	H Width Inner +.000 - .005 (in.)	A Shoulder Width Bore Ring (Approx.) (in.)	E Corner Chamfer x 45° Inner Ring O. D. + .015 - .000 (in.)	C Corner Chamfer x 45° Outer Ring +.015 - .000 (in.)	Balls No.	Balls Size	Pure Moment Rating Inch	Moment Constant 1 Lbs.	Weight Pounds Inch (Approx.)	Price Each
KP3L*	-3A	.1900	.6250	.245	.203	.280	.005	.010	10	5/32”	51.8	12.08	.01	**$22.75**
KP3	-3	.1900	.7774	.297	.270	.331	.005	.022	12	5/32”	93.7	10.13	.03	**$24.70**
KP4	-4	.2500	.9014	.484	.335	.390	.005	.032	11	1/4”	130	8.84	.04	**$18.50**
KP5	-5	.3125	1.2500	.558	.375	.469	.015	.032	9	5/16”	335	6.77	.09	**$21.85**
KP6	-6	.3750	1.4375	.620	.469	.591	.015	.032	10	11/32”	580	5.44	.15	**$20.50**
KP8	-8	.5000	1.6875	.620	.500	.768	.015	.044	10	11/32”	1060	4.46	.21	**$52.75**

**** Stainless steel shield (for “Plya-Seals” use KP3A which has same bore and O.D.) Equiv. Thrust Load = Thrust + .8 Radial Load + Moment Constant x Moment in Inch Lbs.***

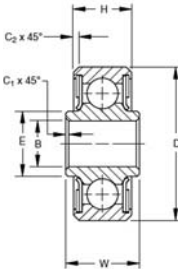
KP-A SERIES—AN201 / MS27641

Single row, ball, deep groove, medium duty. PTFE seals and CRES sealcaps. Exposed surfaces except bore, caps, and seals are cadmium plated. Prelubricated for life. Also offered with CRES 440C material and/or zinc nickel plating per OEM specifications



FAFNIR AND MS AFBMA Bearing No.	Bore 27641	B Dia + .0000 - .0005 (in.)	D Outside Inner Ring +.0000 -.0005 (in.)	W Width Outer Ring +.000 -.005 (in.)	H Width Inner +.000 - .005 (in.)	A Shoulder Dia. Bore Ring (Approx.) (in.)	E Corner Chamfer x 45° Inner Ring O. D. +.015 -.000 (in.)	C Corner Chamfer x 45° Outer Ring +.015 -.000 (in.)	Balls No.	Balls Size	Max Static Non-Brinell Rating Radial Lbs.	Max Static Non-Brinell Rating Thrust Lbs.	Pure Moment Rating Inch-Lbs.	Moment Constant 1 Inch	Weight Pounds (Approx.)	Price Each
KP3A	3	.1900	.6250	.297	.234	.297	.005	.016	10	1/8”	800	600	51.8	12.08	.01	**$16.65**
KP4A	4	.2500	.7500	.281	.219	.380	.005	.016	12	1/8”	1100	900	73.8	10.17	.02	**$17.50**
KP5A	5	.3125	.8125	.297	.234	.415	.015	.016	14	1/8”	1300	1000	100	8.76	.02	**$14.55**
KP6A	6	.3750	.8750	.313	.250	.495	.015	.016	16	1/8”	1400	1100	130	7.68	.03	**$13.80**
KP8A	8	.5000	1.1250	.375	.313	.616	.015	.016	16	5/32”	2200	1700	250	6.14	.05	**$24.60**
EW1/2	NORMA	.5040	.9690	.250	.250										.03	----

KS SERIES— MS27645

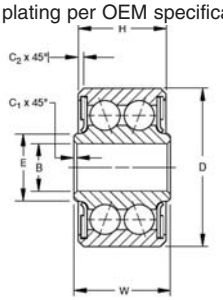


FAFNIR AND MS AFBMA Bearing No.	Bore 27645	B Diameter + .0000 - .0005 (in.)	D Outside Inner Ring +.0000 -.0005 (in.)	W Width Outer Ring +.000 - .005 (in.)	H Width Inner +.000 - .005 (in.)	A Shoulder Width Bore Ring (Approx.) (in.)	E Corner Chamfer x 45° Inner Ring O.D. +.015 -.000 (in.)	C Corner Chamfer x 45° Outer Ring +.015 -.000 (in.)	F (Approx.)	Balls No.	Balls Size	Maximum Static Rating Radial Lbs.	Maximum Static Rating Thrust Lbs.	Weight Pounds (Approx.)	Price Each
KSP3L	3A	.1900	.6250	.245	.203	.257	.005	.016		13	3/32”	400	100	.01	**$17.90**
KSP3	3	.1900	.7774	.297	.270	.342	.005	.022	.275	12	1/8”	800	200	.03	**$23.50**
KSP4	4	.2500	.9014	.484	.335	.400	.005	.032	.408	12	5/32”	1100	300	.04	**$19.50**
KSP5	5	.3125	1.2500	.558	.375	.562	.015	.032	.408	13	3/16”	1400	300	.10	**$36.95**
*KS6A	6A	.3750	.8750	.313	.250	.475	.016	.016	.277	15	1/8”	1000	200	.03	**$21.95**

**** NOTE: These bearings are self-aligning for 10° in either direction except for KS6A (not AN200) which is self-aligning for 8° in either direction.***

DP SERIES—AN207 / MS27644

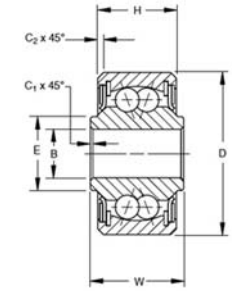
Double row, ball, light and heavy duty. PTFE seals and CRES sealcaps. Exposed surfaces except bore, caps and seals are cadmium plated. Prelubricated for life. For use where high moment rigidity is required, DPP-W series only. Also offered with CRES 440C material and/or zinc nickel plating per OEM specifications



FAFNIR Bearing No.	MS 27644	B Bore +.0000 -.0005 (in.)	D Dia. +.0000 -.005 (in.)	W Outside Inner Ring +.000 -.005 (in.)	H Width Outer Ring +.000 (Approx) (in.)	A Shoulder Width Inner Ring (Approx.) (in.)	E Corner Chamfer x 45° Diameter Bore +.015 -.000 (in.)	C Corner Chamfer x 45° Inner Ring O. D. +.015 -.000 (in.)	Balls No.	Balls Size	Maximum Static Non-Brinell Radial Lbs.	Maximum Static Non-Brinell Thrust Lbs.	Weight Pounds (Approx.)	Price Each
DPP3	-3	.1900	.7774	.495	.473	.302	.005	.02	20	5/32”	2500	1700	.04	**$39.80**
DPP4	-4	.2500	.9014	.620	.491	.410	.005	.032	22	5/32”	3000	1800	.06	**$35.50**
DPP5	-5	.3125	1.2500	.745	.687	.469	.015	.032	20	1/4”	6900	4200	.17	**$58.80**
DPP6	-6	.3750	1.4375	.870	.794	.551	.015	.032	18	5/16”	9700	5800	.26	**---**
DPP8	-8	.5000	1.6875	.932	.856	.735	.015	.044	20	11/32”	13000	7800	.38	**$71.25**

DSP SERIES—AN206 / MS27643

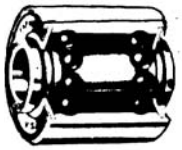
Double row, ball, self-aligning, heavy duty. PTFE seals and CRES sealcaps. Exposed surfaces except bore, caps, and seals are cadmium plated. Prelubricated for life. Also offered with CRES 440C material and/or zinc nickel plating per OEM specifications

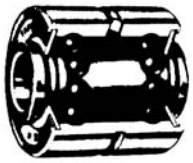


FAFNIR Bearing No.	MS 27643	B Bore +.0000 -.0005 (in.)	D Dia. +.0000 -.005 (in.)	W Outside Inner Ring +.000 -.005 (in.)	H Width Outer Ring +.000 (Approx.) (in.)	A Shoulder Width Inner Ring (Approx.) (in.)	E Corner Chamfer x 45° Dia. Bore +.015 -.000 In.	C Corner Chamfer x 45° Inner Ring O. D. +.015 -.000 In.	Balls No.	Balls Size	Maximum Static Non-Brinell Radial Lbs.	Maximum Static Non-Brinell Thrust Lbs.	Weight Pounds (Approx.)	Price Each
DSP3	-3	.1900	.7774	.500	.392	.304	.005	.022	24	1/8”	1420	200	.04	**$37.85**
DSP4	-4	.2500	.9014	.687	.464	.430	.005	.032	30	1/8”	1780	300	.06	**$41.50**
DSP5	-5	.3125	1.2500	.812	.656	.515	.015	.032	28	3/16”	3740	600	.16	**$41.65**
DSP6	-6	.3750	1.4375	.937	.750	.564	.015	.032	28	7/32”	5100	800	.24	**$63.75**
DSP8	-8	.5000	1.6875	1.000	.812	.775	.015	.044	30	1/4”	7120	1000	.36	**$178.65**

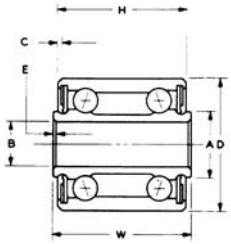
BEARINGS REGREASERS – GREASE FITTINGS

DW SERIES BEARINGS (MS 27647)





- Extra Wide, Double Row, Ball
- Equipped with removable Plya-Seals
- Dimensionally interchangeable with the DW series, the GDW series is lubricatable through holes and a groove in the outer ring.



FAFNIR AND MS AFB MA Bearing No.	Bore 27647	B Diameter +.0000 - .0005 Inches	D Outside Inner Ring +.0000 -.0005 Inches	W Width Outer Ring +.000 -.005 Inches	H Width Inner +.000 - .005 Inches	A Shoulder Width Bore Ring (Approx.) Inches	E Corner Chamfer x 45° Inner Ring O.D. +.015 -.000 Inches	C Corner Chamfer x 45° Outer Ring +.015 - .000 Inches	Balls No.	Balls Size	Pure Moment Rating Inch-Lbs.	Moment Constant 1 Inch	Weight Pounds (Approx.)	Price Each
† DW4K2*	-4A	.2500	.6250	.562	.500	.344	.016	.016	16	3/32"	121	3.49	.025	**$35.45**
DW4K*	-4	.2500	.7500	.875	.750	.435	.005	.016	14	9/64"	365	2.27	.04	**$32.55**
DW5	-5	.3125	.8750	.9375	.8125	.472	.005	.016	26	9/64"	830	1.85	.07	**$41.90**
DW6	-6	.3750	1.0625	1.1875	1.0625	.576	.005	.016	24	3/16"	1830	1.38	.12	**$69.85**
DW8	-8	.5000	1.4375	1.5000	1.3750	.715	.005	.032	22	17/64"	4330	1.07	.29	**$71.25**

EQUIVALENT THRUST LOAD = THRUST + .6 RADIAL LOAD + MOMENT CONSTANT x MOMENT IN INCH-LBS.
Bearing stamped DW4K. †Bearing stamped DW4K2.
These bearings are not to be used as track rollers, cam follower rolls and the like.
*** RETAINER TYPE***

AP

SINGLE ROW, BALL, DOUBLE SEATS


KP3AR11-2


K3L3


K3L2

FAFNIR AND AFBMA Bearing Number	B Bore +.0000 -.0005 Inches	D Outside Diameter +.000 -.002 Inches	W Width InnerRing +.000 -.005 Inches	H Width OuterRing +.000 -.005 Inches	A Shoulder Diameter Inner Ring (Approx.) Inches	E Corner Chamfer x 45° Inner Ring Bore +.015 -.000 Inches	C Corner Outer Ring O.D. Inches	R Radius Outside Diameter Contour	Balls No.	Balls Size	Maximum Safe Working Load Radial Lbs.	Weight Pounds (Approx)	Price Each
K3L3	.1900	.635	.245	.203	.280	.005	.020 Rad.	.550	10	1/8"	200	.01	---
								.500					
K3LR48	.1900	.687	.245	.203	.280	.005	.020 Rad.	3.015	11	5/32"	200	.20	---
							.015 Rad.	2.985					
KP4R16	.2500	.901	.484	.335	.390	.005	.005 x 45°	1.000	11	5/32"	400	.04	**$139.75**
							.015 x 45°	1.000					
KP4R16-2	.2500	1.000	.390	.335	.390	.005	.015 x 45°	.990	11	5/32"	500	.06	**$49.90**

The maximum safe working load is that radial load to obtain 100,000 feet peripheral travel life.

GREASE FITTINGS

Surface Check fittings of the MS15000 series have spring-loaded ball check in the tip. Conform to MIL-F-3541.


MS15001-1 MS15001-4 MS15003-5 MS15003-6 AS15002-1P AS15003-5P

MS No.	AS No.	Price	Surplus No.	Price	Thread	Shank L	Eff. Thread L	Overall L	Tip Angle
MS15001-1	AS15001-1P	**$3.65**	04-02325	**$0.22**	1/4-28 Tapered	3/16"	.109	1/2"	0°
MS15001-2	AS15001-2P	**$4.50**	04-02326	**$0.70**	1/4-28 Tapered	5/8"	.20	31/32"	0°
MS15001-3	AS15001-3P	**$5.35**	04-02327	**$0.72**	1/4-28 Tapered	13/64"	.11	13/16"	45°
MS15001-4	AS15001-4P	**$4.75**	04-02313	**$0.56**	1/4-28 Tapered	3/16"	.109	1/2"	90°
MS15002-1	AS15002-1P	**$3.35**	04-02328	**$0.45**	1/4-28 Tapered	5/32"	.07	33/64"	0°
MS15002-3	AS15002-3P	**$3.35**	04-02329	**$1.95**	1/4-28 Tapered	1/8"	.07	39/64"	45°
MS15003-1	AS15003-1P	**$4.80**	04-02330	**$0.36**	1/8 NPT	19/64"	.19	11/16"	0°
MS15003-2	AS15003-2P	**$6.00**	04-02331	**$1.25**	1/8 NPT	25/32"	.19	1-1/4"	0°
MS15003-3	AS15003-3P	**$5.70**	04-02332	**$1.35**	1/8 NPT	19/64"	.19	29/32"	30°
MS15003-4	AS15003-4P	**$5.35**	04-02333	**$0.86**	1/8 NPT	19/64"	.19	57/642"	45°
MS15003-5	AS15003-5P	**$4.55**	04-02315	**$0.67**	1/8 NPT	9/32"	.188	31/32"	65°
MS15003-6	AS15003-6P	**$4.70**	04-02314	**$0.83**	1/8 NPT	9/32"	.188	15/16"	90°



ACS BEARING REGREASERS

The ACS bearing regreasers restore bearings, rod ends and pulleys to like-new condition. O-ring in base of regreaser provides positive seal when bearing is secured by the threaded center post. Grease, entering under pressure at the grease fitting, is forced to flow through the bearing, flushing out the old grease and dirt, and recharging the bearing with fresh grease. Available in five sizes. Non-Anodized.

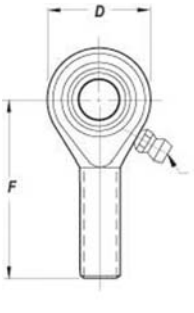
Bearing Regreaser No.	Part No.	Bearing Size O.D.	Bearing Size Bore	Price Each
3	10650-3	3/4"	3/16"	**$16.65**
4	10650-4	1"	1/4"	**$19.85**
5	10650-5	1-1/4"	5/16"	**$20.80**
6	10650-6	1-1/2"	3/8"	**$21.75**
8	10650-8	1-1/2"	1/2"	**$25.90**
Complete Set of Five - P/N 12-11500				**$103.95**

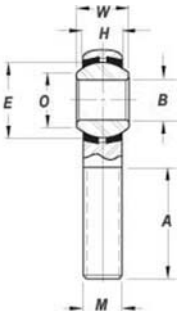


LUBRICAPS

These bright red Lubricaps are made of molded rubber and are used as grease fitting covers. The internal lip holds the cap in place and keeps out dirt, sand, and fluids. M-24529 ***(20% discount for 100/ each)*** P/N 04-01940 .....**$0.48**

Prices Subject to Change Without Notice





HEIM ROD ENDS MALE THREADED
M AND HM SERIES



Rod Ends male threaded (HM M Series)
- Outer Member: Aircraft Quality Carbon Steel, Magnetic particle inspected, with protective coating for corrosion resistance.
- Ball: 52100 Alloy Steel, heat treated, chrome plated.
- Inserts: Brass, 16 size has one piece carbon steel race.

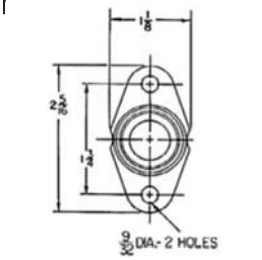
Heim "M" and "MD" series bearings are now manufactured in magnafluxed version only. As old stock is depleted, magnafluxed equivalents will be furnished as substitutes at current (higher) prices unless otherwise requested on the order.

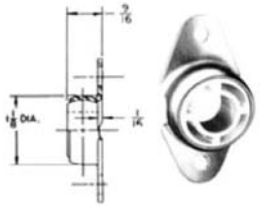
"L" in rod end number designates left hand thread. In this series, the "D" in rod end number (MD35 14) denotes drilled hole in the shank. Add suffix "G" to indicate lubricator is required. Example: HM-SG. Add suffix "FG" lo indicate flush type lubricator is required. Example: M34-14FG. Lubricator (G) (FG) available with minimum qty. required. Please Call for Pricing.

Rod End No.	Equiv. Spherco No.	DIMENSIONS											Max Static Radial Load in Pounds Aprox.	Approx. Weight in Pounds	Price Each
		Bore	ball Width	Housing Width	Ball Flat Diam.	Head Diam.	Length to center of ball	Overall Length	Other Dimensions						
		B	W	H	O	D	F	G	A	N	Ball Diam.	M			
		+.0015 -.0005	+.000 -.005	+.005 -.005		+.010 -.010	+.010 -.010	+.010 -.010	Min	Drill Diam.		Class 3A			
M34-14M	NONE	.1900	.437	.328	.273	.750	1.560	1.935	1.000		33/64	1/4"-28	1,695	.05	**$32.55**
MD35-14M	NONE	.1900	.437	.328	.273	.875	1.375	1.812	.750	#33	33/64	5/16"-24	2,184	.07	**$51.75**
MDL35-14M										.113		UNF			**$24.20**
MD36-14M	NONE	.1900	.437	.328	.273	.750	1.375	1.750	.750	#33	33/64	3/8"-24	2,848	.07	**$55.75**
MDL36-14M										.113		UNF			**$41.25**
MD36-16M	NONE	.1900	.500	.375	.321	.812	1.812	2.219	1.062	#29	19/32	3/8"-24	2,769	.08	**$74.90**
MDL36-16										.136		UNF			**---**
M44-14	NONE	.2500	.437	.304	.354	.812	1.562	1.968	1.000		9/16	1/4"-28	1,695	.06	**$65.75**
ML44-14												UNF			**---**
MD46-15	NONE	.2500	.484	.335	.395	.875	2.312	2.750	1.500	#29	5/8	3/8"-24	3,151	.10	**$54.90**
MDL46-16										.159		UNF			**---**
HM-2M	NONE	.1250	.250	.187	.187	.469	.937	1.172	.500		5/16	6-32	452	.02	**$54.95**
HML-2M												UNC			**$19.40**
HM-2AM	NONE	.1562	.281	.219	.249	.562	1.125	1.406	.625		3/8	8-32	666	.02	**---**
HML-2AM												UNC			**---**
HM-3M	TRE-3	.1900	.312	.250	.306	.625	1.250	1.563	.750		7/16	10-32	910	.03	**$28.50**
HML-3M	TREL-3											UNF			**$210.95**
HM-4M	TRE-4	.2500	.375	.281	.355	.750	1.562	1.937	1.000		33/64	1/4"-28	1,695	.05	**$35.90**
HML-4M	TREL-4											UNF			**$29.50**
HM-5M	TRE-5	.3125	.437	.344	.447	.875	1.875	2.312	1.250	#33	5/8	5/16"-24	2,205	.08	**$39.90**
HM-6M	TRE-6	.3750	.500	.406	.517	1.000	1.938	2.438	1.250	#21	23/32	3/8"-24	3,172	.11	**$35.75**
HML-6M	TREL-6									.159		UNF			**$41.85**
HM-7M	TRE-7	.4375	.562	.437	.586	1.125	2.125	2.688	1.375	#21	13/16	7/16"-20	4,633	.16	**---**
HML-7M	TREL-7									.159		UNF			**---**
HM-8M	TRE-8	.5000	.625	.500	.698	1.312	2.438	3.094	1.500	#3	15/16	1/2"-20	5,876	.24	**$99.65**
HML-8M	TREL-8									.213		UNF			**$209.95**

HML-8M New Surplus.....P/N 04-02269.....**$34.50**

UNF= Universal Fine, UN=Universal Coarse

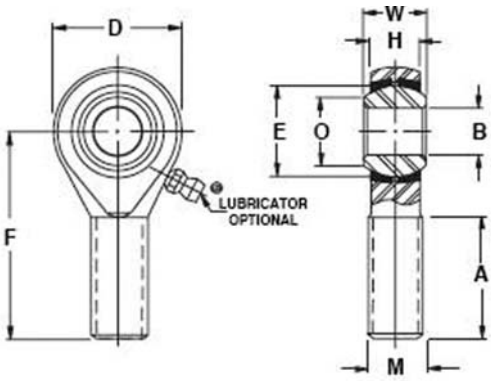




TRIANGLE MFG. BEARINGS

Manufactured by Triangle Mfg. Co., these bearings are spherical on the outside and are contained in a flanged, stamped metal cage, so they provide sliding, rotating, and pivoting motion. The bearings are available in nylon, bronze, or iron as shown in the table below. The FMN10 is used in the wing roots and on the torque tubes inside the fuselage of the Cozy Mark IV.

Part No.	I.D.	Bearing Material	Price Each	Part No.	I.D.	Bearing Material	Price Each
FMN4	1/4"	Nylon	**$1.39**	FM1508P	1/2"	Iron	**$1.44**
FMN5	5/16"	Nylon	**$1.50**	FM1408P	1/2"	Bronze	**$2.90**
FMN6	3/8"	Nylon	**$0.86**	FMN10	5/8"	Nylon	**$0.74**
FM1406P	3/8"	Bronze	**$4.50**	FM1510P	5/8"	Iron	**$1.89**
FMN7	7/16"	Nylon	**$1.61**	FM1410P	5/8"	Bronze	**$3.50**
FMN8	1/2"	Nylon	**$0.92**	FMN12	3/4"	Nylon	**$0.85**
				FM1512P	3/4"	Iron	**$1.10**



ROD END MALE THREADED
HMX EXTRA CAPACITY SERIES



SPECIFICATIONS:

Outer Member: SAE 4130 steel heat treated to 175,000 PSI Cadmium Plated.

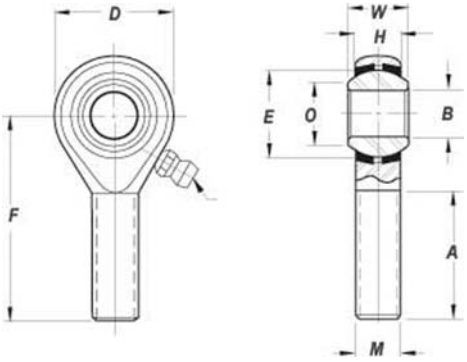
Ball: SAE 52100 Steel, Heat Treated, Chrome Plated.

Inserts: Aluminum Bronze

"L" in rod end number designates left hand thread.
Add letter 'M' to dash number for magnafluxed rod ends.
This series is equipped with lubricators as shown.
Add suffix "FG" to indicate flush type lubricator is required.
Example: HMX-4FG. Additional costs will apply.
Note: See Aurora Bearings page for equivalents to Heim HM & HF Series.

Rod End Number	Equiv Spherco Number	DIMENSIONS											Maximum Static Load in Lbs. approx		Approx. Weight in Lbs.	Price Ea.
		Bore	Ball Width	Housing Width	Ball Flat Dia.	Head Dia.	Length to Cnte of Ball	Over-All Length	Other Dimensions							
		B	W	H	O	D	F	G	A	N		M				
		+.0015 -.0005	+.000 -.005	+.005 -.005		+.010 -.010	+.010 -.010	+.010 -.010	Min.	Drill Dia.	Ball Dia.	Class 3A	Radial	Axial		
HMX-4G	ARE 4-20	.2500	.375	.281	.355	.750	1.560	1.937	1.000	#33	33/64	5/16"-24	3,260	1,710	.06	---
HMXL-4G	AREL-20									.113		UNF				---
HMX-5G	ARE- 5-20	.3125	.437	.344	.447	.875	1.375	2.312	1.250	#21	5/8	3/8"-24	4,920	2,376	.09	**$51.60**
												UNF				
HMX-6G	ARE 6-20	.3750	.500	.406	.517	1.000	1.375	2.438	1.250	#21	23/32	7/16"-20	7,240	2,946	.13	**$21.50**
HMX-7G	ARE 7-20	.4375	.562	.437	.586	1.125	1.812	2.688	1.375	#21	13/16	1/2"-20	7,620	3,367	.18	**$218.95**
HMXL-7G	AREL 7-20									.159		UNF				**$891.00**
HMX-8G	ARE 8-20	.5000	.625	.500	.698	1.312	1.562	3.094	1.500	#3	15/16	5/8"-18	11,920	4,074	.30	---
HMXL-8G	AREL 8-20									.213		UNF				---

New Surplus HMX-8G ..... P/N 06-01661 ..... **$67.85**



HME SERIES



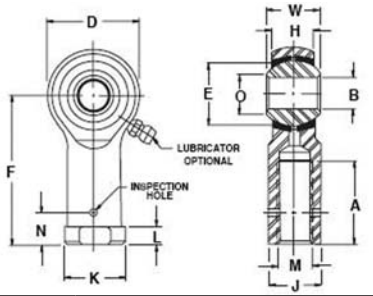
SPECIFICATIONS:
Outer Member: Carbon steel-protective coated for corrosion resistance.
Ball: Carbon steel-heat treated, chrome plated.
Inserts: Aluminum.
Liner: Self lubricating UNIFLON.

"L" in rod end number designates left hand thread.
"R" in part number indicates woven uniflon. Example: HMR-3.
*Uniflon® — The Heim Universal Corporation's trademark for teflon® lined rod ends and spherical bearings.

Part No.	Thread Type	SEE DIAGRAM ABOVE									Price
		B	W	H	D	F	A	Thread Size	E	O	
HME-3M	Right Hand	.1900	.312	.250	.625	1.250	.750	.1900-32	.437	.306	-
HMLE-3M	Left Hand	.1900	.312	.250	.625	1.25	.750	.1900-32	.437	.306	-
HME-4M	Right Hand	.2500	.375	.281	.750	1.562	1.000	.2500-28	.515	.353	**$49.95**
HMLE-4M	Left Hand	.2500	.375	.281	.750	1.562	1.000	.2500-28	.515	.353	-
HME-5M	Right Hand	.3125	.437	.344	.875	1.875	1.250	.3125-24	.625	.447	-
HMLE-5M	Left Hand	.3125	.437	.344	.875	1.875	1.250	.3125-24	.625	.447	**$136.95**
HME-6M	Right Hand	.3750	.500	406	1.000	1.938	1.250	.3750-24	.718	.516	-
HMLE-6M	Left Hand	.3750	.500	406	1.000	1.938	1.250	.3750-24	.718	.516	-
HME-7M	Right Hand	.4375	.562	.437	1.125	2.125	1.375	.4375-20	.812	.586	-
HMLE-7M	Left Hand	.4375	.562	.437	1.125	2.125	1.375	.4375-20	.812	.586	-
HME-8M	Right Hand	.5000	.625	.500	1.312	2.438	1.500	.5000-20	.937	.698	-
HMLE-8M	Left Hand	.5000	.625	.500	1.312	2.438	1.500	.5000-20	.937	.698	-

Prices Subject to Change Without Notice

ROD ENDS FEMALE THREADED (F & HF SERIES)



SPECIFICATIONS:

Outer Member: Aircraft Quality Steel, Cadmium Plated.

Ball: SAE 52100 Steel.

Inserts: Naval Bronze

"L" in rod end number designates left hand thread. Add suffix "G" to indicate lubricator is required. Example: F35-14G. Add suffix "FG" lo indicate flush type lubricator is required. Example: HF-4FG. Add $3.00 to price for lubricator (G) (FG).

Note: Standard Bearings Furnished Without Inspection Hole. If Hole Needed, Add "M" to P/N & At Higher Cost.



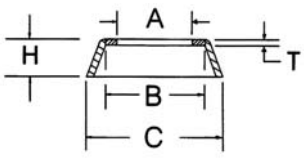
PN	Bore	Ball Width	Housing Width	Head Dia.	Length to ctr. of ball	Thread Length	Thread Size	Ball Di-ameter	Ball Flat Diam-eter	Other Dimensions			Max Rad. Load	Wgt.	Price
	B	W	H	D	F	A	M	E	O	K	N	L			
	+.0015 -.0005	+.000 -.005	+.005 -.005	+.010 -.010	+.010 -.010	+.062 -.031	UNF-3B	REF	REF	+.010 -.010	+.020 -.020	+.010 -.010			
FL34-14M	.1900	.437	.328	.750	1.375	.750	.2500-28	.515	.273	.468	.312	.187	2850	.06	**$49.75**
F34-14M	.1900	.437	.328	.750	1.375	.750	.2500-28	.515	.273	.468	.312	.187	2850	.06	**$34.50**
F347-14M	.1900	.437	.328	.750	1.062	.437	.2500-28	.515	.273	.375	-	-	2850	.05	**---**
F34-16M	.1900	.500	.375	.812	1.375	.750	.2500-28	.593	.321	.468	.312	.187	2750	.08	**$39.85**
F35-14M	.1900	.437	.328	.750	1.375	.750	.3125-24	.515	.0273	.500	.406	.187	2850	.07	**---**
FL35-14M	.1900	.437	.328	.750	1.375	.750	.3125-24	.515	.273	.500	.406	.187	2850	.07	**$211.95**
F44-14M	.2500	.437	.304	.812	1.375	.750	.2500-28	.562	.354	.468	.312	.187	2850	.07	**$95.80**
FL44-14M	.2500	.437	.304	.812	1.375	.750	.2500-28	.562	.354	.468	.312	.187	2850	.07	**$46.70**
F45-19M	.250	.593	.438	.938	1.469	.750	.3125-24	.687	.347	.500	.406	.187	3700	.11	**$57.65**
HF-3M	.1900	.312	.250	.625	1.062	.562	.1900-32	.437	.306	.406	-	.187	1850	.03	**$33.50**
HFL-3M	.1900	.312	.250	.625	1.062	.562	.1900-32	.437	.306	.406	-	.187	1850	.03	**---**
HF-4M	.2500	.375	.281	.750	1.312	.750	.2500-28	.515	.353	.468.	-	.187	2700	.05	**$36.55**
HFL-4M	.2500	.375	.281	.750	1.312	.750	.2500-28	.515	.353	.468.	-	.187	2700	.05	**$36.50**
HF-5M	.3125	.437	.344	.875	1.375	.750	.3125-24	.625	.447	.500	-	.187	3350	.08	**$37.50**
HFL-5M	.3125	.437	.344	.875	1.375	.750	.3125-24	.625	.447	.500	-	.187	3350	.08	**---**
HFL-2A	.1562	.281	.219	.562	.875	.375	.1640-32	-	.249	-	-	-	1700	.02	**---**

New Surplus HFL-3M Bearing..... P/N 04-03454..... **$34.75**
New Surplus HFX-5G Bearing..... P/N 04-03452..... **$33.50**
New Surplus HFX-8G Bearing..... P/N 04-03453..... **$48.60**

****F34-14 Dimensionally the same as Fafnir REPB3N. **F35-14 Dimensionally the same as Fafnir REPB3N2***

SEALS-IT ROD END SEALS





Protect the spherical bearing of rod ends. This patented design features a neoprene rubber seal bonded directly to an aircraft quality washer. The seal encapsulates the bearing and flexes accordingly with any change in angularity. This provides unprecedented protection from dirt and other types of contamination which may severely shorten the life of these important components.

The rubber is engineered for wide range of temperature variation and is impervious to gasoline, oils, and most other common fluids. The steel washer is plated for protection from corrosion.

Size	A	B	C	H	T	Part No.	Price
3/16	.200	.326	.442	.096	.020	05-01434	---
1/4	.257	.375	.565	.125	.025	05-2500	**$2.45**
5/16	.325	.450	.710	.200	.047	05-3125	**$2.45**
3/8	.386	.525	.775	.220	.047	05-3750	**$2.45**
7/16	.445	.610	.910	.250	.047	05-4375	**$2.45**
1/2	.515	.710	1.125	.250	.047	05-5001	**$2.45**
5/8	.638	.900	1.250	.250	.047	05-6250	**$3.05**
3/4	.763	1.00	1.375	.375	.047	05-7500	**$3.15**

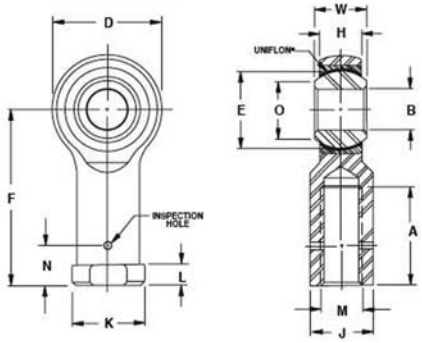
UNIFLON LINED



HFE M SERIES

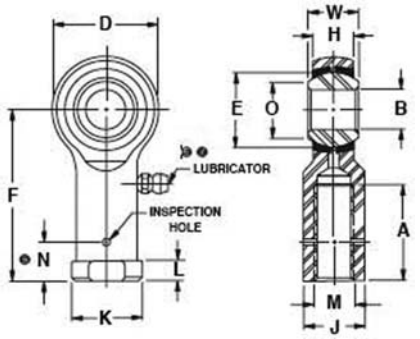
SPECIFICATIONS:
Outer Member: Carbon steel, magnetic particle inspected, with protective coating for corrosion resistance.
Ball: 52100 Alloy steel, heat treated, chrome plated.
Race: Aluminum.
Liner: Self lubricating UNIFLON.

The letter "L" indicates Left Hand thread.



Rod End No.	Dimensions														Max. Static Radial Load (lbs.)	Approx. Wt. (lbs.)	Price Each
	Bore	Ball Width	Housing Width	Ball Flat Dia.	Head Dia.	Length to ctr. of ball	Overall Length	Other Dimensions									
	B	W	H	O	D	F	G	A	K	J	N	L		M			
	+.0015 -.0005	+.000 -.005	+.005 -.005		+.010 -.010	+.010 -.010	+.010 -.010	Min	+.010 -.010	+.010 -.010	+.005 -.005	+.010 -.010	Ball Diam.	Class 3B			
HFE-3M														10-32 UNF			**$99.75**
HFLE-3M	.1900	.312	.250	.306	.625	1.062	1.375	.562	.406	.312	.312	.187	.437		865	.03	---
HFE-4M			.											1/4"-28 UNF			**$59.75**
HFLE-4M	.2500	.375	.281	.355	.750	1.312	1.687	.750	.468	.375	.312	.187	.515		1,550	.05	**$99.50**
HFE-5M														5/16"-24 UNF			---
HFLE-5M	.3125	.437	.344	.447	.875	1.375	1.812	.750	.500	.437	.406	.187	.625		2,080	.08	---
HFE-6M														3/8"-24 UNF			---
HFLE-6M	.3750	.500	.406	.517	1.000	1.625	2.125	.937	.687	.562	.469	.250	.718		2,950	.12	---
HFE-7M														7/16"-20 UNF			---
HFLE-7M	.4375	.562	.437	.586	1.125	1.812	2.375	1.062	.750	.625	.531	.250	.812		3,160	.17	---
HFE-8M														1/2"-20 UNF			**$87.75**
HFLE-8M	.5000	.625	.500	.698	1.312	2.125	2.781	1.187	.875	.750	.594	.250	.937		4,925	.26	---

ROD ENDS FEMALE THREADED



HFX EXTRA CAPACITY SERIES

SPECIFICATIONS:
Outer Member: SAE 4130 steel heat treated to 175,000 PSI Cadmium Plated.

Ball: SAE 52100 Steel, Heat Treated, Chrome Plated.
Inserts: Aluminum Bronze.
"L" in rod end number indicates left hand thread.
"G" in the rod end number indicates lubricator.
All rod ends in this series are magnafluxed, and are stamped with the letter "M".
This series is equipped with lubricators as shown.
Add suffix "FG" to indicate flush type lubricator is required. Example: HFX-4FG.

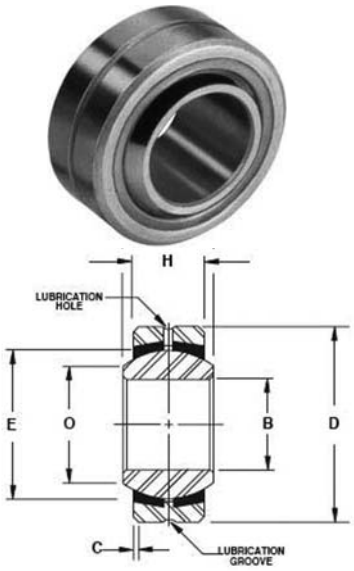
Lubricator (G) (FG) available with minimum qty. required. Please call for pricing.



Rod End No.	Dimensions														Max. Static Radial Load (lbs.)		Approx. Weight (Lbs.)	Price Each
	Bore	Ball Width	Housing Width	Ball Flat Dia.	Head Dia.	Length to ctr. of ball	Overall Length	Other Dimensions										
	B	W	H	O	D	F	G	A	K	J	N	L		M				
	+.0015 -.0005	+.000 -.005	+.005 -.005		+.010 -.010	+.010 -.010	+.010 -.010	Min	+.010 -.010	+.010 -.010	+.005 -.005	+.010 -.010	Ball Diam.	Class 3B	w/ lubri-cator	w/o lubri-cator		
HFX-4G	.2500	.375	.281	.355	.750	1.312	1.687	.750	.468	.375	.312	.187	.515	1/4"-28	3,260	6,680	.06	**$19.95**
HFX-5G	.3125	.437	.344	.447	.875	1.375	1.812	.750	.500	.437	.406	.187	5/8	5/16"-24 UNF	4,920	8,410	.08	---
HFXL-5G																		---
HFXL-6G	.3750	.500	.406	.517	1.000	1.625	2.125	.937	.687	.562	.469	.250	23/32	3/8"-24	7,240	11,160	.14	---
													UNF					
HFX-7G	.4375	.562	.437	.586	1.125	1.812	2.375	1.062	.750	.625	.531	.250	13/16	7/16"-20	7,620	13,660	.18	---
HFXL-7G														UNF				---
HFX-8G	.5000	.625	.500	.698	1.312	2.125	2.781	1.187	.875	.750	.594	.250	15/16	1/2"-20	11,920	19,340	.29	---
HFXL-8G														UNC				---

Prices Subject to Change Without Notice

SPHERICAL BEARINGS
SERIES LS, LSS, LHA



SPECIFICATIONS:

LS SERIES

Outer Member: Carbon Steel, with protective coating for corrosion resistance on all surfaces exposed after installation.
Ball: SAE 52100 Steel, Heat Treated.
Inserts: Brass.

LSS SERIES

Outer Member: 4130 or 4340 Alloy steel, heat treated, with protective coating for corrosion resistance on all surfaces exposed after installation.
Ball: 52100 Alloy steel, heat treated, chrome plated.
Inserts: Copper alloy

LHA SERIES

Outer Member: 4130 or 4340 Alloy steel, heat treated, with protective coating for corrosion resistance on all surfaces exposed after installation.
Ball: 52100 Alloy steel, heat treated, chrome plated.

Spherical Bearing No.	Dimensions							Max Static Radial load In Pounds Approx.	Approx. Weight in Pounds	Price Each
	Bore	Outside Diam.	Ball Width	Housing Width	Chamfer	Ball Diameter	Ball Flat Diameter			
	B +.0000 -.0005	D +.0000 -.0005	W +.000 -.005	H +.000 -.005	C +.000 -.005	E REF	O REF			
LS-3	.1900	.6250	.281	.187	.016	.406	.293	2960	.02	**$27.50**
LS-4	.2500	.7500	.375	.281	.016	.515	.354	5245	.04	**$27.50**
LS-5	.3125	.8750	.437	.313	.016	.625	.447	6550	.05	**$34.50**
LS-6	.3750	1.0000	.500	.375	.016	.718	.517	8605	.08	**$27.75**
LS-8	.5000	1.3125	.687	.531	.044	.937	.637	15600	.18	**---**
LSS-2	.1650	.4687	.250	.187	.235	.020	11/32	2,000	.01	**---**
LSS-3	.1900	.5625	.281	.218	.020	.406	.293	2750	.02	**$39.85**
LSS-4	.2500	.6562	.343	.250	.022	.500	.364	4200	.02	**$46.65**
LSS-5	.3125	.7500	.375	.281	.022	.562	.419	5800	.03	**---**
LSS-6	.3750	.8125	.406	.312	.032	.625	.475	7150	.04	**$43.50**
LSS-8	.5000	1.000	.500	.390	.032	.781	.600	11200	.07	**$23.70**
LHA-2	.1650	.4687	.250	.187	.020	.343	.235	4400	.01	**$28.50**
LHA-3	.1900	.5625	.281	.218	.020	.406	.293	6480	.02	**$48.65**
LHA-4	.2500	.6562	.343	.250	.022	.500	.364	10000	.02	**$48.65**
LHA-6	.3750	.8125	.406	.312	.032	.625	.475	18750	.04	**---**
LHA-8	.5000	1.000	.500	.390	.600	.032	25/32	26,900	.07	**---**

The allowable static axial loads are one-fourth of radial loads given above.



TIMKEN WHEEL BEARINGS

Part No.	Description	Price
04-02054	Bearing Cup 13830	**$53.75**
04-02055	Bearing Cup LM29710	**$14.50**
04-02164	Bearing Cone 07100	**$27.50**
04-02165	Bearing Cup 07196	**$12.70**
04-02166	Bearing Cup LL217810	**$349.00**
04-02167	Bearing LL217849	**$243.95**
04-02168	Bearing Cup LM67010	**$8.95**
04-02169	Bearing Cone LM67048	**$16.95**
04-02229	Bearing 07204	**$29.95**
04-02230	Bearing 08118	**$94.75**
04-02231	Bearing 19150	**$71.75**
05-29749	Bearing LM29749	**$65.75**
06-00607	Bearing A2126	**$21.75**
06-00642	Cup / Race LM11910	**$5.90**
06-03300	Azusa 6" Alum. Timken Bearing	**$59.50**
04-03400	Azusa 6" Alum. 3/4 Timken Bearing	**$156.75**
08125	Bearing 08125	**$57.90**
8231	Bearing Cup 08231	**$22.85**
13286	Bearing Cone A-4050	**$61.75**
13889	Bearing 13889	**$52.80**



SYMMCO BEARINGS

Sintered Bronze Oil-Impregnated Special Flanged Bearings.

Description	Length	Symmco No.	Part No.	Price
SF610-3 Bushing	3/16	SF-610-3	04-00098	**$0.19**
SF-610-8 Bearing	1/2	SF-610-8	04-01570	**$0.75**
SF-610-8 Bearing	3/8	SF-1014-6	05-1014-6	**$0.38**
SF-812-3 Bearing	3/8	SF-812-3	05-03569	**$1.95**
SF-2024-8 Bearing	1/2	SF-2024-8	04-00004	**$1.10**
SF-4084-20 Bearing	1-1/4	SF-4048-20	04-00159	**$4.35**
SF-4084-8 Bearing	1/2	SF-4048-8	04-02171	**$3.60**

AURORA BEARINGS



In 1971 Aurora Bearing Company entered the rod end and spherical bearing market and soon became a major force in the rod end industry. Over the years, Aurora Bearing has retained its original business philosophy of furnishing a quality product at competitive prices and with service much faster than the competition. Aurora offers a complete line of standard and spherical bearings. In addition, special bearings can be designed and manufactured on request. Listed below are many of the most popular Heim bearing part numbers and the equivalent Aurora Bearing part number. On many of these items, the Aurora bearing offers substantial savings and faster delivery time. Unlisted Aurora bearings, quantity discounts and complete Aurora Bearing Company brochure available on request.

The below specifications apply to most but not all Aurora bearings. Note: Bearings not furnished standard with grease fittings are available with grease fittings. Add suffix "Z".
AURORA EQUIVALENTS TO HEIM HM, HF, HMX, HFX, HMR, AND HFR SERIES



SPECIFICATIONS:

Body - Low carbon steel, cadmium or zinc plated at manufacturer's option, dichromate treated. No. 16 series standard body is 4130 steel, not heat treated.
Race - Low carbon steel, cadmium or zinc plated (manufacturer's option), chromate treated.
Ball - Allow steel, heat treated, hard chrome plated.

AURORA EQUIVALENTS TO HEIM HM & HF SERIES

MALE		
Aurora P/N	Heim Equivalent P/N	Price Each
MM-2	HM-2	$7.75
MB-2	HML-2	$6.40
MM-3	HM-3	$6.90
MB-3	HML-3	$6.95
MM-4	HM-4	$7.50
MB-4	HML-4	$7.50
MM-5	HM-5	$8.50
MB-5	HML-5	$8.50
MM-6	HM-6	$9.50
MB-6	HML-6	$9.50
MM-7	HM-7	$11.65
MB-7	HML-7	$11.50
MM-8	HM-8	$14.50
MB-8	HML-8	$14.50

FEMALE		
Aurora P/N	Heim Equivalent P/N	Price Each
MW-2	HF-2	$6.90
MG-2	HFL-2	$6.50
MW-3	HF-3	$6.75
MG-3	-----	$6.45
MW-4	HF-4	$6.95
MG-4	HFL-4	$6.90
MW-5	HF-5	$7.50
MG-5	HFL-5	$7.50
MW-6	HF-6	$8.95
MG-6	HFL-6	$8.70
MW-7	HF-7	$11.50
MG-7	HFL-7	$9.85
MW-8	HF-8	$14.50
MG-8	HFL-8	$12.75

AURORA EQUIVALENTS TO HEIM HMX & HFX SERIES

MALE		
Aurora P/N	Heim Equivalent P/N	Price Each
XAM-4Z	HMX-4G	$16.90
XAB-4Z	HMXL-4G	$16.90
XAM-5Z	HMX-5G	$19.50
XAB-5Z	-----	$19.50
XAM-6Z	HMX-6G	$23.70
XAB-6Z	HMXL-6G	$23.50
XAM-7Z	HMX-7G	$28.50
XM-7G	HMX-7G	$218.95
XAB-7Z	HMXL-7G	$23.10
XAM-8Z	HMX-8G	$35.65
XAB-8Z	HMXL-8G	$33.75

FEMALE		
Aurora P/N	Heim Equivalent P/N	Price Each
AW-4Z	HFX-4G	$17.50
AG-4Z	HFXL-4G	$14.60
AW-5Z	HFX-5G	$17.55
AG-5Z	HFXL-5G	$15.00
AW-6Z	-----	$19.50
AG-6Z	HFXL-6G	$18.95
AW-7Z	HFX-7G	$23.95
AG-7Z	HFXL-7G	$23.90
AW-8Z	HFX-8G	$28.85
AG-8Z	HFXL-8G	$28.95

AURORA EQUIVALENTS TO HEIM HMR & HFR SERIES

MALE		
Aurora P/N	Heim Equivalent P/N	Price Each
MM-3T	HMR-3	$10.90
MB-3T	HMRL-3	$10.50
MM-4T	HMR-4	$10.90
MB-4T	HMRL-4	$10.95
MM-5T	HMR-5	$11.90
MB-5T	HMRL-5	$11.75
MM-6T	HMR-6	$12.95
MB-6T	HMRL-6	$12.85
MM-7T	HMR-7	$15.50
MB-7T	HMRL-7	$11.60
MM-8T	HMR-8	$18.50
MB-8T	HMRL-8	$16.75

FEMALE		
Aurora P/N	Heim Equivalent P/N	Price Each
MW-3T	HFR-3	$10.50
MG-3T	HFRL-3	$10.50
MW-4T	HFR-4	$10.90
MG-4T	HFRL-4	$10.50
MW-5T	HFR-5	$10.90
MW-6T	HFR-6	$12.95
MG-6T	HFRL-6	$12.85
MW-7T	HFR-7	$14.75
MG-7T	HFRL-7	$15.50
MW-8T	HFR-8	$17.50
MG-8T	HFRL-8	$14.70

Refer to HEIM Bearing Chart On Previous Pages for Dimensions on Aurora Bearings.

Prices Subject to Change Without Notice

AURORA BEARINGS

AURORA EQUIVALENTS TO HEIM M, ML, MD, F, & FL SERIES




MALE			FEMALE		
Aurora P/N	Aurora Price	Heim Equivalent P/N	Aurora P/N	Aurora Price	Heim Equivalent P/N
GMM-3M-470	**$12.50**	M34-14M	GMW-3M-470	**$15.70**	F34-14M
GMB-3M-470	**$13.65**	ML34-14M	GMG-3M-470	**$29.50**	FL34-14M
GMM-3M-570	**$14.55**	MD35-14M	GMW-3M-471	**$23.75**	F347-14M
GMB-3M-570	**$34.50**	MDL35-14M	GMG-3M-471	**$39.60**	FL347-14M
GMM-3M-670	**$15.50**	MD36-14M	GMW-3M-480	**$21.65**	F34-16M
GMB-3M-670	**$22.65**	MDL36-14M	GMG-3M-480	---	FL35-14M
GMM-3M-680	**$15.50**	MD36-16M	GMW-4M-470	**$27.75**	F44-14M
GMB-3M-680	**$34.90**	MDL36-16M	GMG-4M-470	---	FL44-14M
GMM-4M-470	**$17.80**	M44-14M	GMW-4M-595	**$17.70**	F45-19M
GMB-4M-470	**$36.85**	ML44-14M			
GMM-4M-675	**$21.50**	MD46-15M			
GMM-4M-680	**$47.65**	MD46-16M			
GMB-4M-680	**$76.70**	MDL46-16M			



AURORA EQUIVALENTS TO HEIM HFE & HME SERIES



MALE			FEMALE		
Aurora P/N	Heim Equivalent P/N	Aurora Price	Aurora P/N	Heim Equivalent P/N	Aurora Price
MW-3TM-125	HFE-3	---	MM-3TM-125	HME-3	**$55.00**
MG-3TM-125	HFLE-3	---	MB-3TM-125	HMLE-3	**$55.25**
MW-4TM-125	HFE-4	**$38.75**	MM-4TM-125	HME-4	**$56.25**
MG-4TM-125	HFEL-4	**$78.90**	MB-4TM-125	HMLE-4	**$95.75**
MW-5TM-125	HFE-5	**$38.50**	MM-5TM-125	HME-5	**$64.75**
MG-5TM-125	HFLE-5	**$155.95**	MB-5TM-125	HMLE-5	**$59.50**



AURORA EQUIVALENTS TO HEIM LS, LHA, & LSS SERIES



LCOM Series Large Size Spherical Bearings			COM Series Spherical Bearings			COM-KH Series Spherical Bearings		
Aurora P/N	Heim Equivalent P/N	Price	Aurora P/N	Heim Equivalent P/N	Price	Aurora P/N	Heim Equivalent P/N	Price
LCOM-3	LS-3	**$22.95**	COM-3	LSS-3	**$8.90**	COM-3KH	LHA-3	---
LCOM-4	LS-4	**$15.95**	COM-5	LSS-5	**$9.70**	COM-4KH	LHA-4	**$12.50**
LCOM-5	LS-5	**$33.50**	COM-6	LSS-6	**$9.70**	COM-5KH	LHA-5	**$13.90**
LCOM-6	LS-6	**$22.85**	COM-7	LSS-7	---	COM-6KH	LHA-6	**$12.50**
LCOM-7	LS-7	**$41.80**	COM-9	LSS-9	**$9.90**	COM-7KH	LHA-7	**$22.75**
LCOM-8	LS-8	**$28.50**	COM-14	LSS-14	**$19.65**	COM-8KH	LHA-8	**$15.55**
			COM-16	LSS-16	**$24.80**	COM-10KH	LHA-10	**$20.50**
						COM-12KH	LHA-12	**$28.90**
						COM-14KH	LHA-14	**$46.20**
						COM-16KH	LHA-16	**$52.75**



AURORA CM-S & CB-S MALE ROD ENDS WITH STUDS



Rod End no.		Dimension in inches									
Right Hand	Left Hand	H Ref.	A ± .015	D Ref.	C +.062 −.031	L ± .015	N ± .010	M Ref.	Thread UNF-3A	a° Misalign Angle	Price Each
CM-3S*	CB-3S*	.234	1.250	.625	.750	1.000	.500	.437	10-32	50	**$6.50**
CM-4S*	CB-4S*	.250	1.562	.750	1.000	1.031	.562	.500	1/4-28	50	**$6.70**
CM-5S*	CB-5S*	.312	1.875	.875	1.250	1.219	.687	.593	5/16-24	50	**$7.50**
CM-6S	CB-6S	.359	1.938	1.000	1.250	1.562	.906	.812	3/8-24	50	**$7.70**
CM-7S	CB-7S	.406	2.125	1.125	1.375	1.750	1.062	.937	7/16-20	50	**$9.70**
CM-8S	CB-8S	.453	2.438	1.312	1.500	2.000	1.125	1.000	1/2-20	50	**$11.50**
CM-10S	CB-10S	.484	2.625	1.500	1.625	2.500	1.500	1.375	5/8-18	50	**$16.55**
CM-12S	CB-12S	.593	2.875	1.750	1.750	3.000	1.812	1.625	3/4-16	50	**$23.70**

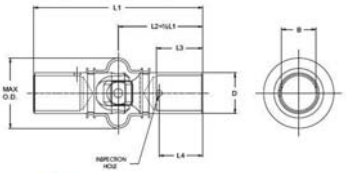
**** Grease fittings not available on these sizes. Units are supplied without grease fittings.***



AURORA CW-3B-14 BEARING

In 1971 Aurora Bearing Company entered the rod end and spherical bearing market and soon became a major force in the rod end industry. Over the years, Aurora Bearing has retained its original business philosophy of furnishing a quality product at competitive prices and with service much faster than the competition. Aurora offers a complete line of standard and spherical bearings. In addition, special bearings can be designed and manufactured on request. P/N 04-03824 ..... **$9.50**

AP



MS20271 UNIVERSAL JOINTS

Complete universal joint line includes a full range of military certified MS20271 and continually tested universal joints used in defense vehicles, aerospace applications, as well as shift/gear change linkage in specialty vehicles.

Meets or exceeds military specification MIL-J-6193

Part No.	ID (in.)	Price Ea
MS20271-B8	3/8	$115.75
MS20271-B10	1/2	$96.85
MS20271-B12	5/8	$99.65
MS20271-B14	3/4	$106.75



Dash #	+.000, -.002 (+.000, -.051) Outside Dia.		+/-.015 (+/-.381) Overall Length		+.031,-.000 (-.787,-.000) Bore Depth		+.004,-.025 (+.102, -.025) Bore Dia.		+/-.015 (+/-.381) Insp. Hole Loc.		Max Dia. (+.102,-.025) Cover Dia.		Weight Max	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg.
B6	.372	9.45	2.0	50.80	.500	12.70	.250	6.35	.437	11.10	.781	19.84	.07	.032
B8	.495	12.57	2.625	66.67	.625	15.88	.375	9.52	.562	14.27	1.031	26.19	.09	.041
B10	.620	15.75	2.750	69.85	.750	19.05	.500	12.70	.687	17.45	1.156	29.36	.18	.082
B12	.745	18.92	3.187	80.95	.875	22.22	.625	15.88	.812	20.62	1.437	36.50	.24	.109
B14	.870	22.10	3.625	92.07	1.00	25.40	.750	19.05	.937	23.80	1.562	39.67	.35	.159

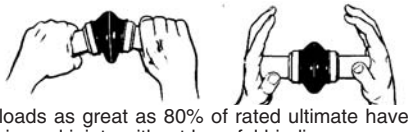
Five hour test at 15° angle.

AP

TORSIONAL OVERLOADS



AXIAL OVERLOADS



Temporary torsional overloads as great as 80% of rated ultimate have been handled by these universal joints without harmful binding.

Temporary axial overloads ranging up to 150% in excess of rated ultimates have been imposed without binding. These characteristics insure high safety factors under the most difficult operating conditions.

H-9426 BALL JOINT



* Hex: 1/2 Inch *Thread: 5/16-18 *Ball: 10 mm .
P/N 06-00675.....$0.70



P/N 05-07400

BALL JOINT ASSEMBLIES

COMMERCIAL

Ball Joint Style	Female End	Male End	Part No.	Price
Is similar to AN276-6 but no longer tapered	1/4-28	1/4-28	05-07300	$11.90
Commercial	10-32	1/4-28	05-07400	$2.95
Commercial	10-32	10-32	05-07500	$2.75
Commercial	1/4-28	1/4-28	05-07600	$15.85

GEARS, CHAINS, SPROCKETS AND BEARINGS





BOSTON GEAR PRODUCTS

STEEL SPROCKETS - These sprockets have many applications in a control system. Hub type.

Sprocket Part No.	Chain Size	No. of Teeth	Price
05-03441	1/4"	12	$6.75
25B15	1/4"	15	$7.50
05-03442	1/4"	20	$15.90
35B14	3/8"	14	$8.50

BUSHINGS - As used on the Solitaire Sailplane.

Bushing Part No.	Price
FF520-10	$0.55
FF620	$1.45

ROLLER CHAIN - These chains fit above sprockets.

1/4" Chain - 10 Ft.	P/N 05-29325	$62.85
3/8" Chain - 10 Ft.	P/N 05-29335	$62.50
Extra Links - S25	P/N 05-29300	$0.65
Extra Links - S35	P/N 05-29350	$0.57

FB-35-1.....Flange Bearing	$1.10
FB-35-2.....Flange Bearing	$0.84
FB-1012-4....Flange Bearing	$0.80
FB-1013-8....Flange Bearing	$2.50
FB-1620-10..Flange Bearing	$6.00
FB-46-2.....Flange Bearing	$0.24

G-481-G Gear	$35.95
G-481Y-P Pinion	$20.50
NF-14-6-8 Bearing	$1.20
NF-16-8-9 Bearing	$1.20

COMPLETE LINE OF BOSTON GEAR PRODUCTS AVAILABLE



BRONZE BUSHINGS SS-610-8

Cast Bronze bearings fit a wide range of applications.

Key Benefits:

High Strength, Excellent Machinability

P/N 04-01937.....$1.98

SINTERED BRONZE OIL IMPREGNATED BEARINGS

PLAIN BEARINGS

Part Number	Hole ID	Hole OD	Length	Price
05-01977	3/16	5/16	3/4"	$1.28
05-01976	1/4	3/8	1"	$0.59
05-01974	1/2	3/4	3/4"	$0.97
05-01975	1/2	3/4	1"	$1.87
05-01979	9/16	3/4	1"	$1.20
05-01978	5/8	3/4	1"	$0.98
05-01891	3/4	7/8	1"	$1.45

FLANGE BEARINGS

Part Number	Hole ID	Hole OD	Length	Flange OD	Flange Thickness	Price
05-01949	1/4	3/8	1/4"	15/32	1/16	$0.44
05-01947	1/2	5/8	1/2"	7/8	1/16	$0.62
05-01946	1/2	5/8	1"	7/8	1/16	$1.50
05-01948	1/2	3/4	1"	15/16	1/8	$3.25
05-01951	5/8	3/4	1/2"	1	3/32	$1.01
04-01638	5/8	3/4	1"	1	3/32	$1.59
05-01950	3/4	7/8	3/4	1-1/8	1/8	$1.28
05-01945	1	1-1/4	3/4	1-5/8	1/8	$2.90



SINGLE-ROW TAPERED ROLLER BEARINGS

The most basic and widely used tapered bearing, the single-row type consists of the cone assembly and the cup. It is usually fitted as one of an opposing pair. During equipment assembly, single-row bearings can be set to the required clearance (endplay) or preload condition to optimize performance. Single-row tapered roller bearings have positive roller alignment that ensures true rolling motion and generates a "seating force" that pushes the roller against the cone large rib. This seating force prevents the rollers from skewing off apex, thereby keeping them positively aligned and located against the cone large rib. P/N 05-29749.....$65.75



BELLCRANK BEARINGS

Part No.	Bore	Flange Dia.	Race Width	Price Each
BC4W10(AN218-4) Experimental Only	1/4"	1-5/8"	5/8"	$20.75
BC5W11	5/16"	1-11/16"	5/8"	$25.80
BCP4W10*	1/4"	1-5/8"	5/8"	$58.75

Military P/N AN218P4 / MS20218-1. Certs Available.
All bearings inspected per MIL-I45208A. 100% traceable. Currently installed on new and rebuilt certified aircraft.Prepacked with lubricant conforming to MIL-G-23827

Quantity discount quoted on request

THROTTLES – CONTROLS

ACS CONTROLS

The ACS line of controls was manufactured by Aircraft Spruce and Specialty Company from 1980 to 1985. As of June, 1985 the controls have been manufactured by ACS Products Company in Lake Havasu City, Arizona. The manufacturing and inspection procedures have been approved by the FAA and original equipment manufacturers. The following engineering data will aid in properly identifying the control most suited to each individual requirement. Also shown are some available options for the controls such as plastic protective covering and steel sleeves for clamping the control to the aircraft structure. Made in the U.S.A.

The A-790-12 vernier mixture control and the A-800-12 friction-lock throttle control are approved for Cessna 172, 172A thru Q; Cessna 150, 150A thru M, A150K, A150L, A150M; Cessna 152, A152.

Other approvals pending. Order by Part Number and state Cessna model and serial number. A790-12 is 53" long. A800-12 length is based on serial number provided.

ENGINEERING DATA

Control Model No.	Control Type	Stroke at 0 Routing	Decrease in Stroke per 360° of Bend	Control Model No.	Control Type	Stroke at 0° Routing	Decrease fStroke per 360° of Bend
A-700	Button Lock (Wire End)	3.37"*	0.50"	A810	Friction Lock (1/4-28)	3.37"*	0.35"
A-730	Glide Free (Wire End)	3.37"*	0.50"	A920	Push-Pull (10-32)	3.37"	0.35"
A-740	Ratchet (Wire End)	3.37"*	0.50"	A930	Push-Pull (1/4-28)	3.50"	0.35"
A-750	Vernier (10-32)	3.37"*	0.35"	A970	Vernier (1/4-28)	3.37"*	0.35"
A-790	Vernier (Wire End)	3.37"*	0.35"	A1550	Push-Pull (10-32) with Bulkhead Fittings	3.37"	0.35"
A-800	Friction Lock (10-32)	3.37"*	0.35"				

Length of exposed wire. **Recommended minimum bending radius for all controls is 5" (never less than 3")

PLASTIC COVERING ON CONTROL CASING

All ACS controls can be supplied with a black Polyolefin (PO) protective cover. Price of the PO cover carries a base price of $3.00 plus the length of control in ft. multiplied by 1.50 for lengths to 10 ft. For lengths over 10 ft., use $3.00 base price plus $1.90/ft. for PO cover plus a 425 set-up fee. Example: Cost of PO cover on 5 ft. control is $3.00 plus 5 x 1.40 = $10.00. Cost of PO cover on 15 ft. control is $3.00 plus 15 x 1.90 - $31.50.

STEEL SLEEVES ON CONTROL CASING

Cadmium plated 2" long steel sleeves can be added to the casing to provide clamping points for securing the control to the aircraft structure. Specify sleeve location (measurement taken from under the panel nut to mid-point of sleeve). Sleeves are normally swaged to the casing but will be left unswaged when specified. Add $7.50 for installation of sleeves on A730 & A740 controls. **Price/Sleeve $4.00**

THREADED STEEL SLEEVES ON CONTROL CASING

Threaded steel sleeves ("bulkhead" fittings) can be added to the casing to provide secure clamping of the control where it passes through a bulkhead. The cadmium plated sleeves are 2" long, with 1-1/2" length of 7/16-20 threads. Specify sleeve location (measurement taken from under the panel nut to mid-point of sleeve). Sleeves are normally swaged to the casing but will be left unswaged when specified. Add $7.50 for installation of sleeves on A730 & A740 controls. **Price/Sleeve $6.00**

HOW TO ORDER CONTROLS

STOCK CONTROLS - All stock controls are identified by a part number as shown in the descriptions of the controls. To order a stock control, specify control type, knob color, length to nearest 1/8" (measured as described in text), and any added features such as PO cover on flexible casing or steel sleeves centered at specified distances from panel nut (lengths of stock controls are in whole-foot increments and only lengths listed are stocked). Include 7-digit part number as shown in text.

SPECIAL-LENGTH CONTROLS - If you require a special-length control, specify control type, knob color, length to nearest 1/8" and any added features such as PO cover, etc. Special-length controls carry a set-up charge in addition to the cost of the control (calculated as described in the texts).

CUSTOM CONTROLS - If you do not find the type of control you require in this catalog, send a detailed sketch with dimensions, or the old control as a sample, to Aircraft Spruce & Specialty Co., 225 Airport Circle, Corona, CA 92880-2527 (1-800-824-1930). Custom controls are priced like similar stock controls but with a $35 set-up and engineering charge added, plus costs for any special parts which must be fabricated for the control.

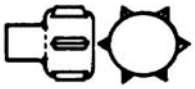
VERNIER CONTROLS

Vernier controls assure smooth operation - cannot creep. For coarse adjustment, depress center button and push or pull. For fine adjustment, turn knob. Smooth acting at all temperatures. Casing is made of tightly wound galvanized steel wire Inner shaft is stainless steel cable (Models A-750 and A-970) or stainless steel wire (Model A-790). Low-friction operation is provided by an internal extruded Teflon liner. Controls have 1-1/4" dia. plastic knob with 3/4" dia. aluminum release button. A protective black PVC cover is available as an option on controls. Choice of knob color - black, red or blue (FAA Color Code: Black - Throttle, Red - Mixture, Blue - Prop), and knob design (see below).

The FAA has recently adopted a standard configuration for cockpit control knobs in production aircraft type-certificated after August 11, 1986. The



Throttle Control (Black) (FAA Color) Or White



Mixture Control (Red)



Prop Control (Blue)

red mixture knob is to have six raised ridges whereas the blue prop control is to have the opposite profile with six grooves. The black throttle control knob is to have a smooth profile. The different knob contours assure positive identification by touch.

Aircraft Spruce is proud to offer the ACS line of vernier controls with the new style FAA knobs at no extra charge. The throttles will be furnished with the smooth black knob, the mixture controls with the contoured red knob and the prop controls with the contoured blue knob. Look to Aircraft Spruce & Specialty Company for a complete selection of original installation or replacement controls at tremendous savings.

REPLACEMENT PARTS FOR ACS CONTROLS



ACS large Control Cable Grommet made of black synthetic rubber. P/N 05-02633.....**$2.95**



ACS Rubber Grommets N-549-A (Small)
P/N 05-02634..... **$2.95**



ACS Large Black Knob A-663-A for the A-800 controls.
05-03416..... **$4.85**



Replacement ball bearings for A790 Controls
P/N 05-07700 .....**$1.95**

Replacement ball bearings for A700/A-1840 Controls
P/N 05-02618 .....**$2.00**

NOTE: The Grommets (rubber boots) fit all ACS 10-32 threaded end controls, such as: A-750, A-800, A-770, A-1860, A-920, A-1550, A-1750, A-950, and A-1760.



A-750 VERNIER CONTROL
(10-32 THREADED END)



The A-750 vernier control has 10-32 threaded shaft for use with ball point or threaded terminal. Unique ball-socket construction permits the threaded end to swivel 8° in any direction. Casing has Teflon inner liner for low friction and heat resistance in high-temperature areas such as engine compartments. Furnished with FAA-style knobs (Black, Red & Blue). Travel: 3-3/8". Wt. 1 lb. (4'). Stocked in the following lengths (measurement taken from under panel nut to end of threaded shaft with knob pushed in). Order by Part No.

Knob Color	Length 3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-07736	05-07748	05-07760	05-07772	05-07784	05-07796
Red	05-07836	05-07848	05-07860	05-07872	05-07884	05-07896
Blue	05-07936	05-07948	05-07960	05-07972	05-07984	05-07996
Price	**$84.85**	**$86.75**	**$89.75**	**$89.75**	**$91.75**	**$92.90**

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus $20.00 set-up charge for controls under 10 feet, $40.00 for controls 10 feet and over. For controls longer than shown in chart, also add $4.88 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls.

Glasair Prop Control A-750 Blue 80" long ..... P/N 05-07980 ..... **$133.75**

A-1750-12-1 CONTROL FOR CESSNA 182 - See our website for eligibility list. ..... P/N 05-12630 ..... **$295.00**



3/4 - 16 UNF-2A THD.

A-790 VERNIER CONTROL
(SOLID-WIRE END)



The A-790 vernier control has a .078" dia. stainless steel wire core. Both the wire and Teflon lined flexible casing may be shortened as required. The Teflon liner provides low friction with heat resistance in high temperature areas such as engine compartments. Furnished with FAA-style knobs (Black, Red & Blue). Max. travel: 3-3/8". Stocked in the following lengths (measurement taken from under the panel nut to end of wire with knob pushed in). Order by Part Number.

Knob Color	Length 3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-08036	05-08048	05-08060	05-08072	05-08084	05-08096
Red	05-08136	05-08148	05-08160	05-08172	05-08184	05-08196
Blue	05-08236	05-08248	05-08260	05-08272	05-08284	05-08296
Price	**$86.75**	**$75.85**	**$76.75**	**$78.80**	**$79.95**	**$81.75**

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus $20.00 set-up charge for controls under 10 feet, $40.00 for controls 10 feet and over. For controls longer than shown in chart, also add $4.88 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls.

Replacement Ball Bearing for A-790 Controls..... P/N 05-07700 ..... **$1.95**

A-1790-12-1 CONTROL FOR CESSNA 182 - See our website for eligibility list. ..... P/N 05-12629 ..... **$216.95**



A-970 VERNIER CONTROL
(1/4-28 THREADED END)



The A-970 vernier control is similar to the Model A-750 described above but with 1/4-28 threaded end (non-swiveling). Casing has Teflon inner liner for low friction and heat resistance in high-temperature areas such as engine compartments. Furnished with FAA-style knobs (Black, Red & Blue). Travel: 3-3/8". Stocked in following lengths (measurement taken from under panel nut to end of threaded shaft with knob pushed in). Order by Part Number.

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus $20.00 set-up charge for controls under 10 feet, $40.00 for controls 10 feet and over. For controls longer than shown in chart, also add $4.88 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls.

Knob Color	Length 3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-08336	05-08348	05-08360	05-08372	05-08384	05-08396
Red	05-08436	05-08448	05-08460	05-08472	05-08484	05-08496
Blue	05-08536	05-08548	05-08560	05-08572	05-08584	05-08596
Price	**$86.75**	**$86.95**	**$89.75**	**$89.50**	**$91.80**	**$81.50**



1/2 - 20 UNF-2A THD.

A-800 FRICTION LOCK CONTROL
(10-32 THREADED END)



The A-800 friction lock control provides positive locking ırning the chrome collet locking nut. Unique ball-socket construction permits 10-32 threaded end to swivel 8° in any direction. Casing has Teflon liner for low friction and heat resistance in high-temperature areas such as engine compartments. Travel: 3-3/8". The 1-1/4" dia. solid knob is available in black or blue (blue knob has smooth profile, not FAA style). Stocked in following lengths (measurement taken from under panel nut to end of threaded shaft with knob pushed in). Order by Part No.

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus $20.00 set-up charge for controls under 10 feet, $40.00 for controls 10 feet and over. For controls longer than shown in chart, also add $4.88 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls.

Knob Color	Length 3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-08636	05-08648	05-08660	05-08672	05-08684	05-08696
Blue	05-08836	05-08848	05-08860	05-08872	05-08884	05-08896
Price	**$77.75**	**$79.75**	**$79.95**	**$83.75**	**$83.80**	**$86.75**

A-800 VANS CONTROL CABLE FOR RV AIRCRAFT

Specify knob color (black, blue, red), overall length of control (from under panel nut to end of control) and stroke (2-1/4", 2-1/2"). For controls over 72" long, add $1.50 per foot. For custom stroke (2-3/8", 2-3/4", 3-1/2") add $45 to cost of control. P/N 05-01436 ..... **$183.75**

A-810 FRICTION LOCK CONTROL
(1/4-28 THREADED END)





The A-810 friction lock control is similar to the A-800 control but with 1/4-28 threaded end (non-swiveling). With Teflon liner. Travel: 3-3/8". Knob styles and length measurement same as for A-800. Stocked in the following lengths. Order by Part Number.

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus $20.00 set-up charge for controls under 10 feet, $40.00 for controls 10 feet and over. For controls longer than shown in chart, also add $4.88 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls.

Knob Color	Length 3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-09236	05-09248	05-09260	05-09272	05-09284	05-09296
Blue	05-09336	05-09348	05-09360	05-09372	05-09384	05-09396
Price	**$78.75**	**$79.80**	**$82.75**	**$83.75**	**$73.75**	**$86.75**

A-810-12-1 CONTROL FOR CESSNA 182 - See our website for eligibility list. ..... P/N 05-12631 ..... **$259.95**



1/2 - 20 UNF-2A THD.

A-820 FRICTION LOCK CONTROL
(SOLID-WIRE END)



The A820 friction lock control is similar to the A-800 control but with a solid wire end like the A-790 control above. With Teflon liner. Travel: 3-3/8". Knob styles and measurements same as for A-800.

Knob Color	Length 3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-09436	05-09448	05-09460	05-09472	05-09484	05-09496
Blue	05-09536	05-09548	05-09560	05-09572	05-09584	05-09596
Price	**$66.75**	**$67.95**	**$69.90**	**$71.75**	**$73.90**	**$75.75**

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus $20.00 set-up charge for controls under 10 feet, $40.00 for controls 10 feet and over. For controls longer than shown in chart, also add $4.88 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls.

FAA APPROVED A-790 & A-800 CONTROLS

The A-790-12 vernier mixture control and the A-800-12 friction lock throttle control are approved for Cessna 172, 172A thru Q; Cessna 150, 150A thru M, A150K, A150L, A150M; Cessna 152, A152. Other approvals pending. Order by part number and state Cessna model and serial number. A790-12 is 53" long. A800-12 length is based on serial number provided. Note: For special length controls over 25ft. long, add extra $15.00 to the set-up fee.

P/N A-790-12..... **$175.00** P/N A-800-12 ..... **$163.85**

All ACS Products Controls are made in the U.S.A

A-700 BUTTON LOCK DASH CONTROL
(7/16-20 UNF-2A THREADS / SOLID WIRE END)



Provides a 10-lb. locking force for light and medium service applications. Black or Red anodized aluminum knob with aluminum release button. Has .062" dia. stainless steel wire core in flexible metal casing. May be shortened as req. Max. travel 3-1/2". Order by Part No.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-13172	05-13184	05-13196	05-13120
Red	05-13272	05-13284	05-13296	05-13220
Price	**$61.85**	**$64.75**	**$63.85**	**$72.75**

Replacement Ball Bearing for A-700/A-1840 Controls
P/N 05-02618 ..... **$2.00**

A-700-12-1 CONTROL FOR CESSNA 182 - See our website for eligibility list. P/N 05-12629..... **$216.95**

A-770 BUTTON LOCK DASH CONTROL
(10-32 THREADED END)



Same as A-700 control above except has 10-32 threaded end, with .078' dia. stainless steel inner cable and Teflon-lined flexible casing. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-16172	05-16184	05-16196	05-16120
Red	05-16272	05-16284	05-16296	05-16220
Price	**$73.75**	**$75.75**	**$77.95**	**$87.85**

A-780 BUTTON LOCK DASH CONTROL
(1/4-28 THREADED END)



Same as A-700 control above except has 1/4-28 threaded end, with .078' dia. stainless steel inner cable and Teflon-lined flexible casing. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-16372	05-16384	05-16396	05-16320
Red	05-16472	05-16484	05-16496	05-16420
Price	**$77.75**	**$78.75**	**$80.75**	**$91.50**

A-1860 T-HANDLE BUTTON LOCK DASH CONTROL
(10-32 THREADED END)



Same as A-770 control above except has black powder-coated aluminum T-handle with aluminum release button. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-16672	05-16684	05-16696	05-16620
Price	**$76.80**	**$77.75**	**$79.75**	**$91.75**

A-1840 T-HANDLE BUTTON LOCK DASH CONTROL
(SOLID WIRE END)



Same as A-700 control above except has black powder-coated aluminum T-handle with aluminum release button. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-13572	05-13584	05-13596	05-13520
Price	**$62.75**	**$65.75**	**$65.75**	**$73.75**

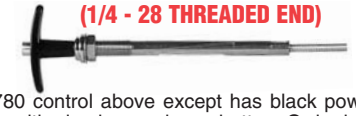
EXTENSIONS FOR THREADED CONTROLS



Use these stainless steel extensions for moderate length adjustments to stock length controls. Stocked with 1 male & 1 female threaded end. The extensions provide the required increase in control length when threaded approximately half way onto the control. Furnished in 2", 3", 4", 5" and 6" lengths. All extensions have 10-32 threads. To order, add -2, -3, -4, or -5 to Dash number for length. P/N 10376..... **$13.99/ea**

All ACS Products Controls are made in the U.S.A

A-1870 T-HANDLE BUTTON LOCK DASH CONTROL
(1/4 - 28 THREADED END)



Same as A-780 control above except has black powder-coated aluminum T-handle with aluminum release button. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-16872	05-16884	05-16896	05-16820
Price	**$77.95**	**$78.75**	**$79.95**	**$92.75**

A-730 GLIDE FREE CONTROL
(SOLID WIRE END)



Simple design for push-pull operation with low friction characteristics. Has .050" dia. stainless steel wire core in flexible metal casing with polyethylene liner. May be shortened as required. Max. travel 3-1/2". Available with black or red plastic knob. Order by Part No.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-13672	05-13684	05-13696	05-13620
Red	05-13772	05-13784	05-13796	05-13720
Price	**$33.95**	**$35.50**	**$36.75**	**$43.75**

A-1770 T-HANDLE GLIDE FREE CONTROL
(SOLID WIRE END)



Same as A-730 above except with black powder coated aluminum T-handle. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-13872	05-13884	05-13896	05-13820
Price	**$43.50**	**$43.50**	**$44.60**	**$49.75**

A-740 RATCHET CONTROL
(SOLID WIRE END)



Ratchet design provides detented positions under vibration conditions. Simple push-pull operation. Has .050" dia. stainless steel wire Core in flexible metal casing with polyethylene liner. May be shortened as required. Max. travel 3-1/2". Available with black or red plastic knob. Order by Part No.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-14072	05-14084	05-14096	05-14020
Red	05-14172	05-14184	05-14196	05-14120
Price	**$36.50**	**$36.95**	**$38.75**	**$44.70**

A-1780 T-HANDLE RATCHET CONTROL
(SOLID WIRE END)



Same as A-740 above except with black powder coated aluminum T-handle. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-14272	05-14284	05-14296	05-14220
Price	**$43.50**	**$45.50**	**$46.65**	**$72.75**

CONTROL END EXAMPLES

SOLID WIRE

SOLID WIRE SPEC END STYLE C



10-32 THREADED END



1/4"-28 THREADED END



AP

A-920 PUSH-PULL CONTROL
(10-32 THREADED END)



This control has 10-32 threaded ends with 8° swivel & 3-3/8" stroke. It has Teflon casing liner for use in high-temperature areas such as engine compartments, & .078" dia. stainless steel inner cable to minimize backlash. Stocked in the following lengths. Order by Part No.

Control Length	Part No.	Price	Control Length	Part No.	Price
36"	05-12736	**$48.90**	96"	05-12796	**$57.75**
48"	05-12748	**$49.95**	108"	05-127108	**$59.75**
60"	05-12760	**$51.95**	120"	05-127120	**$65.75**
72"	05-12772	**$53.75**	132"	05-127132	**$67.75**
84"	05-12784	**$59.90**	144"	05-127144	**$68.75**

A-930 PUSH-PULL CONTROL
(1/4-28 THREADED END)



This control has 1/4-28 threaded ends (nonswiveling) and 3-1/2" stroke. It has Teflon casing liner for use in high-temperature areas such as engine compartments, and .078" dia. stainless steel inner cable to minimize backlash. Stocked in the following lengths. Order by Part No.

Control Length	Part No.	Price	Control Length	Part No.	Price
36"	05-30036	**$49.85**	96"	05-30096	**$59.75**
48"	05-30048	**$52.75**	108"	05-30108	**$60.75**
60"	05-30060	**$53.75**	120"	05-30120	**$67.75**
72"	05-30072	**$55.75**	132"	05-30132	**$68.75**
84"	05-30084	**$58.80**	144"	05-30144	**$71.75**

SPECIAL LENGTH CONTROLS – Refer to chart for price of next longest control (by foot), and add a $20.00 set-up charge for controls up to 10 feet, $40.00 for controls over 10 feet. For lengths over 144" add $4.88 for each extra foot or fraction of a foot. Allow 2 - 3 weeks.

A-1550 PUSH-PULL CONTROL
(10-32 THREADED END)



This control has same design as A-920 control but with 7/16-20 threaded bulkhead fittings added at each end. Not stocked. Available at base price of $33.73 + $4.88 per ft. or fraction of a foot + $20 set-up charge

A-1750 VERNIER CONTROL
(10-32 THREADED END)



A-1750 Vernier Control: features - removable button and facenut and 2" of control panel threads for those difficult mounting applications. (10-32 threaded control rod like the A-750 control.)

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8Ft.
Black	05-10236	05-10248	05-10260	05-10272	05-10284	05-10296
Red	05-10336	05-10348	05-10360	05-10372	05-10384	05-10396
Blue	05-10436	05-10448	05-10460	05-10472	05-10484	05-10496
Price	**$89.75**	**$91.85**	**$93.75**	**$93.75**	**$72.95**	**$73.85**

A-1970 VERNIER CONTROL
(1/4-28 THREADED END)



A-1970 Vernier Control same features as the A-1750 except it has the A-970 style (1/4 x 28 threaded rod)

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8Ft.
Black	05-09636	05-09648	05-09660	05-09672	05-09684	05-09696
Red	05-09736	05-09748	05-09760	05-09772	05-09784	05-09796
Blue	05-09836	05-09848	05-09860	05-09872	05-09884	05-09896
Price	**$89.85**	**$91.95**	**$70.65**	**$95.75**	**$84.50**	**$100.75**

SPECIAL LENGTH CONTROLS – Use price of 10 ft. control plus $1.45 per ft. or fraction of a foot, plus $20.00 set-up charge for controls up to 10 feet, $40.00 for controls over 10 feet. Allow 2 - 3 weeks.

CONTROLS WITH COILED WIRE END – Add $8.50 to cost. To order, add "C" to part number. Controls with coiled end have only 3" stroke rather than 3-1/2" on standard end controls.

All ACS Products Controls are made in the U.S.A

A-950 PUSH-PULL CONTROL
(10-32 THREADS / SOLID WIRE END)



Same as A-920 control except one end is .078" dia. stainless steel wire. Special-length controls not required as the wire end can be cut off to desired length. Order by Part No.

Control Length	Part No.	Price	Control Length	Part No.	Price
36"	05-16936	**$36.50**	96"	05-16996	**$44.70**
48"	05-16948	**$37.95**	108"	05-169108	**$45.50**
60"	05-16960	**$39.50**	120"	05-169120	**$51.75**
72"	05-16972	**$39.85**	132"	05-169132	**$52.75**
84"	05-16984	**$42.55**	144"	05-169144	**$55.80**

A-960 PUSH-PULL CONTROL
(1/4-28 THREADS / SOLID WIRE END)



Same as A-930 control except one end is .078" dia. stainless steel wire. Special-length controls not required as the wire end can be cut off to desired length. Order by Part No.

Control Length	Part No.	Price	Control Length	Part No.	Price
36"	05-17036	**$51.75**	96"	05-17096	**$45.50**
48"	05-17048	**$39.50**	108"	05-170108	**$46.85**
60"	05-17060	**$46.50**	120"	05-170120	**$52.80**
72"	05-17072	**$41.90**	132"	05-170132	**$75.75**
84"	05-17084	**$43.95**	144"	05-170144	**$57.75**

A1600 SERIES
POSITIVE LOCK CONTROLS – SINGLE END



These positive-locking controls are available with white, black, or blue knob or T-handle style in black or aluminum. Complete part number with -W for white, -B for black knob, -BU for blue knob, -TB for t-handle black or -TA for T-handle aluminum. Special length controls are available at price for next longer control + $4.88 per foot + $20 set-up charge for controls up to 10 feet, $40.00 for controls over 10 feet.

Control	End	6 Ft.		7 Ft.		8 Ft.		10 Ft.	
		Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
A-1610	.078 Wire	05-17172	**$136.85**	05-17184	**$147.75**	05-17196	**$97.00**	05-17120	**$166.75**
A-1620	10-32 Thread	05-17272	**$136.75**	05-17284	**$148.75**	05-17296	**$137.75**	05-172120	**$166.75**
A-1630	1-1/4-28 Thread	05-17372	**$102.95**	05-17384	**$103.95**	05-17396	**$151.75**	05-17320	**$106.95**

POSITIVE LOCK CONTROLS – DUAL END



These positive-locking dual controls are available with white, black, or blue knob or T-handle style in black or aluminum. Complete part number with -W for white, -B for black knob, -BU for blue knob, -TB for t-handle black or -TA for T-handle aluminum. Special length controls are available for price of next longer control (for longest of the two cables) + $9.88 per foot + $20.00 set-up charge for controls up to 10 feet, $40.00 for controls over 10 feet. Specify exact length of both cables when ordering.

Control	End	6 Ft.		7 Ft.		8 Ft.		10 Ft.	
		Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
A-1640	.078 Wire	05-17472	**$169.95**	05-17484	**$121.95**	05-17496	**$179.85**	05-17420	**$127.95**
A-1650	10-32 Thread	05-17572	**$179.75**	05-17584	**$125.95**	05-17596	**$127.95**	05-17520	**$132.95**
A-1660	1-1/4-28 Thread	05-17672	**$181.75**	05-17684	**$127.95**	05-17696	**$129.95**	05-17620	**$134.95**

A-1760 VERNIER CONTROL
(10-32 THREADED END)



A-1760 Vernier Control like a A-750 control except it has a threaded bulkhead fitting in place of the grooved or notched fitting.

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8Ft.
Black	05-09936	05-09948	05-09960	05-09972	05-09984	05-09996
Red	05-10036	05-10048	05-10060	05-10072	05-10084	05-10096
Blue	05-10136	05-10148	05-10160	05-10172	05-10184	05-10196
Price	**$96.90**	**$98.75**	**$99.80**	**$95.95**	**$103.75**	**$104.75**

A-1760 VANS RV CUSTOM CONTROL CABLE

Specify knob color (black, blue, red), overall length of control (from under panel nut to end of control) and stroke (2-1/4", 2-1/2"). For controls over 72" long, add $5.00 per foot. For custom stroke (2-3/8", 2-3/4", 3-1/2") add $45 to cost of control. P/N 05-01435.....**$190.75**

Prices Subject to Change Without Notice

THROTTLE AND CHOKE CABLES

NON-LOCKING THROTTLE AND CHOKE CABLES



Non-Locking Choke Controls for Dual Carburetor Rotax 912/914 Series Engines Allows a neat, clean installation without a clunky splitter box These controls do not feature a locking mechanism, however they have an internal elastomer seal to dampen vibration and provide a small amount of resistance. If your choke installation features a return spring, this control will return to the closed position when released. Stroke 3.5" min. These controls are not for use on certified aircraft, or for use for flight controls or flight control trim tabs.

Model No.	Description	Part No.	Price
101D048	Control Dual 4ft W/O Knob	05-11212	**$161.75**
101D048-RB	Control Dual 4ft Round Black Knob	05-11213	**$166.75**
101D048-RBC	Control Choke Dual 4ft Round Black Knob	05-11214	**$172.75**
101D048-RC	Control Dual 4ft Round Clear Knob	05-11215	**$166.75**
101D048-RCC	Control Choke Dual 4ft Round Clear Knob	05-11216	**$172.75**
101D048-RL	Control Dual 4 Ft Round Blue Knob	05-11217	**$166.75**
101D048-RLC	Control Choke Dual 4 Ft Round Blue Knob	05-11218	**$172.75**
101D048-RR	Control Dual 4ft Round Red Knob	05-11219	**$166.75**
101D048-RRC	Control Choke Dual 4ft Round Red Knob	05-11220	**$172.75**
101D072	Control Dual 6ft W/O Knob	05-11221	**$176.75**
101D072-RB	Control Dual 6ft Round Black Knob	05-11222	**$181.75**
101D072-RBC	Control Choke Dual 6 Ft Round Black Knob	05-11223	**$159.75**
101D072-RC	Control Dual 6ft Round Clear Knob	05-11224	**$181.75**
101D072-RCC	Control Choke Dual 6ft Round Clear Knob	05-11225	**$159.75**
101D072-RL	Control Dual 6 Ft Round Blue Knob	05-11226	**$181.75**
101D072-RLC	Control Choke Dual 6ft Round Blue Knob	05-11227	**$159.75**
101D072-RR	Control Dual 6ft Round Red Knob	05-11228	**$181.75**
101D072-RRC	Control Choke Dual 6ft Round Red Knob	05-11229	**$159.75**
101D096	Control Dual 8ft W/O Knob	05-11230	**$160.75**
101D096-RB	Control Dual 8ft Round Black Knob	05-11231	**$164.95**
101D096-RBC	Control Choke Dual 8ft Round Black Knob	05-11233	**$169.75**
101D096-RC	Control Dual 8ft Round Clear Knob	05-11234	**$164.95**
101D096-RCC	Control Choke Dual 8ft Round Clear Knob	05-11235	**$169.75**
101D096-RL	Control Dual 8ft Round Blue Knob	05-11236	**$164.95**
101D096-RLC	Control Choke Dual 8ft Round Blue Knob	05-11237	**$169.75**
101D096-RR	Control Dual 8ft Round Red Knob	05-11238	**$164.95**
101D096-RRC	Control Choke Dual 8ft Round Red	05-11239	**$169.75**
101D144	Control Dual 12ft W/O Knob	05-11240	**$170.80**
101D144-RB	Control Dual 12ft Round Black Knob	05-11241	**$174.75**
101D144-RBC	Control Choke Dual 12ft Round Black Knob	05-11242	**$178.75**
101D144-RC	Control Dual 12ft Round Clear Knob	05-11243	**$174.75**
101D144-RCC	Control Choke Dual 12ft Round Clear Knob	05-11244	**$178.75**
101D144-RL	Control Dual 12ft Round Blue Knob	05-11245	**$174.75**
101D144-RLC	Control Choke Dual 12ft Round Blue Knob	05-11246	**$177.75**
101D144-RR	Control Dual 12ft Round Red Knob	05-11247	**$174.75**
101D144-RRC	Control Choke Dual 12ft Round Red Knob	05-11248	**$178.75**

THROTTLE AND CHOKE CABLES - LOCKING



Turn-to-Lock Choke Controls for Dual Carburetor 912/914 Series Rotax Engines Allows a neat, clean installation without a clunky splitter box These controls feature a turn-to-lock mechanism that requires a quarter turn of the knob to lock or unlock the control at any position. For a non-locking control go to Non-Locking Choke Controls. Stroke 3.5" Min.

Model No.	Description	Part No.	Price
1014d048	Control Turn-To-Lock Dual 4ft	05-11249	**$166.75**
1014d048-B	Control Turn-To-Lock Dual 4ft Ball Knob	05-11250	**$171.80**
1014d048-F	Control Turn-To-Lock Dual 4ft Fluted Knob	05-11251	**$171.80**
1014d048-FL	Control Turn-To-Lock Dual 4ft Fluted Knob	05-11252	**$175.75**
1014d048-P	Control Turn-To-Lock Dual 4ft 4-Prong Knob	05-11253	**$171.80**
1014d048-PL	Turn-To-Lock Dual 4ft 4-Prong Knob	05-11254	**$175.75**
1014d048-T	Control Turn-To-Lock Dual 4ft T-Handle Knob	05-11255	**$171.80**
1014d048-TL	Control Turn-To-Lock Dual 4ft T-Handle Knob	05-11256	**$175.75**
1014d072	Control Turn-To-Lock Dual 6ft	05-11257	**$176.75**
101d4072-B	Control Turn-To-Lock Dual 6ft Ball Knob	05-11258	**$166.52**
1014d072-F	Control Turn-To-Lock Dual 6ft Fluted Knob	05-11259	**$181.75**
101d4072-FL	Control Turn-To-Lock Dual 6ft Fluted Knob	05-11260	**$159.75**
1014d072-P	Control Turn-To-Lock Dual 6ft 4-Prong Knob	05-11261	**$181.75**
1014d072-PL	Control Turn-To-Lock Dual 6ft 4-Prong	05-11262	**$159.75**
1014d072-T	Control Turn-To Lock Dual 6ft T-Handle Knob	05-11263	**$180.99**
1014d072-TL	Control Turn-To-Lock Dual 6ft T-Handle Knob	05-11264	**$158.95**
1014d096	Control Turn-To-Lock Dual 8ft Wo Knob	05-11265	**$160.75**
1014d096-B	Control Turn-To-Lock Dual 8ft Ball Knob	05-11266	**$164.95**
1014d096-F	Control Turn-To-Lock Dual 8ft Fluted Knob	05-11267	**$164.95**
1014d096-FL	Control Turn-To-Lock Dual 8ft Fluted Knob	05-11268	**$169.75**
1014d096-P	Control Turn-To-Lock Dual 8ft 4-Prong Knob	05-11269	**$164.95**
1014d096-PL	Control Turn-To-Lock Dual 8ft 4-Prong Knob	05-11270	**$169.75**
1014d096-T	Control Turn-To-Lock Dual 8ft T-Handle Knob	05-11271	**$164.95**
1014d096-TL	Control Turn-To-Lock Dual 8ft T-Handle Knob	05-11272	**$169.75**

VERNIER ASSIST THROTTLE CONTROL



Vernier-Assist™ Throttle Controls for Dual Carburetor 912/914 Series Rotax Engines
Innovative design allows a neat, clean installation without a clunky splitter box
McFarlane invents a new type of vernier engine control This brand new type of control has all the fine adjustment benefits of an old style push-button release vernier control, with the simplicity, responsiveness and jam-proof safety of a friction lock control.
Light weight and compact behind the panel
Safer - No vernier threads to jam!
US Patent No. 8,485,057
These light weight controls use a patent pending drive mechanism. The new roller action vernier provides smooth, jam-proof coarse and fine adjustment without a release button. Coarse adjustments are made by pushing the knob inwards or pulling the knob outwards. Fine adjustments are made by rotating the knob clockwise or counterclockwise.

Description	Control Length	Part No.	Price
MCTV005D048	48	05-11277	**$227.95**
MCTV005D072	72	05-11278	**$237.95**
MCTV0005D096	96	05-11279	**$239.75**
MCTV0005D144	144	05-11280	**$253.95**

AP

ATTACHING HARDWARE FOR CONTROLS

WIRE GRIP



Is a unique fitting which securely attaches to solid wire end push-pull cables. Uses a "pin vice" gripping action to attach a cable. The 5/8" long 10-32 threaded end will attach a clevis, ball joint, or other hardware for use with mixture controls, carb heat box, cabin air, or other applications, resulting in a clean, professional installation.

For .040-.050 dia cables .....P/N 05-08101 .....**$27.50**
For .055-.062 dia cables .....P/N 05-16000 .....**$12.65**
For .078 dia cables .....P/N 05-16001 .....**$11.85**

(Use P/N 05-16001 on A790, A820, A960, and A950 ACS controls)
(Use P/N 05-08101 on ACS A730, A740, A1770, and A1780 controls

AN486 TERMINALS



With 1/4-28 female threads. Fork hole dia. 3/16". AN486-3P has 17/64" fork opening. AN486-4P has 9/64" fork opening.

P/N AN486-3P **$18.50**
P/N AN486-4P.....**$18.65**

AN665-21R TERMINAL



Has 10-32 threads and 3/16" dia. fork hole. Furnished with clevis pin, cotter pin and locknut.

P/N 05-02500..... **$12.00**

BOLT TYPE TERMINAL



Special 3/16" dia. bolt with drilled shank. With hex nuts and washers. Use instead of "bug" nut.

P/N 05-16100 .....**$0.60**

CONTROL HOUSING CLAMPS



AN742 plain loop type clamps to secure housing of throttles, dash controls, Bowden cable, etc. to airframe.

AN742-D3 for 3/16" O.D **$0.41**
AN742-D4 for 1/4" O.D.....**$0.34**

SLOTTED BRACKET CONTROL MOUNT





Notch of end fitting locks into slot of bracket to secure control. Steel Construction.

P/N 10465.....**$21.90**

CLAMP STYLE CONTROL MOUNT

Protruding "finger" in clamp holds control in position. Two-piece steel clamp and base. P/N 10464..... **$14.50**

WIRE STOP



Wire Stop is ideal for securing cable ends. Removable and completely reusable.
OD 1/4" ID 8-32 Length 3/8" for cable up to 3/32"
P/N 15-06291.....**$0.70**

CONTROL CABLE PIVOT MOUNT



This pivot type support solves a couple of problems that have been around as long as GA aircraft. Eases the binding due to rigid cable mounting and the associated cable wear and breakage. Accepts cable OD in the range 3/16" to 1/4". P/N 05-11907 .....**$24.75**

FLAP HANDLE COVER



This flap handle is durable, flame-retardant, and fairly easy to install. The end result is a 1 foot section of tubing that will fit on any flap handle (Or any other round handles) that is 3/4" to 7/8" in diameter. The exposed length on the handle should not exceed 12 inches subtracting the length of the grip. It is simple to install with a high heat blow dryer or heat gun. When installed it will have a dark gray texture and be highly resistant to minor dings. This tubing will confirm to small radius bends and cover most scratches and minor surface imperfections. P/N 05-06920.....**$13.75**

STANDARD FLAP HANDLE GRIP



This is a standard Black plastic grip that can be installed on any round 7/8" shaft. It has a cutout in the end for a release button. It is ribbed all the way around. P/N 05-06923.....**$10.65**

RED FLAP HANDLE GRIP



This is a standard Red plastic grip that can be installed on any round 7/8" shaft. It has a cutout in the end for a release button. It is ribbed on the top and has finger grips on the bottom.

P/N 05-06922.....**$10.65**

RUBBER HEX CUT FLAP HANDLE GRIP



This is a special Rubber grip that can be installed on any round 7/8" shaft. It has a cutout in the end for a release button. It has a raised Hex cut pattern all around the grip.

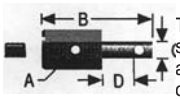
P/N 05-06921.....**$12.50**

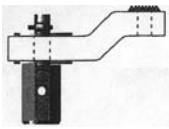
CARGO TIE-DOWN DOUBLE STUD FITTING



Description	PN	Price
Double stud round ring	05-13140	**$46.55**
Double stud Twisted ring	05-13141	**$75.75**

CABLE END "B" NUT





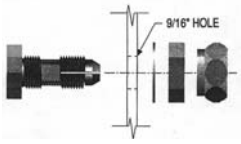
This universal NAP assembly will eliminate bent or smashed push-pull cable ends and get a strong hold at the same time. The cable end lays in a machined channel at the bottom of the screw hole. Tightening the compression screw snugs down on the cable end thus eliminating any potential crimping or smashing of the cable. Eliminates wear, possible cable breakage and enhances smooth push-pull operation. Complete with washers and cotter pin. All stainless steel, computer machined and easy to install.

Part No.	A	B	C	D
05-16210	.070	.825	.186	.241
05-16230	.086	.825	.249	.255
05-16240	.070	.645	.249	.093
05-16245	.070	.645	.186	.093

Throttle, Wt.,.26 oz..... P/N 05-16210..**$11.85/ea.**
Mixture, Wt,.29 oz ..... P/N 05-16230..**$11.85/ea.**
Cabin Heat, Wt,.26 oz... P/N 05-16240..**$11.85/ea.**
Carb Heat ..... P/N 05-16245..**$11.85/ea.**

DISCOUNT: LESS 20% ON 25 OR MORE.

CABLE SAFE



A Safe "No-Slip-Grip" for your thru bulkhead cables. This unit prevents your throttle, mixture, choke or any push-pull cable from slipping at the firewall/ bulkhead location. Machined from lightweight aluminum, and final blue anodizing. Installation is simple with a drill and wrench. Once installed, the cable is threaded and the end nut is snugged down on the cable casing for positive encapsulation. Designed specifically for the aircraft industry, these fittings can be installed on virtually any application that requires a solid hold on any cable assembly with a rigid outer case. Thousands of applications: auto, boat, race car, motorhome. Used with 1/4" thru 7/32" diameter cable.

Cable Safe, Wt.: .84 oz. .....P/N 05-16250..**$13.50/ea.**

DISCOUNT: LESS 20% ON 25 OR MORE.



CABLE SAFE II - This Fitting is designed for use on coaxial type control cables. It has a two piece design to allow it to be placed over the cable inserted thru the firewall & tightened down, providing a positive lock.

For 1/4" cable housing ..... P/N 05-16252 ..... **$21.85/ea.**
For 3/8" cable housings..... P/N 05-16253 ..... **$22.90/ea.**

ADAPTOR - For the cable safe to adapt down to 3/16" diameter cable housings. ..... P/N 05-16251 .....**$5.35/ea.**

WIRE SWIVELS



OD	ID	Length	Cable Dia.	Part No.
1/4"	8-32	.240"	3/32 Max	2361

P/N 06-01282..... **$0.75**

CONDUIT RETAINER - STRAIGHT



OD	ID	Length	Conduit	Part No.
5/16-24	.260	2	7/32	2386

P/N 06-01281..... **$1.55**

BOWDEN CABLE (SOLID WIRE ENDS)



Spiral-wound galvanized wire casing. Use for push-pull controls of any length. Inside cable dia. .078. Outside casing diameter 7/32".

P/N 05-15500.....**$2.70/ Ft.**

BOWDEN CABLE INNER WIRE



Stainless stainless steel wire .078" diameter. Sold by the foot.....P/N 05-15510 ..... **$0.65**
Bowden cable housing .....P/N 05-15505 ..... **$2.08**

BOWDEN CABLE CLAMP

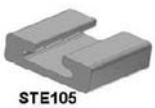


Designed to provide a simple method of anchoring a typical wire wound cable. Used in anchor hole of 7/16" diameter.

For 3/16" Bowden Cable ..... P/N 05-15705.....**$16.50/ea.**
For 7/32" Bowden Cable ..... P/N 05-03287.....**$13.75/ea.**

BROWNLINE STYLE SEAT/CARGO TRACKS





Aircraft Spruce now carries Brownline style seat track and extrusion for modifications and homebuilder, or experimental aircraft customers. The new seat track can be ordered as slotted extrusion with or without 0.785" diameter machined openings every one inch, and can be purchased in anodized standard lengths or by the inch. They can also be purchased in non-anodized bulk lengths from 75" to 180". Compatible with common MS33601 .73" diameter style fittings, the new tracks are precision machined, from aerospace grade 7075-T6511 aluminum with full traceability and material certification.

MFR PN	Description	Part No.	Price
6656-6	6" 6656-6	05-07163	**$17.50**
6656-12	12" 6656-12	05-07164	**$32.99**
6656-18	18" 6656-18	05-07166	**$39.50**
6656-24	24" 6656-24	05-07167	**$46.50**
6656-36	36" 6656-36	05-07168	**$72.85**
6656-48	48" 6656-48	05-07169	**$86.80**
STE105	Extrusion STE105 (Sold per inch)	05-07172	**$0.99**

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

FRICTION THROTTLE



Adjustable friction throttles with same construction as the ACS A-800 friction throttle but with a large (2" dia.) black solid plastic knob. Has 3/16" dia. 10-32 threaded end with 8° swivel. Stocked in the following lengths (measurement taken from under panel nut to end of threaded shaft with knob pushed in). Order by Part No. Made in the U.S.A.

Length	Part No.	Price	Length	Part No.	Price
3 Ft.	05-13700	**$84.75**	5 Ft.	05-13900	**$88.75**
4 Ft.	05-13800	**$86.75**	6Ft.	05-14000	**$89.75**

SPECIAL LENGTH CONTROLS - Use price of next longest stock length above plus $20 set-up charge. For lengths over 6 ft. also add $1.45 per foot. Allow 2-3 weeks. ***THROTTLE KNOB -*** Black solid plastic knob, 2" dia., with 1/4-28 internal threads. P/N05-29100 .....**$4.50**

BUTTON TYPE DASH CONTROL



Button Type Dash Control designed for use with many control system applications. Easily installed. Operates smoothly. All adjustable parts are metal. 7/8" Dural button on 3/16" diameter shaft. Maximum travel is 2". Furnished in 5 ft. and 8 ft. length. May be shortened. Order Inserts separately.

5 Ft. Dash Control ..... P/N 05-14200 .....**$17.75**
8 Ft. Dash Control ..... P/N 05-14300 .....**$22.50**

INSERTS ONLY - Round pressure-sensitive labels, 3/4" dia. White lettering on black background. Order by part number. Basic P/N is 05-144. Last two digits of P/N are as shown in above illustration. Example: 05-14460 is "Starter"..... **$0.55 Ea**



MC6160 UNIVERSAL PUSH TO UNLOCK CONTROL



Perfect for Alt Air and Carb Heat controls for the experimental/homebuilt market. Knobs can be engraved for $25.00 per knob. Custom laser marking of the knobs is available for $25.00 per knob. Receive a $15.00 discount for each additional knob with the same design.

Size	Color	Part No.	Price	Size	Color	Part No.	Price
6Ft	Black/Black	05-04607	**$73.80**	6Ft	Clear/Black	05-04610	**$73.80**
8Ft	Black/Black	05-04608	**$76.50**	8Ft	Clear/Black	05-04611	**$75.90**
12Ft	Black/Black	05-04609	**$79.95**	12Ft	Clear/Black	05-04612	**$79.95**

T-HANDLE DASH CONTROL



Manufactured of duralumin and brass. Locks positively, will not vibrate loose. One-fourth turn locks it in any position and will hold up to 100 lbs. Standard travel 2-1/2". T-handle is 1-3/4" wide. Can be mounted from front or rear of instrument panel. Complete with wire and casing which may be shortened.

SINGLE WIRE

5 Ft. Control ..... P/N 05-15000 .....**$44.65**
8 Ft. Control ..... P/N 05-15100 .....**$29.95**
12 Ft. Control ..... P/N 05-15200 .....**$33.50**

TWO WIRES -

8 Ft. Control ..... P/N 05-15300 .....**$82.80**

THROTTLE CONTROL



The phenolic knobs are hard and stable. Unlike the soft injection molded knobs, they resist scratching and the effects of sunlight and age. Meet the latest F.A.R. requirements for shape. and color. When ordering please provide: Make, Model, and Serial. P/N 05-02486.....**$327.00**

CARBURETOR HEAT CONTROL FOR CESSNAS



Carburetor Heat Controls for Cessna 140 thru 185 aircraft. High temperature Teflon lined conduit for reduced vibration wear, longer life and smooth, consistent control. Cheapy controls with poly liners will not tolerate engine temperatures and special heavier wire for more fatigue strength and reliability. Improved friction mechanism. High quality scratch resistant phenolic knob. Updated square knob meets the latest FAA standards. 4ft. end to end. P/N 05-11978.....**$172.80**

CARBURETOR HEAT CONTROL FOR PIPER PA 28



Special, heavier wire for more fatigue strength and reliability. Improved friction mechanism. Reduced vibration wear. Anti-rotate feature to reduce stress on the inner wire. High temperature Teflon lined conduit. High quality replacement knobs duplicate the original Piper color and shape to maintain the original factory appearance of the instrument panel. P/N 05-15355.....**$102.80**

EYEBALL FIREWALL ASSEMBLIES

Allows easy installation of cables with oblique entry/exit angles. Includes the eyeball swivel, cable pass through, and line clasper. The Eyeball swivels up to 50 degrees and is clamped in place to complete installation. The hole is easily enlarged for other sizes.

Ball Matl.	 Aluminum		 Steel		 Aluminum	
Appx. Wt.	0.08 lb.		0.07 lb.		0.10 lb.	
Model No.	SE961-B		SE961-S		TTp	
Hole Size	Part No.	Price	Part No.	Price	Part No.	Price
.125"	05-03440	**$31.75**	05-00764	**$37.85**	05-00722	**$42.85**
.188"	05-00957	**$31.75**	05-00766	**$38.75**	05-00723	**$42.85**
.218"	05-01378	**$31.75**	05-01381	**$37.85**	05-01383	**$42.85**
.240"	05-01379	**$31.75**	05-01382	**$39.65**	05-01384	**$42.85**
.250"	05-00958	**$31.75**	05-00767	**$37.85**	05-00724	**$42.85**
.260"	05-00959	**$31.75**	05-00768	**$39.65**	05-00726	**$42.85**
.312	---	**---**	05-12502	**$39.65**	---	**---**
.330	05-12498	**$31.75**	05-12503	**$39.65**	05-12493	**$42.85**
.375"	05-01380	**$31.75**	05-12504	**$43.75**	05-12494	**$42.85**
.438	05-12499	**$36.36**	05-12505	**$45.46**	05-12495	**$42.85**
.500	05-12500	**$36.36**	05-12506	**$39.65**	05-12497	**$42.85**
.562	---	**---**	05-12507	**$39.65**	---	**---**
.750	---	**---**	05-12508	**$45.46**	---	**---**



SERIES 4000 SPHERICAL METAL GROMMETS

The 4000 Series Spherical Metal Grommets have been developed to offer superior and robust aircraft cockpit fire protection and to give flexibility in routing pass-through controls at angles up to 50° from perpendicular. The 4000 Series require only a single hole for minimum installation time. All-steel construction allows the product to meet temperature requirements of FAA Aircraft Circular 20-135 for certificated aircraft. **Model 4100** has an extended body and enlarged body flange for use on composite firewalls. **Model 4200** accommodates steel firewalls up to 0.040" thickness.

4100 Series			*4200 Series*		
Size	Part No.	Price	Size	Part No.	Price
.125"	05-06893	**$72.75**	.125"	05-06905	**$53.75**
.188"	05-06894	**$72.75**	.188"	05-06906	**$53.75**
.218"	05-06895	**$72.75**	.218"	05-06907	**$53.75**
.240"	05-06896	**$72.75**	.240"	05-06908	**$53.75**
.250"	05-06897	**$72.75**	.250"	05-06909	**$53.75**
.260"	05-06898	**$72.75**	.260"	05-06910	**$53.75**
.312"	05-06899	**$61.75**	.312"	05-06911	**$53.75**
.375"	05-06901	**$72.75**	.375"	05-06912	**$53.75**
.438"	05-06902	**$59.75**	.438"	05-06913	**$53.75**

MODEL 4100 SERIES SHOWN HAVE A BODY LENGTH OF 1/2". SEE WEBSITE FOR LONGER BODY LENGTHS.



SERIES 6000/7000 SPHERICAL METAL GROMMETS

The 6000 Series Spherical Metal grommets have been developed to address these issues: Space restrictions on some firewalls, Ease and time required for installation, FAA requirements for fire protection, and Minimum parts count.

This series requires only space for a 3/4" wrench on the firewall, and can accommodate ball hole sizes from .125" to .260".

The 7000 Series Spherical Metal Grommets have been developed to require minimal preparation and installation time in a robust, all-steel product with a minimal parts count and parts less likely to be dropped or lost during installation. As an all-steel product, it meets the heat resistance requirements of FCC AC 135. This is a requirement for firewall use in certificated aircraft. Installation still requires FAA field approval for those aircraft.

The Model 7000 can accommodate a pass-through up to .925" in diameter, making it ideal for pass-throughs.

6000 Series			*7000 Series*		
Size	Part No.	Price	Size	Part No.	Price
.125"	05-06929	**$45.90**	.125"	05-06935	**$39.80**
.188"	05-06930	**$45.90**	.188"	05-06936	**$39.80**
.218"	05-06931	**$45.90**	.218"	05-06937	**$39.80**
.240"	05-06932	**$45.90**	.240"	05-06938	**$39.80**
.250"	05-06933	**$45.90**	.250"	05-06939	**$39.80**
.260"	05-06934	**$45.90**	.260"	05-06940	**$39.80**
			.312"	05-06941	**$39.80**
			.375"	05-06942	**$39.80**
			.438"	05-06943	**$39.80**
			.500"	05-06944	**$39.80**
			.562"	05-06945	**$39.80**
			.750	05-12501	**$39.80**

SEE WWW.AIRCRAFTSPRUCE.COM FOR COMPLETE SELECTION OF SPHERICAL METAL GROMMETS

THROTTLE QUADRANTS

AP

THROTTLE QUADRANTS FOR RV'S

These quadrants are made from aircraft quality anodized aluminum for long life and corrosion resistance brass friction plates are adjustable to fit individual preferences. Black anodized top plates are machined and engraved on a CNC mill to exacting tolerances for an excellent finish. side plates are laser cut insuring a perfect fit and feel. All hardware used meets AN standards. Note: All throttle quadrants require a AN665-21R clevis with an AN393-11 clevis pin.
The side mount style quadrants are intended for use in tandem airplanes such as the RV4, RV8, Stardusters, Baby Great Lakes, One Design, Acro Sport & Sonerai. Center mount style is intended for use in side-by-side aircraft such as RV's, Sonex, Thorp T18 & Pulsars.



3 CONTROL LEVER
Side Mount Curved Top
Model: SMCT3L
Wt: 10 Oz.
7-3/4" H
x 4-3/4" W x 2" D
P/N 05-00698
$204.95



3 CONTROL LEVER
Center Mount
Curved Top
Model: CMCT3L
Wt: 12 Oz.
7-3/4" H x 7" W
x 2" D
P/N 05-00701
$244.95



3 CONTROL LEVER
Side Mount Flat Top
Model: CT83F
Wt: 10 Oz.
7-3/4" H
x 4-3/4" W x 2" D
P/N 05-00703
$222.95



2 CONTROL LEVER
Side Mount Flat Top
Model: CT82F
Wt: 8 Oz.
7-3/4" H x 4-3/4" W
x 1-1/2" D
P/N 05-00702
$179.80



2 CONTROL LEVER
Center Mount
Curved Top Model: CMCT2L
Wt: 10 Oz.
7-3/4" H x 7" W
x 2" D
P/N 05-00699
$213.95



2 CONTROL LEVER
Side Mount
Curved Top
Model: SMCT2L
Wt: 8 Oz.
7-3/4" H x 4-3/4" W
x 1-1/2" D
P/N 05-00697
$184.75



RV8 REAR QUADRANT
A single lever rear quadrant with an engraved top plate and a short handle for better clearance. 8" x 5-1/4" x 2"
P/N 05-04531 ..... **$118.85**

ACS THROTTLE QUADRANTS



Available in two lever designs. The 2-lever control has black plastic "Throttle" knob and red "Mixture" knob. The 3-lever control has blue "Prop" knob in addition to the throttle and mixture knobs. Built-in friction lock. Levers have 2-1/2" travel. Quadrants fit on left or right side of cockpit and can be used in tandem. Complete with aluminized Mylar knob inserts. Ends of throttle and prop levers have 3/16" dia. holes for attachment of push-pull controls with clevis terminals. End of mixture lever has .076" dia. hole to accept solid wire control such as Bowden cable. Made in the U.S.A.
Two-Lever Quadrant ..... P/N 05-00960..... **$46.50**
Three-Lever Quadrant (pictured)..... P/N 05-00961..... **$68.75**

CIRRUS CONTROL QUADRANT UPGRADES



These Control Quadrant Upgrades result in greater fuel efficiency with reduced engine wear by means of a propeller RPM control lever. The Prop control lever for CIRRUS SR20 reduces noise significantly while providing a much more relaxing and enjoyable flight for both pilot and passengers. Simple non-structural installation. Traditional propeller RPM control, enabling "oversquare" operations as in other high performance aircraft (Columbia/Corvalis, Mooney, Piper, Cessna, Beech, etc.). Reduced fuel consumption, 1+ gallon per hour in cruise and 5+ gallons per hour in a cruise-climb. Pays for itself in approximately 200 hours of operation. Dramatically reduced cabin noise and vibration. Airport/environmentally friendly noise abatement. Reduced engine wear and operational costs. Boost pump LED to remind pilots. Easy installation and easy return to OEM status. Compatible with the CIRRUS SR20.
SR20..... P/N 05-07192..... **$3,500.00**
SR22..... P/N 05-07193..... **$3,500.00**

STAINLESS STEEL FIREWALL PASS THRU KIT



The heart of this kit is a one piece metal spun flanged tube, made from .050" thick stainless steel, along with a .050" thick reinforcement plate. (Other flanges on the market are made from .020" thick stainless flat stock, rolled and spot welded together). The flange is the strongest, most indestructible flange on the market. The flange mounts on the inside (crew side) of the firewall, and the reinforcement plate mounts on the forward (engine) side of the firewall – capturing the firewall between 2 pieces of .050" thick stainless steel. The flange has a generous radius formed between the flange and tube to prevent chaffing of wires and cables. Most builders will utilize TWO firewall pass thru units – one for high current cables (battery, alternator, main buss power) and the second for smaller signal wiring for engine instrumentation and control functions. P/N 12-04762 ..... **$78.75**

PIPER AEROSTAR THROTTLE KNOBS



These throttle knobs are direct replacements for Piper Aerostar OEM parts but many other applications are possible. Their big advantage is that they are shaped to fit your hand for easy, precise power control. Pilots report them having a "jet-like feel". And they're made from a tough polymer material so they'll never crack or break. Package of 2.
Black M1015 ..... P/N 05-14954 ..... **$98.00**



ROTAX DUAL CARBURETOR THROTTLE CONTROLS

Allows a neat, clean throttle installation without a clunky splitter box. Supersmooth friction lock, heavy duty 0.062 inch stainless steel inner wires. Standard knob is egg shape and ball knob is sphere shape.

Description	Part No.	Price	Description	Part No.	Price
4' Std Knob	05-04385	**$163.80**	6' Std Knob	05-04386	**$182.75**
6' Std Knob	05-04387	**$180.80**	4' Ball Knob	05-04388	**$160.80**
6' Ball Knob	05-04389	**$170.75**	8' Ball Knob	05-04390	**$180.80**

THROTTLE QUADRANTS – CONTROL WHEELS

HOMEBUILDERS THROTTLE QUADRANTS

These quality quadrants have been in use in a wide variety of experimental and ultralight aircraft for over 25 years. Designed and manufactured to provide years of dependable, precise performance.



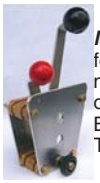
Model #1 – This external reversing hook-up quadrant can be used in tandem for dual control. Available with 1, 2, or 3 lever. Weight: 10 oz. Body size: 3.5" x 4".
Single lever quadrant .....P/N 05-15905 .....**$78.80**
Two Lever Quadrant.....P/N 05-15910 .....**$66.80**
Three Lever Quadrant .....P/N 05-15915 .....**$73.85**
Add -F to P/N and $10 to price for adjustable friction.



Model #2 – This internal non-reversing hook up quadrant is often used on RV-4 and similar homebuilt aircraft. Available in 1, 2, or 3 lever models. Weight: 12 oz. Body Size: 3.5" x 4".
Single lever Quadrant .....P/N 05-15920 .....**$62.95**
Two Lever Quadrant .....P/N 05-15925 .....**$95.75**
Three Lever Quadrant .....P/N 05-15930 .....**$73.85**
Add -F to P/N and $10 to price for adjustable friction.



Model #3 – This internal reversing hook up quadrant is ideal for a variety of different aircraft models. Available with 1, 2, or 3 lever. Weight: 10 oz. Body size: 3.5" x 4".
Single lever Quadrant..... P/N 05-15935.....**$66.75**
Two Lever Quadrant..... P/N 05-15940.....**$67.75**
Three Lever Quadrant ..... P/N 05-15945.....**$73.85**
Add -F to P/N and $10 to price for adjustable friction.



Model #4 – This popular quadrant was specifically designed for use on RV-3 and RV-4 aircraft and is also applicable to many other homebuilt aircraft. Furnished in two lever model only and furnished with adjustable friction. Weight: 12 oz. Body size: 3.5" x 4".
Two lever Quadrant .....P/N 05-15950 ..... **$78.80**



Model #5 – Panel mount quadrant can be an internal reversing or internal non-reversing. Available in S-series only. One, two or three levers. Friction or non-friction. Panel Mount Reversing listed below
Single lever Quadrant.....P/N 05-02436 .....**$65.75**
Two Lever Quadrant.....P/N 05-02437 .....**$70.90**
Three Lever Quadrant .....P/N 05-02438 .....**$73.85**



Model #6 – Twin-engine model: Non-reversing internal or reversing internal unit with a four-arm configuration. L-series only. Friction or non-friction. Twin Engine Reversing Internal listed below.
Four lever Quadrant .....P/N 05-02364 ..**$92.75**
Four lever Quadrant w/ Friction..P/N 05-02365 **$103.75**

T-BAR HANDLE FOR QUADRANTS

This handle is 3-1/2" long and 1-1/4" round and fits all of the Homebuilders Quadrants above. The arm slot is offset to one side. It is molded urethane and is very durable. Add -1 or -1F (as applicable) to the Part No. and $25.00 to the price (example: 05-15925-1)



ACS CONTROL WHEEL A-1310

Designed to be more user friendly than standard control wheels. Mounting position can be raised or lowered one inch by rotating the mounting flange. All parts machined from 6061-T6 billet. The A-1310 Control has cavities for wiring, but does not come prewired or with a mic switch. They can be ordered with a hole drilled for the mic or can be drilled later. Wt: 26 oz. Mounting flange hole sizes: 3/4" or 7/8". Made in USA.
3/4" Black Anodized .....P/N 05-02248 .....**$100.75**
3/4" Bare Aluminum.....P/N 05-02279 .....**$96.50**
7/8" Black Anodized .....P/N 05-02282 .....**$100.75**
7/8" Bare Aluminum.....P/N 05-02284 .....**$97.00**

BEECH BONANZA/BARON CONTROL WHEELS



These control wheels are identical in design to the new Beechcraft large ram's horn style wheels. They can be powder coated black with a highly durable material. Peeling or yellowing that occurs on older Beech wheels has been eliminated by the powder coating process. This control wheel is a direct replacement for the Beech/Raytheon 60-524080-13, 14 (for F33A, F33C, V35B, A36, and B36TC) and , -17 (for F33A, F33C, A36, B36TC, and 58) control wheels. Can be installed on many other aircraft using FAA form 337 for field approval. FAA Form 8130-3.
Hand crafted black leather wrapping is available for these control wheels. Each wheel is individually hand laced and custom fitted to the wheel. We can also hand wrap your existing Beech control wheel in leather. Send your control wheel to Aircraft Spruce in Corona, CA and allow 3 weeks for delivery. A Davtron MB800 digital chronometer installed in the faceplate of the control wheel is also available.



These Control Wheels now include an installation kit (Thumbplate, Faceplate, Screws).
Custom Leather Wrapped Wheel is available for and additional cost.
P/N 05-00547..... **$1,325.00**

Description	Part No.	Price
Basic Control Wheel Factory White	05-00545	**$638.00**
Basic control Wheel Black Powder Coat	05-06928	**$698.00**

CONTROL YOKE UPGRADES



Grips



Center Cushion

Now flaking & peeling finish on worn control yokes can be remedied cost effectively by these pilot-installable, semi-flexible, molded grips which are available with push-to-talk button built-into the top of the yoke (not the side). The Model SX-100 grips (pilot & copilot set) and optional, built-in, Model SX-101 plug-in push-to-talk button simply slip-over the thin, "ram's horn" control yokes of Cessna 150, 152, 172, 177, Grumman-American AA-1, AA-5 and early Mooney aircraft. Their thick, padded feel and built-in push-to-talk button add comfort, convenience & value to vintage airplanes. The top-mounted, low profile, miniature push-to-talk button supplied completely wired with plug, jack and coiled cord, is less likely to be pressed by accident, get in the way or slip out of position than bulky, side-strapped, units. Complete your updated yoke configuration with a pair of new model SX-110 center cushions, richly finished in black. Cushions fit neatly over centers of any control yokes.

Description	Application	Part No.	Price
SX-100 Grips without Push-to-Talk switch (4ea)	Small Cessna Ram Horn - C150, C172, C177, prior to 1973	05-16600	**$69.50**
SX-101 Grips (set of 4) with Push-to-Talk switch (left side)	Cessna 150, 152, 172, 177, Grumman-American AA-1, AA-5, Pre 1964 Mooney Aircraft	05-16630	**$109.75**
SX-101 Grips (set of 4) with 2 Push-to-Talk switch (left & right)	Cessna 150, 152, 172, 177, Grumman-American AA-1, AA-5, Pre 1964 Mooney Aircraft	05-16635	**$159.75**
SX-110 center cushion Set (Black)	Small Cessna Ram Horn - C150, C172, C177, prior to 1973	05-16610	**$49.95**

AP

BEECHCRAFT ACCESSORIES

Designed & built by real-world pilots, manufactured to the highest standards. These products are built for those incomparable Beechcraft. Years of experience and the highest quality materials and construction result in the best products available for Bonanzas & Barons. All have FAA STC/PMA as applicable.

BONANZA/BARON CONTROL YOKE LOCK



Protect your investment with this heat treated lock. It installs quickly and simply (no modification is needed) but cannot be removed without being unlocked. It is a permanent, direct replacement for the original equipment. Complete with the highest quality lock, instructions, and all hardware. P/N 05-00649.....**$376.00**

Optional clipboard for clearances or notes makes a stable flight center. Spring-loaded, it snaps out of the way in seconds.

Deluxe (with Quick Release).....P/N 05-01335 .....**$202.95**

BEECH THROTTLE, MIXTURE, PROP KNOB SET



These high-strength knobs for Bonanzas are a big improvement over old, cracked original equipment and likely the best replacement knobs on the market. Bright color-coded space-age material will not crack or fade and will not get hot like aluminum knobs. P/N 05-00652 ..... **$214.95**

Push buttons only, with new screws P/N 05-00653 ..... **$104.75**

WINDOW VENT HINGE & LATCH KIT

For new windows only on Mooney, Piper, Socata, Commander.

P/N 05-01336 .....**$157.75**

BEECH STORM WINDOW HINGE/LATCH KIT



Every Bonanza or Baron pilot will appreciate the quality workmanship in every one of these storm window hinge/latch kits. Professional construction means they work smoothly, and they fit standard factory window holes with no modifications.

Complete hinge/latch kit..... P/N 05-00654... **$225.95**
Latch & Striker only..... P/N 05-00655... **$126.75**
Hinges Only..... P/N 05-00656... **$109.85**

BONANZA NOSE GEAR BRACE



These PMA approved replacements for the Nose Gear Brace are used in early Bonanzas. Applicability: Model 35 D-1 thru D6561 Model 33 CD-1 thru CD-370 Old unit (core) must be returned. FEATURES: FAA/PMA Approved direct replacement part. • One piece aluminum stronger than OEM part. • Durable corrosion resistant white powder coated finish. • Weight increase of 4.56 lbs. beneficial for aft CG aircraft. • Completely improved design eliminates potential for any corrosion. • Upper and lower bronze bushings included. • Grease fittings included.

P/N 05-02463 ..... **$3,895.00**

BEECH DOOR HINGE KITS



Main landing gear door hinge kits from Marsh Brothers Aviation for all models of Beech Bonanza and Debonair. Avoid unnecessary and costly repairs by installing AeroTough™ GF polymer bushings. This preventative maintenance solution will ensure that you will never have the complications with seized bushings that traditional metal bushings can exhibit.

Bonanza ..... P/N 05-11934..... **$319.00**
Baron..... P/N 05-11935..... **$319.00**
Bonanza/Baron Install Kit..... P/N 05-12241..... **$32.50**

ALTERNATOR BLAST AIR DUCTS



This 24V Alternator Blast Air Duct is for use with Beech Bonanza. Comes with 8.

P/N 05-10907.....**$12.50**

NOT FAA APPROVED

BEECHCRAFT BONANZA INTAKE DUCT



Beechcraft (Raytheon) Bonanza Intake Duct fits most 1964 on up: I0520 & I0550 Beech. Models: S35-V35-V35A-V35B-V35TC C33A, F33A, A36

3 ply with Nomex reinforcement & includes Clamps.

Gloss Red .....P/N 05-06564 ..... **$111.75**
Gloss Blue.....P/N 05-06565 ..... **$119.75**

NOT FAA APPROVED

TOW PIN FOR BEECHCRAFT FAA/PMA APPROVED



Installation Eligibility:

Debonair: 35-A33, 35-B33, 35-33, E33, F33

Bonanza: G33, 35-C33A, E33A, F33A, F33C, N35, P35, S35, V35, ...V35A, V35B, 36, A36, A36TC, B36TC

Baron: 20-21-3 95-55, 95-55, 95-B55, 59-C55, D55, E55, 58, 56TC, A56TC, 58TC, 58P

RAPCO Tow Pin..... P/N 05-01625.....**$24.50**

CESSNA GOLDEN EAGLE YOKE EMBLEM



Replace Your Original, Damaged, Or Missing Yoke Inserts With Our New Faux Carbon Fiber Insert! Includes Beautiful Domed Golden Eagle Emblem (Does NOT Include Yoke or Padded Surround) Faux Carbon Fiber Insert Is Same Size As Your Original Piece - Installation Instructions Included.

P/N 09-03786.....**$179.75**

BEECH BONANZA YOKE EMBLEM



This Is A Beautiful Domed Black and Gold Emblem, Approximately 1.1" High, 7.3" Wide, 1/32" Thick, For Peel 'n Stick Application. The Classic Beech "B" Is A Real Eye-Catcher! Designed Especially For Bonanza Yokes, This Piece Can Be Applied Almost Anywhere!

P/N 09-03868.....**$41.60**

ROTAX THROTTLE SPRINGS 6822



A common complaint about the Rotax 912/914 engines is that the throttle return springs are too strong. McFarlane stocks a variety of springs so you can choose the one that best fits your application. All McFarlane throttle controls for Rotax engines include P/N 6822 spring. Less than half the strength of the original stock Rotax springs. Prevents throttle "creep" due to excessive return spring force. Requires 1 per carburetor (2 per engine)

Note: Installer is responsible for determining whether this spring is an appropriate substitution for their application. For use on non-certified aircraft. Comes in a pack of two. P/N 05-12477.....**$19.80**

BEECHCRAFT ELEVATOR FORWARD CABLE MC35-524385



This elevator cable, P/N MC35-524385 is part of the line of FAA-PMA approved flight control cables for Beechcraft aircraft.

P/N 05-15258.....**$181.85**

BEECHCRAFT KING AIR FIRE DETECTOR SHIELDS



Vendor Part Number	Replacement Part Number	Model Eligibility	PN	Price
TL-101-910079-3	101-910079-3	B200, B200C, B200C (C-12F), B200C (UC-12F), B200C (UC-12M), B200C (C-12R), B200CT, B200T	05-11052	**$252.00**
TL-101-910079-1	101-910078-3	200, 200C, 200CT	05-11053	**$99.95**
TL-100-570029-1	100-570029-1	C90, C90A, C90GT, E90	05-11054	**$160.25**

BEECHCRAFT MAIN GEAR BOLT



This is a replacement for discontinued Main Gear Bolt part number CA101-810089-1. The new part number is CA101-810089-1A. This part has been tested and is superior in tensile strength and fatigue and crack resistance. Eligible for Beechcraft 1900 series aircraft, this is a life limited part that meets all requirements for the full 5 year/10,000 cycle life. The part number and serial number are engraved on the bolt head.

P/N 05-04163.....**$320.00**

BEECHCRAFT PATCH

4" x 2", ready to be ironed or sewn on.

P/N 14-00131.....**$2.75**

Prices Subject to Change Without Notice

FUEL TANKS



FUEL WARNING SYSTEM

Float-action sensor in tank activates panel warning light when fuel supply is low. All-PBT unit, impervious to aviation fuel. Use AN 867-4 flange for mounting.

Sensor ..... P/N 6905-400..... **$31.75**
Warning Light ..... P/N 05-17660..... **$29.00**
Bulb(GE-330)..... P/N 11-04016..... **$1.25**

DISCOUNTS: 10% ON 6, 15% ON 12, 20% ON 50

INVERTED PICKUP TUBES



"Flop" tubes for inverted flight are made from Aeroquip 701-6 flexible hose. End fitting swaged onto hose has a 1/4" male pipe thread attached to tank outlet. Available for any of the tanks listed, or others. Specify tank model and tube length. Minimum length available is 9"

9" ..... P/N 05-20509 .... **$72.85**
10".....P/N 05-20510 .....**$71.75**
11" ..... P/N 05-20511 .... **$69.95**
12".....P/N 05-20512 .....**$72.50**
13" ..... P/N 05-20513 .... **$72.75**

Add $1.80 to 13" price for each additional inch.

PICKUP TUBE ADAPTER

Specially machined AN912 fitting for connecting pickup tube to fuel tank.
For 12" tubes & longer ..... P/N 10380 ..... **$12.50**
Specially machined AN912-12D for shorter than 12"
P/N 10380-1 ..... **$52.75**

FLOP TUBE ADAPTER WITH SIDE OUTLET



This fitting eliminates the need to put an angle fitting on standard adapter. 1/4" female pipe thread on side and bottom & 1" male pipe or 3/4" male pipe on bottom. Use with AN867-6 or 8.

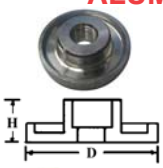
1" Male Pipe .....P/N 05-20525 ..... **$52.75**
3/4" Male Pipe .....P/N 05-20526 ..... **$52.75**

FUEL TANK DRAIN FITTING



Minimizes drain flow vortexing that allows water and contaminants to remain in tank no matter how many times the drain cycle is repeated. Threads are 1/8" NPT - brass throughout P/N 05-28900 .....**$38.30**

ALUMINUM WELDING FLANGES



Part No.	Female Pipe Thread	Dia. "D" In	Height "H" In	Price Each
AN867-1	1/8"	1-1/2	7/16	**$9.55**
AN867-2	1/4"	1-3/4	5/8	**$10.85**
AN867-3	3/8"	1-7/8	5/8	**$11.60**
AN867-4	1/2"	2	3/4	**$11.80**
AN867-6	3/4"	2-1/4	13/16	**$15.60**
AN867-8	1"	2-11/16"	1"	**$18.50**

FINGER STRAINERS



Finger strainers are strainers for fuel tank outlets. Standard size features a brass fitting with 3/8" male pipe thread which fits AN867-3 welding flange, and 1/4" female pipe thread for valve or fuel line fitting. Screen is 16 mesh brass.
Large finger strainer has a 3/8"-NPT x 1/2"-M-NPT brass bushing with a T304 stainless steel screen.

Standard.... P/N 05-17700... **$7.50** Large .... P/N 05-04445 .....**$20.50**

RAVEN HEADER TANKS



Header tank used for any aerobatic aircraft such as Pitts Specials etc. Comes with mounts to attach to existing tank straps, clamps and weld-in fitting for main tank. 16" x 7" in diameter. Holds approximately 2-1/2 gallons. Weighs 3 lbs.
P/N 05-00913 ..... **$519.00**



RAVEN WING TANKS

Wing tank used to hold extra fuel or smoke oil in top wing of aerobatic biplanes.

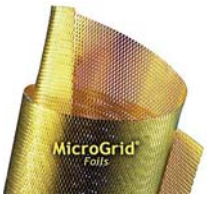
S1-S Wing Tank .....P/N 05-00914 ..... **$526.00**
S1-C Wing Tank.....P/N 05-00915 ..... **$439.00**
Experimental S2, Eagle Wing Tank .....P/N 05-00916 ..... **$537.00**

STRUT FOOTBALL FUEL TANKS



5 gallon strut tank with filler cap and pick up cap. Made from see through Cross Link Polyethylene (XLPE) which prevents material breakdown due to ethanol use. This tank may be mounted right on the strut and allows for easy access for filling and viewing to check fuel levels. Experimental Only
P/N 05-12347 .....**$149.85**

MICROGRID LIGHTNING STRIKE PROTECTION



MicroGrid precision expanded strike protection in composite aircraft structures. In fact, MicroGrid is used by Boeing, Embraer, and many other aircraft manufacturers. MicroGrid's single unit structure is superior because it can't unravel like woven wire. Nor is costly material removed as in etching or stamping.

The appropriate gauge and pattern of material is easily adhered to the composite for 200,000 amps of conductivity. Aircraft are easily repaired after a lightning strike by simply sanding away the surface to apply a patch of new MicroGrid. And fantastically flexible MicroGrid easily conforms to a variety of shapes and contours in both manufacture and repair. It can be bent, shaped and laminated with a variety of materials, including those which expand, contract and flex.

ALUMINUM OR COPPER MICROGRID

Aluminum MicroGrid is ideal for most composite aircraft structure applications and is nearly half the weight of the copper MicroGrid. Copper MicroGrid is recommended for use with carbon fiber structures. Two layers of MicroGrid are recommended over fuel tank applications.

Aluminum MicroGrid (37" wide).....P/N 05-02631 ..... **$18.85 ft.**
Copper MicroGrid (18" wide).....P/N 05-02632 ..... **$12.85 ft.**

	Aluminum	Copper
Weight - Lbs./SF	0.016	0.029
Base Metal Thickness	0.004 inch	0.003 inch
LWD	0.080 inch	0.125 inch
Overall Thickness	0.006 inch	0.005 inch
Open Area	68%	77%

ALUMINUM FUEL TANKS



PITTS SPECIAL FUEL TANK

Design	Capacity (Gallons)	Main Tank	Part No.	Tank for Inverted Flight	Part No.	Each Wing Tank	Part No.
Acro-Sport II	24			**$617.00**	05-18510		
Baby Greatlakes	10	**$943.00**	05-03058				
Cougar	23	**$582.00**	05-18600				
Cuby	12.5	**$530.00**	05-18700				
EAA Bi-Plane	16	**$526.00**	05-18800				
Fly Baby	14	**$556.00**	05-18900				
Hatz Bi-Plane	18					**$876.00**	05-19020
Mustang I	16	**$532.00**	05-19100				
Mustang II	27	**$1,059.00**	05-19200				
Pitts Special	19			**$572.00**	05-19310		
Pober Pixie	12	**(Send Drwg. 05-19400)**				**$949.00**	05-19420
Skybolt	29			**$529.00**	05-19510	**$414.95**	05-19520
Smith Miniplane	16	**$755.00**	05-19600				
Starduster I	18	**$514.00**	05-19700	**$613.00**	05-19710	**$437.95**	05-19720
Starduster II	26	**$925.00**	05-19800	**$883.00**	05-19810	**$932.00**	05-19820
Tailwind		**$807.00**	05-19950				

SEE PRO-SEAL TANK SEALANT AND SLOSHING COMPONENTS IN COVERING SUPPLIES SECTION

OPTIONAL TANK INSTALLATIONS

Sight Gauge (Fittings and Tubing) for Pitts or Skybolt Tanks - no installation charge.
P/N 05-29000..... **$43.50**

FLOP TUBE, LOW FUEL LEVEL WARNING, FLUSH FILLER CAP ARE AVAILABLE. CALL FOR PRICING.

FUEL TANK HOLD DOWN STRAPS

Fabricated from.035 stainless steel. Straps are 1"wide x 36" long. For VariViggen Starduster & others. P/N 05-20400....**$2.25**

ANTI-CHAFE CHANNEL FOR FUEL TANK STRAPS

Neoprene rubber extrusions to hold 1" wide metal fuel tank straps.
#9 Channel P/N 05-01800 ..... **$1.67 Ft.**

CAUTION: Electric sender should not be installed in a tank with flop tube to prevent possible entanglement. Tank should be free of everything but flop tube. Use sight gauge with flop tube.
Prices are based on tanks manufactured to the original plans as issued by the designer. Minor modifications such as changes in tank fitting sizes or locations can be made at additional charge. Please submit all pertinent data with respect to desired changes at time of order.
ALLOW 2-3 WEEKS DELIVERY TIME ON ALL TANKS.

CUSTOM TANKS AVAILABLE: SEND BLUEPRINT OR SKETCH FOR QUOTATION
ADD $15.00 BOX CHARGE FOR CRATING TANKS FOR SHIPMENT

CURTIS SUPERIOR VALVES

CURTIS DRAIN VALVES

Curtis Superior Valve Co., Inc. Fuel and Oil Drain Valves have been the standard in the industry for over 60 years. Curtis valves are used in OEM applications and in the military aircraft. Most valves are made of high quality brass for resistance to corrosion and rusting ,giving them long service life and extended seal life. Most Curtis Valves have a spiral to open and twist to lock for easy fuel sampling and oil draining.

PIPE THREAD VALVES

Model Number	Thread Size	Installed Length	Material	Part No.	Price
CCA-1250*	1/8" NPT	1.358"	B	05-04045	**$13.85**
CCA-1300*	1/4" NPT	1.690"	B	05-04046	**$14.50**
CCA-1350*	38" NPT	1.920"	B	05-04047	**$18.90**
CCA-1400*	1/2" NPT	1.685"	B	05-03060	**$30.50**
CCA-1550*	1/8" NPT	1.052"	B	05-01869	**$13.75**
CCA-1600*	1/4" NPT	1.340"	B	05-01870	**$14.50**
CCA-1650*	3/8" NPT	1.510"	B	05-01871	**$18.70**
CCA-1700*	1/2" NPT	1.685"	B	05-01872	**$30.50**
CCA-3600*	1/4" NPT	1.690"	BC	05-04048	**$18.90**
CCA-36150*	1/8" NPT	1.054"	BC	05-03654	**$19.50**
CCA-39000*	1/4" NPT	1.340"	SS	05-03655	**$37.50**
CCA-4800*	1/4" NPT	1.690"	BC	05-04049	**$22.75**
CCA-4850*	1/8" NPT	1.052"	BC	05-00686	**$18.85**
CCA-4900*	1/4" NPT	0.945"	BC	05-11718	**$21.99**
CCA-4950*	3/8" NPT	1.920"	BC	05-04050	**$21.65**
CCA-7000	3/8" NPT	1.125"	AA	05-15401	**$22.50**
CCA-7450*	1/8" NPT	1.052"	BC	05-03652	**$15.65**
CCA-36150*	1/8" NPT	0.75"	BC	05-03654	**$19.50**
CCB-36700*	1/8" NPT	1.058"	BC	05-03659	**$14.50**
CCB-36750*	1/8" NPT	1.058"	SS	05-03660	**$31.70**
CCA-1100	1/8" NPT	1.052"	A	05-12914	**$21.50**
CCA-1500	1/8" NPT	1.052"	A	05-12915	**$20.50**


05-03660


05-04050


05-03652

STRAIGHT THREAD VALVES

Model Number	Thread Size	Installed Length	Material	Part No.	Price
CCA-5800-1*[1]	7/16" 20 NF3	.620"	BC	05-03651	**$21.85**
CCA-5800-3*[1]	1/8" NPT	1.205"	BC	05-03694	**$20.50**
CCA-4350*	9/16" 18 UNF3	.635"	BC	05-03648	**$23.50**
CCA-31300*[1]	9/16" 18 NF3	1.234"	BC	05-04053	**$26.50**
CCA-39550*	5/8" 18 NF3	1.054"	B	05-01873	**$34.75**
CCA-6000*	9/16" 18 UNF	.640"	BC	05-04051	**$24.75**
CCA-36400*[1]	9/16" 18 UNF	.635"	BC	05-04055	**$24.75**
CCB-36350-1	3/4" 16 UNF	0.125	AA	05-04059	**$81.75**
CCA-4300*	7/16" 20NF3	.625"	BC	05-03647	**$19.65**
CCB-4320*[1]	7/16" 20 NF3	.835"	BC	05-03657	**$18.50**
CCA-5800-1*[1]	7/16" 20 NF3	.620"	BC	05-03651	**$21.85**
CCA-5800-3*[1]	1/8" NPT	1.205"	BC	05-03694	**$20.50**
CCA-4350*	9/16" 18 UNF3	.635"	BC	05-03648	**$23.50**
CCA-31300*[1]	9/16" 18 NF3	1.234"	BC	05-04053	**$26.50**
CCA-39550*	5/8" 18 NF3	1.054"	B	05-01873	**$34.75**
CCA-6000*	9/16" 18 UNF	.640"	BC	05-04051	**$24.75**
CCA-36400*[1]	9/16" 18 UNF	.635"	BC	05-04055	**$24.75**
CCB-36350-1[1]	3/4" 16 UNF	0.125	AA	05-04059	**$81.75**


05-03651


05-03657


05-04059

*=TSO-C76, [1]=Non-Locking, B= Brass, AA= Aluminum Alodine, A= Aluminum, BC= Brass/Cadmium Plated, SS= Stainless Steel

AP

FLUSH MOUNTED VALVES

Model Number	Thread Size	Auto Valve PN	Saf-Air PN	Part No.	Price
CCA-2500	1/8 NPT	F391-18	SA-18	05-04885	**$20.50**
CCA-2600	1/4 NPT	F391-14	SA-14	05-04886	**$20.50**
CCA-2700	3/8-24 UNF	F391-32	SA-32	05-04887	**$20.50**
CCA-2800	7/16-20 UNF	F391-72	SA-72	05-04888	**$20.50**
CCA-2900	1/2-20 UNF	F391-82	SA-82	05-06490	**$20.70**
CCA-7500	3/4-16 UNF	--	--	05-04057	**$106.75**
CCA-7500-1	3/4-16 NF3	--	--	05-03653	**$86.75**
CCA-7500-2	3/4-16 UNF	--	--	05-04058	**$94.75**
CCB-37500	3/4-16 NF3	--	--	05-12640	**$198.75**
CCB-36350-1	3/4-16 NF3	--	--	05-04059	**$87.75**
CCB-36450-5	3/4-16 NF3	--	--	05-03658	**$92.75**



NON-LOCKING FUEL VALVES


05-15397

Model Number	Thread Size	Auto Valve PN	Saf-Air PN	Part No.	Price
CCA-1200	7/16" 20 UNF	1.220"	05-15397	$62.85	**$20.50**
CCA-1800	1/8" NPT	.987"	05-11156	$13.95	**$20.50**
CCA-1900	1/4" NPT	.955"	05-11157	$14.50	**$20.50**
CCA-2000	3/8" 24 UNF	.987"	05-11158	$14.50	**$20.50**
CCA-2100	7/16" 20 UNF	.987"	05-11159	$14.50	**$20.70**

SELF-LOCKING OIL DRAIN VALVES


05-15398

Model Number	Application	Thread Size	Installed Length	Part No.	Price
CCB-33000	Continental	5/8" 18 UNF	2.100"	05-15398	**$157.75**
CCB-36000	Lycoming	½" NPT	2.040"	05-15399	**$157.75**

CURTIS QUICK DRAIN SECURITY SYSTEM

This Curtis Quick Drain Security System is designed to accept a locking device that will prevent tampering and the theft of fuel. FAA TXO-C76 approved. The dash number on the model numbers below indicates the number of valves and locks included.
System Contains: CCA-39650 Quick Drain Valves, CCA-39660 Quick Drain Locks, CCA-39670 Master Keys, and CCA-39680 Sample Cup Opener.



Part Number	Contains	Part No.	Price
CCA-39700-2	2 Tank Locking System	05-01239	**$41.80**
CCA-39700-4	4 Tank Locking System	05-01255	**$75.85**
CCA-39700-6	6 Tank Locking System	05-01256	**$99.95**

CURTIS SUPERIOR REMOVAL TOOLS

Helps with the installation and removal of Curtis flush mounted valves without damage. Eliminates the problem of damage as well as valve torque.



Name	Works with valve:	Part No.	Price
CST-716	CAA-1250, 1550, 4850, 7450, 9950, 36150, CCB-36750	12-02244	**$52.75**
CST-78	CCA-1400, 1700, 39550, 39560, CCB-3700	12-02245	**$53.90**
CST-916	CCA-1300, 1600, 3600, 4800, 4900, 5900, 39000	12-02246	**$52.75**
CST-1116	CCA-1350, 1650, 2440, 2450, 2460, 4320, 4950, 5400, 5800-1	12-02090	**$52.75**
CST-36450	CCB-36450, CCB-36450-5	12-02280	**$69.75**

OIL DRAIN VALVE ASSEMBLIES


Jabiru *Rotax*


05-03540


08-06258


08-06257

Curtis Oil Drain Valves for Jabiru and Rotax			
Description	**Application**	**Part No.**	**Prices**
Curtis Oil Drain Valve - 1/2" - 20 Brass Lockwire Drilled Action-Spiral, Lock Open	Jabiru 2200, 3300	05-03698	**$38.50**
Curtis Oil Drain Valve - 12mm - 1.75mm Brass, Length 1.45" Lock Wire Drilled Action-Spiral, Lock Open	Rotax 912F2, 912F3, 912F4, 914F2, 914F3, 914F4	05-03697	**$38.50**
Curtis 90 Degree Adapter for Jabiru and Rotax			
Jabiru 90 Degree Adapter CCA-2480	Jabiru 2200, 3300	08-06258	**$58.75**
Rotax 90 Degree Adapter Thread Size: 12mm-1.75mm, Internal/External Brass CCA-2470	Rotax 912F2,912F3, 912F4, 914F2, 914F3,914F4	08-06257	**$58.75**
Oil Drain Valve Adapter Assembly			
Oil Drain Valve Adapter Assembly	Rotax	05-03539	**$95.75**
Oil Drain Valve Adapter Assembly	Jabiru	05-03540	**$95.75**

QUICK DRAIN HOSES



A simple push and twist action locks the CCB-39600 Series Quick Drain Hose in place and opens the drain. Fuel / oil flows through 5' of high grade vinyl tubing preventing spillage

Model Number	Connector Color	Used with Valves	Part No.	Price
CCB- 39600-1	Black	CCA-1400, CCA-1700, CCA-39550	05-00138	**$19.95**
CCB- 39600-2	Blue	CCA-1350, CCA-1650, CCA-4950	05-00139	**$20.50**
CCB- 39600-3	Yellow	CCA-1300, CCA-1600, CCA-3400, CCA-3600, CCA-4800, CCA-4900, CCA-39000	05-00141	**$18.50**
CCB- 39600-4	Silver	CCA-4350, CCA-7250, CCA-36400, CCA-36650	05-00142	**$18.50**
CCB- 39600-5	Brass	CCA-1250, CCA-1550, CCA-4300, CCA-4850, CCA-9950, CCB-36750	05-00143	**$18.85**

FLUSH VALVES ADAPTER PLATE ASSEMBLY

Overall Dia. 2.75 Depth: 640,000-650,000
(From mounting surface to bottom hole dia: 1-1/2")
Flush Valve Adapter Plate Away
PLT-275V P/N 05-04545 .....**$122.95**


P/N 05-04545

Flush Valve Adapter Plate Assembly.With 6 holes
PLT-275AV P/N 05-04546 .....**$136.95**


P/N 05-04546

Prices Subject to Change Without Notice

SAF-AIR FUEL DRAIN VALVES

SAF-AIR DRAIN VALVES

SAF-AIR push type fuel drain valves are close tolerance valves of simple design. These valves provide the most trouble free operation of any other line of valves in the industry. SAF-AIR valves are manufactured with an o-ring placed on the stem to seal against a flat seat on the body. This design eliminates an area where dirt can gather, thus putting an end to the main cause of fuel drain valve drip. FAA & PMA APPROVED.



CAV-110H-4 CAV-160H-4 CAV-170H-4 CAV-180H-4
CAV-110 CAV-160 CAV-170 CAV-180

MODEL CAV-110 1/8" NPT - For Cessna 310 tip tanks; Mooney Mark 20 and 20A; all Ercoupe models; Bellanca, Taylorcraft model B; Stinson 108, 108-1, 108-2, 108-3; Voyager model 10 and 10A; Navion; Waco VK series and UPF; and Sea Bee. Fits all standard gascolators. ***MODEL CAV-160 1/4" NPT -*** For Piper models J-3, J-4, PA-11, -12, -14, -25, -16, -17, -18, -20, -22, -23, and -15 Tri-Pacer; Apache; Champion; Aeronca; Cessna T-50 and earlier 120 and 140 models; and Beechcraft AT-11 and C-18S. ***MODEL CAV-170 7/16-20 NF-3 -*** For all Cessna late 140A models, 150, 170, 170A, 170B, 172 and 175. ***MODEL CAV-180 3/8-24 NF-3 -*** For Cessna 180, 182, 185, 190, 195, 205, 210, 310, 310A, 310B, 310C and 336. ***CAV-100H-4, CAV-160H-4, CAV-170H-4, CAV-180H-4 -*** All four models come with 1/4" hose end.

Note: All aircraft applications are for general reference only. Verify correct valve for your aircraft before ordering.

Part No.	Thread	Price	Part No.	Thread	Price
CAV-110	1/8" NPT	**$15.95**	CAV-170	7/16-20 NF	**$17.85**
CAV-110H4	1/8" NPT	**$21.75**	CAV-170H-4	7/16-20 NF	**$22.85**
CAV-160	1/4" NPT	**$15.95**	CAV-180	3/8-24 NF	**$17.85**
CAV-160H-4	1/4" NPT	**$21.60**	CAV-180H-4	3/8-24 NF	**$22.50**

Replacement Seals	Price Each
MS29513-006 Tip (all models)	**$0.37**
MS29513-011 Seat (CAV-180)	**$0.79**
MS29513-012 Seat (CAV-170)	**$0.44**

SAF-AIR SPECIALTY FUEL DRAIN VALVES



4350-6L F75 P3750 C500
SA-60S SA5817-4C

The F75 is used on wing tip tanks or any application where a 3/4"-16 flush mounted fuel drain valve is needed. This aluminum valve is simple and clean to operate, using any standard sampling tube. Just push up on the center of the valve to sample fuel. Our new design allows all the fuel to enter the tube without leakage. This valve is designed for use on Cessna 310 through 441 model airplanes. • The C500 is used on the bladder style wing tanks with a 1/2" diameter nozzle. • The P3750 has a 3/8" NPT thread and is designed for use on those applications. Both valves provide push-to-test or push-and twist features for locking the valve open. Material is 360 brass. • The SA5817-4C is used with a 3/4"-16 bulkhead fitting to mount the valve flush with the outside skin of the plane. A hose is attached to the valve with a 7/16"-20 fitting at the low point of the fuel system.Material is anodized aluminum. • The SA-60S valve is the same as the CAV-160 except it is constructed of 304 stainless steel. Valve can be used in highly corrosive applications such as salt water. • 4350-6L has a 7/16"-20 thread and a long stem that can be cut to length for your application. Material is anodized aluminum.

Part No.	Thread	Price	Part No.	Thread	Price
C500	1/2" Tube	**$26.60**	SA-60S	1/4" NPT	**$25.95**
P3750	3/8" NPT	**$23.60**	4350-6L	7/16"-20	**$73.75**
F75	3/4-16	**$86.80**	SA5817-4C	3/4"-16	**$96.75**

PIPER FUEL DRAIN KIT



Developed in compliance with Airworthiness Directive 85-06-04 for Piper aircraft. Fits most popular Piper aircraft, including J-3, 4, 5; PA-12, 14, 15, 16, 17, 18, 20 & 22. Fuselage kit includes a bushing, elbow, elastic grommet, hose, clamp, drain valve, warning sign & instructions (AD 85- 06-04). Wing kit incl. drain valve, warning sign & instructions (AD85-06-04).

Fuselage Tank Fuel Drain Kit ..... P/N 05-01892 ..... **$52.00**
Wing Tank Fuel Drain Kit ..... P/N 05-01893 ..... **$28.75**
Wing Tank Fuel Drain Kit/Flush Drain ..... P/N 05-01894 ..... **$26.50**

F391 FLUSH DRAIN VALVE



Valve mounts in the sump, the same as original plug, with no projection. Can't be knocked off or opened by particles thrown from propellers. Opens only when operated with sampler cup, rod or wire. Clear cup permits inspection for water or contaminants. FAA approved.

Part No.	Thread Size	Application	Price
F-391-14	1/4" NPT	Aeronca, Beech AT-11, D-18S, Piper PA-11, 12, 18, 20, 22, Apache, champion, Howard	**$26.85**
F-391-18	1/8" NPT	Stinson, Waco VK, UPF, Seabee, Bellanca, T-Craft "B", Navion	**$27.70**
F-391-32	3/8-24	Cessna 180, 182, 195	**$26.50**
F-391-72	7/16-20	Cessna 140, 150, 170, 172, 175	**$28.50**
F-391-82	1/2-20	Cessna Cardinal, 210	**$26.85**

Sampler Cup - Fits all F-391 Valves ..... P/N 05-17300 ..... **$4.80**

SAF-AIR FLUSH-MOUNTED DRAIN VALVES



SA14 SA18 SA32 SA72 SA82 SA187 SA53S

SAF-AIR designed its line of flush mounted fuel drain valves to be an exact replacement for the Auto Valve F391 line of flush fuel drain valves. Unlike the Auto Valve, SAF AIR valves can be rebuilt. These valves offer a dependable, low-cost solution when a flush mount is needed. ***FAA & TSO-C76 approved.***

P/N	Size	Equiv.	Price	P/N	Size	Equiv.	Price
SA14	1/4 NPT	F391-14	**$23.50**	SA72	7/16-20	F391-72	**$23.50**
SA18	1/8 NPT	F391-18	**$23.75**	SA82	1/2-20	F391-82	**$23.50**
SA32	3/8-24	F391-32	**$23.75**	SA187	1/8 NPT	F391-187	**$23.50**

LOCK OPEN SAF-AIR DRAIN VALVES

Similar to the drain valves above with including the capability of locking in the open position making pre-flight check for contamination and water in the fuel system very easy. Models 1250 & 1250H are popular choices to install on gascolators.

FAA & TSO-C76 APPROVED.

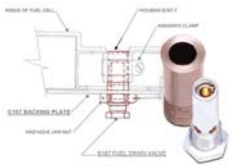


1250 1250H 2500 2500H 3750 3750H 4375 4375H

Part No.	Size	Price Ea.	Part No.	Size	Price Ea.
1250	1/8 NPT	**$19.85**	1250H	1/8 NPT*	**$24.50**
2500	1/4 NPT	**$19.70**	2500H	1/4 NPT*	**$24.50**
3750	3/8-24	**$19.70**	3750H	3/8-24*	**$25.00**
4375	7/16-20	**$19.70**	4375H	7/16-20*	**$23.70**

***These valves come with 1/4" hose adapter**

FUEL DRAIN VALVE KITS FOR CESSNA, PIPER, AND BEECHCRAFT



These high quality fuel drain valve kits are FAA-PMA approved for a wide range of Cessna, Piper, and Beechcraft aircraft. These drain valves prevent drain nipple slippage, require no O-rings, feature corrosion free construction, and use the industry standard 1/8" pipe thread valve. ***Features***: • The valve can be rebuilt • Fuel resistant o-ring - Fluorosilicone • Push to test against the wing surface ***Specifications***: • Material: Valve 360 Brass, Housing Stainless • Finish: Cadmium Plate • Temperature: -100° to +350°F (-73° to +177C) • O-Rings: M25988-005 • Pressure: 60 PSI max.

Description	Part No.	Price
Kit for Cessna	05-03566	**$137.95**

AP

GASCOLATORS – FUEL TESTERS

AP

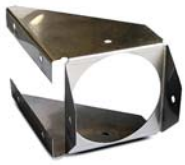
ACS GASCOLATOR



All-metal gascolator with S.S. screen, 1-7/8" dia. cadmium plated steel bowl w/quick drain. Top is CNC machined from 6061-T6 aluminum. Top casting has 1/4" pipe ports for 3/8" fuel line and one 1/8" pipe port for primer fitting. Wt: 8 oz. Made in the U.S.A.
P/N 10580.....**$87.75**

Replacement Bowl(Aluminum) P/N 05-11982 .....**$23.80**
Replacement Gaskets - For auto fuel 3/32" thick x 2-1/8" O.D. 10536-1 P/N 06-00441 .....**$5.85**
Replacement Screens -
120 Microns Stainless Steel..... P/N 10543-1 .....**$2.45**
74 Microns Stainless Steel..... P/N 05-03436 .....**$3.85**

ACS GASCOLATOR INSTALLATION BRACKET



Versatile bracket of .016 stainless steel accommodates gascolators with either metal or glass bowl. When mounted as illustrated, inlet and outlet connections are on sides. When bracket is inverted, one port of gascolator faces firewall for direct routing of fuel line through firewall. Fits gascolators sold after May 1, 1989. Made in the U.S.A..... P/N 10371.....**$24.50**

ACS HIGH PRESSURE GASCOLATOR



New ACS high pressure gascolator. Lighter weight and simpler design than the ACS "classic" gascolator. Bailwire and attaching hardware have been eliminated. Threaded collar secures bowl to top. Tested to 50lbs. Bowl is cadmium plated and top and collar are anodized for corrosion protection. Made in the U.S.A.
High Pressure Gascolator ..... P/N 05-04248.....**$118.75**
Replacement Gasket 10536-1..... P/N 06-00441.....**$5.85**
Replacement 120 Micron Screen 10543-1 ... P/N 10543-1.....**$2.45**
Replacement 74 Micron Screen ..... P/N 05-03436.....**$3.85**

FAA-APPROVED GASCOLATORS

CNC-machined out of 6061 aluminum for longer use. Anodized "O" ring seals for improved sealing capabilities, a bayonet tab locked bowl system. Direct replacement for factory parts. FAA-approved for many Piper, American Champion, Husky, Maule, Taylorcraft, Dynac and Cessna aircraft. Fits in existing Piper mounting brackets. Check the Aircraft Spruce website for aircraft cross-reference list or contact us for gascolator approved for your aircraft.


SA3-00


SA3-00B


SA3-10


SA3-10A

Model	Size	Part No.	Price
SA3-00	1/4 NPT - 3/8" Line - 3 oz.	05-00840	$248.00
SA3-00B*	1/4 NPT - 3/8" Line - 3 oz.	05-02674	$248.00
SA3-10	3/8 NPT - 1/2" Line - 4 oz.	05-02675	$319.00
SA3-10A*	3/8 NPT - 1/2" Line - 4 oz.	05-00894	$319.00

8130 Forms are not available for these gascolators.

GASCOLATORS FOR OUTSIDE THE U.S.

Model	Size	Part No.	Price
SA3-00	1/4 NPT - 3/8" Line - 3 oz.	05-12468	$272.95
SA3-00B*	1/4 NPT - 3/8" Line - 3 oz.	05-12470	$272.95
SA3-10	3/8 NPT - 1/2" Line - 4 oz.	05-12471	$338.00
SA3-10A*	3/8 NPT - 1/2" Line - 4 oz.	05-12469	$338.00

**** Note: This unit does not require a bracket for installation.***

PIPER GASCOLATOR GASKET



For Product Application see Piper Parts Manual for your Aircraft. 2.125 in. X 2.125 in. X 0.125 in.
P/N 462-049.....**$4.95**

USHER GASCOLATOR 6



Can be used on fuel injection systems up to 50 psi .Anodized inside and out to prevent corrosion. Has two 1/4" NPT ports for 3/8" fuel line, a 1/8" primer port, and a 1/8" NPT drain valve port. Mounting bracket not included. Now comes ready to mount to firewall.
Gascolator .....P/N 05-15140 .**$88.95**
Replacement Screen.....P/N 05-25972 ...**$2.50**
Replacement O-ring .....P/N 05-12242 ...**$1.85**

CESSNA DRAIN VALVE - S2106-4

Cessna Drain Valve - S2106-4. Cessna Replacement Part.
P/N 06-03056.....**$38.50**

GATS JAR FUEL SAMPLER



The incredible GATS Jar allows a pilot to pour the fuel used in the preflight check back into the fuel tank without fear of water contamination. Also detects jet fuel in the event of inadvertent fueling of your aircraft with jet fuel.
12 oz..... P/N 05-21250..... **$17.85**
16 oz..... P/N 05-04237..... **$17.85**
Replacement actuator
P/N 17-00043..... **$5.95**

GATS JAR BUNDLE PACKS

6 Pack..... P/N 17-00284..... **$96.00**
12 Pack..... P/N 17-00285..... **$191.95**
12 Pack..... P/N 17-00286..... **$770.00**
100 Pack..... P/N 17-00287..... **$1,605.00**

FUEL TESTERS



The unique snap-on probe fits all quick-drain valves, stores compactly, and reduces spillage, loss, and probe breakage. Also includes a chrome-plated screwdriver blade with both a Phillips and a slotted head.
4"..... P/N 13-18463 ..... **$5.75**
6"..... P/N 13-18464 ..... **$5.15**

CURTIS FUEL SAMPLER CUP



This fuel sampler cup is designed for use with many popular fuel drain valves including the F391 drain valves used on many of today's productions aircraft. Wide bowl allows fuel sampling without fuel dripping onto the hands.
P/N 05-17300 ..... **$4.80**

ASA AIRCRAFT FUEL TESTING CUP



Protect yourself from fuel contamination by visually checking the fuel for water and debris. Clear cup with a reinforced steel pin that works with most aircraft. Measures 2-1/2" high x 1-3/4" diameter. Lifetime warranty. P/N 13-02353 ..... **$4.95**

GASOHOL TESTER



This compact fuel tester / double tip screwdriver combo measures the presence and percentage of alcohol in gasoline, and tightens errant screws.
P/N 05-03439..... **$5.95**

GOCHECK PREFLIGHT 6 IN 1 MULTI-TOOL



6-in-1 Tool. With space at a premium in most flight bags, this innovative device combines multiple preflight tools in one compact unit. Includes a fuel tester with strainer, stall horn tester, dipstick wiper, red/white flashlight, Phillips/flathead screwdriver and checklist reminder card. P/N 05-15254 ..... **$71.75**

MULTISUMP AVIATION FUEL TESTER



MultiSump+™ allows the pilot to sample and individually inspect fuel from each sump while a quick dump feature transfers fuel to the lower catch can thus eliminating emptying the tester after each sump.
Multisump with Fuel Strainer ..... P/N 05-04653 ..... **$41.60**
Multisump without Fuel Strainer ..... P/N 05-15052 ..... **$31.50**
Fuel Strainer Only..... P/N 05-08097 ..... **$12.50**

FUEL TESTER CONTAINER



A polycarbonate airtight container for clean, odor free storage of a fuel tester. Can also be used to store other items like reading glasses that you want to protect from breaking. 9"x2.5"x1.75". 2.5 o.z. P/N 13-12408 ..... **$14.99**

PHENIX SELECT-FLO FUEL FILTERS



Phenix Select-Flo Fuel Filter: select the inlet size from -6 to -10 and the outlet size from -6 to -10 based on what your engine needs. No ORB fittings to buy in addition to the filter, the male AN is machined onto the filter caps, along with 100 micron. All filter elements in stainless steel mesh so they can be cleaned and used indefinitely. Proudly manufactured in the USA.

Description	Part No.	Price
Select-flo Filter Dash 10 In To Dash10 Out Blk / 100 Micron Element	04-03671	$74.95
Select-flo Filter Dash 8 In To Dash 8 Out Blk / 100 Micron Element	04-03672	$74.95
Select-flo Filter Dash 6 In To Dash 6 Out Blk / 100 Micron Element	04-03673	$76.75

PHENIX SELECT-FLO FUEL FILTER BRACKETS



Phenix Select-Flo Fuel Filter Brackets: All filter elements in stainless steel mesh so they can be cleaned and used indefinitely. Proudly manufactured in the USA.

Description	Part No.	Price
Select-flo Filter Mounting Bracket Type A	04-03666	$31.95
Select-flo Filter Mounting Bracket Type B	04-03667	$31.50
Select-flo Filter Mounting Bracket Tube Mount 1-1/2"	04-03668	$32.50
Select-flo Filter Mounting Bracket Tube Mount 1-5/8"	04-03669	$32.80
Select-flo Filter Mounting Bracket Tube Mount 1-3/4"	04-03670	$33.50

KING AIR FUEL FILTER DRAIN VALVE



Improved, repairable valve for thousands less than Beech!
- Improved seal design provides a long life reliable valve
- Teflon lined control conduit and stainless steel cable
- Reliable design - proven to over 10,000 cycles
- Latest Viton fuel-proof seals
- Anodized for better corrosion resistance
- Unheard of 10 Year Limited Warranty!

Consists of two components: a valve housing and a replaceable valve control plunger assembly. P/N 05-13139.....**$1,617.00**



MICRON 10 FUEL FILTER

Length: 4.25" Filter medium: 1.375" dia. 304 pleated SST disk Dia: 2.0" Filter Efficiency: 10 Micron Flow rate: 15.3 gpm Oper. Press: 8,000 PSIG Weight: 5 oz. Drop in pressure: 1.0% Fitting Size: AN6. This filter is washable and reusable.

P/N 05-01699.....**$87.95**



K&N SCREEN DISC FUEL FILTERS

High volume, low pressure in-line gas filters are easy to clean by simply backflushing.

5/16".....P/N 15-05456.....**$17.95**
1/4".....P/N 15-05457.....**$15.50**



MULTISUMP AVIATION FUEL STRAINER

Use with your existing Fuel Tester to remove contaminants and water from your samples during pour back.

P/N 05-08097.....**$12.50**



ACS FREE FLOW ONE-WAY CHECK VALVE

Prevents return fuel flow during normal operation but provides by-pass fuel feed in an emergency if the fuel pump fails. Wt. 1 oz., 2-7/8" long. Use with tube fittings for 3/8" dia. fuel line. Anodized for corrosion resistance.

P/N 10630.....**$30.50**



INLINE FUEL FILTER

In-line, high-capacity, translucent filter with screen. Has standard 1/4" barb inlet and outlet tubes.

P/N 05-14958.....**$3.85**



FUEL FILTER

In-tank type. Brass construction with fine-mesh screen. Has standard 1/4" barb inlet and outlet tubes

P/N 05-01031.....**$6.50**



3/8 INCH PLASTIC FILTER

Plastic in-line fuel with 3/8" inlet & outlet - metal version is 33033 with hoses and camps. Style: Fuel Filter. Height: 3.543. Outer Diameter: 1.826. Nominal Micron Rating: 30. P/N 05-04701.....**$10.50**

FUEL FILTERS



For homebuilts. Used on VariEze and various gyrocopters. Rated to 10 PSI. Not recommended for fuel injected systems.

Description	Part No.	Price
1/4" Fuel Filter (Metal)	05-33031	$9.50
3/8" Fuel Filter (Plastic)	05-04701	$10.50
1/4" Fuel Filter (Plastic)	05-33001	$8.70
Universal Fuel Filter Inline 1/4",5/16",3/8"	15-05826	$17.50

ANDAIR FS20 SERIES FUEL SELECTOR EXTENSION KITS



Steps	Valve Model/ Length	Part No.	Price
Extension Kits	FS20-1	05-15318	$119.00
--	FS20-2	05-15319	$119.00
--	FS20-3	05-15320	$119.00
--	FS20-4	05-15321	$119.00
--	FS20-5	05-15322	$119.00
--	FS20-7	05-15323	$119.00
--	FS20-8	05-15324	$129.00
Extension Tubes	6"	05-15325	$26.80
--	12"	05-15326	$53.75
--	18"	05-15327	$80.75
--	24"	05-15328	$98.75
--	30"	05-15329	$122.75
--	36"	05-15330	$147.75



MOONEY FUEL SELECTOR ARM EXTENDER

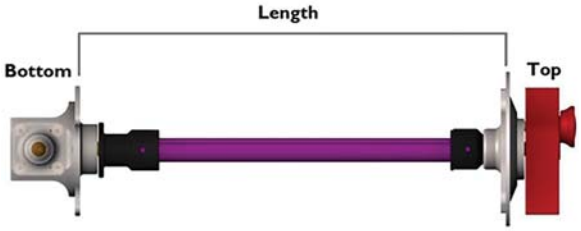
Mooney Fuel Selector Arm Extender. Extend the arm by approximately 10 inches and reach the selector valve again.

P/N 05-15255.....**$24.95**

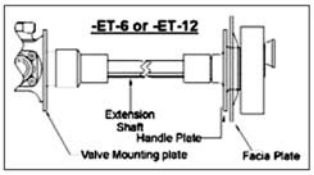
AP

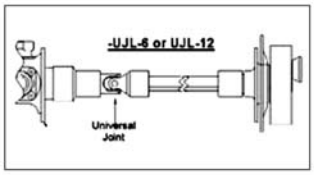
EXTENSION FUEL VALVES - GASCOLATORS

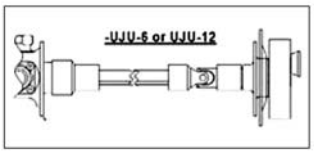
ANDAIR EXTENSION FUEL SELECTORS

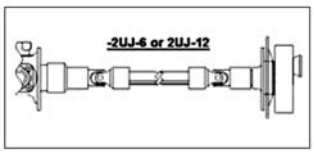


For use with any Andair valve. The kit includes everything needed to operate the valve remotely by way of a specially extruded tube. There is no riveting involved, just cut the tube down to length and fit together. To maintain the firm detent at each tank selection, there is a detent cap on the top of the valve. The special tube then fits into this. Then, so as to maintain the safety feature, where the valve cannot be inadvertently switched off, the button has been moved to the upper section. Like the standard valves, the button must be raised to switch the fuel of. The tube is available 6" or 12" long and 4 extension options are available. The extension must be ordered with the valve. (i.e. an extension cannot be retro fitted to a previously purchased valve).









Option	Size (In.)	Price
ET	6	Call or Email for price and availability
1JU	6	
2JU	6	

Option	Size (In.)	Price
ET	12	Call or Email for price and availability
1JU	12	
2JU	12	

E | Valve Part No. | ET / 1JU / 2JU | 6 / 12

i.e. FS25f5-M or FD20-20-D2-6M

Length of extension tube:
6 = 6" long.
12 = 12" long.

ET: with one universal joint on lower part of valve
UJL: with one universal joint on the upper section of the valve
UJU: with 2 universal joints.

Example:
E-FS25f5-M-ET-6 = (6"long, 1/2"Left, Main, Right, Off, Straight Ext. Valve)
E-FS20-20-D2-6M-2UJ-12 = (12"long, 3/8"duplex fuel selector extension with 2 UJs and 12" tube).

SPECIAL ENGRAVING - Andair can offer special engraving for all of the available valves. Please contact the Aircraft Spruce technical department for more information. Here are some examples:



GASCOLATOR FIREWALL FITTING



Includes mounting flange and backing plate. Mount your gascolator solidly on the firewall with this special bulkhead fitting. Simply drill a 5/8" hole through the firewall and a backing plate on the cabin side and rivet the 1-1/2" x 1/8" flange to the firewall. Connect the incoming fuel line to the AN6 male tube fitting on the cabin side. Screw the gascolator onto the 1/4" male pipe (on the engine side). Machined from mild steel (303 stainless steel). P/N 05-00907 .....**$21.85**

ANDAIR GASCOLATORS



05-29551

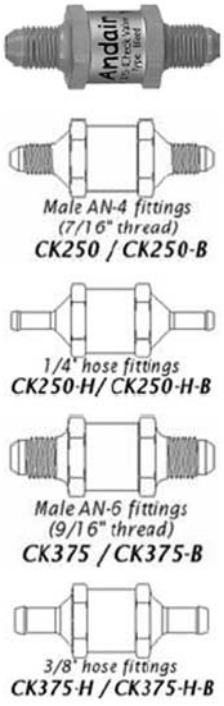
Andair make Gascolators for both 3/8" and 1/2" lines. Both types have a screw locking ring that prevents the bowl from coming off, and a facility for this to be wirelocked. The bowl is internally sealed with an Viton (R) O-ring. A PTFE coated 70 micron Stainless Steel mesh is used as the filter screen. The PTFE coating helps prevent water from passing, by maintaining it as a droplet formation. A large filter area is present and wide passages have been incorporated so that the pressure loss through the Gascolators is kept to an absolute minimum. There is an 1/8 NPT hole on the bottom of the bowl so it can be drained and also one on the top of the body. This one can be used as a pressure tapping or a filtered supply to the primer pump. A selection of fittings can also be used with the GAS375 and the GAS500.

GAS375M with -6 Male Fittings ..... P/N 05-29551 .....**$229.00**
GAS375F w/ 1/4" NPT Female Fittings ... P/N 05-29552.....**$229.00**
GAS375B w/ Banjo Fittings..... P/N 05-29553.....**$243.95**
GAS500F - 3/8" NPT Female Fittings..... P/N 05-00129.....**$397.00**
GAS500M -has -8 Male Flare Fittings ..... P/N 05-00136.....**$397.00**

NOTE: ADD -1 TO PART UMBER FOR REVERSE FOLLOW GASCOLATORS. EXAMPLE: 05-29551-1

Replacement o-ring for GAS375..... P/N 05-00704.....**$15.95**
Replacement o-ring for GAS500..... P/N 05-00706.....**$15.95**
Replacement screen for GAS375 ..... P/N 05-00707.....**$53.95**
Replacement screen for GAS500 ..... P/N 05-00708.....**$89.50**
Stainless Steel Drain Valve..... P/N 05-00709.....**$34.60**

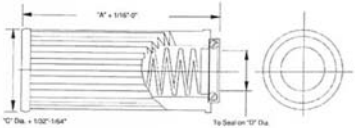
ANDAIR CHECK VALVE



Built from aircraft grade Aluminum and anodized for corrosion protection this lightweight and compact unit is excellent. The check valve is ideal for tank vents and high pressure fuel pump bypass lines. Its extremely light weight internal shuttle operates with the slightest pressure yet the internal O-ring seals allow the unit to be used up to 50 PSI. Other qualities include break out pressure less than 1 PSI, great flow characteristics around shuttle, and bleed allows shuttle to weep off pressure in the event of a blocked line. Features AN-6 (3/8") fitting on bottom. Valve measures 5/16" dia. x 2.75" long.

Model No.	Bleed	End Fittings	Part No.	Price Ea.
CK250	No	7/16-20	05-00713	**$76.85**
CK250-B	Yes	7/16-20	05-00714	**$76.85**
CK375	No	9/16-18	05-00716	**$76.85**
CK375-B	Yes	9/16-18	05-29555	**$76.85**
CK250-H	No	1/4" hose	05-00717	**$76.85**
CK250-H-B	Yes	1/4" hose	05-00718	**$76.85**
CK375-H	No	3/8" hose	05-00719	**$76.85**
CK375-H-B	Yes	3/8" hose	05-00721	**$75.90**
CK375-M-BRP	--	--	05-14969	**$107.75**

PUROLATOR AN6235 SERIES LINE FILTER ELEMENTS



* MIL-F-5504 Qualified
* Qualified for use in MS28720 and AN6234 filter assemblies.
* Operating Temperatures: -65F TO + 275F
* Element Collapse:150PSID Minimum.
* Filtration:10 Micrometers.
* Hydraulic O-ring.
* Media: micropleat(c) elements (resin impregnated cellulose)
* Bubble Test 100%

AN No.	A	C	D	Part No.	Price
AN6235-1A	1.937"/ 1.875"	.859"/ .813'	.375"/ .373"	08-07076	$9.50
AN6235-34	3.500"/ 3.438"	1.656"/ 1.610"	.875"/ .872"	08-07104	$7.95

Prices Subject to Change Without Notice

FUEL VALVES - DUPLEX VALVES

ANDAIR POSITIVE STOP FUEL VALVES



Andair Ltd. of England produce these superb Safety Fuel Selectors. Precision built from aircraft grade materials, with PTFE seals packed against a highly polished ball giving a very smooth action. Designed by an RV builder the Andair valve features a positive stop for the off position. A spring loaded button on the lever must be raised before the lever can be moved to the off position. This eliminates the possibility of turning the fuel off in flight, which is an inherent risk with some other designs. The lever has internal stops and detents on the left and right positions. The FS20 range has been designed for 3/8" fuel lines and the FS25 Range is for use with 1/2" lines. New to the range is the FS20-8 5-way selector valve.

FS20X1-F or FS25x1-F Model 1

FS20X2-F or FS25x2-F Model 2

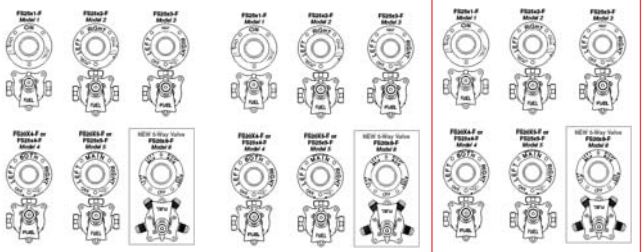
FS20X3-F or FS25x3-F Model 3



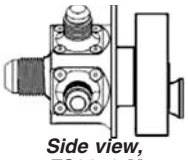
FS20X4-F or FS25x4-F Model 4

FS20X5-F or FS25x5-F Model 5

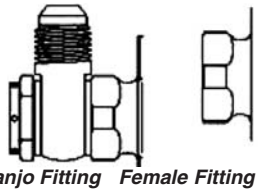
NEW 5-WAY VALVE
FS20x8-F Model 8



SIDE FITTINGS - The side fittings can either be -M (Male 9/16-18 for the 20 range or 3/4-16 for the 25 range) or -F (Female pipe 1/4 for the 20 range and 3/8 for the 25 range)

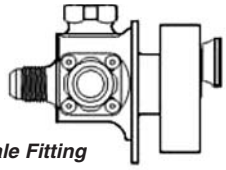


Side view, FS20x8-M



Banjo Fitting Female Fitting

LOWER FITTINGS ON MODELS 3, 4, 5 & 8 The Andair Range of fuel selectors is now available with choice of lower fittings for models 3,4,5 and 8. This fitting can either be -M (Male 9/16-18 for the 20 range or 3/4-16 for the 25 range) or -F (Female pipe 1/4 for the 20 range and 3/8 for the 25 rang e) or a Banjo fitting. The banjo fitting has a 360° adjustable Male 9/16-18 end for the 20 range or 3/4-16 for the 25 range.



Male Fitting

Lower Fittings	Model	Side Fitting	Price Ea.
--	1, 2	Male or Female	CALL
Male or Female	3, 4, 5 8		CALL
Banjo	3, 4, 5 8		CALL

Lower Fittings	Model	Side Fitting	Price Ea.
--	1, 2	Male or Female	CALL
Male or Female	3, 4, 5 8		CALL
Banjo	3, 4, 5 8		CALL

ANDAIR UNIVERSAL JOINT



These Universal joints work in conjunction with our specially extruded extension rod to allow mounting of fuel valves at angle to the control level. 30° maximum angle. P/N 05-13282 .....**$86.75**

FS20-20-D2 DUPLEX VALVES



Used to switch the fuel in an appliction where there is a fuel injected engine that needs flow return. It allows you to pipe surplus fuel to the same tank from which it was drawn. This avoids the worry of overfilling the return tank or having an overly complicated fuel system. Engines that can benefit from this valve are Surburu, Continental, Rotax, and Diesel engines. The FS20-20-D2 has two 3/8" sections where as the new FS25-20-D2 has one 1/2" feed section and on 3/8" return section. The valves can be supplied with either male or female fittings.

FS25-20-D2 DUPLEX VALVES - New to the range is the FS25-20-D2 which has a 1/2" feed ports and 3/8" return ports, for use in larger injected engines.

Model No.	Part No.	Description	Thread	Ports	Price
FS20-20-D2-6M	05-06926	3/8" Feed & Return	1/4" Pipe	Male	**$475.00**
FS20-20-D2-6F	05-06927	3/8" Feed & Return	9/16-18a	Female	**$624.00**
FS25-20-D2-6F	05-29562	1/2" Feed, 3/8"Return	1/4,3/8"pipe	Female	**$665.00**
FS25-20-D2-6M	05-29563	1/2" Feed, 3/8"Return	9/16-18, 3/4-16	Male	**$647.00**

FS22D2 DUPLEX VALVE



This new duplex valve from Andair has been designed for the use with low flow rate fuel and vapor return systems. An example being the Turbo charged Rotax 912S. Base on the popular FS20x2, the FS22 retains the key features of small size and light weight. The return line valve usesour a new style PTFE disc, operated via the main ball valve allowing the return fuel to flow back to the tank from whicn it ws drawn. The FS22 is availab le in two forms, the FS22-2PD with its 1/8" female pipe fittings pointing downward (see image) or the FS22-2PS (sideways pointing fittings). Both valves include all of the safety features that appear in he full range of Andair Fuel Selectors.

Model No.	Part No.	Description	Thread	Ports	Price
FS22-D2-6F-PS	05-29564	3/8"Feed,1/8"Return	1/4,1/8"Pipe	Female	**$439.00**
FS22-D2-6M-PS	05-29566	3/8"Feed,1/8"Return	9/16-18	Male	**$458.00**
FS22-D2-6F-PD	05-29567	3/8"Feed,1/8"Return	1/4,1/8"Pipe	Female	**$417.00**
FS22-D2-6M-PD	05-29568	3/8"Feed,1/8"Return	9/16-18	Male	**$439.00**

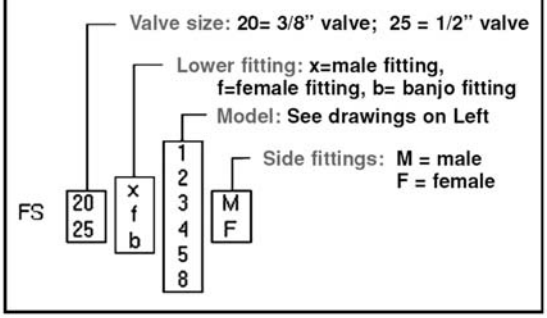
ANDAIR F520 FUEL VALVES



The FS20x4 Fuel Selector is designed for high wing aircraft where it is possible to feed from both tanks simultaneously. Porting for the both position is done internally so there is no need to T the two tanks together. There is a 90 degree action between each tank selection, and the safety feature where the red button on the lever has to be raised to switch off the fuel. On the FS20x4 there are 3 ports. The lower port is the outlet to the engine and can be Male AN-6, Female 1/4NPT or a Banjo fitting which is a 360 degree adjustable fitting with a male AN-6 end. One of the great features of this unit is that when the selector is in the OFF position, there is no cross feed between each tank. So if you have your aeroplane parked on a slope, or if one tank is fuller than the other, no cross-feed will occur.

Part No.	Model	Description/Ports	Price
05-01023	FS20X1M	On/off (90 Degree Action Shut Off Valve) Male	$279.00
05-29506	FS20X1F	On/off (90 Degree Action Shut Off Valve) Female	$272.95
05-29505	FS20X2F	Left/right/off (90 Degrees Between Left And Right) Female	$279.00
05-29507	FS20X3F	Left/right/off (180 Degrees Between Left And Right) Female	$289.00
05-02635	FS20X4M	Left/both/right/off (90 Degrees Action Between Each Position) Male	$279.00
05-29508	FS20X4F	Left/both/right/off (90 Degrees Action Between Each Position) Female	$289.00
05-01419	FS20B4M	Left/both/right/off (90 Degrees Action Between Each Position) Banjo/male	$284.95
05-01432	FS20F4F	Left/both/right/off (90 Degrees Action Between Each Position) Female/female	$279.00
05-29509	FS20X5F	Left/main/right/off (90 Degrees Action Between Each Position) Female	$289.00
05-13056	FS20X7-T	Left/right/off (90 Degrees Between Left And Right) Elbow Male/elbow Male/male	$299.00

PLEASE ORDER USING THE FOLLOWING PART NUMBERS:



FS20 – 3/8" ***FS25 – 1/2"***

AP

FUEL VALVES

AP

HOMEBUILDERS SHUT-OFF VALVES



A full-flow plug valve with solid bottom and integral mounting bracket. Brass body and plug. Floating stem with O-ring prevents leakage. Packed with synthetic grease which resists gasoline and solvents. Indicating click on 3-port and 4-port valve (CN models) tells when handle is in full open or closed position. Tested to 30 PSI. Not FAA approved.

Part No.	Model No.	Imperial Equiv.	Valve Type	Pipe Thread	Price
6749	210-CL	108HD-04	3-Port*	1/4" Female x 1/4" Female	$26.65
05-01032	210-CN	108HD-06	3-Port*	3/8" Female x 3/8" Female	$29.70
05-01033	200-CL	114-HD-04	4-Port**	1/4" Female x 1/4" Female	$31.75
05-01034	200-CN	114HD-06	4-Port**	3/8" Female x 3/8" Female	$36.50

For 2 tanks. Flow is from either side to branch.
For 3 tanks. Flow is from any side to bottom outlet.
Note: Order valve with 1/4" pipe threads for 3/8" dia. fuel line. Order valve with 3/8" pipe threads for 1/2" dia. fuel line. These pipe thread sizes are the ones normally associated with the indicated tube sizes.

FUEL VALVE LEVER



This lever is a direct replacement for the lever that comes standard with the Home-built Shutoff Valve, part numbers 210-CN, 200-CL and 200 CN. It will also replace the lever that is shipped standard with nearly all of the Vans RV Series aircraft. The appearance is much nicer than the stock lever, it is red in color (the standard color relative to fuel) and needs no hardware other than what is sent with the valve. When mounted according to Van's plans the stock lever actually uses the handles as the pointer. P/N 05-03047 ..... **$39.50**

DOW CORNING 3452 VALVE LUBRICANT



Excellent for lubricating valves and slow moving components exposed to harsh chemicals and solvents. resists deterioration by chlorides, solvents, acids and condensate. Dow 3452 is a white, fluorocarbon thickened, fluorosilicone fluid based grease with a temp. range of -20 to 450°F. z2 oz. tube. P/N 09-00333 ..... **$56.75**

MINIATURE FUEL VALVES



The lightest (4 oz.) smallest (1.5" long), easiest to operate ball type (not plug) on-off fuel valve available. Light operating force makes it ideal for remote operation. Not FAA approved. Forged brass with 1/4", 3/8", or 1/2" female pipe ends.

1/4" NPT valve ..... P/N 05-12627..... **$29.65**
3/8" NPT valve ..... P/N 05-23330..... **$29.65**
1/2" NPT valve ..... P/N 05-01026..... **$28.50**

CESSNA 172/175 FUEL SELECTOR VALVE



This High Quality Fuel Selector Valve replaces Cessna Valve #0513120-5 for Cessna 172/175 series. PMA'd.
P/N 05-11164 ..... **$995.00**

FUEL SELECTOR VALVE GASKET FOR CESSNAS



Cork/rubber gaskets meets tough government standards for fuel resistance. Model 0513125 Fits many Cessna 172/175/177/210 models. See our website for application chart.
P/N 01-01353 ..... **$7.95**

HIGH-PRESSURE BRASS BALL VALVE



Great for use in tight spaces, suitable for high-pressure applications. Connections are NPT. Body is brass, ball is nickel-plated brass, seats are PTFE, and seal is fluoroelastomer. Valves have unrestricted flow (full port). Female x Female • Pipe Size: 1/4" • End-to-End Lg.: 1 15/16" • Lever Handle • Max. Pressure for Water, Oil, and Inert Gas: 1000 psi @ 70°F • Temp. Range: -40° to +300°F • Vacuum Rating: 29" Hg..... P/N 05-06885..... **$17.75**

WEATHERHEAD FUEL SHUT-OFF VALVE



3-way Weatherhead valves, with 1/4' female pipe ports feature a Delrin-spool design for smooth operation. Handle mounted on 1-1/4" long shaft. Not FAA approved.
Model No. 6749 3-Port Valve - Flow is from either side to middle port. ..... P/N 6749..... **$26.65**
Model No. 6747 4-Port Valve - Flow is from any horizontal port to bottom port. ..... P/N 6747..... **$27.75**

HOMEBUILDERS WEATHERHEAD FUEL VALVE HANDLE



This unique fuel valve handle is designed to provide a positive feel and makes it easy to determine the current tank selection. It fits the popular Homebuilders and weatherhead fuel valves and is made from billet 6061T6 aluminum bar stock. They are milled, not cast. Handles are hand deburred, red anodized, and laser etched.
P/N 05-07184 ..... **$35.85**

J-3 FUEL VALVE



Includes a steel handle for use with the original pushpull shut off control. this valve is a significant improvement over the original brass style fuel valve. The new valve has a stainless steel ball seated in an inert composite seat. This improved design eliminates the stiff operation and leaking around the shaft that the original design was prone to. PMA approved.
P/N 05-00848..... **$162.75**

SPRL FUEL VALVES



A three/four way fuel selector offering left-off-right and both if required. There are 90 degrees between selections and the absence of a lower fitting reduces the depth required. The lift and turn selector is instinctive, secure, and easier to use than the complex 'lift button' type. The locking detents avoid accidental movements. The fixings match most installations, and the internal ports prevent cross feeds, unless 'selected to 'Both'. Male AN fittings enable you to plumb straight into the aeroplane system with no extra fittings to buy. Suitable for all current fuels. For experimental aircraft only. Fittings must be purchased separately.
The new V4 offers a full flow return added to the existing valve base. Ceramic disks and valve simplicity promise a long life with the ceramics. Please note that the accessories listed below are the only compatible accessories; other standard accessories will not fit these valves.

SPRL V1 3 way valve ..... P/N 05-04450 ..... **$169.75**
SPRL V1 4 way valve ..... P/N 05-04451 ..... **$169.75**
SPRL V4 3 way valve ..... P/N 05-08366 ..... **$344.00**
SPRL V4 4 way valve ..... P/N 05-08367 ..... **$315.00**
SPRL V1-3P-C way valve w/ conforming selector ..... P/N 05-11464 ..... **$169.75**
SPRL V1-4P-C way valve w/ conforming selector ..... P/N 05-11465 ..... **$159.95**
SPRL V3-3P-C Duplex valve with conforming selector ..... P/N 05-11466 ..... **$228.00**
SPRL V3-4P-C Duplex valve with conforming selector ..... P/N 05-11467 ..... **$228.00**
SPRL V4-3P-C way valve with conforming selector ..... P/N 05-11468 ..... **$325.00**
SPRL V4-4P-C way valve with conforming selector ..... P/N 05-11469 ..... **$326.00**

ACCESSORIES

Must purchase these parts. Standard AN do not fit the valves.

AN6 Male Fittings (pk of 3) ..... P/N 05-04452 ..... **$11.50**
AN8 Male Fittings (pk of 3) ..... P/N 05-04453 ..... **$11.95**
NPT 1/4" Female Fittings(pk of 3) ..... P/N 05-04454 ..... **$11.50**
NPT 3/8" Female Fittings (pk of 3) ..... P/N 05-04455 ..... **$11.95**
SPRL On/Off V2 Valve ..... P/N 05-06468 ..... **$68.75**
SPRL V3-3P Duplex Valve ..... P/N 05-06469 ..... **$199.90**
SPRL V3-4P Duplex Valve ..... P/N 05-06470 ..... **$215.95**

SPRL V6 VALVE FOR ROTAX

V6 is a miniature valve aimed at the Rotax market with 6mm pipes in mind. Weight 127 grams **** C means FAR23 conforming selector. Can be installed inside 2-1/4" width having parallel inputs from the rear tapped 10mm to use standard Rotax banjos or straight fittings.

Model	Specifications	PN	Price
V6 54-3-C	V6 with a small 54mm face plate, 3 way, L/R/Off	05-14988	$166.75
V6-54-4-C	V6 with a small 54mm face plate, 4 way, L/Both/R/Off	05-14989	$166.75
V6-70-3-C	V6 with 70mm face plate, 3 way, L/R/Off	05-14992	$166.75
V6-70-4-C	V6 with 70mm face plate, 4 way, L/Both/R/Off	05-14993	$166.75

NEWTON SPRL FITTING 14 MM X 3 IN



For use with SPRL fuel valves V1, V2, and V3. 14mm X 3" fitting..... P/N 05-12638..... **$10.95**

REMOTE FUEL VALVE DRIVE



A remote drive has the selector conveniently at hand while the valve and pipes are on the bottom of the fuselage or even on the front of the firewall. We include a flexible universal drive joint to accept small errors in alignment. The standard drive is 12" long but drive shafts up to 6 feet are available. . ..... P/N 05-06501..... **$117.75**

PIPER AEROSTAR FUEL SELECTOR KNOBS



The difference from the OEM equipment is the readily-visible white indication line on each knob. The white line matches up with each selection line on the panel so you can easily view the fuel selection position at a glance, even in poor lighting conditions. And these knobs will never slip on the boss. A bit of peace of mind in high workload flight conditions. Package of 2.
P/N 05-14951 ..... **$32.50**

EXTENDED FUEL VALVE DRIVE



The standard drive is 12" long but drive shafts up to 6 feet are available. The universal joint is modestly priced as it is not new, but for this usage, 'new, surplus' is ideal. The drive tubes can be cut to any required length and simply push together. Price per foot. 6' shipping limit. Note: Special order lengths available upon request.
P/N 05-06557..... **$13.00**

NEWTON BANJO FITTING SETS



The fittings enabled you to plumb straight into the aeroplane system with no extra fittings to buy. The lightweight alloy construction is anodized for protection; the Viton 0 ring seals are suitable for all current fuels. For experimental aircraft only. Fittings must be purchased separately; if needed, 3 AN-6 fittings come with the valve. Fittings: AN8 Male NPT 1/4" OR 3/8" Female and banjo fittings are available, all seal to the valve with O ring system Standard AN fittings cannot mate directly to the valve.

1/4" Fitting Set ..... P/N 05-06471..... **$42.85**
5/16" Fitting Set ..... P/N 05-06472..... **$39.50**
3/8" Fitting Set ..... P/N 05-06473..... **$52.75**
1/4" Large Fitting Set ..... P/N 05-06474..... **$33.50**

Prices Subject to Change Without Notice

ALLEN PREMIUM FUEL SHUT-OFF VALVES



These premium fuel valves are recommended by Rutan Aircraft as the best fuel valves they have seen. They are a direct, bolt-in replacement for Weatherhead and other fuel valves. They turn smoothly and freely with a very positive spring loaded ball detent system which lets you feel the left right and off positions. Manufactured of anodized aluminum. Handle is not furnished with valve. Available in 3 models. Model GS122 valve originally recommended for Long-EZ. Not FAA approved. For experimental aircraft only.

	Model 6S122 P/N 05-29500	Model 6S1000 P/N 05-29515	Model 6S1001 P/N 05-29525
Handle	No	No	No
Ports	3	4	3
Ports Configuration	3 x 1/4-18 NPT	MS33649-06	MS33649-06
Handle Positions	4	4	4
Ports Open			
Position 1	All Closed	1 & 4	C & A
Position 2	A & C	2 & 4	C, A & B
Position 3	All Closed	3 & 4	C & B
Position 4	B & C	All Closed	All Closed
Price Each	$217.95	$2,729.00	$1,097.00

HANDLE FOR ALLEN FUEL VALVES



This aluminum handle is specially machined to fit the Allen fuel valves above. P/N 05-01915..... **$32.85**

ALLEN FUEL VALVE HANDLE



Designed to provide a positive feel and makes it easy to determine the current tank selection. It fits the popular Allen Fuel valves and is made from billet 6061T6 aluminum bar stock. Red anodized, and laser etched. P/N 05-07183..... **$36.75**

EXTENDED HANDLE SHAFT FOR ALLEN FUEL VALVES



Used to make an extended handle shaft for the Allen fuel valves. The handle extension can be made as long as desired.....P/N 05-01916 ..... **$94.50**

FUEL FLOW VALVE



Designed for tank installation. Similar to above but without built-in filter. 90° rotation for ON-OFF. Has standard 1/4" barb outlet tube. P/N 05-01041..... **$6.50**

FUEL FLOW VALVE



Twin-tank fuel selector valve. 3 positions: LEFT-OFF-RIGHT. LEFT and RIGHT positions are 90° either side of OFF. Panel mount. P/N 05-01042..... **$7.50**

FUEL FLOW VALVE



Panel mounted fuel on-off.
P/N 05-01043 ..... **$8.75**

FUEL TANK VALVE 90 DEGREE WITH GROMMET



Standard replacement valve and grommet for plastic or Quicksilver type fuel tanks. Right angle valve shut-off with a 1/4 turn of the handle. Requires 33/64" hole in tank. Barb end accepts any 1/4" i.d. fuel line. Supplied with Grommet. Weight 2 oz.P/N 15-05334..... **$6.50**

BANJO FITTING



This can be rotated through 360° then tightened and safety locked. Excellent for applications where space was limited. It can really be described as an adjustable 90° elbow fitting
P/N 05-29565 ..... **$63.85**

FUEL FLOW ELBOW



Bushed 90° tank fitting with standard 1/4" barb outlet. Requires Rubber Bushing P/N 05-01039.
P/N 05-01045 ..... **$1.75**

90 DEGREE FUEL TANK ACCESS ELBOW



Bushed 90° tank fitting with standard 1/4" barb outlet and 1/4" barb in the tank Requires Rubber Bushing PN 05-01039. P/N 04-02163 ..... **$1.60**

RUBBER BUSHING



Required for installation of Fuel Flow Elbow described above. P/N 05-01039 ..... **$0.32**

QUICK-DISCONNECT FUEL LINE FITTINGS



05-01035



05-01036



05-01037



05-01038

Complete sets are furnished with both male and female units. Available in both panel mount (left) and in-line (center) styles, with or without internal automatic fuel shut-off. (1/4" tubing). The O-rings may not be compatible with some alcohol based auto fuels.
In-line with shut-off .....P/N 05-01035 .. **$14.95**
In-line without shut-off .....P/N 05-01036 .... **$8.75**
Panel mount with shut-off.....P/N 05-01037 .. **$21.85**
Panel mount without shut-off..P/N 05-01038 .. **$18.75**

PRIMER BULB



Install between fuel tank and engine. A few squeezes prime your engine for easy starting.

Primer Bulb 1/4" Tube Fit - Lg. (7" x 2") .....P/N 05-03690..... **$18.75**

PRIMER KIT



Everything you need to add a plunger-type primer system to your aircraft. The kit includes the plunger, a reducer "T" fitting, 1/8" barb "T" fitting, and 10 feet of 1/8" urethane fuel line.
P/N 05-01047 ..... **$22.75**

ACS PRIMER



Formerly manufactured by Gerdes Products, this primer has an anodized, all aluminum body and an engraved aluminum knob. The inlet and outlet ports are located on the sides of the pump and both are 1/8" pipe thread. Overall length is 3-5/8" and weight is 3.5 oz. New manufacture. Current inlet and outlet locations were changed from original design on 10-27-16. Made in USA. Note: 2 O-Rings are used per primer. For overhaul, customer will need quantity 2 of 05-19920. See Accessories.
P/N 05-19920 ..... **$189.00**
Replacement O-Ring.....P/N 05-11936 ..... **$4.35**

ESSEX PRIMER O-RINGS

Essex O-Rings for K2404-1/8(2 required)..... P/N 05-02174 ..... **$5.45**

ELECTRIC SOLENOID ENGINE PRIMER VALVE



These new electric solenoids are recommended by Co-Z Development Corp. as ideal electric engine primers for homebuilt aircraft. These normally closed 2-way valves are direct acting and have only two moving parts, a viton plunger and stainless steel spring. Can be installed in any position and are easy to inspect without removing from the line. Pipe size is 1/8" NPT. Orifice dia. 1/8". Wt. 5 oz. #1 port is out, #2 port is in. Will handle max. PSI of 60.

Mounting Bracket - A universal stainless steel mounting bracket for the 1/8" NPT valves may be ordered separately. The mounting bracket can be assembled to the valve body utilizing the body mounting holes
2V Solenoid VLV 20CC02PV4B2A ..... P/N 05-04368..... **$51.75**
24V Solenoid VLV 20CC02PV4B2B ..... P/N 05-04369..... **$62.75**
Solenoid Mounting Bracket 4K007..... P/N 05-04370..... **$18.75**

PRIMER OVERHAUL KIT





Restoring primer pump operation - The kit is replaces the worn O-rings (2) on the primer pump used on non-fuel injected engine installations. The primer seals frequently are not re-lubricated until someone complains the primer isn't working or the engine is hard starting. This is most evident by the pump being hard or stiff to operate. Generally speaking, by the time the pump stops performing, the seals are worn (to the point that lube is of little value) and must be replaced. The kit contains the two O-rings, a packet of Seal Lube, and detailed instructions.
P/N 05-03637 ..... **$5.95**

FUEL LINE



Polyurethane tubing, translucent blue in color. 1/4" ID. A superior, premium grade of urethane, the optimum material for ultralight fuel line. (Min. order, 4 ft.)
P/N 05-01049 ..... **$1.25/ft.**

PRIMER LINE



Polyurethane tubing, translucent pink in color. 1/8" ID. For primer systems.
P/N 05-01050 ..... **$0.46/ft.**

PULSE LINE



Connects engine pulse outlet to fuel pump pulse inlet. Outside Diameter: 3/8". Inside Diameter: 1/4". Thickness of the Wall: 3/32"
P/N 05-01063 ..... **$0.68/ft.**

FUEL LINE SPLITTERS/JOINERS



Perfect for feeding from 2 tanks, or for feeding two carburetors from 1 tank. All have standard barbed ends. Made of Delrin. "T" type, 1/4"..... P/N 05-01051..... **$1.15**
"Y" type, 1/4"..... P/N 05-01052..... **$1.10**
"T" type, 1/8"..... P/N 05-01053..... **$1.95**

AP

FUEL TRANSFER PUMPS – FUNNELS

FUEL FILTER FUNNELS



P/N 05-00026 *P/N 05-01054* *P/N 05-01055* *P/N 05-01371*

Mr. Funnel® Fuel Filters are simply amazing. Dirty fuel in.... pure fuel out. It's that easy.
The specially designed filter removes water and dirt from gas, even 2-stroke mixtures. Ethanol attracts water more than regular gasoline. Never before has a fuel filter been more important.
Dirt and water are practically unavoidable in stored fuel, causing microbial growth, corrosive acids, electrolysis and rust. These contaminants can plug filters, corrode components, decrease efficient combustion and cause engine shutdown or system failure.
When fuel is poured through the Fuel Filter Funnel, water and debris will not pass through the filter's fluoropolymer-coated stainless steel filter. Only filtered fuel flows through to your engine, improving its efficiency, durability, and proper operation. The sump area collects the deflected water and debris for proper disposal. The Fuel Filter Funnel will filter gasoline, diesel, heating oil, kerosene and 2-cycle mixed gas.
The Fuel Filter Funnel is a heavy-duty, anti-static, and fast flow funnel with built-in filter technology.
Lawn mowers, tractors weed trimmer/blowers, dirt bikes/ATVs, boats, even airplanes... will have longer useful lives if owners filter their fuel!

Part No.	Height	Diameter	Flow Rate	Price
05-00026	6.00"	3.5"	2.7 gpm	**$17.95**
05-01054	8.75"	5.5"	3.9 gpm	**$23.95**
05-01055	10.00"	8.5"	5.0 gpm	**$34.95**
05-01371	10.00"	8.5"	12-15 gpm	**$52.95**

AP

GOATTHROAT FUEL TRANSFER PUMP



P/N 05-02196



P/N 05-02197

GoatThroat Pumps have been in the industrial market for 15 years. Recently introduced to aviators, these pumps deliver fuel efficiently and directly to the filler downspout with a finger controlled discharge nozzle. Made of chemical grade polypropylene, GoatThroat Pumps can pressurize any container in seconds. Internal pressure relief valve opens at 7 psi, but 2 psi is all you need to deliver fuel safely to your plane. A drip-proof faucet dispenses small amount or gives steady flow. Containers remain upright, so there is no extra handing and little chance for accidental spills. Includes the fitting for a 55 gal. drum. 5 gal. can fitting sold separately.

Fuel Transfer Pump..... P/N 05-02196... **$199.99**
Adapter for Blitz 5 gal. can..... P/N 05-02197..... **$58.95**
Adapter for Scepter 5 gal. can ..... P/N 05-03031..... **$72.75**

VP SPORTSMANS CONTAINERS



These 5 gallon polyurethane ventilated containers are ideal for most motorsport fuels. The Sportsman's Container is a rugged, multipurpose tool that has a multitude of applications in the hangar and on the runway. This 5-gallon workhorse is FDA-approved for the storage of water and is also great for aircraft fluids, oils and industrial liquids. The Sportsman's Container is made using 30% more plastic than the standard 5-gallon containers and therefore designed to handle the rough treatment inherent in the maintenance and upkeep of your aviation equipment.

White Square..... P/N 05-06953..... **$33.50**
White Round..... P/N 05-06955..... **$35.99**
Blue Square..... P/N 05-06954..... **$37.50**
Blue Round..... P/N 05-06956..... **$38.50**

Accessories

Replacement Cap..... P/N 05-06957..... **$7.85**
Replacement Vent Cap ..... P/N 05-06958..... **$1.70**
Deluxe Hose..... P/N 05-06959..... **$10.50**
Syphon Pump..... P/N 05-06960..... **$28.50**
Large Funnel with Filter..... P/N 05-06961..... **$46.85**

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• 24 Hour Access!
• Fast, Easy Navigation!

CLEAN FUNNEL™



model 112



model 415



model 428

Clean Funnel™ is the funnel that keeps itself clean. Replacing the caps on each end after each use prevents left over fluid from dripping out, and keeps your work area or baggage compartment clean. No need to wipe your funnel out with a rag before reusing. Clean Funnel™ is ideal for use with fuel or oil as well as windshield washer fluid, detergents, antifreeze, hydraulic fluid, and more. Great for aircraft, automobiles, motorcycles, tractors, boats, ATV's snowmobiles, and more.

- Model 112 (turquoise) has a 1 pint fluid capacity and a 12" vinyl tube attached to its spout, making it very handy to reach into small or tight spaces.
- Model 415 (red) has a 1-1/2 quart capacity, 17" long with flexible spout, and spout I.D. is 9/16".
- Model 428 (black) has 1-1/2 quart & 13-1/4" long with a flexible spout and 1-1/8" O.D. spout.

Model #	Color	Part No.	Price
112	Turquoise	12-00374	**$8.50**
415	Red	12-00375	**$10.70**
428	Black	12-00376	**$10.70**

OIL INJECTION / WATER OVERFLOW RESERVOIRS



15-06936

High density polyethylene tanks; ideal for Oil Injection Reservoir or Coolant/Water Overflow. Translucent white color easily shows fluid level. Tank is blown molded with a 1/4" thick seamless construction and includes rugged mounting tabs that mount to any flat surface. Includes a threaded 2-1/4" vented cap with tether to prevent loss. Sealed tank without drain, bottom access is easy for either push in fittings or threaded bulkheads with plenty of access thru large cap opening.

1 Quart: 7.74" high x 6.2" wide x 1/4" thick. Weight 10 oz. **Includes 1/4" barb spigot molded on bottom** ..... P/N 15-06828..... **$28.50**
1.5 Quart: 7.74" high x 5.9" wide x 1/4" thick. Weight 12 oz.
P/N 15-06830..... **$12.75**
2 Quart: 5" high x 6" wide x 1/4" thick. Weight 8 oz.
P/N 15-06936..... **$22.85**
4 Quart: 8-1/2" high x 6" wide x 1/4" thick. Weight 20 oz.
P/N 15-04841..... **$22.00**
Replacement 2-1/4" Vented, Black, Nylon Cap.
P/N 15-06936-1..... **$3.60**

Prices Subject to Change Without Notice

FUEL CAPS

FUEL SELECTOR PLATE FOR LATER CESSNA 170'S &172'S





This fuel selector plate is billet machined and anodized, with the text engraved on the plate. It is an efficient one piece design which is easy to install and factory guaranteed. FAA/PMA approved.

Cessna 172 - 37 Gals. .....P/N 05-00227....**$72.75**
Cessna 170 - 37 Gals. .....P/N 05-00899....**$72.75**
Cessna 172 - 36 Gals. .....P/N 05-00901....**$72.75**
Cessna 180 - 55 Gals. .....P/N 05-00902....**$72.75**
Cessna 180 - 60 Gals. .....P/N 05-00903....**$64.75**
Cessna 180 - 79 Gals. .....P/N 05-00904....**$66.75**
Cessna 172 - 84 Gals. .....P/N 05-00905....**$68.80**
Cessna 182 - 55 Gals. .....P/N 05-00906....**$72.75**

AVMAT AVGAS FUEL MATS



This fuel mat by Aviation Laboratories is made from heavy duty durable synthetic rubber. They are non-static and fuel resistant. Available with a center hole or a top offset hole. Size is 24" x 16", with a 4" diameter hole.

AVMAT-AVGAS1 (Top Hole)
P/N 13-03588.....**$103.85**
AVMAT-AVGAS2 (Center Hole)
P/N 13-03589.....**$99.85**
AVMAT-JET1 (Top Hole) .....P/N 13-04925.....**$99.85**
AVMAT-JET2 (Center Hole).....P/N 13-04926.....**$104.75**

ANDAIR LOCKING FUEL CAP



This Locking Fuel Cap can be installed to RV wing tanks, crafted with a smart elegant design, is lockable with completely random key generation, comes with 2 keys, custom engraving upon request, and has Viton O-ring seal. P/N 05-08037.....**$159.95**

THERMOS STYLE PRESSURE FUEL CAPS



Pressure fuel caps are recommended for aerobatic installations. These caps are made with Buna-Nitrile gaskets for fuel resistance. These caps are non-vented for gravity fuel systems. It is highly recommended that a #40 (3/32") drill is used to drill a vent hole through the lower base plate and stud assembly using a drill press.

Part No.	Diameter (I.D.)	Height	Price Each
05-18400	2"	1-3/16"	**$49.85**
05-18402	2-1/2"	1-3/16"	**$41.40**

Aluminum weldable adapter neck for use with 2" cap illustrated.
3" Length.....P/N 10367-3.....**$28.25**
6" Length.....P/N 10367-6.....**$30.50**

RAM AIR PRESSURE CAP



Tube through cap allows forced air into tank which forces fuel out. Used with wing tank kits.
P/N 05-08077.....**$31.50**

FUELTAPE



While most FBOs do a great job of keeping fuel orders straight, mistakes can and do happen. As for pilots, sometimes it's not feasible to stand around waiting for the fuel truck to ensure the right fuel is being poured into the aircraft tanks. FuelTape is a highly durable, weatherproof masking tape that clearly indicates to the fueler which grade of fuel must be used. Simply tear off a piece and stick it over the fuel caps and you have a low-cost, reliable system to keep your tanks safe. FuelTape is available in both 100LL or Jet A versions. The colors and design conform to FAA standards. FuelTape is a simple product that both eliminates mistakes and gives the pilot piece of mind that they can go off and handle other business. Sold by the roll.

Av-Gas.....P/N 05-06416.....**$9.95**
Jet-A .....P/N 05-06417.....**$7.25**

FUEL CAP O-RINGS

Fuel Cap	Mfg P/N	P/N	Type	Size	Price
Shaw 431/531	MS29513-338	MS29513-338	Nitrile	Large O-ring	**$2.06**
Shaw 431/531/416	MS29513-010	05-00107	Nitrile	Small O-ring	**$0.38**
Shaw 431/531	M25988-1-338	04-03827	Flourosilicone	Large O-ring	**$6.25**
Shaw 431/531	M25988-1-010	05-12763	Flourosilicone	Small O-ring	**$0.49**
Shaw 416	MS29513-232	MS29513-232	Nitrile	Large O-ring	**$1.50**
Shaw 416	M25988-1-232	04-03826	Flourosilicone	Large O-ring	**$4.90**
Shaw 416	M25988-3-010	04-03829	Flourosilicone	Small O-ring	**$0.30**
GABB 37810	MS29513-339	MS29513-339	Nitrile	Large O-ring	**$2.23**
GABB 37810	MS29513-110	05-00111	Nitrile	Small O-ring	**$0.39**
GABB 37810	M25988-1-339	04-03828	Flourosilicone	Large O-ring	**$11.80**
GABB 37810	M25988-1-110	04-03825	Flourosilicone	Small O-ring	**$0.98**

ACS TWIST-TO LOCK FLUSH FUEL CAP



The ACS Twist-To-Lock Flush Fuel Cap Assy is machined from 6061 aluminum billet. The cap is available in vented and non-vented configurations. The sealing element for the cap is an easily replaceable viton O-ring. The bottom of the cap is secured to the bottom of the ring by a safety chain to prevent loss of the cap during flight. The mounting ring may be welded, riveted, bolted or molded onto the tank.

Complete Set (non-vented).....P/N 10600 .....**$57.75**
Complete Set (vented).....P/N 10610 .....**$61.75**
Replacement "O"Ring.....P/N 10609 .....**$3.95**

ACS FLUSH FUEL CAPS



This latest modification of the ACS Flush Fuel Cap (unvented) utilizes a Viton O-Ring as the sealing element between the cap and mounting ring. The Viton O-Ring is compatible with aviation fuels and auto gas. The cap with Viton seal is interchangeable with the old-style cap with rubber gasket. Machined from solid aluminum. Ring may be welded, riveted, bolted or molded to the tank. The bottom of the cap is secured to the bottom of the ring by a safety chain to prevent loss of the cap in flight. Mounting ring flange is 1/8" thick. Ring opening is 2-5/8" dia. Overall dia. 4-3/8".

Complete Set (New-Style Cap w/Mounting Ring)
P/N 05-01390 .....**$55.75**
New Style Cap Only..... P/N 05-01391 .....**$39.95**
Replacement Viton O-ring (for New-Style Cap Only)
P/N 05-01392 .....**$7.70**

FUEL CAP COVERS



Any general aviation aircraft with flush fuel caps can benefit from these fuel cap covers. They effectively prevent rainwater from contaminating your fuel when the aircraft is parked outside. Simply place the covers over the fuel caps when you leave the aircraft. Before your next flight or refueling, just use your hand to wipe any excess water away from the covers and then remove them. Watch the video to see how they work. ..... P/N 05-14949.....**$143.75**

PIPER FAA / PMA FUEL CAPS



Application	Description	Part No.	Price
PA-24-250 s/n-24-01 - 24-3687 PA-24-260 s/n-24-4993 - 24-6000 PA-24-400 s/n-26-02 - 26-148 PA-30 s/n-30-02 - 30-2000 PA-39 s/n-39-01 - 39-155 Replaces OEM 27221, 23/8"	Piper Fuel Cap PA-24 2-3/8" Dia	05-08079	$122.75
PA-23-150, 160 s/n-23-01 - 23-2046 Replaces OEM 17672, 1-7/8"dia.	Piper Fuel Cap PA-23 1-7/8" Dia	05-06466	$128.75
PA-23-250, 23-235, all serial numbers Replaces OEM 16097, 2-3/8" dia	Piper Fuel Cap PA-23 2-3/8" Dia	05-04161	$89.95

PIPER PA23 FUEL CAP



CA16097N is an improved version of part number CA16097. This new part uses an improved elastomer with superior fuel resistance. The fuel cap is eligible for PA23 aircraft.....P/N 05-04161 .....**$89.95**

PIPER PA-23 FUEL CAP



The 2 inch Piper PA-23 fuel caps are back. PMA Products, Inc. announced the return of their CA17672N fuel caps that are manufactured with improved rubber specifically formulated to prevent swelling. This part number replaces Piper part numbers 454-084 and 17672-000. Specifications: FAA-PMA Approved. Eligible Aircraft: Piper PA-23 (Beginning S/N 23-1, Ending S/N 23-1182) Piper PA-23-160 (Beginning S/N 23-1177, Ending S/N 23-2046). ..... P/N 05-06466.....**$128.75**

PIPER PA23 FUEL CAP



FAA/PMA Approved. Replaces OEM P/N 17672, 1-7/8" diameter. Fits PA-23-150, 160 s/n-23-01 to 23-2046.
P/N 05-12273.....**$175.75**

USHER FLUSH FUEL CAPS



The UD-3 flush fuel cap assembly is an unvented cap similar in design to the #5 style cap. The aluminum mounting ring has a 2" dia. opening and an overall dia. of 3-3/4". It may be riveted, bolted or molded to the tank. It is currently used on many popular homebuilts such as the RV's, Lancair, Velocity & White Lightning. Specify flat or contoured adapter.

UD-3 with Flat Adapter..... P/N 05-01061..... **$44.85**
UD-3 with Contoured Adapter..... P/N 05-01062..... **$44.85**
UD-3-C Fuel Cap Only..... P/N 05-15373..... **$36.95**
Usher O-Ring 2-325 Large..... P/N 05-02146..... **$1.65**
Usher O-Ring 2-012 Small..... P/N 05-02147..... **$0.95**

GAS TANK CAP GASKETS

Part No.	Description	Size	Price Ea.
05-18500	Piper	3" OD, 2" ID	**$4.95**
05-18505	Cessna	2-1/4" OD, 1-3/8" ID	**$4.45**

AP

FUEL CAPS

AP

AERO FUEL CAPS - ALUMINUM


05-00045


05-28651


05-28652


05-28653

These English fuel caps are used on most of the worlds super cars and bikes, and some series production aero planes. They are beautifully made in forged and bright anodized aluminum. The high precision and easy to operate mechanism is very secure and non vented. They are designed to keep the fuel in and the water out. The lock is there to ensure that your tank is free from contaminants. Aero caps are used on Adam, CAP, Cirrus, Diamond, Lancair Columbia, Lancair kits, Nemesis, Vans, Velocity and many more aircraft.

Cap assemblies come complete with cap, gasket, and flanges as ordered. Two keys come with the locking version. Fixing can be by rivet, bolt, weld or glass in as appropriate. These are flush caps of outstanding quality which are ideal for virtually any homebuilt aircraft.

Order the attach ring separately as needed, see accessories.

The 300 Series: 3-3/4" OD opening 1-3/4", 6 hole 3" pcd. A37 fits 2" and 2.25" Hoses.

The A512 & A508 Series: 3" entry / 5.5" OD. Feature special surface seal to avoid water/ice ingress. For Avtur Jet and diesel fuels.

Series	Description	Part No.	Price
A36	A36L Locking Cap Assy. 6-hole	05-28651	**$145.75**
A36	A36LFF Locking Cap Assy. Glass in	05-28652	**$141.75**
A36	A36S Non-Locking Assy. 6-hole	05-28656	**$125.75**
A36	A36SFF Non-Locking Flush Glass in	05-28658	**$143.80**
A37	A37L Locking Cap+ Hose Fitting 6 hole	05-28653	**$160.75**
A37	A37LFF Locking Cap Flush Glass in	05-28654	**$171.90**
A37	A37S Non-Locking+ Hose Fitting 6-hole	05-28659	**$154.75**
A512L	A512L 3" Cap, Locking - 12 hole	05-00045	**$183.75**
A512FF	A508L 3" Cap, Locking - 8 hole	05-04538	**$197.75**
A512FF	A512FF Locking (Glass-In) Cap	05-02650	**$177.75**
Replacement Neck Flange for 05-28666 Cap		05-11451	**$36.85**

NEWTON AERO 200 FUEL CAP



The all-metal construction of the Aero 200 Fuel Cap combines strength and lightweight, with a 6 hole flange - To fit directly into tank. Specified for use with many hostile fluids. Non-locking Due to the compact dimensions it is not possible to fit a lock to the Aero 200. P/N 05-06836.....**$108.95**



AERO FUEL CAP OVERHAUL KITS

Overhaul kits contain the required viton rubber seals, stiffnuts and clips.

Aero 300 Fuel Cap Overhaul Kit
P/N 05-02218.....**$12.90**

Aero 400 Fuel Cap Overhaul Kit
P/N 05-02613.....**$17.75**

Aero 500 Fuel Cap Overhaul Kit
P/N 05-02219.....**$29.50**



LIGHTWEIGHT DOOR LOCK SETS

Match above fuel cap locks.
P/N 05-28664 .....**$17.50 ea.**

NEWTON FUEL CAP KEYS



#	Part No.	Price	#	Part No.	Price
601	05-15071	**$17.50**	610	05-15073	**$17.50**
602	05-03663	**$3.95**	611	05-15074	**$17.50**
603	05-15072	**$17.50**	612	05-15075	**$21.50**
604	05-03437	**$17.50**	613	05-15076	**$17.50**
605	05-04540	**$17.50**	614	05-15077	**$17.50**
606	05-03388	**$17.50**	615	05-15078	**$17.50**
607	05-03389	**$17.50**	616	05-15079	**$26.50**
608	05-04541	**$17.50**	617	05-15080	**$17.50**
609	05-04542	**$17.50**			

Caps for Fuselage and Wing Tanks



For separate fuselage and wing tanks we offer a screw in flange to fit a 2.25" threaded bushing that can be welded or glassed into a tank. This gives a flush fitting outside the skin, avoiding doors and internal spillage. Ideal for all wooden airplanes (e.g. Falco). Good for smoke oil tanks.

A30S-G/S Non-Locking, Threaded	05-28705	**$143.80**
A30L-G/S Locking,Threaded	05-28700	**$159.75**
Aluminum Tank Flange	05-01056	**$12.75**

BAYONET FUEL CAPS AND FILLER NECKS



Locking bayonet type cap with gasket, fastens to filler neck with safety chain. Externally threaded to mate with tank flange. 1.5" dia. filler hole, 2.25" diameter at threaded base, 1-3/8" neck length. Complete with aluminum tank flange designed for welding to aluminum tanks. Inner surface threaded to receive filler neck. Not compatible with auto gas.

Complete Set with Unvented Cap.....P/N 05-17800 .....**$40.50**
Complete Set with Vented Cap.....P/N 05-17900 .....**$42.25**
Aluminum Tank Flange.....P/N 05-01056 .....**$12.75**
Cap Only (unvented).....P/N 05-01057 .....**$9.50**
Cap Only (vented).....P/N 05-01058 .....**$11.75**
Gasket for above Caps.....P/N 05-01059 .....**$1.95**
Filler Neck.....P/N 05-01060 .....**$17.55**

RETROFIT FUEL CAPS

Tired of hard to open gas caps and caps which leak? These retrofit gas caps offer easy fingertip action and secure sealing.



GLASAIR FLUSH FITTING CAP replaces the rubber seal Glasair cap (2.5-entry and 2" hole). Lockable. Epoxy/Flox in place. Based on aero 300 series. P/N 05-01004 .....**$156.75**

VANS RETROFIT FUEL CAP - Fits inside existing Vans flange and arrives flush to the wing surface, replacing the standard 'Usher' cap. Two keys with each cap and matching key numbers. Easy action and secure seal with 1-3/8" orifice. Use this cap for easy operation and zero leaks. Fix in place with eg 'proseal'.
P/N 05-01006 .....**$72.75**



Replacement O-Ring Kit.....P/N 05-07226 ..... **$17.55**

LIGHTWEIGHT SPRL FUEL CAPS


SPRL-S-GS


SPRL-S

This cap has secure sealing and easy finger tip operation. These caps are made from the highest quality modern engineering plastics with Viton 'o' ring seals (which can be easily replaced if you should ever need to do so.) The mounting ring is anodized aluminum with the flange recessed to give a perfect flush fit whether it is riveted under a metal skin, as in the RV series, or built into a composite structure. This cap is non vented and recommended to keep the fuel in, the water out and in the locking version, other unwanted items out of your tank. Size: 65 mm O.D.; Wt: 80 grams. SPRL caps are used on Europa, Compair, Glasair, Lancair, Murphy, OMF, Rocket, Velocity, Zenith and many more experimental aircraft.

Non-Locking cap W/ Flush Flange SPRL-S..... P/N 05-28662 ....**$48.55**
Locking cap W/ Flush Flange SPRL-L..... P/N 05-28663 ....**$66.75**
Cap with Threaded Flange SPRL-G/S..... P/N 05-28666 ....**$69.75**
Locking cap with Threaded Flange..... P/N 05-28667 ....**$75.75**
Backnut to secure threaded flanges to skin (for 2.25" hose)
P/N 05-00042 ....**$10.85**
Sprl Fuel Cap O-ring Kit..... P/N 05-02611 ....**$11.65**
Replacement neck flange for 05-28666 Cap .... P/N 05-11451 ....**$36.85**



A-30 CIR THREADED FUEL CAP

A30-CIR is a screw threaded fuel cap the will fit almost flush to a skin, with the riveted flange on an adjacent tank or the back of a 'wet' skin. This was designed to be fitted after painting, reducing the likelihood of dirt/dust in the cap and the cost of masking/finishing operations. It is available with a locking or non locking cap.

A30 L-CIR Locking.....P/N 05-06838 .....**$165.75**
A30 S-CIR Non-Locking.....P/N 05-06837 .....**$155.75**



SPRL rivet flange for threaded fuel caps
P/N 05-06491 .....**$34.60**



ACS 10700 FLUSH FUEL CAP

The unvented flush fuel cap operates with a lift and turn lever. This cap has a 3" opening for easy refueling. Cap & adapter ring are anodized "clear" for corrosion resistance. Cap is fastened to adapter ring with safety chain. Made in the U.S.A.

10700 Flush Fuel Cap ....P/N 05-04702 .....**$349.50**
Replacement O-Ring 10700 CAP .....P/N 05-04703 .....**$4.85**

FUEL ADDITIVES

PRIST® HI-FLASH® HI-FLO™ ANTI-ICING FUEL ADDITIVE



Prist® Hi-Flash® Hi-Flo™ Anti-Icing Fuel Additive: The Original Just Got Better Prist® Hi-Flash® Hi-Flo™ aerosol cans are now available with a redesigned trigger dispensing system that makes them easier and safer to use. The safety trigger gives the user control of additive flow with instant on and off dispensing. Now the trigger dispensing system comes pre-mounted on the can which eliminates leaks at the valve connection. This means less waste, no drips and no spills. Prist® anti-icing fuel additive comes in a wide range of packaging, making it easy to choose the amount of product and dispensing method for your application. The sizes include: 55-gallon drums, 5-gallon pails, 20-once and 8-ounce aerosol cans.

FLAMMABLE

20 oz. can..... P/N 09-39555..... **$12.85**
Case (24 Cans)..... P/N 09-39554..... **$299.95**
5 Gal. ..... P/N 09-04436..... **$119.00**

ALCOR TCP FUEL TREATMENT CONCENTRATE

ELIMINATE SPARK PLUG LEAD FOULING!



"Get the lead out" by using Alcor TCP Fuel Treatment, the only FAA-approved product of its kind for non-turbo-charged engines. For use in low-compression piston aircraft engines, A simple treatment with every fill-up prevents that unwanted lead build-up, significantly reducing the fouling of your engine and the cost of flying. Only 1 ounce of TCP is required for every 10 gallons of fuel! The handy syringe dispenser allows precise measurement of the amount of TCP to put in your tank. Stop lead build-up before it starts with TCP! Sold in quarts. ***TCP Syringe sold separately Note: TCP is not to be carried aboard aircraft.***

Quart Can..... P/N 05-21300 ..... **$37.95**
55-Gallon Drum..... P/N 05-01430 ..... **$2,625.00**

Accessories

Dispenser -(For use on the QT. and Gallon bottles)
P/N 05-21500..... **$4.85**

DECALIN RUNUP FUEL ADDITIVE



Decalin RunUp is approved for use with the new 100VLL (Very Low Lead) fuel announced by the FAA on Special Airworthiness Bulletin NE-11-55. Decalin RunUp contains two types of additive, one to reduce the negative effects of tetraethyl lead in aviation fuel and the other to improve the combustion efficiency, reduce combustion deposits and clean the fuel delivery system in aircraft. Decalin RunUp is not approved for use in the engines of certified aircraft.

16OZ..... P/N 05-01406..... **$22.50**
Decalin Runup Fuel Additive Quart..... P/N 05-03412..... **$34.85**

DECALIN FUELSTAT FUEL TESTING KIT



The objective of the test is to provide rapid screening of fuel samples (water in fuel or fuel), giving a quick and accurate assessment of H Res, bacteria & other fungi including yeasts in the fuel tank. This test is unlike current growth-based tests, which require a minimum of 72 hours to provide any results. The test measures the amount of active growth in the sample and provides actions and alert levels. The FUELSTAT® resinae PLUS test measures the amount of different types of contamination: H Res, bacteria and fungi actively growing in the sample and reports that as the weight of material in the sample. This is a newer, more accurate measurement system than the old Colony Forming Unit (CFU) count. P/N 05-15250 ..... **$159.00**

FUEL FRESH



Aircraft sit - Fuel Fresh prevents gasoline from going stale. This process called Autoxidation occurs when oxygen reacts with fuel, thereby forming gum and varnish. Auto gas is particularly susceptible, losing octane performance and flammability, resulting in greater possibility for detonation. Add fuel Fresh and preserve fuel up to 24 months, maintain octane, prevent gum varnish, clean fuel system, and inhibit corrosion. Quick starts and clean burn are assured. Safe for 2 or 4 cycle engines. Handy measuring bottle. 32 fl.oz. Concentrate (Treats 96 Gal.)
P/N 09-38050 ..... **$9.95**

HAMMONDS BIOBOR JF® FUEL BIOCIDE



For diesel and jet fuel. Recommended in many operating manuals as the preferred, industry standard fuel additive for eliminating Hydrocarbon Utilizing Micro-Organisms (HUM Bugs) in fuel tanks. US Coast Guard Certified and is the only diesel additive that has been given a military MIL Spec number.

4 oz. ..... P/N 05-06865 ..... **$12.50**
16 oz ..... P/N 05-04963 ..... **$23.85**
1 qt. ..... P/N 05-04962 ..... **$42.75**
1 gal ..... P/N 05-04961 ..... **$133.85**
5 gal ..... P/N 05-04960 ..... **$593.00**
55 Gallon ..... P/N 05-06866 ..... **$4,173.00**

HAMMONDS TURBOLINE FUEL STABILIZER



Turboline FS100 is a high-temperature fuel stabilizer and detergent additive designed to minimize carbon or coke deposits in turbine fuel combustion systems.
Turboline FS100 is readily soluble in jet fuel. Batch blending into the fuel is acceptable, but the best procedure is proportional injection. Turboline FS100 is completely compatible with other fuel system additives such as FSII and Biobor JF®. Turboline FS100 is fully approved for all operators using GE, Pratt & Whitney, Honeywell and all variants of the Turbomeca Arriel 1 & 2 engines. Operators with other Turbomeca engine models and Rolls-Royce can obtain approval on request. Please contact your local FAA authority, international authority, or OEM if you have specific questions concerning your equipment. Recommended Treatment Level for Turboline FS100 – The optimum treatment level in the fuel is 625 ppm (vol). This treatment level equates to about 80 oz. of product for every1,000 gallons of fuel. Gallons of Jet Fuel x .000625 = Gallons of Additive Gallons of Additive x 128 = Ounces of Additive.

16 oz. ..... P/N 05-06870 ..... **$58.95**
5 Gallon ..... P/N 05-06871 ..... **$1,196.00**
55 Gallon ..... P/N 05-06872 ..... **$11,609.00**

HAMMONDS LUBRIBOR® HIGH TECH LUBRICITY AGENT



Designed to improve fuel lubricity and reduce fuel system wear. Applications– LubriBor® is specially formulated for use in lowsulfur diesel fuel, now required for all over-the-road vehicles, and may be used in other applications such as boating, industrial and construction equipment, mining and farm equipment.

16 oz.....P/N 05-06867 ..... **$24.70**
5 Gallon .....P/N 05-06868 ..... **$299.95**
55 Gallon .....P/N 05-06869 ..... **$2,298.00**

HAMMONDS BIOBOR HUM-BUG DETECTOR KIT



The Hum-Bug Detector® Kit is a low-cost, easy-to-use early warning system that will effectively identify hydrocarbon utilizing micro-organism contamination in all hydrocarbon fuels and oils.
P/N 05-04964 ..... **$24.75**

AP

FUEL TANK SEALANTS

AP

3M™ AC-251 B-2 3.5 OZ - CANOPY / WINDSHIELD SEALANT



A two-part, quick curing, polysulfide based canopy and windshield sealants. Formulated for sealing acrylic, glass, and polycarbonate aircraft canopies and windshields. Contain no solvent and do not craze. Excellent adhesion and resistance to UV and weather exposure. 3.5oz Fill Premixed Syringe. A thixotropic, non-sag consistency.. ..... P/N 09-04008.....**$59.75**

3M™ AEROSPACE SEALANT AC-350



A fast cure, intermediate density polysulfide sealant suitable for fuel tank and fuselage applications. Maintain flexibility and bond strength on most metal substrates such as; aluminum, titanium, steel, stainless steel, glass, and many coatings under extremes of temperature, weathering and stress.

B-2 3.5oz..... P/N 09-04009..... **$37.50**

3M™ AC-240 CLASS B FUEL TANK AND FUSELAGE SEALANT



A two-part, polysulfide based product for use as a quick cure sealant for integral fuel tanks and fuselages. A thixotropic non-sag consistency and can be readily applied with a spatula or extrusion gun or vertical surfaces. It will cure to a fuel-resistant rubber at temperature above 20 degrees F and exhibits excellent tooling properties with very low shrinkage.

Class	Size	Cure Time	Part No.	Price
B-1/2	Pint	1/2 Hour	09-02634	**$55.75**
B-1/2	3.5 oz.	1/2 Hour	09-02635	**$28.95**
B-2	3.5 oz.	2 Hour	09-02638	**$31.70**
B-2	Pint	2 Hour	09-02637	**$55.75**

3M™ AC-236 CLASS A INTEGRAL FUEL TANK AND FUSELAGE SEALANT



C-236 Class A is a brushable, two-component, liquid polysulfide polymer system providing excellent fuel tank and fuselage seals. It has outstanding resistance to aviation gasoline and jet fuel, as well as resistance to chemicals and petroleum products common to the aircraft industry. Maintains its flexibility and bond strength on most metal substrates like aluminum, stainless steel, steel, and many coatings under extremes of temperature, weathering and stress. Pourable liquid easily applied by brush. It has excellent tooling properties.

Class	Size	Part No.	Price
A-1/2	Pint	09-02614	**$48.70**
A-1/2	3.5 oz.	09-04495	**$23.65**
A-2	Pint	09-02618	**$47.70**
A-2	3.5 oz.	09-02619	**$26.50**

3M™ AC-236 CLASS B FUEL TANK AND FUSELAGE SEALANT



A two-component, manganese dioxide cured, liquid polysulfide polymer system providing excellent fuel tank and fuselage seals. It has outstanding resistance to aviation gasoline and jet fuel, as well as resistance to chemicals and petroleum products common to the aircraft industry. Maintains its flexibility and bond strength on most metal substrates like aluminum, stainless steel, steel. A thixotropic paste easily applied by extrusion, injection gun or spatula. It has excellent tooling properties.

Class	Size	Part No.	Price
B-1/2	3.5 oz.	09-02623	**$26.85**
B-1/2	25 grams	09-02625	**$25.50**
B-2	Pint	09-02626	**$51.75**
B-2	3.5 oz.	09-02627	**$25.50**
B-2	2 oz.	09-04496	**$19.75**
B-4	3.5 oz.	09-02631	**$25.50**
B-4	Pint	09-02630	**$51.75**
B-2	Quart	09-04497	**$105.75**

TRIGGER TYPE SEALANT GUNS



This air-powered, trigger controlled sealant gun will spread sealant smoothly, uniformly, and exactly where you want it. Includes body, 10 ft. hose, and 2 1/2 oz. zinc plated corrosion resistant retainer to prevent cartridge split. Hose has Hanson-style air fitting.

Gun with 2.5 oz. Retainer ... P/N 12-02923.....**$112.85**
Gun with 6 oz. Retainer ..... P/N 12-02922.....**$112.85**

PISTOL GRIP SEALANT GUNS



Use this pneumatic pistol grip sealant gun to apply smooth, uniform material exactly where you want it. Comes with body, 10 ft. hose, and 2 1/2 oz. zinc-plated corrosion resistant retainer. Hanson-style air fitting on hose.

Gun with 2.5 oz. Retainer ..... P/N 12-02921.....**$136.80**
Gun with 6 oz. Retainer ..... P/N 12-02920.....**$136.80**
Gun with 2.5 oz. & 6 oz. Retainers ..... P/N 12-04600.....**$148.75**
2.5 oz. Retainer only..... P/N 12-04598.....**$22.95**
6 oz. Retainer only..... P/N 12-04599.....**$26.70**

PRO-SEAL FUEL TANK SEALANT



P/S 890 CLASS B2 - A filleting compound for sealing integral fuel tanks and pressurized cabins. It was especially developed for use over a temperature range of -65°F to +275°F and provides outstanding resistance to aircraft fuels (aviation gasoline or jet fuel) and petroleum base lubricating oils. Cures at room temperature and without shrinkage to form a resilient sealant possessing excellent adhesion to aluminum, magnesium, titanium, steel and numerous other materials.

Class	Size	Part No.	Price
B-1/2	2.5 oz.	09-04494	**$48.75**
B-1/2	3.5 oz.	09-04493	**$42.50**
B-1/2	Pint	09-04642	**$122.75**
B-2	6 oz.	09-04643	**$58.80**
B-2	Pint	09-38560	**$119.75**
B-2	Quart	09-38565	**$249.65**

PRO-SEAL FUEL TANK SEALANT 890 A2



An aircraft integral fuel tank sealant that has a service temperature range from -65°F (-54°C) to 250°F (121°C), with intermittent excursions up to 275°F (135°C). This material is designed for brush and fay sealing of fuel tanks and other aircraft fuselage sealing applications. The cured sealant maintains excellent elastomeric properties after prolonged exposure to both jet fuel and aviation gas. A two-part, manganese dioxide cured polysulfide compound. The uncured material is suitable for application by brush in thickness up to 25 mils. It cures at room temperature to form a resilient sealant having excellent adhesion to common aircraft substrates.

6oz. Kit .....P/N 09-04644 ..... **$56.75**

PROSEAL PR-1776M CLASS B LOW WEIGHT FUEL TANK SEALANT



A low density, high temperature aircraft integral fuel tank sealant. Service temperature range from -65°F (-54°C) to 250°F (121°C), with very limited excursions up to 360°F (182°C). Designed for fillet sealing of fuel tanks and other aircraft fuselage sealing applications. Cured sealant maintains excellent elastomeric properties after prolonged exposure to aircraft fuels both jet fuel and aviation gas, and will resist limited contact to diphosphate ester based hydraulic fluids. Two-part, manganese dioxide cured Permapol® P-5 modified polysulfide. Suitable for application by extrusion gun or spatula. It cures at room temperature to form a resilient sealant. Shelf Life: 9 months

P/N 09-02003.....**$359.00**

CHEMSEAL TANK SEALANT C3204



CS3204 is a fuel resistant sealant for use on integral fuel tanks and pressurized cabins as well as other areas subject to contact with aircraft fuels, lubricants, oils, water and/or weathering. Meets requirements of specifications AMS-S-8802 formerly MIL-S-8802, CMNP021, Lockheed, Gulfstream, Hughes Aircraft, Fairchild SPS 6-1 & 6-2.

B-2 2oz. sealant (2 hour)..... P/N 09-38500.....**$18.85**
B-2 3-1/2 oz. sealant (2 hour) ..... P/N 09-38510.....**$20.95**
B-1/2 6 oz(1/2 hour) ..... P/N 09-04612.....**$21.50**

Accessories

Nozzle for Pro-Seal Kits ..... P/N 02-00099.....**$1.15**
Economy Sealant Mixer ..... P/N 12-01792.....**$16.85**

Discount Schedule: Less 10% on 12 kits, less 15% on 20 kits (may be assorted).

PRO-SEAL HAND-DISPENSING GUN



These hand-operated dispensing guns are ideal for applying Pro-Seal type sealants in small quantities normally used by the home builder Available in two sizes for the two sizes of Pro-Seal offered above.

2-1/2 oz. Dispensing Gun....P/N 09-38520 ... **$124.50/ea.**
6 oz. Dispensing Gun .....P/N 09-38530 ... **$129.95/ea.**

PRO SEAL AIR POWERED TS950 2.5 OUNCE GUN KIT



The Air Powered Sealant kit includes: Techcon TS950 Sealant Gun with Pistol Grip Handle 2.5 oz. Versatile, pneumatic 2.5 ounce sealant applicator system with pistol grip handle. Techcon Extended Wiper Plunger (1 piece per kit) Techcon 2.5 Oz. Standard Density Disposable Cartridge (1 piece per kit) Opaque White

Air Powered 2.5 Ounce Gun Kit.....P/N 09-38540 .....**$597.00**
Air Powered 2.5 Ounce Gun Only.....P/N 09-38542 .....**$597.00**
Extended Wiper Plunger (Sold Each) .....P/N 09-00758 .....**$0.75**
2.5 oz. Std. Density Disposable Cartridge ..P/N 09-00759 .....**$0.65**

PRO SEAL AIR POWERED TS950-60-HA 6.0 OZ GUN KIT



This 6.0 oz Pro Seal Gun Kit includes: Techcon Gun Pistol Grip Assembly TS950-60-HA 6oz. Techcon Extended Wiper Plunger (1 piece) Techcon 6 Oz. Standard Density Disposable Cartridge. Techcon TS950 10ft. Hose Assembly.

Air Powered 6.0 Ounce Gun Kit.....P/N 09-38550 .....**$895.00**
Air Powered 6.0 Ounce Gun Only.....P/N 09-38552 .....**$755.00**
Extended Wiper Plunger (Sold Each) .....P/N 09-00758 .....**$0.75**
2.5 oz. Std. Density Disposable Cartridge ..P/N 09-00759 .....**$0.65**
Techcon TS950 10Ft. Hose Assembly.....P/N 09-02416 .....**$135.80**

The application life of each sealant is specified by the dash number in the part number.
Examples: AC-236 B-2 6oz. is 2 hour life. AC-250 B-1/6 2oz. is 1/6 hour life.

AEROLIFE POLYPROTECH FUEL TANK SEALANT SINGLE COMPONENT



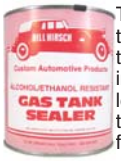
Fuel Tank Sealant "Single Phase" (one-part) A long lasting, permanently flexible "Single Phase" Polysulfide Sealant. Tack-free in 1 to 3 days, excellent resistance to oils, gasoline and diesel fuel Ideal for fuel tanks; cures to a firm flexible rubber seal with excellent adhesion qualities, can also be sanded and painted. ..... P/N 09-02544 ..... **$8.95**

AEROLIFE POLYPROTECH FUEL TANK SEALANT DUAL COMPONENT



A long lasting, permanently flexible "Dual Phase" Polysulfide Sealant. Fast curing two part system where time of completion is the criteria; cures to a firm flexible rubber seal with excellent adhesion qualities. Excellent resistance to oils, gasoline and diesel fuel; ideal for fuel tanks, cures to a firm flexible rubber seal, a product more for the professional than the home builder. Approximately 45 minute application time. Sealant ..... P/N 09-02543 ..... **$38.75**

ALCOHOL RESISTANT GAS TANK SEALER



This is impervious to all fuel types. Over 2,000,000 sold to date. It is the best way to repair and restore your fuel tank. Simple application, includes extensive application information and product information sheet. Will seal pinhole leaks and prevent rusting. 1 Pint will seal a 10-12 gallon tank. Good for all fuel types. Works well with all metal and fiberglass tanks. Note: For Experimental Aircraft Only!

Quart ..... P/N 09-03477 ..... **$35.90**
Gallon ..... P/N 09-02566 ..... **$88.75**

RHINO 9700 FUEL TANK SEALER



Rhino 9700 is a 100% solids epoxy system which is the highest quality fuel and chemical resistant lining and coating material available. It contains no solvents and no corrosive or carcinogenic substances to assure low toxicity and ease of application. Provides superior low temperature curing, impact and abrasion resistance, and cures in the presence of moisture or humidity. Brushes on easily. Sold in 3 gallon kit containing 2 gallons of resin and 1 gallon of hardener. One 3 gallon kit can coat tanks of average size homebuilt. Used extensively on Lancairs and other homebuilts. Shelf life one year.

1 Gallon Kit..... P/N 09-05368..... **$168.80**
3 Gallon Kit..... P/N 09-42226..... **$629.00**

JEFFCO FUEL TANK SEALER



A 100% solids epoxy system. It contains no solvents and no corrosive or carcinogenic substances to assure low toxicity and ease of application. Provides superior low temp. curing, impact and abrasion resistance, and cures in the presence of moisture or humidity. Brushes on easily. One 3 gallon kit can coat tanks of average size homebuilt. Note: Jeffco Fuel Sealer 9700 FCR(Part Number:09-42226) is made up of 2 parts. Part A and Part B. They both can be sold separately. Part A is Part number:01-01062 and Part B is part number: 01-01063.3 Gal Kit..... P/N 09-42226 ..... **$629.00**

PR-1005-L BUNA-N SLOSH COATING



A aircraft integral fuel tank slosh coating designed as a top-coat or barrier coating, cured to resist prolonged exposure to both jet fuel and aviation gas. It has a service temperature range from -100°F (-73°C) to 250°F (121°C), with intermittent excursions up to 275°F (135°C). PR-1005-L is a one part, synthetic rubber solution.Suitable for application by brush, fill-and-drain, dip, or spray. It cures at room temp. Test results are in accordance with MIL-S-4383 specification test methods. Color: Red; Dry time(77°F): 20 mins.; non-toxic.

Pint ..... P/N 09-00323 ..... **$150.75**
Quart..... P/N 09-00324 ..... **$233.95**

NYCOTE 7-11 CORROSION PROTECTION



Apply Nycote® 7-11 to metal surfaces that need protection from corrosive elements. The liquid formula can be easily applied by painting, spraying or dipping areas that need protection from aircraft fuels, oil, lubricants, phosphate ester hydraulic fluids, salt spray and water. Nycote® 7-11 also provides excellent high impact, abrasion resistance, flexibility and toughness at temperatures of -70°F to +300°F (-57°C to +149°C). Nycote® 7-11 has a six-month shelf life and the container can be resealed throughout. NSN: 8010-01-134-0415.

Clear ..... P/N 09-05322 ..... **$215.95**
Blue ..... P/N 09-05321 ..... **$451.00**

PR-1422 CLASS B FUEL TANK SEALANT SEMKIT - B2



PR-1422 Class B is an aircraft integral fuel tank sealant. It has a service range from -65F (-54°C) to 250°F (121°C), with intermittent excursions up to 275°F (135°C). This material is designed for fillet sealing fuel tanks and other aircraft fuselage sealing applications. The cured sealant maintains excellent elastomeric properties after prolonged exposure to both jet fuel and aviation gas.
PR-1422 Class B is a two-part, dichromate cured poly-sulfide compound. The uncured material is a low sag, thixotropic paste suitable for application by extrusion gun or spatula. It cures at room temperature to form resilient sealant having excellent adhesion to common aircraft substrates.

6 oz. Kit ..... P/N 09-04703 ..... **$48.50**
2-1/2 Pint ..... P/N 09-04836 ..... **$123.75**
3 Pint ..... P/N 09-04835 ..... **$124.85**

PR-1428 CLASS B ACCESS DOOR SEALANT SEMKIT - B1/2



PR-1428 Class B is a low adhesive sealant. It has a service temperature range -65°F (-54°C) to 250°F (121°C), with intermittent excursions up to 250°F (135°C). The material is designed for use as an access door sealant or in the fabrication for form-in-place (FIP) gaskets. It can also be used to protect electrical wired, terminals and equipment against fuel moisture, dirt and short circuits. PR-1428 Class B is a two-part, manganese dioxide cured, polysulfide compound. The uncured material is a low sag, thixotropic paste suitable for application by extrusion gun or spatula. It cures at room temperature to form a removable seal to common aircraft substrates.

P/N 09-04704 ..... **$84.75**

PR-1428 CLASS B ACCESS DOOR SEALANT SEMKIT - B2



PR-1428 Class B is a low adhesive sealant. It has a service temperature range -65°F (-54°C) to 250°F (121°C), with intermittent excursions up to 250°F (135°C). The material is designed for use as an access door sealant or in the fabrication for form-in-place (FIP) gaskets. It can also be used to protect electrical wired, terminals and equipment against fuel moisture, dirt and short circuits.
PR-1428 Class B is a two-part, manganese dioxide cured, polysulfide compound. The uncured material is a low sag, thixotropic paste suitable for application by extrusion gun or spatula. It cures at room temperature to form a removable seal to common aircraft substrates.

P/N 09-04706 ..... **$83.99**

DAPCO 2200 FIREWALL SEALANT

Dapco™ 2200 is an adhesive, solvent-free, thixotropic silicone paste. Dapco™ 2200 is most commonly used as a coating, sealant or filleting material in the construction, repair and maintenance of all types of aircraft. The product can be applied using a variety of methods and is especially useful where fire resistance, exposure to phosphate ester fluids, and/or exposure to extreme temperatures -65°F (-54°C) to 400°F (204°C) are major considerations. The product can also be used as an insulative and/or ablative heat shield. 6 OZ
Features: • Quick Cure • Excellent fire resistance to 2000° F • Service temperature of -65° F up to 400° F • Universal primerless adhesion to diverse substrates • Good resistance to aerospace chemicals • Offers non-inhibition curing characteristics against other sealants and adhesives • Non-volatile content of >97% • Qualified to BMS 5-63, AMS3374, and BAMS 552-004. P/N 09-05254 ..... **$145.95**

NYCOTE 7-11 CORROSION PROTECTION PEN



For small precise jobs. The Nycotek™ applicator pen eliminates the mess and clean up of hazardous materials in addition to being easily disposable. It's perfect for small or hard to reach areas and one pen can cover two to four square feet. Easy-to-apply brush on with same corrosion resistant advantages as our Nycote® 7-11.

Clear ..... P/N 09-05324 ..... **$215.95**
Blue ..... P/N 09-05323 ..... **$215.95**

AP

ACF-50 ANTI-CORROSION COMPOUND



ACF-50 is a state-of-the-art compound for controlling corrosion on aircraft electrical and avionics systems and airframes. ACF-50 is designed for owners of strut equipped Piper aircraft to comply with new Piper bulletin 5280C requiring lift strut inspection. ACF-50 kills the corrosion process with just one application and will last for 24 months. Microswitches, cannon plugs, and relays will remain corrosion free. Plus, ACF-50 will easily free seized nuts, screws and bolts. ACF-50 is qualified under Mil-C-81309E, and manufactured under ISO 9000 Certified Processes. Try ACF-50, you will be truly amazed at the results.

13 oz. Spray Can(HAZMAT) ..... P/N 09-44350 ..... **$15.95**
32 oz. Bottle ..... P/N 09-00364 ..... **$29.85**
4 Liter can ..... P/N 09-44345 ..... **$94.75**
20 Liter Pail ..... P/N 09-00437 ..... **$398.00**

CORROSION BLOCK



Corrosion Block is a clean fluid that actively protects metal using advanced polar bonding chemistry. Synthetic additives in Corrosion Block completely penetrate corrosion cells…replacing the salt water which is then allowed to evaporate. Corrosion Block's hydrophobic film remains to further protect the metal acting like an off-switch for corrosion.

4 oz. Pump..... P/N 09-02991 ..... **$5.95**
12 oz. Aerosol..... P/N 09-02992 ..... **$12.95**
20 Liter..... P/N 09-02993 ..... **$390.00**
32 oz. with spray..... P/N 09-02994 ..... **$28.50**
205 Liter..... P/N 09-02995 ..... **$2,369.00**

CORROSION BLOCK GREASE



Multi Purpose High Performance Grease, Won't Soften, Breakdown or Wash Out. Formulation provides both high and low temperature performance. Strongly resists water wash out and provides superior protection against rust and corrosion. Corrosion Block Grease out performs lithium and most synthetic greases and meets or exceeds requirements for NLGI Service Classification GC-LB (automotive wheel bearing and chassis lubricants), which is based on ASTM D4950 performance requirements.

2 oz. Tube..... P/N 09-02987 ..... **$3.95**
14 oz. Tube..... P/N 09-02989 ..... **$9.50**
16 oz. Tub..... P/N 09-02990 ..... **$11.50**

CORROSION X AVIATION



Corrosion X is an excellent penetrant, lubricant, and corrosion filter which confirms to Mil-C-81309E and is perfect for extended corrosion protection of airframes. It is also highly effective in protection of all components in the electrical / avionics systems. On existing corrosion, it penetrates oxidation, displaces lectrolyte and stops electrolysis. On corrosion free surfaces provides an ultra-thin barrier to guard against moisture intrusion and corrosion attack. Treatment lasts 2 years or more, and Corrosion X is non-toxic. Corrosion X is a highly recommend treatment for extending the life of airframes.

Aviation Formula			*Original Formula*		
Size	**Part No.**	**Price**	**Size**	**Part No.**	**Price**
16 oz. Spray	09-00296	**$16.07**	16 oz. Spray	09-00926	**$8.51**
16 oz. Aerosol	09-42220	**$17.85**	16 oz. Aerosol	09-00925	**$16.07**
1 Gallon	09-44225	**$88.88**	1 Gallon	09-04084	**$88.88**
5 Gallon	14-00672	**$402.30**	5 Gallon	09-04269	**$402.30**
30 Gallon	09-04086	**$1,942.11**	30 Gallon	09-04268	**$1,942.11**
55 Gallon	09-04085	**$3,318.48**	55 Gallon	09-04270	**$3,318.48**

CORROSION X PRESSURE SPRAYERS



Excellent for applying Corrosion X and require no special training to operate. Compact, convenient and easy to use, these sprayers have no moving parts and operates at 80 PSI shop air. Furnished with instructional video. Available in 3 sizes.

2.5 GALLON TOTE - Required Air Pressure: 80 PSI @ 5 - 6 CFM Capacity: 2.5 gallons Weight: 22lbs **Hose**: 10' Color: Blue
Basic Unit Includes: 1" cricket wand, 3' x 1/4" 360° wand, 3' superflex wand ..... P/N 09-00373 ..... **$719.10**
Complete Unit Includes: 1" cricket wand, 3' x 1/4" 360° wand, 3' superflex wand, 8' x 1/4" 360° wand, 6' x 3/16" 45° fan wand, 5" x 1/8" hook wand..... P/N 09-00374 ..... **$809.10**

5 GALLON HANDI-SPRAY™ - Required Air Pressure: 80 PSI @ 5 - 6 CFM Capacity: 5 gallons Weight: 28lbs Hose: 25' Color: Blue
Basic Unit Includes: 1" cricket wand, 3' x 1/4" 360° wand, 3' superflex wand..... P/N 09-00371 ..... **$809.10**
Complete Unit Includes: 1" cricket wand, 3' x 1/4" 360° wand, 3' superflex wand, 8' x 1/4" 360° wand, 6' x 3/16" 45° fan wand, 5" x 1/8" hook wand..... P/N 09-00372 ..... **$899.10**

BELT PACK - Required Air Pressure: 80 PSI @ 5 - 6 CFM Capacity: 1 quart Weight: 7lbs Hose: 3'
Basic Unit Includes: Pistol belt and holster, 1" cricket, 5" x 1/8" hook wand, 3' superflex ..... P/N 09-00375 ..... **$539.10**
Complete Unit Includes: Pistol belt and holster, 1" cricket wand, 3' x 1/4" 360° wand, 3' superflex wand, 8' x 1/4" 360° wand, 6' x 3/16" 45° fan wand, 5" x 1/8" hook wand. P/N 09-00376 ..... **$746.00**

CORROSION X HEAVY DUTY



CorrosionX Heavy Duty is for super long-term protection against serious rust and corrosion assault. For those really tough jobs where you need the ultimate protection against moisture, the answer is new CorrosionX Heavy Duty. There is no other product like it on the market today. It is a high performance, thick-film version of CorrosionX. It was developed specifically to provide maximum protection against moisture intrusion and resulting rust and corrosion. Recommended for use on boat trailers by Field and Stream.

12 oz. Aerosol..... P/N 09-00927..... **$14.18**
1 Gallon..... P/N 09-04117..... **$93.15**
5 Gallon..... P/N 09-04265..... **$423.00**
30 Gallon..... P/N 09-04266.... **$2,151.09**
55 Gallon..... P/N 09-04267.... **$3,676.86**

CORROSION X RUST REMOVER



CorrosionX Rust Remover is a breakthrough in the nonhazardous removal of unwanted rust. Rust Remover eliminates surface rust from iron and steel without harmful fumes. It will not harm copper, brass, plastic, rubber or vinyl. It is also safe to use on painted surfaces for removal of 'bleeding' rust. Not for use on nonferrous metals. Once rust has been removed, it is important to treat metal with some kind of protective coating so that the clean metal surface does not re-rust. For this purpose we recommend neutralizing / rinsing the cleaned metal surface. 16oz. .....P/N 09-04273 .....**$13.41**
Gallon.....P/N 09-04645 .....**$19.76**

PAR-AL-KETONE



Black Bear Par-Al-Ketone is best known as one of the most rugged corrosion preventives available, performing successfully for over 40 years protecting aircraft components and machine parts in outdoor storage and for export. Qt.....P/N 09-26800 .....**$18.85**
Gal.....P/N 09-26900 .....**$69.85**

BOESHIELD™ T-9 CORROSION PROTECTANT



Developed this formula for long term protection of aircraft components. Penetrates to fasteners and fixtures, where it displaces moisture, and will even loosen rusted parts. Boeing recommends it for fuselage, wing, and tail structures, engines and cowlings, landing gear and gear wells, control linkages, and avionics. Dries to a clean waxy film. Lubricates and protects all metals for months. Safe on most paints, plastics & vinyls. 12 oz. Aerosol can..... P/N 09-01623..... **$16.99**
4 oz Drip Can..... P/N 09-00378..... **$9.99**
4 oz Spray Can..... P/N 09-00379..... **$9.99**
Gallon Can..... P/N 09-01622..... **$114.99**

TUBE SEAL (LINE OIL)



Prevents rust and corrosion inside aircraft tubing structures. Tubeseal is a blend containing a very fine preservative oil (MIL-L-21260) which has a characteristic of climbing the tube wall and spreading over the entire surface to provide lasting protection. Penetrates and reveals very small pin holes in a weld and in time, due to exposure, congeal and seal the hole. 1 quart will treat 2 light aircraft fuselages. Complete instructions on label.

Qt..... P/N 03-14000 .....**$26.00**
Pt..... P/N 03-14005 .....**$14.00**

DOW CORNING DC-4 COMPOUND



A grease-like silicone material which provides a moisture proof seal for ignition and electrical systems. More water repellent than waxes. Effective from -70° to 400° F. A low-loss dielectric. Meets spec. MIL-I-8860. 5.3 Oz. Tube .....P/N 09-27700 ..... **$17.50**

ECK CORROSION COATING



Eck®-T, convenient liquid paste squeeze tube, ideal for small applications such as holes and on hardware. Comes with a screw-on nozzle attachment. Prohibits dissimilar metals from Electrolysis and Galvanic corrosion. Protects aluminum and stainless steel against electrolytic reaction, isolates dissimilar metals and gives bedding protection for hardware and fasteners. Eck® contains anti-seizing lubricant for threads. Eck® is dielectric and perfect for use with electrical connectors. P/N 09-02138 .....**$10.85**

ACF-50 X HAND HELD SPRAY SYSTEM



The HAND HELD SPRAY SYSTEM is designed to turn ACF-50 into a dense fog. The equipment has been preset and factory tested to achieve this goal. The equipment is rugged and will provide years of service, with virtually no maintenance, provided reasonable care is taken with its use.

P/N 09-04053 .....**$754.00**

Prices Subject to Change Without Notice

SENSENICH COMPOSITE PROPELLERS

TRACTOR PROPELLERS



Engine	Speed	Model	Prop. Dia.	Spinner Dia.	Part No.	Price
Rotax 912/912S/914		2A1R5R70DN	70”-66”	12”	05-10604	**$1,761.00**
Rotax 912/912S/914		2A1R5R75DN	75”-71”	12”	05-10605	**$1,761.00**
Rotax 912/912S/914		3B0R5R68CN	68”-62”	9.5”	05-10606	**$2,335.00**
Rotax 912/912S/914	Over 150	2A0R5R64EN	64”-60”	8”-11.5”	05-10607	**$1,760.00**
Jabiru 2200		2A0J5R62HN	62”-58”	8”-11.5”	05-10608	**$1,760.00**
Jabiru 3300		2A0J5R64ZN	64”-60”	8”-11.5”	05-10609	**$1,760.00**
Continental O-200, Lycoming O-235	---	2EKC72AE (Cont.)	72”-69”	9.5”	05-10610	**$2,980.00**
Continental O-200, Lycoming O-235		2EM6C72AE (Lyc.)	72”-69”	9.5”	05-10611	**$2,980.00**
Lycoming O-320, O-360		2G0M7 2-Blade	72”-68”	13”	05-10612	**$3,435.00**
Lycoming O-360	---	2G0M8C72RG	72"-68"	13"	05-11909	**$3,350.00**
Lycoming O-360		3G0M8C72PG	72"-68"	13"	05-11910	**$4,095.00**

PUSHER PROPELLERS

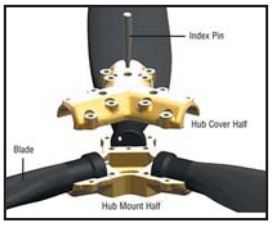
Engine	Speed	Model	Prop. Dia.	Spinner Dia.	Part No.	Price
Rotax 912/912S/914	---	2A0R5L69EN	68”-64”	8”-11.5”	05-10614	**$1,760.00**
Rotax 912/912S/914		3B0R5L68CN	68”-62”	9.5”	05-10615	**$2,335.00**

AP

BLADES

(Must Specify Cutdown and Balance Weight)

Model	Description	Part No.	Price
R70DN-(), R75DN-()	2 Blade Rotax Tractor, Long Hub	05-10617	**$755.00**
R64EN-(), R70EN-()	2 Blade Rotax Tractor, Short Hub	05-10618	**$755.00**
L68CN-(), R68CN-()	3 Blade Rotax Pusher, Tractor	05-10619	**$660.00**
R62HN-()	Jabiru 2200 Tractor	05-10620	**$755.00**
L62PN-(), R64ZN-()	Jabiru 3300 Pusher, Tractor	05-10621	**$755.00**
L69EN-()	2 Blade Rotax Pusher, Short Hub	05-10622	**$755.00**
C72AE-()	2 Blade Continental O-200, Lycoming O-235	05-10623	**$1,255.00**
C72RG-()	2 Blade Lycoming O-320, O-360	05-10624	**$1,385.00**
C72PG-()	3 Blade Lycoming O-320, O-360	05-10625	**$1,145.00**



HUBS

Includes bolts and pitch change system

Model	Part No.	Price
Rotax, Jabiru	05-11028	**$865.00**
Rotax 3 Blade	05-11029	**$675.00**
2EK, 2EM6	05-11030	**$1,020.00**
2G0M7, 2G0M8	05-11031	**$780.00**
3G0M7, 3G0M8	05-11032	**$965.00**

BOLT KITS

Model	Part No.	Price
Rotax, Jabiru Clamp	05-11033	**$35.00**
Rotax, Jabiru Mount	05-11034	**$35.00**
Rotax Extension Mount (Specify extension length)	05-11035	**$55.00**
2EK, 2EM6	05-11036	**$50.00**
2G0M7, 2G0M8	05-11037	**$75.00**
3G0M7, 3G0M8	05-11038	**$55.00**

PREMIUM SPINNERS

Specify Engine

Diameter	Part No.	Price
9.5”	05-10631	**$392.00**
13” (RV)	05-10632	**$650.00**

PROP EXTENSIONS

Includes spacer lugs. Extensions can be stacked for custom lengths.

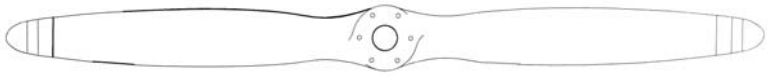


Model	Part No.	Price
Rotax & Jabiru 1/2”	05-11039	**$75.00**
Rotax 1”	05-11040	**$95.00**
Rotax & Jabiru 1 3/8”	05-11041	**$125.00**
Rotax 1-1/2”	05-11042	**$135.00**
Rotax 1-3/4”	05-11043	**$145.00**
Rotax 2-1/4”	05-11044	**$165.00**
Rotax 3-3/16”	05-11045	**$205.00**

HUB PARTS

Model	Part No.	Price
Pitch Cylinder	05-11046	**$85.00**
Pitch Stop	05-11047	**$15.00**
Extension Lugs (6)	05-11048	**$30.00**
Mount Lugs (6)	05-11049	**$40.00**
Hub Lugs (6)	05-11050	**$50.00**
Pitch Pin	05-11051	**$30.00**

SENSENICH METAL PROPELLERS



Most popular models of Sensenich metal propellers are available in local stock for immediate shipment. Installation bolt kit is furnished with each propeller. Attaching kit for flange shaft will be packed for all Continental installations unless taper shaft installation is specified. Propellers may be shipped via UPS. Partial List - Request Prices on Unlisted Models. Approximate Shipping Weight 40 Lbs.

Aircraft Model*	Engine	Standard Prop	Climb Prop	Cruise Prop	Our Price
Aeronca 11AC	Cont. A-65	74CK-0-46			Please see our website or call for quote.
Beech Model 23	Lyc. O-320 (160 hp)	74DM6-0-60	74DM6-0-56		
Bellanca 7EC, 7FC, 7JC	Cont. C-90	76AK-2-46	76AK-2-44	76AK-2-48	
Cessna 120, 140	Cont. C-85	76AK-2-44	76AK-2-42		
Cessna 150 thru 150K	Cont. O-200	69CK-0-52			
Cessna 152	Lyc. O-235 (110 hp)	72CKS6-0-56	72CKS6-0-54		
Cessna 172 thru 172C	Cont. O-300C, D	74DC-0-56			
Cessna 170	Lyc. O-360 (180hp)	76EM8S5-0-56	76EM8S5-0-54	76EM8S5-0-60	
Cessna 172 Avcon Conv.	Lyc. O-360 (180hp)	76EM8S5-0-56			
Cessna 172, 172A	Lyc. O-360 (180hp)	76EM8 series			
Cessna 177	Lyc. O-360 (180hp)	76EM8 series			
Piper J3C65, L4, Cub	Cont. A-65	74CK-0-46	74CK-0-44		
Piper PA-11, Cub, J4A	Cont. A-65	74CK-0-46	74CK-0-44		
Piper PA-11, PA-18, Cub	Cont. C-90	76AK-2-42		76AK-2-46	
Piper PA-18 Super Cub	Lyc. O-235-C1	76AM6-2-44			
Piper PA-18 Super Cub	Lyc. O-320 (150 hp)	74DM6-0-56	74DM6-0-54	74DM6-0-58	
Piper PA-20 Pacer	Lyc. O-235-C1	76AM6-2-50	76AM6-2-48	76AM6-2-52	
Piper PA-22-108 Colt	Lyc. O-235-C1B	76AM6-2-48		76AM6-2-50	
Piper PA-20, PA-22	Lyc. O-290-D (125 hp)	74DM6-0-56	74DM6-0-54		
Piper PA-22	Lyc. O-320 (150 hp)	74DM6-0-60	74DM6-0-58		
Piper PA-28-140 Cherokee	Lyc. O-320 (150 hp)	74DM6-0-60	74DM6-0-58		
Piper PA-38 Tomahawk	Lyc. O-235 (112 hp)	72CK-0-56			
Piper PA-28 140, 4 Cherokee	Lyc. O-320 (150hp)	74DM6-0-58	74DM6-0-56		
Piper PA-28 150 Cherokee B	Lyc. O-320 (150hp)	74DM6-0-58	74DM6-0-56		
Piper PA-28 151 Warrior	Lyc. O-320 (150hp)	74DM6-0-58			
Piper PA-28 151 Warrior/160	Lyc. O-320 (160hp)	74DM6-0-60			
Piper PA-28 160 Cherokee B	Lyc. O-320 (160hp)	74DM6-0-60			
Piper PA-28 180 Archer	Lyc. O-320 (180hp)	76EM8S5-0-60			
Piper PA-28 180 Cherokee C	Lyc. O-320 (180hp)	76EM8S5-0-60			
Piper 181 Archer II ('78)	Lyc. O-320 (180hp)	76EM8S5-0-62			
Pitts Special S1S and S2	Lyc. I0-360	76EM8-0-56 to -61			
Taylorcraft BC65, BCD12D	Cont. A-65	74CK-0-48	74CK-0-46		
Taylorcraft BC12D85, 485, 19	Cont. C-85	74CK-2-46	74CK-2-44		
Stoddard Hamilton Glasair ITD, FT,RG	Lyc 0-320/160hp				
Stoddard Hamilton Glasair IITD, FT,RG	Lyc 0-320/160hp				
Stoddard Hamilton Glasair IIITD, FT,RG	Lyc 0-320/160hp				
Tri-R (KIS)/116	Lyc 0-235-L2C				
Van's RV-3/150, RV-4/150	Lyc 0-320/150hp				
Van's RV-3/160, RV-4/160	Lyc 0-320/160hp				
Van's RV-6/RV-6A150	Lyc 0-320/150hp				
Van's RV-6/RV-6A160	Lyc 0-320/160hp				
Zenith CH-2000/116	Lyc 0-235 (116hp)	72CK-0-46		72CK-0-48	
Zenith CH-2000A/150	Lyc. 0-320 (150hp)	74DM6S5-0-58			

*All models listed are land planes.

SENSENICH FLIGHT PERFORMANCE ALUMINUM PROPS FOR VANS AIRCRAFT

For the Lycoming 0-235 (125 HP): 72 CK Series Propeller..... 72 CK Series Propeller.....P/N 05-01468..... **$4,575.00**
For the Lycoming 0-320 (150 or 160 HP): 70 CM Series Propeller..... 70 CM Series Propeller.....P/N 05-01469..... **$4,843.00**
For the Lycoming 0-360 (180 HP): 72 FM Series Propeller ..... 72 FM Series Propeller.....P/N 05-01470..... **$4,960.00**

Both Systems Include:
- High Performance Fixed-Pitch Aluminum Propeller
- Aluminum Propeller Extension Included
- 2 yr or 200hr warranty (whichever comes first)
- Personalized service
- Attaching Hardware Included
- A full 2" dia. reduction allowed for repairs
- Propeller system that can be serviced anywhere.

Specify aircraft model, engine, & pitch (standard, climb, or cruise) when ordering. Also available for Murphy Rebel, Elite, Glasair, Thorp T-18, Tri-R, Midget Mustang, & many other homebuilts.

SENSENICH COMPOSITE AIRCRAFT PROPELLERS

Sensenich composite propellers are available for a wide range of experimental aircraft engines such as the Rotax 912, 912S, 914, Jabiru 2200 and 3300, Continental 0-200, and Lycoming 0-235, 0-320, and 0-360. Replacement blades, hubs, bolt kits, extensions, and spinners are also available,
See www.aircraftspruce.com for complete list of Sensenich products, part numbers and prices.

SENSENICH ALUMINUM PROP BOLT KITS

These propeller bolt kits for Sensenich aluminum propellers include the bolts and washers for propeller attachment.

Propeller Application	Bolt Kit Part No.	Price	Propeller Application	Bolt Kit Part No.	Price
69CK	AN6H-37AS	**$242.95**	76AK	AN6H-32AS	**$294.95**
72CK	AN6H-37AS	**$242.95**	76AM6	AN6H-33AS	**$306.00**
74CK	AN6H-32AS	**$294.95**	76EM8	AN8H-46AS	**$345.00**

PROPELLER BUSHINGS



SENSENICH A-437 For installations with Continental taper shaft. 5/8" O.D. x 3/8" I.D. x 1/2" Long.
Set of 6.....P/N 05-01127..... **$36.75**



MCCAULEY A-1170 5/8" O.D. x 3/8" I.D. x 11/16" Long.
Set of 6.....P/N 05-01128..... **$176.75**

SENSENICH PROPELLER FOR CESSNA 172'S

This propeller is STC's for Cessna 172's I thru P using Lycoming 0-320 series engines. It is available in pitches of 56 to 60 and no spinner change is required. Features a full 2 inch diameter reduction. Model 74DM7S14-0-56-60 (Specify pitch)..... **$2,562.95**

SENSENICH WOOD PROPELLERS



Original equipment on Piper, Aeronca, Taylorcraft, Cessna, Ercoupe, Fairchild, and others. Metal tipping and high lacquer finish. Bolts and mounting plates not included. 18 lbs. each. FAA approved for certificated aircraft. Also excellent for experimental aircraft. Aircraft Spruce is an authorized Sensenich factory distributor. *Props w/asterisk are most commonly used props & are normally in stock for immediate shipment.

STANDARD PROP

Aircraft Models	Engine	Stnd. Prop	Part No.	Price	Climb Prop	Part No.	Price
Aeronca 7AC, 11AC, 11ACS	Cont. A65	W72CK-42	05-W72CK-42	**$1,710.00**	W72CK-40	05-00583	**$1,765.00**
		W72CK-44	05-W72CK-44	**$1,683.00**			
Cessna 120, 140	Cont. C85	W74FK-45	05-01808	**$2,499.00**	W74FK-44	05-01809	**$2,499.00**
Commonwealth 185	Cont. C85	W74FK-44	05-01809	**$2,499.00**			
Luscombe 8A	Cont. A65/C65	W76CK-42	05-01810	**$2,228.00**	W76CK-40	05-01821	**$2,225.00**
Piper J-3, J-4A, PA-11, A-17	Cont. A65/C65	W72CK-42	05-W72CK-42	**$1,710.00**	W72CK-40	05-00583	**$1,765.00**
Piper J-3 (Duster)	Cont. A75	W70DK-40	05-01811	**$2,013.00**			
Piper J-4E	Cont. A75	W70DK-42	05-01812	**$2,013.00**			
Piper J-4F, PA-15	Lyc. O-145B	W70LY-36	05-01813	**$2,079.00**			
PA-14, PA16, PA-18, PA-20	Lyc. O-235C1	W74FM-49	05-01814	**$2,499.00**	W74FM-47	05-01819	**$2,499.00**
PA-20, PA-22 125,135	Lyc. O-290D/D2	W74FM-54	05-01815	**$2,499.00**			
PA-18, PA18A	Lyc. O-290D/D2	W74FM-49	05-01814	**$2,499.00**	W74FM-47	05-01819	**$2,499.00**
T-Craft BC65, BC1265	Cont. A65	W72CK-42*	05-W72CK-42	**$1,710.00**			
L2, D65, DC065							
T-craft BC12D	Cont. A65	W72CK-42	05-W72CK-42	**$1,710.00**	W72CK-40	05-00583	**$1,765.00**
BC12D1							
Stinson 10, HW75	Cont. A70	W70Dk-40	05-01811	**$2,013.00**			

AP

TENNESSEE PROPELLERS



Each Tennessee propeller is solidly built by skilled craftsmen from the finest selection of hardwoods. The laminated propeller is carefully assembled, carved, balanced and finished. Standard Rotax hub bolt pattern (others available on request). When ordering, please tell us: 1. Engine type and displacement 2. Left hand or right hand drive 3. Pusher or tractor configuration 4. Gear or belt drive, and reduction ratio 5. Prop diameter and pitch Direction of prop rotation is determined by viewing rotation of prop from behind the aircraft. Left hand rotation is counter-clockwise, right hand rotation is clockwise. If you're not sure about prop size, give us a call.

Description	Part No.	Price	Description	Part No.	Price
36" Prop 1.5" Hub	TP36	**$254.95**	36" Prop 2" Hub	TP362	**$345.95**
42" Prop 1.5" Hub	TP42	**$309.95**	42" Prop 1.5" Hub	TP42	**$309.95**
44" Prop 1.5" Hub	TP44	**$296.00**	44" Prop 2" Hub	TP442	**$371.95**
48" Prop 1.5" Hub	TP48	**$340.95**	48" Prop 2" Hub	TP482	**$371.95**
50" Prop 1.5" Hub	TP50	**$357.95**	50" Prop 2" Hub	TP502	**$389.95**
52" Prop 1.5" Hub	TP52	**$357.95**	52" Prop 2" Hub	TP522	**$389.95**
54" Prop 1.5" Hub	TP54	**$357.95**	54" Prop 2" Hub	TP542	**$276.95**
58" Prop 1.5" Hub	TP58	**$326.00**	60" Prop 1.5" Hub	TP60	**$379.00**
60" Prop 2" Hub	TP602	**$369.00**	64" Prop 2" Hub	TP642	**$401.95**
66" Prop 2" Hub	TP662	**$393.00**	68" Prop 2" Hub	TP682	**$419.00**
70" Prop 2" Hub	TP702	**$449.95**	74" Prop 2" Hub	TP742	**$449.95**

HARTZELL PROPELLER HARDWARE

HARTZELL ENGINE TECHNOLOGIES
MONTGOMERY, ALABAMA USA

Hartzell Propeller Hardware.

Description	Part No.	Price
Hartzell Prop O-ring C-3317-228	05-11998	**$4.50**
Hartzell Prop O-ring C-3317-230	05-12380	**$4.90**
Hartzell Prop Fiber Washer A-1020	05-11999	**$0.95**
Hartzell Prop Screw B-3845-8	05-12001	**$1.30**
Hartzell Prop O-ring C-3317-028	05-12509	**$6.50**

PRINCE AIRCRAFT COMPANY P-TIP PROPS



WOOD P-TIP PROPELLER - Before the "Carbon Fiber P-TIP Propeller", this had been considered one of the most efficient and lowest noise propellers available; the only wood/carbon fiber anti-vortex droop tipped propeller in the world. This propeller is a wood, fixed pitch propeller that relies on the forward pull of the propeller to automatically provide pitch change proportional to the amount of force being applied to the propeller disk. When a propeller operates at a slower airspeed than its maximum capabilities, it has a proportional pull in relation to the velocity of forward motion, so at takeoff and climbing condition the propeller will have its largest forward pull. Due to the scimitar shape, the tip of the propeller cones forward, as the coning angle changes the propeller will lessen pitch that provides shorter takeoffs and higher rates of climb. As the propeller increases in forward speed the disk pressure is reduced, this forces the propeller to increase pitch and top speed. This change in pitch is approximately four inches from takeoff to cruise. The droop P-TIP is to control the air spillage over the propeller tip that delays the tip vortices which cause drag and turbulence within the propeller arc. A propeller, like a wing, works best when it has unturbulated air over the airfoil sections. The P-TIP delays the vortices, the propeller then has smooth air to provide best thrust and a pronounced reduction in propeller noise.

Additional benefit of the P-TIP design is the volume of air the propeller produces. When air flows through a standard tip propeller design, the airflow at the tip will flow over the propeller tip. As soon as it passes the tip it will tuck down behind the propeller blade giving a cone of air from the propeller smaller than the propeller diameter. For example, a 72" diameter propeller without a P-TIP will give a volume of air from the propeller of approximately 68" of diameter; a P-TIP propeller will provide 72" of air volume. This means that a 68" P-TIP will give the same volume of air as a standard tip 72" propeller. By reducing propeller diameter there is less frontal area or flat plate drag of the aircraft. Higher top speeds are the result without sacrificing takeoff or climb. Your benefit is a lightweight, pitch changing propeller that will give you the best of short takeoff, maximum cruise, and more flying enjoyment in a quieter cockpit.

COMPOSITE P-TIP PROPELLER - Composite P-Tip Props retain the same qualities of the wood P-TIP but are more efficient and durable. Prince uses the reliable time proven wood core of hard maple, then completely encloses the blades in multiple layers of high tensile strength composites. The hardwood core absorbs the dangerous harmonic vibrations and benefits your airframe by smoothing the engine power pulses, and the composite wrapping allows the airfoils sections to be thinner, reducing drag while increasing durability and locks each blade into operating at precise angles. The best working propeller is one that is rigid enough to allow all blades to move alike, thin at the cord section to eliminate as much drag as possible, and strong enough to satisfy the large amounts of stress required during flight. Urea Formaldehyde adhesive meets Military Specifications to insure reliable operation and trouble free flying for the life of the propeller. Propellers are finished in a metal prop gray color, this shade will match nearly every paint scheme, the Durability and Ultrahigh Gloss finish is a two-part Urethane, machine buffed to achieve a propeller that reflects the quality of manufacturing like no other propeller available.

Note:Request Prince Propeller order form at time of order we will fax or mail form to you to complete to insure correct propeller is furnished for you application.

APPLICATION CHART

Aircraft	Engine	HP	Dia./Pitch	Hub Thickness	Price Schedule
Acro Sport	0-320	150	71/48	3.7	F
Avid Flyer	Rotax 503	52	68/34	2.1	B
	Rotax 532	64	71/35	2.1	B
Baby Great Lakes	C-80A	80	66/48	3.25	F
Cozy	0-320	150	68/72	3.7	F
	0-320	160	68/74	3.7	F
	0-360	180	68/76	3.7	F
Dragonfly	1834VW	60	52/45	2.75	D
	2100VW	82	52/48	2.75	D
Glasair	0-320	150	68/72	3.7	F
	0-320	160	68/74	3.7	F
	0-360	180	68/76	3.7	F
	0-540	270	69/113	3.7	F
Glass Goose	0-320	150	64/62	3.7	E
	0-320	160	64/64	3.7	E
Kitfox	Rotax 503	46	68/30	2.1	B
	Rotax 912	80	68/47	2.25	B
KR-2	1835 VW	55	52/48	2.75	D
	2100 VW	80	52/50	2.75	D
	Subaru	75	53/68	3.7	D
Lancair	0-200	100	58/68	3.7	E
	0-235	118	58/68	3.7	E
	0-290	140	60-72	3.7	E
	0-320	150	62/72	3.7	E
	0-320	160	62/74	3.7	E
	0-360	180	68/76	3.7	F

LOW HORSE POWER PROPS

(Ultralight Type) **Composite**

Schedule	P-Tip	P-Tip
A.. Up to 54"	**$8.00**	**$12.20**
B... 55"-110"	**$8.50**	**$12.75**

Call for Quote on all Prince Aircraft Propellers.

HIGH HORSEPOWER PROPS

Composite

Schedule	P-Tip	P-Tip
C.. Up to 45"	**$12.50**	**$18.65**
D.....46"-55"	**$13.00**	**$19.20**
E.....56"-65"	**$15.50**	**$23.10**
F....66"-110"	**$16.40**	**$24.40**

MCCAULEY MET-L-PROPS



Original equipment on most Cessna aircraft and popular with owners of many other designs. McCauley has earned an enviable reputation for producing high-performance propellers. Most popular numbers are available from local stock. The Met-L-Prop number designates the model, diameter and pitch. Example: CM7150 is a model CM propeller with a 71 inch diameter and 50 inch pitch. When ordering a new prop which requires a doweled spacer, both spacer and bolt kit are included. Spacers and bolt kits may also be ordered separately. When ordering, specify whether engine has a tapered or flanged crankshaft. Tapered crankshaft requires Kit No.B-4622-6. Flanged crankshaft requires Kit No.B-4622-9. Elliptical tip models 1A90/CF and square tip models 1B90/CM having the same diameter and pitch are directly interchangeable except for CF7538 on Cessna 150G, H, J and K model seaplanes.

Aircraft Model	Engine	Standard Prop	Cruise Prop	Climb Prop	Our Price**
Beech A23-24	Lyc.I0-360-A2B,A2D	BFA7762+			**Call**
Bellanca 7ECA	Cont. 0-200A	ACM6948+			**Call**
Bellanca 7ECA	Lyc. 0-235-C2C	CLM7246+	CLM7250		**Call**
Bellanca 7GCA	Lyc. 0-320-A2B	GM7452	GM7455	GM7450	**Call**
Cessna120,140	Cont. C-85	CM7148	CM7150	CM7146	**Call**
Cessna120,140	Cont. C-90	CM7152	CM7154		**Call**
Cessna 150A-F	Cont. 0-200A	MCM6950			**Call**
Cessna150G-K	Cont. 0-200A	DCM6948	DCM6950		**Call**
Cessna 150L	Cont. 0-200A	OCM6948+			**Call**
Cessna 170A,B	Cont. C-145	MDM7655	MDM 7656	MDM7653	**Call**
Cessna 172	Cont. 0-300A,B	MDM 7653	MDM7655	MDM7652	**Call**
Cessna 172A-H	Cont. 0-300C,D	EM 7653	EM7655	EM7652	**Call**
Cessna172I,K,L	Lyc. 0-320E2D	DTM7553+			**Call**
Cessna 175	Cont. G0-300A,C	MFC8467			**Call**
Cessna 175A,B	Cont. G0-300C,D	MFC8467			**Call**
Cessna 177	Lyc. 0-320-E2D	TM7653+			**Call**
Cessna 177A	Lyc. 0-360-A2F	EFA7656+			**Call**
Great Lakes	Lyc. 0-320-E2A	EGM 7654			**Call**
Luscombe 8A	Cont. A-75	CM7447	CM7449		**Call**
Piper J3 Cub	Cont. C-85	CM7144	CM7146		**Call**
Piper PA-18,18A	Lyc 0-290-D2	GM8241`			**Call**
Piper PA-32	Lyc.0-540-F4B5	PFA8266+			**Call**

Applications and Prices for some Popular McCauley Props. All Models Available. Prices are the same for all props with the same letter prefix.

PRINCE AIRCRAFT PROPELLER ORDERING INFORMATION

HOW TO DETERMINE COST

1. Select style and price, P-TIP or Composite P-TIP propeller.
2. Multiply propeller diameter times price per inch, e.g.:

High Horsepower 68" dia. P-TIP propeller, 68 x 13.51 = **$918.68**,
Composite P-TIP 68 x 18.48 = **$1256.64**

3. Add Leading Edge Protectors, if required.

MULTI-BLADE PROPS

Three-Blade..... 2 Blade rate x 3 Four-Blade .....2 Blade rate x 4

LEADING EDGE PROTECTOR

Up to 48" diameter .....**$61.00** 49" - 110" **$83.00**

Prices Subject to Change Without Notice

POWERFIN COMPOSITE PROPELLERS



Powerfin is the only composite propeller manufacturer in the U.S. to offer a true Clark-Y airfoil which optimizes surface airfoil for thrust. Powerfin also allows for infinite pitch range with any increment. The pitch alignment tool supplied with every Powerfin takes the guesswork out of pitching your prop. Simply set the stop screw, clamp the tool to the hub, and turn the blade to the stop. The process takes less than 10 minutes for a 3 bladed prop. Powerfin features include superior aerodynamics, noise reducing tips, superior composite construction, very strong low profile hub, durable finish, 2 and 3 blade configurations, fits Rotax 75MM bolt pattern, adapters for every bolt pattern, 32" to 72" diameter, leading edge protection, speed set hub and a two year factory warranty against defects. Weight is 6.5 lbs. for 2 bladed Powerfin and 9.0 lbs. for 3 bladed Powerfin. Complete brochure available on request.

MODEL B



General use propeller although specifically designed to run significantly smaller diameters than most other props. The B-Model runs very well on a 582/2.58 as a three blade 60" for example, and can out produce our competition even when running much smaller diameters. Maximum possible diameter with this model is 65".

MODEL C



Designed specifically for powered parachutes as a three blade 64" on a Rotax 582/2.58, this design works well on Rotax 447's through Rotax 618 as well as the Hirth engines that fall between 40 and 80 horsepower. This is the propeller being sold as standard equipment on 6 of the top 7 ppc's. Maximum possible diameter with this model is 69".

MODEL E



This is our smallest propeller - designed for engines between 15 and 30 horsepower. These narrow blades allow for a maximum possible diameter of 53". Backpack ppc's are the target of this design although the blade has been proven very efficient on many older, fixed wing airplanes with diameter restrictions. This is the ONLY pitch adjustable prop available to backpack units.

MODEL F



This is our largest propeller - designed for larger two-stroke engines that use the higher gear reduction ratios and horsepower up to 115. This prop runs beautifully on a Rotax 503/3.47 as a three blade 66"-70". A two place Kolb can't squeeze any more efficiency out of a 503/3.47 than with our F-model 68" prop. This prop is also the finest prop available for the Rotax 912, 912S, and 914 engines. Maximum possible diameter with this model is 75".



To calculate the cost of a full propeller assembly, take the price for a single blade times the number of blades you need. Then add the cost of the hub you need.
The cost of each type of blade is the same regardless of the diameter.
For example: A three blade C-model propeller assembly will include three C-model blades ($420) and a standard three blade Apex hub ($195). The total is $620. All hub assemblies* include mounting hardware, optional locknuts for Rotax engines, and a 1/4" dowel pin used for setting the pitch.

BLADES

Blade Model	Part No.	Single Blade Price
B-Model	05-06962	**$229.00**
C-Model	05-06963	**$199.00**
E-Model	05-06964	**$189.00**
F-Model	05-06965	**$269.95**

****All propeller and hub assemblies include mounting hardware for the Rotax A, B, C, or E box or the Hirth gearbox.***

HUB ASSEMBLIES*

Hub Type	For Blade Models	Part No.	Price
Special Three Blade Apex	E	05-06973	**$289.95**
Standard Two Blade Apex	B, C, & F	05-06966	**$299.00**
Standard Three Blade Apex	B, C, & F	05-06967	**$319.00**
Standard Four Blade Apex	B, C, & F	05-06968	**$345.00**
Standard Five Blade Apex	B, C, & F	05-06969	**$369.00**
Rotax 912 Three Blade Apex	B, C, & F	05-06970	**$355.00**
Rotax 912 Four Blade Apex	B, C, & F	05-06971	**$369.00**
Rotax 912 Five Blade Apex	B, C, & F	05-06972	**$398.00**

Shipping a two or three blade propeller assembly is $20.00. These prices are for all U.S. customers excluding Alaska and Hawaii. Most international orders will ship U.P.S. International - Expedited Service. If you wish a quote on an international order, please supply an address with a postal code so we can quote shipping prices.



PROPS INC. PROPELLERS FOR HOMEBUILTS

Ground Adjustable Propellers by Props Inc. For those who have changes in mind or like the looks of a three blade prop. It has wood blades similar to the Homebuilt line, but with an aluminum hub. Key Benefits: Wide Adjustable Range• Replaceable Blades • Custom Designed

Description	Diameters	Price
VW, Jabiru, Suburu	46" - 58" dia.	**$1200.00**
Three Blade	Up to 90" dia.	**$1500.00**
Four Blade	Up to 90" dia.	**$1750.00**

Homebuilt Props by Props Inc. Homebuilt props come with urethane leading edge protection and fiberglassed wrapped tips. Key Benefits: Durable, yet can save tear down cost in the event of a ground strike. •Specifically designed for the use. • Can be modified for fine tuning.

Description	Diameters	Price
VW, Jabiru, Suburu	46" - 58" dia.	**$435.00**
Gyrocopter, Airboats Mac, VW, Suburu	48" - 56" dia.	**$435.00**
C-90, O-200, O-235 O-320, O-290, O-360	58" - 60" dia. 60" - 72" dia.	**$1148.00**

Specify aircraft type, prop diameter, pitch, bolt pattern, pusher or tractor configuration, and mahogany or birch when ordering any homebuilt propeller. Allow 2-3 weeks for shipment of our custom propellers. Add $30.00 for 3-blade and $50.00 for 3 and 4 blade props-packing and shipping. Maple may be substituted for Birch according to availability.

ULTRALIGHT PROPELLERS BY PROPS INC.



These high quality ultralight propellers are available in both birch and mahogany. The birch props are as split-resistant as mahogany but mahogany props with glass coating are 1/3 lighter than the birch. Mahogany props come with a glass coating - it is optional on birch props. Add $35.00 for leading edge protection on birch or mahogany props. Propeller reconditioning available on all ultralight props. Specify prop dia., pitch, bolt pattern, aircraft and engine type, birch or mahogany, and pusher or tractor configuration.

Allow 2-3 weeks for delivery. Prop drilling included in price. Additional $18.00 for packing and shipping.

Diameter (Specify)	Pitch (Specify)	Price for Plain Prop
36 thru 40	Any (to 36")	**Call for Quote**
41 thru 48	Any (to 46")	**Call for Quote**
49 thru 54	Any (to 46")	**Call for Quote**
55 thru 60	Any (to 46")	**Call for Quote**
61 thru 66	Any (to 46")	**Call for Quote**
67 thru 72	Any (to 46")	**Call for Quote**

Request quotation on prop pitch over 46"

AP

WARP DRIVE ADVANCED COMPOSITE PROPELLERS



Warp Drive's Advanced Composite Carbon Fiber propeller has a structural strength near that of metal propellers. Because of the stiffness achieved by using carbon fibers, the prop will do very little coning (bending forward) under power. Proper fiber placement allows the prop to flex torsionally for maximum cruise efficiency. The strongly fixed position of the blades along with optimum torsional performance translates into more thrust than conventional propellers.

The interior structure of this new propeller is all carbon fiber - no fiberglass, no foam, no filler - an all carbon fiber matrix combined with top quality hybrid epoxies. Carbon fiber is one of the strongest building materials available. When properly engineered, carbon fiber can achieve the strength and stiffness of a metal part, as demonstrated by its wide range of industrial and aerospace uses.

WARP DRIVE PROPELLER BLADE TYPES

All propellers and blade types are available with Stainless Steel Leading Edge protection as an option at additional cost.

1. STANDARD ADVANCED COMPOSITE CARBON FIBER BLADES
   The Standard Carbon Fiber Blades can be used on Rotax, Arrow, VW and similar engines.
2. HIGH HORSE POWER ADVANCED COMPOSITE CARBON FIBER BLADES
   The Carbon Fiber HP Blades will be required for use on Lycoming, Continental and some auto conversion engines.

WARP DRIVE HUBS

Warp Drive offers two types of hubs of our propellers. First is our Standard Hub. This is an assembly of anodized aluminum plates and composite clamping blocks. It accommodates standard and custom hub bolt patterns of up to 3 1/8".

The second type of hub is the HP Hub. This hub consists of two halves machined from solid aluminum. It is the same weight as the standard hub assembly and can accommodate Rotax, Arrow, VW, SAE I Continental, SAE II Lycoming and custom bolt patterns.

STANDARD CARBON FIBER PROPELLER

2-Blade Std Carbon Fiber Propeller ..... 05-31920 ..... **$482.00**
3-Blade Std Carbon Fiber Propeller ..... 05-31925 ..... **$637.00**
4-Blade Std Carbon Fiber Propeller ..... 05-31930 ..... **$1,062.00**
Replacement Std Carbon Fiber Blade ..... 05-31935 ..... **$207.95**

WITH HP HUB

05-31940 ..... **$795.00**
05-31945 ..... **$924.00**

HIGH HORSE POWER CARBON FIBER PROP WITH HP HUB

2-Blade Carbon Fiber H/P w/HP Hub ..... 05-31950 ..... **$972.00**
3-Blade Carbon Fiber HP w/HP Hub ..... 05-31955 ..... **$1,225.00**
Replacement Carbon Fiber HP ..... 05-31960 ..... **$362.00**
Mounting Hardware (Rotax) ..... 05-31965 ..... **$17.95**
Protractor ..... 05-31970 ..... **$45.50**
Non-Standard Hub Pattern ..... 05-31975 ..... **$47.50**
Spinner (Rotax Pattern) ..... 05-31980 ..... **$139.95**
"HP" Hub (purchased separately) ..... 05-31985 ..... **$338.00**

ORDERING A PROPELLER

We request all applicable information below when you are ordering:

1. Name, Address, Phone Number(s)
2. Vehicle - type, make, model, cruise speed, tractor/pusher,
3. Engine - make, horse power,
4. Reduction Drive - type, ratio. If there is no reduction drive, (State Prop RPM)
5. Hub Requirements - A) Bolt circle dia, B) Number of bolts, C) Bolt dims, D) Center hole dims, E) Drive lug dimensions (if applicable),
6. Propeller Description-rotation, diameter, structural limitation of diameter manufacturer's suggested prop description, no. of blades, tractor or pusher.

QUICK ADJUST SYSTEM IVOPROPS



The Quick Adjust System Ivoprops allow you to adjust the pitch on the ground in a matter of seconds by turning the screw adjustor in the center of the prop. Specify aircraft and engine make and model, and propeller diameter. * Magnum Ivoprop (5.5" cord, 58" to 76" diameter) is a high-horsepower version for engines up to 700 HP.

* Magnum Paddle Ivoprop (5.5" constant cord, 58" to 84" diameter" is for high-horsepower air boats and bush planes.

Description	Part No.	Price
1 Blade Ultralight Standard Lefthand	15-05478	**$195.00**
1 Blade Ultralight Standard Righthand	15-05856	**$245.95**
1 Blade Ultralight Hi-Pitch Lefthand	15-05477	**$226.95**
1 Blade Ultralight Hi-Pitch Righthand	15-06638	**$221.95**
2 Blade Ultralight Standard Lefthand	15-04749	**$461.95**
2 Blade Ultralight Standard Righthand	15-06312	**$450.00**
2 Blade Medium Standard Lefthand	15-08279	**$844.00**
2 Blade Medium Standard Righthand	15-07899	**$844.00**
2 Blade Ultralight Hi-Pitch Lefthand	15-06932	**$439.95**
2 Blade Ultralight Hi-Pitch Righthand	15-06933	**$423.95**
3 Blade Ultralight Standard Lefthand	15-04785	**$695.00**
3 Blade Ultralight Standard Righthand	15-06326	**$620.00**
3 Blade Medium Standard Lefthand	15-06325	**$1,107.00**
3 Blade Medium Standard Righthand	15-04784	**$1,094.00**
3 Blade Ultralight Hi-Pitch Lefthand	15-06972	**$599.95**
3 Blade Ultralight Hi-Pitch Righthand	15-07224	**$860.00**
6 Blade Ultralight Standard Lefthand	15-08274	**$1,238.00**
6 Blade Ultralight Standard Righthand	15-08275	**$1,238.00**

IN-FLIGHT ADJUSTABLE PITCH IVOPROPS



The In-Flight Adjustable Pitch Ivoprop allows the pilot to change the propeller pitch in flight through a toggle switch mounted in the cockpit. Mounts directly to any Rotax gear box (B or C0 and can be adapted to VW, Subaru, Hirth, Arrow and smaller Lycoming and Continental engines. Older model Ivoprop ground adjustable props can be converted to the In Flight System with the Retrofit Kit. In Flight adjustable hub comes assembled with complete instructions. Weight of 3 blade 72" Prop including all required parts (furnished) is 9 lbs. Specify aircraft and engine make and model, and propeller diameter (48" to 76"). Magnum Ivoprops are for engines up to 700 HP (56"-76" prop. dia.).

Magnum 2-Blade Ivoprop Kit ..... P/N 05-33270 ..... **$2,451.00**
Magnum 3-Blade Ivoprop Kit ..... P/N 05-33280 ..... **$2,755.00**
Magnum 6-Blade Ivoprop Kit ..... P/N 05-33290 ..... **$3,849.00**
Magnum Retrofit Kit for Ground Adjustable Ivoprops
P/N 05-33295 ..... **$1,590.00**

IVOPROP REPLACEMENT BLADES

Note: Proproot Number required prior to order. (This number can be found at the base of the original prop blade).

High Pitch Right Hand ..... P/N 15-06638 ..... **$221.95**
High Pitch Left Hand ..... P/N 15-05477 ..... **$226.95**
Standard Pitch Right Hand ..... P/N 15-05856 ..... **$245.95**
Standard Pitch Left Hand ..... P/N 15-05478 ..... **$195.00**

STEEL LEADING EDGE PROP TAPE



Stainless Steel leading edge tape. This part replaces the leading edge tape on the Ivoprop.

P/N 15-06059 ..... **$9.50**



CONSTANT SPEED ELECTRONIC GOVERNOR

• Converts In-Flight Adjustable Ivoprop into the constant speed propeller • Plugs into existing wiring harness • Size: 2" x 4" x 1"

P/N 05-00601 ..... **$347.00**

Prices Subject to Change Without Notice

ULTRA-PROP



Select 2, 3, or 4 blade props. Each blade is moulded from a high strength glass-reinforced composite. High efficiency airfoil design means high thrust from a 59" diameter prop. One set of pitch blocks included, additional blocks available in 1° increments. Universal hubs made from high strength composite. Accommodates most popular bolt-mounting patterns. Each prop comes complete with all assembly and mounting hardware, and complete instructions. Black blades and hub are beautifully complemented by high impact polyester spinner. Blades can be trimmed to length, allowing custom prop diameters as small as 48".

Description	Part No.	Price	Description	Part No.	Price
Kit 2 Blade LH	UP102L	**$235.00**	Kit 2 Blade RH	UP102R	**$235.00**
Kit 3 Blade LH	UP103L	**$285.00**	Kit 3 Blade RH	UP103R	**$285.00**
Kit 4 Blade LH	UP104L	**$339.00**	Kit 4 Blade RH	UP104R	**$340.00**
Kit 5 Blade LH	05-06455	**$450.00**	Kit 5 Blade RH	05-06456	**$453.00**
Kit 6 Blade LH	05-06457	**$557.00**	Kit 6 Blade RH	05-06458	**$557.00**

ACCESSORIES

Description	Part No.	Price	Description	Part No.	Price
Pitch Block Set 9 DG	UP9	**$8.50**	Pitch Block Set 10 DG	UP10	**$8.50**
Pitch Block Set 11 DG	UP11	**$8.50**	Pitch Block Set 12 DG	UP12	**$8.50**
Pitch Block Set 13 DG	UP13	**$9.50**	Pitch Block Set 14 DG	UP14	**$8.50**
Pitch Block Set 15 DG	UP15	**$8.50**	Pitch Block Set 16 DG	UP16	**$8.50**
Pitch Block Set 17 DG	UP17	**$8.50**	Pitch Block Set18 DG	UP18	**$8.50**
Bolt Sleeve Set	UPSLEEVE	**$3.85**	Hardware Pack	UPHDW	**$4.00**
Replace LH Blade	UP105P	**$73.50**	Replace Blade RH	UP105T	**$73.50**
Hub half 2 Blade	UP1072	**$35.00**	Hub Half 3 Blade	UP1073	**$35.00**
Hub Half 4 Blade	UP1074	**$35.00**			

ULTRA-PROP SPINNER - Kit includes white polyester spinner, mounting bracket, and all extra hardware for installation. Specify Quicksilver MX belt drive type with 1/4 inch mounting hardware or Rotax gear drive with 5/16 or 8 mm mounting hardware. Note: Designed for use on Ultra-Prop only.

1/4" MX..... P/N 05-04958.....**$59.95**
5/16" Rotax..... P/N 05-04959.....**$59.95**

POLYMER SPINNER WASHERS



Propeller spinner washers are typically made from thin nylon. They are usually replaced every time the spinner is removed because the screw pressure against the spinner curvature causes the nylon washers to fail. Instead of nylon, these washers are machined from an extruded billet of a, very tough polymer material – the toughest we make – so they won't crack or extrude. The washers easily conform to the spinner's curved surface and will serve without replacement for a very long time. In fact, they may never need replacement! Fits a # 10 screw, with a diameter and thickness to suit the round head stainless steel screw usually used for prop spinners.

SCREWS NOT INCLUDED PACKAGED IN BAGS OF 25

Color	Description	Part No.	Price
Yellow	Spinner Washers Pack of 25	05-12883	**$71.75**
Clear	Spinner Washers Pack of 25	05-15422	**$71.75**
Gray	Spinner Washers Pack of 25	05-15423	**$71.75**

ULTRA-PROP II



Select 2, 3, 4, 5, or 6 blade props.
The Ultra-Prop II uses the same patented blade, hub and pitch block system as the original Ultra-Prop, which has been in continuous production since 1984 and will remain available. The totally new component is the blade. When assembled it makes a prop 66 inches diameter and like the original, can be cut to any lesser diameter without need for any tip finishing or balancing. This blade has a more conventional plan form, appropriate twist and a highly efficient airfoil. The engineering thermoplastic used is carbon fiber reinforced for high strength and low weight.
The Ultra-Prop II is available with two to six blades and can be used on many engines from 20 to over 100 HP. Each blade can handle at least 25 HP at 2500 RPM. The maximum operating RPM is 2900.
The hubs are identical to the original and incorporate a high strength steel plate overlaid with an engineering thermoplastic. The pitch blocks are made in the same original mold, but use a higher strength thermoplastic. They are identified by a white ink mark or "CA" stamp mark on the wide end of each block. Alternatively, new pitch blocks may be "solid"; molded without the original "webbed" structure. A special, high strength steel aircraft bolt was manufactured so it could retain the ¼" holes in the hubs and pitch blocks. The bolt heads have a "dimple" in the center and marked with a "CA" and "AFC" around the dimple. Larger diameter and stronger MS washers are also used. Bolt torque values remain the same. The original spinner will fit the Ultra-Prop II.

Description	Part No	Price
3 Blade LH	05-15268	**$425.00**
4 Blade LH	05-15270	**$500.00**
5 Blade LH	05-15272	**$575.00**
6 Blade LH	05-15274	**$650.00**
Single Blade RH	05-15275	**$125.00**
2 Blade RH	05-15265	**$350.00**
3 Blade RH	05-15267	**$425.00**
4 Blade RH	05-15269	**$500.00**

PROPELLER ENGINE BALANCE MASTER



Balance Masters® are PATENTED, DESIGNED, MANUFACTURED AND DISTRIBUTED IN THE U.S.A. and are easy-to-install devices for propellers and Rotax engines. These devices cut the vibration factor on ultralight aircrafts by as much as 50 percent when both balancers are installed.
Balance Masters® are weighted with a high density liquid mass (Mercury). The physical principles of centrifugal and gyroscopic forces explain the action of the Balance Masters®. With the Balance Masters installed, the weighted liquid mass (Mercury) in the apparatus shifts during spinning, and adjusts to compensate for imbalances due to such factors as changes in flying conditions or warpage in the propeller, from nicks and rocks during takeoffs and landings. The Propeller Balance Masters® mounts on the propeller shaft or gear box in conjunction with the propeller. It is less than 7 inches in diameter.
The Engine Balance Master is made to fit most Rotax engines and bolts under the Starter Pulley on the Fly Wheel side of the engine. It is less than 5 inches in diameter. Each device weighs about 4 oz. Installation will take about 25-30 minutes using ordinary hand tools for each device. Balance Master is designed to fit most propeller bolt patterns and Rotax engines from 277FA through 582. We will need to know the manufacturer of your propeller and engine model to determine the right configuration.

Description	Part No.	Price
Off-Set Prop Balancer	15-05828	**$138.50**
Balancer for Engine Rotax 912, 914	15-09450	**$168.00**
Balancer for Engine Rotax 377, 447, 503	15-05261	**$149.95**
Balancer for Engine Rotax 582, 618	15-05260	**$149.95**

WHIRLWIND PROPELLERS — GOVERNORS



WHIRLWIND PROPS

Whirl Wind has made significant developments in the construction of the carbon composite propeller blades Insuring a strong, light and durable propeller system. The blade twist has been optimized for aerobatic performance, and the wide chord allows for more low-speed thrust and braking on those long down lines.



200C SERIES PROPELLERS

The 200C Series system consists of 2 carbon fiber blades with nickel leading edge erosion shields, aluminum hub and a composite spinner. This propeller is counter-weighted to prevent engine overspeed. This propeller can be flown in rain and off unapproved airstrips.

Performance & Quality. This 200C Series propeller has been designed to maximize the aerobatic performance of your airplane! The exceptional performance is derived from advanced engineering developments, including the use of our latest airfoils. The 200C Series is a two-blade hydraulic constant speed propeller system designed for aircraft using the Lycoming IO-360 engine (180 - 200 hp).

P/N 05-00568 ..... **$9,960.00**

SPECIFICATIONS

Prop Model#:	7755/C214	***System Wt:***	47 lbs (213 Kg)
Engine Type:	Lyc. O-360,IO-360	***Function:***	Aerobatic
Engine HP:	180 - 200 hp	***Control:***	Governor P-940
Max RPM:	2700 RPM	***Finish:***	Gray or White
# of Blades:	2	***Spinner:***	Composite 13",14"
Diameter:	77"		

200C SERIES BENEFITS

* Faster Acceleration
* Better climb
* More vertical performance
* Faster top speed
* More braking effect
* Lower polar moment of inertia

400C SERIES PROPELLERS

The new 400C Series system consists of three carbon fiber blades with nickel leading edge erosion shields, aluminum hub and a composite spinner. This propeller is also counter-weighted to prevent engine overspeed. This propeller can be flown in rain and off of unapproved airstrips.

Experience the exceptional performance of the 400C Series propeller system. Like the 200C Series, performance is derived from advanced engineering developments, including the use of our latest airfoils. The 400C Series is a three-blade hydraulic constant speed propeller designed for aircraft using the Lycoming IO-540 engine (260 - 300 hp).

P/N 05-00569 ..... **$14,329.00**

SPECIFICATIONS

Prop Model#:	7855/C415	***System Wt:***	65 lbs
Engine Type:	Lyc. IO-540	***Function:***	Aerobatic
Engine HP:	260 - 300 hp	***Control:***	Governor P-940
Max RPM:	2700 RPM	***Finish:***	Gray or White
# of Blades:	3	***Spinner:***	Composite 14"
Diameter:	78"		

400C SERIES BENEFITS

* Faster Acceleration
* Better climb
* More vertical performance
* Faster top speed
* More braking effect
* Lower polar moment of inertia

JIHOSTROJ HYDRAULIC GOVERNORS

Jihostroj Model	Engine Application	Part No.	Price
P-910	Rotax 912 & 914; Oil Pressure to increase pitch	05-00571	**$1,399.00**
P-920	Lycoming O-320, IO-360, IO-540 - Standard; Oil Pressure to increase pitch	05-00572	**$1,374.00**
P-940	Lycoming O-320, IO-360, IO-540 - Aerobatic; Oil Pressure to decrease pitch	05-00573	**$1,375.00**

WHIRLWIND ROTAX 912/914 PROPELLERS



The WhirlWind GA propeller series are ground pitch adjustable aircraft propellers featuring advanced aerodynamic and composite design. The high gloss urethane surface shows off the quality craftsmanship and attention to detail. The blade design is optimized for maximum efficiency and minimum noise. The blade structure is manufactured from thermoset epoxy/graphite composite matrix. This advanced composite structure ensures high strength and blade accuracy in all flight environments. Only WhirlWind propellers come standard with electroformed Nickel leading edge shields for superior fit and abrasion protection. The hub is CNC machined from aerospace aluminum and is dimensionally certified; all hubs are surface treated with shot peen for increased strength and cycle life and then Anodized for corrosion protection.

Specifications: Engines: Rotax 912/914, Diameter: 2 blade - 68-70 in. 3 blade - 64-70 in., Weight: 2 blade - 8 lbs.3 blade - 11 lbs., HP/RPM: 115@5800

Description	PN	Price
Whirlwind Rotax 912/914 3bld Prop 68" LSA	05-11166	**$1,528.00**
Whirlwind Rotax 912/914 3bld Prop 70" LSA	05-06850	**$1,528.00**
Whirlwind Rotax 912/914 3bld Prop 75" STOL	05-12339	**$1,825.00**
Whirlwind Rotax 3 Blade Prop 68" STOL	05-12340	**$1,665.00**
Whirlwind Rotax 3 Blade Prop 70" STOL	05-11897	**$1,665.00**
Accessories		
9" Spinner for prop	05-06852	**$325.00**
9.75" Spinner for prop	05-06853	**$330.00**
11.3" Spinner for prop	05-06854	**$335.00**

WHIRLWIND PROPS



The WhirlWind GA propeller series are ground pitch adjustable aircraft propellers featuring advanced aerodynamic and composite design. The high gloss urethane surface shows off the quality craftsmanship and attention to detail.

The blade design is optimized for maximum efficiency and minimum noise. The blade structure is manufactured from thermoset epoxy/graphite composite matrix. This advanced composite structure ensures high strength and blade accuracy in all flight environments. Only WhirlWind propellers come standard with electroformed Nickel leading edge shields for superior fit and abrasion protection. The hub is CNC machined from aerospace aluminum and is dimensionally certified; all hubs are Anodized for corrosion protection. The hub is CNC machined from aerospace aluminum and is dimensionally certified; all hubs are surface treated with shot peen for increased strength and cycle life and then Anodized for corrosion protection.

Description	Part No.	Price
Lycoming 360,320 2 blade 78" Prop	05-11837	**$2,950.00**
Continental O-200 2 blade 72" Prop	05-11838	**$2,500.00**
Lycoming 0-320/0-360 2 blade 72" Prop	05-11836	**$2,650.00**
Jabiru 3300 2 blade 65" Prop	05-11835	**$1,550.00**

PROPELLER GOVERNORS



Whether your requirement is for a Woodward, McCauley or Hartzell, We have most governor models available on an overhaul/exchange basis. Should you prefer to purchase the Prop Governor "outright", please add the core charge to the exchange price.
All overhauled Prop Governors are warranted for material and workmanship for a period of 180 days.

Manufacturer	Part No.	Price	Core Charge
HARTZELL			
A-SERIES Prop Governor	05-04721	**$1,465.00**	**$1,000.00**
B-SERIES Prop Governor	05-04722	**$1,391.00**	**$400.00**
C-SERIES Prop Governor	05-04723	**$1,391.00**	**$400.00**
D-SERIES Prop Governor	05-04724	**$1,395.00**	**$400.00**
E-SERIES Prop Governor	05-04725	**$1,275.00**	**$400.00**
E8-SERIES Prop Governor	05-04726	**$1,374.00**	**$400.00**
F2-SERIES Prop Governor	05-04727	**$1,555.00**	**$400.00**
F3-SERIES Prop Governor	05-04728	**$1,676.00**	**$400.00**
F4-SERIES Prop Governor	05-04729	**$1,392.00**	**$400.00**
F6-SERIES Prop Governor	05-04730	**$1,471.00**	**$400.00**
F8-SERIES Prop Governor	05-04731	**$1,586.00**	**$400.00**
H-SERIES Prop Governor	05-04732	**$1,395.00**	**$400.00**
MCCAULEY			
Manufacturer	**Part No.**	**Price**	**Core Charge**
C290D2 Prop Governor	05-04735	**$1,390.00**	**$500.00**
C290D3 Prop Governor	05-04736	**$1,391.00**	**$500.00**
C290D4 Prop Governor	05-04737	**$1,390.00**	**$500.00**
C290D5 Prop Governor	05-04738	**$1,389.00**	**$500.00**
DC290D1 Prop Governor	05-04739	**$1,389.00**	**$500.00**
DCFS290D7 Prop Governor	05-04740	**$1,386.00**	**$400.00**
DCF290D7 Prop Governor	05-04741	**$1,391.00**	**$500.00**
DCFTS290D10 Prop Governor	05-04742	**$1,583.00**	**$400.00**
DCFTS290D15 Prop Governor	05-04743	**$1,583.00**	**$400.00**
DCF290D8 Prop Governor	05-04744	**$1,325.00**	**$400.00**
DCFS290D9 Prop Governor	05-04745	**$1,586.00**	**$400.00**
WOODWARD - ***Call for price and availability.***			

AP

PCU 5000 PROPELLER GOVERNORS



The PCU5000 is lightweight, compact & pumps 30 - 35% more oil which maintains a perfect constant-speed.
Features:

- Compact / Weighs 2 lbs. less than most conventional governors
- New units at a lower cost
- Easy installation - hardware included
- TBO - same as your engine
- 3 year limited warranty
- 4 year extended warranty available

PCU5000 - FAA-PMA Approved for single engine Cessna, Beechcraft /Raytheon, Remis, Mooney and Piper aircraft.
Certified models fit all: Lycoming, Continental and *Rotax engines *(applicable if mounting pad conforms to AND20010)
PCU5000X - Experimental - The PCU5000X is specially engineered for single engine experimental aircraft and can be customized to a specific application.
Experimental models fit all: Lycoming, Continental, Superior Air Parts, Engine Components and *Rotax engines *(applicable if mounting pad conforms to AND20010)

Complete engine number required for order on each model.

PCU5000X Experimental Prop Governor ..... P/N 05-04750 ..... **$1,600.00**
PCU5000 Certified Prop Governor for McCauley / Woodward ..... P/N 05-04751 ..... **$2,395.00**
PCU5000 Certified Prop Governor for Hartzell ..... P/N 05-04752 ..... **$2,642.00**

PCU 500 Model	Part No.	Price
PCU5000 Prop Governor ATG210760	05-12520	**$1,900.00**
PCU5000 Prop Governor ATM210761	05-12521	**$2,800.00**
PCU5000 Prop Governor ATN210761	05-12522	**$2,800.00**
PCU5000 Prop Governor ATP210761	05-12523	**$2,800.00**
PCU5000 Prop Governor ATB210681	05-12524	**$2,400.00**
PCU5000 Prop Governor ATB210988	05-12525	**$2,400.00**
PCU5000 Prop Governor ATF4-4A-1	05-12526	**$2,400.00**
PCU5000 Prop Governor ATT210761	05-12527	**$2,800.00**
PCU5000 Prop Governor ATD210688D	05-12528	**$2,400.00**
PCU5000 Prop Governor ATF6-58-1	05-12529	**$2,800.00**
PCU5000 Prop Governor ATF6-58	05-12530	**$2,800.00**
PCU5000 Prop Governor ATF6-59	05-12531	**$2,800.00**
PCU5000 Prop Governor ATB210760	05-12532	**$1,900.00**
PCU5000 Prop Governor ATA210760L	05-12533	**$1,895.00**
PCU5000 Prop Governor ATA210760LD	05-12534	**$2,800.00**
PCU5000 Prop Governor ATJ210681	05-12535	**$1,900.00**
PCU5000 Prop Governor ATA210760H	05-12536	**$1,900.00**
PCU5000 Prop Governor ATA210760HD	05-12537	**$2,800.00**

PCU 500 Model	Part No.	Price
PCU5000 Prop Governor AT210657	05-12539	**$1,900.00**
PCU5000 Prop Governor ATC210680	05-12540	**$1,900.00**
PCU5000 Prop Governor AT210937	05-12541	**$2,120.00**
PCU5000 Prop Governor AT210488	05-12542	**$2,120.00**
PCU5000 Prop Governor ATB210761	05-12544	**$2,395.00**
PCU5000 Prop Governor ATE210761	05-12545	**$1,900.00**
PCU5000 Prop Governor ATH-1	05-12546	**$2,400.00**
PCU5000 Prop Governor ATB4-2	05-12547	**$2,400.00**
PCU5000 Prop Governor ATF4-1A	05-12548	**$2,400.00**
PCU5000 Prop Governor ATF4-4A	05-12549	**$2,400.00**
PCU5000 Prop Governor ATG210681	05-12550	**$1,900.00**
PCU5000 Prop Governor ATF4-3A	05-12551	**$2,400.00**
PCU5000 Prop Governor ATF4-13	05-12552	**$2,400.00**
PCU5000 Prop Governor ATF4-21	05-12553	**$2,400.00**
PCU5000 Prop Governor ATF2-7A	05-12554	**$2,407.00**
PCU5000 Prop Governor ATF4-11B	05-12555	**$2,400.00**
PCU5000 Prop Governor ATF210761	05-12558	**$2,400.00**

VISIT WWW.AIRCRAFTSPRUCE.COM FOR COMPLETE LIST OF PCU 5000 SERIES GOVENORS.

DYNAVIBE PROPELLER BALANCERS

AP

DYNAVIBE PROP BALANCER



DynaVibe is an economical, state-of-the-art dynamic propeller balancer designed specifically for the aircraft industry. DynaVibe displays the magnitude and phase of propeller vibration allowing precise weight adjustments for balanced and smooth engine operation. * Economical - including: • Dynamic Balancer • Accelerometer with 30 ft cable • Optical Pickup and Reflective Tape (Tach) • Carrying Case • No hidden costs or additional items to buy! * Accurate - Reports RPM, Vibration Magnitude * Results - Reduce vibration for a smoother flight, and decrease mechanical wear of engine and instruments

DynaVibe Aircraft Prop Balancer .....P/N 05-04532 .....**$1,495.00**
DynaVibe Aircraft Prop Balancer with NISTP/N 05-04533 .....**$1,644.00**
DynaVibe Rotocraft Prop Balancer .....P/N 05-04534 .....**$1,995.00**
DynaVibe Rotocraft Prop Balancer with NIST .P/N 05-04535 .....**$2,190.00**

RETROREFLECTIVE TAPE FOR DYNAVIBE



This tape has a printed triangular pattern which provides strong visibility because of its reflective surface. P/N 05-10645 .....**$19.95**

BUZZ MASTER PROP BALANCER



This extremely simple and sensitive tool uses the plum-bob and bevel principle to balance props both vertically and horizontally. It can be carried in a small tool box for easy use in the field and balances props accurately for smooth operation. The precision machined hub works with any prop designed with standard 1" center hole. Illustrated instructions included. P/N 13-17400 .....**$29.95**

DIGITAL RECHARGEABLE PROPELLER PROTRACTOR



The Protector is a precision, highly accurate and simple to use device for checking, setting or changing propeller pitch. The resolution and repeatability is 0.05 degree and the accuracy is +/- 0.1 degree. It is powered with a standard 9 volt battery with approximately one year use life.
P/N 12-04974 .....**$93.85**

DYNAVIBE GX3 PROFESSIONAL PROP BALANCER AND VIBRATION ANALYZER



DynaVibe GX3 (DynaTrack Optional)
The DynaVibe GX3 has all the balancing and vibration analysis features of the DynaVibe GX2 and adds helicopter track and balance capability. The GX3's rotorcraft mode allows multiple vibration readings to be taken per flight and can be operated with a push-to-talk switch. This is ideal for single-operator operation. When used in conjunction with the DynaTrack optical tracker accessory, the DynaVibe GX3 measures blade track simultaneously with vibration measurements.
DynaTrack Optical Tracker Accessory (DynaVibe GX3 Required)
The DynaTrack optical tracking accessory for the DynaVibe GX3 measures blade track for up to 6 blades. The DynaTrack mounts conveniently to the windscreen with a suction cup which makes setup quick and easy.

DynaVibe GX3.....P/N 05-14970 .....**$3,995.00**
DynaVibe GX3 & DynaTrack Kit .....P/N 05-14680 .....**$6,995.00**
DynaVibe DynaTrack .....P/N 05-14678 .....**$2,995.00**
Sensor Mounting Kit.....P/N 05-14679 .....**$87.97**

PROPELLER BALANCING BUSHING KITS



Propeller Balancing Bushing Kit
Fine tune propeller balance with this accurate and easy to use bushing kit!
An out of balance propeller can lead to harmful vibrations and costly aircraft maintenance. Costly issues that may arise include:
• Excessive load on crankshaft bearings
• Cracking of propeller and spinner bulkheads
• Engine mount wear and deterioration
• Distracting airframe vibration
These bushing kits make it possible to check the static balance of a propeller quickly and accurately.

Description	Specifications	Part No.	Price
129 Propeller Bushing Kit	1-1/4 to 1-1/2 Taper type axle sizes as in the Cessna 30 & 400 series	**05-12919**	**$312.00**
129 Balancer Tool	For use with the 129 PBK - ONLY	**05-12922**	**$248.95**
108 Propeller Bushing Kit	1-1/4 to 1-1/2 axle sizes	**05-12920**	**$312.00**
108 Balancer Tool	For use with the 108 PBK - ONLY	**05-06878**	**$192.75**

Prices Subject to Change Without Notice

RAPCO DE-ICERS



MCCAULEY DE-ICE BRUSH CLUSTERS FROM RAPCO

These McCauley De-Ice Brush Clusters from Rapco are FAA-PMA approved and are applicable to any aircraft using the McCauley style brush blocks. Two clusters per block are required. Brush clusters with dash numbers require one of each dash number per block.

RAPCO No.	Block No.	Installation	Part No.	Price
RAB40012	C40010	Cessna: T182, TR182, 340A, 402C, 404, 414A, 421C, 425	05-01326	$77.75
RAB40046	C40055	Cessna: U206G, TU206G, 210N, P210N, T210N, 210R, T210R, 310P, T310P, 310Q, T310Q, 310R, T310R, 441	05-01328	$159.75
RAB40189	C40179	Cessna: T182, TR182, 340A, 402C, 404, 414A, 421C, 425	05-01327	$93.75
RAB40193	C40187	Cessna: U206G, TU206G, 210N, T210N, 210R, P210N, T210R, T303, 441	05-01329	$73.95
RAC40256-1	C40257	Raytheon: F33A, V35B, A36, B36TC, 58, 58A, 58P, 58PA, 58TC, 58TCA, B200, B200C, B200CT, B200T	05-01330	$79.75
RAC40256-2	C40257	Raytheon: F33A, V35B, A36, B36TC, 58, 58A, 58P, 58PA, 58TC, 58TCA, B200, B200C, B200CT, B200T	05-01331	$79.75
RAB40332	C40331	Fairchild: SA227-AT, SA227-AC, SA227-BC, SA227-CC, SA227-DC	05-01334	$106.75
RAC40371-1	C40363	Raytheon: B200, B200C, B200T, B200CT, A200CT	05-01332	$87.75
RAC40371-2	C40363	Raytheon: B200, B200C, B200T, B200CT, A200CT	05-01333	$87.75
RAC40464-1	C40463 & C40685	Beechcraft: 95-55, 95-A55, 95-B55, 95-B55A, 95-B55B, (T42), 95-C55, 95-C55A, 95-D55, 95-D55A, 95-E55, 95-E55A, A200CT (RC-12K), A200CT (RC-12P), A200CT (RC-12Q)	05-13270	$179.75
RAC40464-2	C40463 & C40685	Beechcraft: 95-55, 95-A55, 95-B55, 95-B55A, 95-B55B, (T42), 95-C55, 95-C55A, 95-D55, 95-D55A, 95-E55, 95-E55A, A200CT (RC-12K), A200CT (RC-12P), A200CT (RC-12Q)	05-13271	$179.75
RAC40522-1	C40660	Cessna: 182S, 182T, T182T, 206H, T206H	05-13273	$160.75
RAC40522-2	C40660	Cessna: 182S, 182T, T182T, 206H, T206H	05-13274	$160.75

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RAPCO PROPELLER DE-ICERS

Model No.	Replaces	Description	Part No.	Price
RA1288-3	BFG PN. 4E1188-3 Safeway PN.6848	28 volt wire element with 4.92 ohms resistance 3 wire integral 12” lead with ring terminals For standard rotation propeller	05-11740	$165.75
RA1288-4	BFG PN. 4E1188-4, Safeway PN. 6904	28 volt wire element with 4.92 ohms resistance 3 wire integral 14.25” lead with ring terminals For standard rotation propeller	05-12573	$149.80
RA1288-7	BFG PN. 4E1188-7, Safeway PN. 6905	28 volt wire element with 4.92 ohms resistance 3 wire 6” leads with ring terminals For standard rotation propeller	05-12574	$149.80
RA1314-2	BFG PN. 4E1314-2 Safeway PN. 6981	14 volt wire element with 1.14 ohms resistance 3 wire integral 12.25” lead with ring terminals For standard rotation propeller	05-11746	$165.75
RA1701-3	BFG PN. 4E1601-3 Safeway PN. 6888	28 volt wire element with 4.92 ohms resistance 3 wire integral 12” lead with ring terminals For counter rotation propeller	05-12575	$149.80
RA1701-7	Replaces: BFG PN. 4E1601-7 Safeway PN. 6870	28 volt wire element with 4.92 ohms resistance 3 individual wire 6.25” leads For counter rotation propeller	05-11754	$165.75
RA2056-4	BFG PN. 4E1956-4 Safeway PN. 5855BSW or 6615SW Cessna PN. C165013-0601 McCauley PN. B-40183-04	28 volt wire element with 4.92 ohms resistance 3 wire integral 1.75” lead with ring terminals For counter rotation propeller	05-12576	$149.80
RA2252-2	BFG PN. 4E2152-2 or 4E2716, Safeway PN. 6936SW or 6205SW, Cessna PN. 6205, McCauley PN. B-40183-02	28 volt wire element with 4.92 ohms resistance 3 wire integral 1.5” lead with ring terminals For standard rotation propeller	05-12577	$149.80
RA2252-4	BFG PN. 4E2152-4 Safeway PN. 6553SW McCauley PN. B-40183-06	28 volt wire element with 4.92 ohms resistance 3 wire integral 2” lead with ring terminals For counter rotation propeller	05-12578	$149.80

RAPCO RA38572 ALCOHOL FEED SHOE



RA38572 Alcohol Feed Shoe. Replaces BFG PN. 37527. EASA approved.

P/N 05-11780 .....**$56.75**

RA1649 HUB EXTENDER



3 wire, 9 1/2” long, ring terminals. Replaces: BFG PN. 3E1549. BFG: Most BFG de-ice part numbers convert to RAPCO part numbers by changing the prefix to RA and adding 100 to the base number.

P/N 05-11753 .....**$61.75**



DEICE BRUSH MODULE SPACERS

Spacers are replacement parts for the Modular De-ice brush assemblies.

Model No.	Replaces	Description	Part No.	Price
RA2318-3	BFG PN. 3E2218-3	1 5/8” W x 1 1/2” L x 3/32” T	06-02936	$27.50
RA2318-4	BFG PN. 3E2218-4	1 5/8” W x 1 1/2” L x 1/8” T	06-02937	$27.50
RA2318-5	BFG PN. 3E2218-5	1 5/8” W x 7/8” L x 5/16” T	06-02938	$27.50
RA2318-6	BFG PN. 3E2218-6	1 5/8” W x 1 3/8” D x 5/16” T	06-02939	$27.50

RA2111U UNIVERSAL DE-ICE BRUSH MODULE KIT



RA2111U Universal Brush Module Kit with unrodded brush, wire markers, terminal and spacer. Replaces: BFG PNs. 3E2011-1 thru -6 & -8 brush modules with unrodded brushes.

P/N 05-11763 .....**$94.75**

RA2111U-ROD UNIVERSAL DE-ICE BRUSH MODULE KIT WITH ROD



RA2111U Universal rodded brush module kit with wire markers, terminal and spacer. Replaces: BFG PN. 3E2011-1 thru -6, -8 & -10 brush modules with rodded brushes.

P/N 05-11764 .....**$86.85**

WEAR STRIP



Insert for brush slots on BFG heavy duty brush blocks assemblies PNs. 4E3196-1 or 4E3197-1, used on Beechcraft 1900, 1900C (C-12J), 1900D.

P/N 06-02935 .....**$8.95**



RAPCO WIRE HARNESSES

Model No.	Replaces	Description	Part No.	Price
RA1656	BFG PN. 3E1556	Hub Extender, 3 wire, 8 1/4" long, ring terminals	05-12591	**$68.80**
RA1989-2	BFG PN. 4E1889-2 Safeway PNs. 6976, D-5735-1	3 wire, 13 3/4" long, ring terminals	05-11755	**$58.75**
RA1989-3	BFG PN. 4E1889-3 Safeway PN. 6959	3 wire, 13" long, ring terminals	05-11756	**$58.75**
RA1989-4	BFG PN. 4E1889-4 Safeway PN. 6871	3 wire, 15 3/4" long, ring terminals	05-11757	**$58.75**
RA2067-1	BFG PN. 4E1967-1 Safeway PN. 6962	3 wire, 15" long, ring terminals & butt splices	05-11759	**$58.75**
RA2067-2	BFG PN. 4E1967-2 Safeway PN. 6963	3 wire, 18" long, ring & butt terminals	05-11760	**$58.75**
RA2067-3	BFG PN. 4E1967-3 Safeway PN. 6964	3 wire, 14" long, ring & butt terminals	05-11761	**$58.75**
RA2067-4	BFG PN. 4E1967-4 Safeway PN. 6965	3 wire, 15" long, ring terminals & butt splices	05-11762	**$58.75**
RA2117-4	BFG PN. 3E2017-4 Safeway PN. 6881	2 wire, 15 1/2" long, ring terminals	05-11765	**$58.75**
RA2117-8	BFG PN. 3E2017-8, Safeway PN. 6951	2 wire, 17 3/8" long, ring terminals	05-12592	**$68.80**
RA2150	BFG PN. 3E2050-2 Safeway PN. 6961	2 wire, 17" long, ring terminals & plug	05-11768	**$56.75**
RA2150-2	BFG PN. 3E2050-2 Safeway PN. 6961	2 wire, 17" long, ring terminals & plug	05-11769	**$56.75**
RA2171-2	BFG PN. 4E2071-2, Safeway PNs. D-6206-1, 6856C, 6638, Cessna PNs. D-206-1, D-5855-1, 6638	3 wire, 14 3/4" long, ring terminals	05-11770	**$61.75**
RA2192-1	BFG PN. 3E2092-1 Safeway PN. 7022	2 wire, 14 3/8" long, ring terminals & plug	05-11771	**$58.75**
RA2192-2	BFG PN. 3E2092-2 Safeway PN. 6887	2 wire, 15" long, ring terminals & plug	05-11772	**$58.75**
RA2192-3	BFG PN. 3E2092-3 Safeway PN. 6952	2 wire, 14 3/8" long, ring terminals & plug	05-11773	**$58.75**
RA2192-4	BFG PN. 3E2092-4 Safeway PN. 6834	2 wire, 18" long, ring terminals & plug	05-12276	**$65.75**
RA2192-5	BFG PN. 3E2092-5 Safeway PN. 6953	2 wire, 14 1/2" long, ring terminals & plug	05-11774	**$57.75**
RA2192-6	BFG PN. 3E2092-6 Safeway PN. 6954	2 wire, 13 1/8" long, ring terminals & plug	05-11775	**$61.75**
RA2194-1	BFG PN. 3E2094-1 Safeway PN. 6955	2 wire, 15 1/8" long, ring terminals & plug	05-11776	**$56.75**
RA2194-2	BFG PN. 3E2094-2, Safeway PN. 6956	2 wire, 18" long, ring terminals & plug	05-12593	**$68.80**
RA2194-3	BFG PN. 3E2094-3, Safeway PN. 6993	2 wire, 14 1/2" long, ring terminals & plug	05-12594	**$63.75**
RA2460-4	BFG PN. 3E2360-2 3E2360-4, Hartzell PN. 7931-3E2360-4	HD 2 wire, 20 1/2" long, ring terminals & plug.	05-12595	**$76.90**
RA2460-4HD	BFG PN. 3E2360-2 3E2360-4, Hartzell PN. 7931-3E2360-4	HD 2 wire, 20 1/2" long, ring terminals & plug	05-12596	**$63.75**
RA2469-1	BFG PN. 3E2369-1	3 wire, 13" long, ring terminals & plug	05-12597	**$67.75**
RA2469-2	BFG PN. 4E2369-2 Safeway PN. 6941	3 wire, 13 1/8" long, ring terminals & plug	05-11777	**$59.75**
RA2626-1	BFG PN. 4E2526-1	2 wire, 13 1/4" long, ring terminals	05-12598	**$63.75**
RA40330	Safeway PN. 6719SW, McCauley PN. B-40330	2 wire, 19 7/8" long, ring & hook terminals	05-12599	**$86.75**
RA40387	BFG PN. 3E2293-1 Safeway PN. 6875SW, McCauley PN. B-40387	2 wire, 21 3/4" long, ring & hook terminals	05-12600	**$88.85**
RA40531	McCauley PN B-40531, SMR PN SMR40531	2 wire 21 15/32" long, ring terminals and plug	05-14962	**$117.75**
RA40585	McCauley PN B-40585, SMR PN SMR40585	2 wire 19 5/16" long, ring terminals and plug	05-14963	**$48.60**
RA-C165013-0602	Cessna PN C165013-0602, BFG PN. 4E2071-1, Safeway PN. 6260SW-1	3 wire, 16 5/8" long, ring terminals	05-11785	**$58.80**
RA-C165013-0604	Cessna PN. C165013-0604, McCauley PN.B-5051, BFG PN. 4E2071-3, Safeway PN. 6479SW 2	3 wire, 16 5/8" long, ring terminals	05-12278	**$51.75**
RA40531	McCauley 40531	2 wire, 21 3/4" long, ring terminals, plug connector	05-15366	**$59.95**
RA40585	McCauley 40585	2 wire, 19 1/2" long, ring terminals, plug connector	05-14963	**$48.60**



RAPCO DE-ICE BRUSHES

RAPCO manufactures FAA PMA approved propeller de-ice brushes for replacement in BFG brush assemblies. These specially formulated carbon compound offers increased service life by reducing wear at altitude.

Model No.	Replaces	Description	Part No.	Price
RA1306-1	BFG PN. 3E1206-1 used in solid block assemblies.	Rodded brush, carbon 3/4" L x 3/4" W X 1/8 " T, with 1 1/2" wire lead.	05-11743	**$52.90**
RA1306-2	BFG PN. 3E1206-2 used in solid block assemblies.	Rodded brush, carbon 3/4" L x 3/4" W X 1/8" T, with 1 1/4" wire lead.	05-11744	**$52.90**
RA1306-3	BFG PN. 3E1206-3 used in solid block assemblies.	Rodded brush, carbon 3/4" L x 3/4" W X 1/8" T, with 1 3/4" wire lead.	05-11745	**$52.90**
RA1543-1	BFG PN. 3E1443-1 used In solid block assemblies.	Brush 13/16" L x 3/4" W X 1/8" T with 1 1/2" wire lead.	05-11749	**$49.50**
RA1543-2	BFG PN. 1443-2 used in solid brush block assemblies.	Brush 13/16" L x 3/4" W X 1/8" T with 1 1/4" wire lead.	05-11750	**$50.80**
RA1543-5	BFG PN. 3E1443-4 unrodded brush or 3E1443-5 kit.	Kit includes RA1543-4 brush measuring 13/16" L x 3/4" W X 1/8" T, with wire markers & terminal.	05-11751	**$48.50**
RA1543-7	BFG PN. 3E1443-6 rodded brush or 3E1443-7 kit used in BFG PN. 3E2011-1 thru -5, & -10 or RAPCO PN. RA2111U-ROD modules.	Kit includes RA1543-6 rodded brush measuring 13/16" L x 3/4" W X 1/8" T, wire markers & terminal.	05-11752	**$49.80**
RA2426-2	BFG PN. 3E2326-2 brush kit or 3E2326-1 brush. Used in constant force modules PN. 3E2320-1 thru-6 & -8.	Kit includes RA2426-1 brush measuring 3/4" W X 1 3/8" L X 1/8" T and constant force springs.	05-12601	**$84.95**
RA2620-1	BFG PN. 3E2520-1 brush or 3E2522-1 kit. Used in BFG Heavy Duty brush assembly 4E3096-1, 4E3097-1, 4E3196-1 & 4E3197-1.	Kit, with brush 3/4" W X 1 1/16" L X 1/8" T, terminal and wire markers for BFG assembly PN. 4E3196-1, 4E3197-1. Note: Order 4 each per block.	05-12602	**$91.85**
RA2142-1	BFG PN. 3E2042-1	Modular De-ice Brush Assembly, 3 brush	05-11766	**$337.00**
RA2142-2	BFG PN. 3E2042-2	Modular De-ice Brush Assembly, 3 brush	05-12580	**$354.00**
RA2144-1	BFG PN. 3E2044-1	Modular De-ice Brush Assembly, 3 brush	05-11767	**$298.75**
RA2144-2	BFG PN. 3E2044-2	Modular De-ice Brush Assembly, 3 brush OR Modular De-ice Brush Assembly, 2 brush as applicable. Same style for all.	05-12581	**$354.00**
RA2146-1	BFG PN. 3E2046-1		05-12582	**$309.00**
RA2146-2	BFG PN. 3E2046-2		05-12583	**$354.00**
RA2146-3	BFG PN. 3E2046-3		05-12584	**$354.00**
RA2162-1	BFG PN. 3E2062-1		05-12585	**$304.00**
RA2162-2	BFG PN. 3E2062-2		05-12586	**$304.00**
RA2171	BFG PN. 3E2071		05-12587	**$304.00**
RA2190-1	BFG PN. 3E2090-1		05-12588	**$304.00**
RA2190-2	BFG PN. 3E2090-2		05-12589	**$304.00**
RA2190-3	BFG PN. 3E2090-3		05-12590	**$304.00**

Prices Subject to Change Without Notice

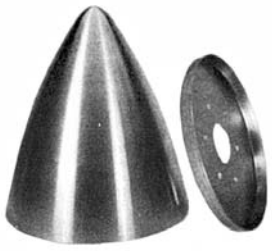


BN-1 BULLET NOSE SPINNER KIT FAA-APPROVED

Designed specifically for fixed pitch wood or metal props installed on horizontal opposed engines with prop hub thickness not exceeding 3-5/8". Kit includes 8" diameter x 12" long spinner dome center hole is 2.68" diameter, two aluminum bulkheads, mounting hardware, templates for trimming dome to fit prop hub and complete installation instructions. Ideal spinner for homebuilts. Wt. 1-3/4 lbs. FAA approved for installation on many certificated aircraft such as Aeronca, Cessna, Luscombe, Piper, Stinson and Swift. FAA approval list on request.

Note: ACS Plates will only work with ACS Domes. Made in the U.S.A.

Complete Kit	P/N 05-14682	**$324.00**
Bulkheads Only: Front	P/N 05-02677	**$77.85**
Rear	P/N 10004-R	**$81.75**
Dome Only	P/N 10003	**$181.75**



SN-4 SPINNER KIT

Aluminum spinner, 9-7/8" diameter, 11-1/8" long. Center hole is 2-1/4" diameter Spinner dome fabricated from .080'' thick aluminum for durability. Wt. 2 lbs. Furnished with mounting hardware and trimming and installation instructions. Used on Q2, Q200 and other homebuilts. To order, see "How To Order Spinner Kits". Made in the U.S.A.

Note: ACS Plates will only work with ACS Domes.

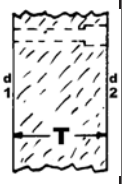
Complete Kit	P/N 10303	**$216.95**
Rear Bulkhead Only	P/N 10302	**$63.80**
Dome Only	P/N 10301	**$143.75**
SN-4 Kit (undrilled bulkhead)	P/N 05-13200	**$203.95**
Optional Front Bulkhead (Not Incl.In Kit)	P/N 10304	**$70.90**

Front Plate available for hub thicknesses of 3-3/8", 3-1/2" and 2-3/4" only.

HOW TO ORDER SPINNER KITS

Please furnish the following information so that we may provide the proper spinner kit for your combination of prop hub thickness, prop bolt and prop bushing diameters, and bolt hole pattern.

- Spinner Model
- Prop Hub Thickness (T)
- Prop Bolt Dia. (d1)
- Prop Bolt Bushing Dia.(d2)
- Specify SAE #1 or SAE #2, SAE #3, or Rotax Pattern
  *Rotax & 4" Pattern are an additional **$35.00**
- Also Available in 6 hole, 4" Bolt circle Diameter.
- Forward Facing Flange Additional **$60.00** Fee
- ACS machine fee PN 05-04904 **$35.00**



**** Note: SAE #1 = 4-3/8" dia.; SAE #2 - 4-3/4" dia.; SAE #3 = 5-1/4" dia.***

SPINNER EXTRA HIGH POLISH "CHROME"



We now offer our complete line of aircraft spinners "high polished", which gives them a beautiful chrome-like appearance. If spinner is to be painted this is not necessary, but if it will be bare, add the High Polish option for a bright, shiny look. Add these prices to the price of the standard spinner and specify "high polish". Made in the U.S.A.

Note: ACS Plates will only work with ACS Domes.

BN-1	**$69.00**	SN-4	**$63.00**	AC-1	**$82.00**
BN-3	**$82.00**	SN-5	**$66.00**		

ALL SPINNERS MADE ON STEEL TOOLING

BN-3 SPINNER KIT FOR LYCOMINGS



Aluminum spinner, 12-1/16" diameter, 13-1/4" long. Center hole is 2-5/8" diameter. Designed for installation on homebuilts with Lycoming 0-290, 0-320 and 0-360 engines. Spinner dome and bulkheads fabricated from .080" thick aluminum for durability. BN-3 spinner kits available for props with hub thicknesses of 3-7/16", 3-9/16", 3-3/4", 4-1/4", 4-11/16", 5" and 5-3/8". Wt. 3 lbs. Furnished with predrilled front and rear bulkheads, mounting hardware and trimming and installation instructions. To order, see ***"How To Order Spinner Kits".*** Note: ACS Plates will only work with ACS Domes. Made in the U.S.A.

Complete Kit	P/N 10060	**$273.95**
Rear Bulkhead Only (Large)	P/N 10031	**$60.75**
Front Bulkhead Only (Small)	P/N 10051	**$68.75**
Dome Only	P/N 10022	**$150.75**

STANDARD BN-3 KITS

P/N	Specifications	Price
05-10000	HUB 3-7/16, SAE2, BOLT 3/8, BWII 5/8	**$264.95**
05-11000	HUB 3-9/16, SAE2, BOLT 3/8, BWII 5/8	**$263.95**
05-03431	HUB 3-9/16, SAE2, BOLT 1/2, RWII 3/4	**$273.95**
05-12000	HUB 3-3/4, SAE2, BOLT 3/8, BWII 5/8	**$264.95**
05-13000	HUB 4-1/4,SAE2, BOLT 3/8, BWII 5/8	**$268.95**

NOTE: SAE #1= 4 3/8", 2 = 4 3/4", 3 = 5 1/4"
ALL OTHER BN-3 SPINNERS ARE SPECIAL ORDER

PROP SPACERS

(6061 Aluminum with Prop Bolt Holes Drilled)

Thickness	P/N	Price	Thickness	P/N	Price
1/16"	10055-1	**$15.95**	1/4"	10055-4	**$22.95**
1/8"	10055-2	**$17.95**	3/8"*	10055-5	**$29.95**
3/16"	10055-3	**$21.95**			

Specify SAE and bolt size. All are special order.

****Furnished in two pieces: 1/4" and 1/8" thick***

BN-2 SPINNER KIT



The BN-2 aluminum spinner kit features a 10" long dome and is 10-3/4" in diameter. It is furnished complete with a rear bulkhead and hardware kit.Note: ACS Plates will only work with ACS Domes. Made in the U.S.A.

BN-2 Spinner kit w/drilled plate. .	P/N 10340	**$254.95**
BN-2 Dome Only	P/N 10341	**$168.75**
BN-2 Rear Bulkhead only	P/N 10342	**$68.75**
BN-2 Spinner kit w/undrilled plate.	P/N 05-13500	**$254.95**

AC-1 SPINNER KIT



Aluminum spinner 10-1/8" diameter. Length of dome varies from 13-1/2" to 15-1/2", depending on prop hub thickness. Heavy duty construction. Furnished with predrilled front and rear bulkheads and streamlined fairing for pusher installations. Kits available for hub thicknesses of 3" to 5". For Lycoming 0-235 engines specify SAE #1 (4-3/8" dia.) or SAE #2 (4-3/4" dia.) bolt circle. Wt. 2-3/4 lbs. Furnished with mounting hardware and trimming and installation instructions. To order, see "How To Order Spinner Kits". ACS Plates will only work with ACS Domes.Made in the U.S.A.

Complete Kit	P/N 10105	**$336.00**
Kit Less Fairing	P/N 10105-1	**$272.95**
Front (Large) Bulkhead Only	P/N 10102	**$67.75**
Front (Large Heavy Duty) Bulkhead Only	P/N 06-00009	**$99.75**
Rear (Small) Bulkhead Only	P/N 10103	**$70.90**
Dome Only	P/N 10101	**$158.75**
Fairing Only	P/N 10104	**$78.75**
LG Bulkhead 3/8"Bolt, 5/8" Bushing SAE1	P/N 05-03428	**$41.00**
LG Bulkhead 3/8" Bolt, 5/8" Bushing SAE2	P/N 05-03429	**$63.75**



ADVANCED COMPOSITE AC-I SPINNER DOME

This new super-light spinner dome weighs about 8oz. which drastically reduces the spinner assembly weight and the need for lead ballast in the nose of pusher-type aircraft. This weight savings, combined with the revolutionary new tapered spinner dome which reduces drag can increase the cruise speed of almost any pusher-type homebuilt. These spinners have been used on a modified VariEze to win several air races.

This composite dome uses the AC-1 10102HD aluminum bulkheads and the 10104 fairing. The spinner's bulkhead is spun from 6061 aluminum sheet. The premium bulkhead is turned from 6061 billet for more fatigue resistance and is grey anodized.

AC-1 Advanced Composite Dome	P/N 01-28000	**$289.50**
AC-1 10102HD Bulkhead (Standard)	P/N 06-00009	**$99.75**
AC-1 Bulkhead (Premium)	P/N 05-04906	**$269.00**
AC-1 Faring	P/N 10104	**$78.75**

AP

ACS SKULL CAP SPINNERS



5-inch diameter - For wood or metal props on Cont. A-65 to O-200 engines. High-polish finish. Top quality. Made in the U.S.A.

Polished .....P/N 10210 .....**$59.95**
Unpolished .....P/N 10211 .....**$47.85**
5" Skull Spinner Dome (only) Polished .....P/N 05-21600 .....**$44.50**

6-inch diameter - For Lycoming O-235 to O-360 engines and Cessna 170's. With mounting bracket and installation hardware. High-polish finish. Top quality.

Polished.....P/N 10220 .....**$66.50**
Unpolished.....P/N 10221 .....**$53.75**
6" Skull Spinner Dome (only) Polished .....P/N 05-21700 .....**$52.75**
Bracket & Hardware Only (Fits Either Spinner)
P/N 05-21800 .....**$13.75**

CESSNA SKULL CAP SPINNER



Skull Cap Spinner Assembly (small) for Cessna, FAA/PMA Approved. For wood or metal propellers on A-65, A-75, C-85, and C-90 Continental Engines. Made in the U.S.A.

Spinner Assembly..... P/N 05-06844.....**$92.75**
Dome Only..... P/N 05-04829.....**$65.75**
Bracket Only ..... P/N 05-04830.....**$23.50**

COMPOSITE SPINNERS FOR PIPERS & CESSNAS



P/N 05-00744

These new composite materials spinners and bulkheads are FAA/PMA approved and STCs to replace aluminum spinners and bulkheads on the Piper aircraft models listed below. Bulkheads are constructed for maximum strength and resistance to fatigue due to vibration. Pipers metal versions often crack in 200-300 hours, whereas the composite assemblies have been tested over 4000 hours on a PA-28 with no failure. Spinners for twins & all bulkheads are warranted against vibration fatigue for the life of the aircraft by the factory. ***Includes washers.***

Description	Model	PN	Price
Spinner Kit	PA28-140/150/160	05-28350	**$2,125.00**
Spinner Dome	150A, 150F, 150FA	05-01257	**$729.00**
Spinner Dome	170B, 172, (1956-59)	05-01258	**$729.00**
Spinner Dome	172XP Not FAA/PMA Approved	05-01259	**$718.00**
Spinner Dome	172 Skyhawk (G-Q)	05-00744	**$725.00**
Spinner Dome	182 P, Q Skylane	05-00746	**$939.00**
Spinner Dome	177B, 177RG Cardinal	05-00747	**$2,075.00**
Spinner Dome	210 (all 3 blade McCauley	05-00748	**$1,655.00**
Spinner Dome	PA-140/150/160 Cherokee	05-00749	**$729.00**
Spinner Dome	PA-24-180/250, PA23-150/160	05-00752	**$729.00**
Spinner Dome	PA-24-180/250, PA23-235/250	05-00753	**$1,459.00**
Bulkhead	PA30, PA23-250 (Aztec)	05-02659	**$825.00**
Spinner Dome	PA30, PA23-350 (C model & up)	05-02660	**$1,225.00**
Spinner Dome	PA28-151/161 Warrior	05-02662	**$975.00**
Alt. Bulkhead	PA28-151/161 Warrior	05-02658	**$635.00**
Fwd. Bulkhead	PA28-151/161 Warrior	05-02655	**$685.00**
Spinner	310R, T310Q, T310R, T310P	05-00754	**$935.00**
Rear Bulkhead	PA28-161 Warrior	05-02663	**$835.00**
Spinner Dome	PA28-161 Warrior POST 1979 13" Spinner	05-02661	**$989.00**
Spinner LH	PA34-200T Seneca II	05-02665	**$1,675.00**
Spinner RH	PA34-200T Seneca II	05-02666	**$1,675.00**
Bulkhead	PA34-200T Seneca II	05-02664	**$935.00**
Bulkhead	PA31/-325/-350 Navajo	05-02667	**$985.00**
Bulkhead	PA31/-325/-350 Navajo	05-02668	**$975.00**
Spinner Dome	PA31/-325/-350 Navajo	05-02669	**$1,675.00**
Spinner Dome	PA31/-325/-350 Navajo	05-02670	**$1,675.00**
Bulkhead only	PA38-112 Tomahawk	05-02656	**$645.00**
Spinner Dome	PA28-235	05-00756	**$1,675.00**
Fwd. Bulkhead	PA28-180/181 Cherokee/Archer	05-00757	**$515.00**
Spinner Dome only	PA28-180/181 Cherokee/Archer	65805-00	**$2,075.00**
Spinner Dome	PA32R-300, PA32-260/300/301,	05-00758	**$935.00**
Fwd. Bulkhead	PA28R-180/200, PA-235	05-00759	**$675.00**
Spinner Dome	PA38-112 Tomahawk	05-00761	**$1,045.00**
Spinner Dome	PA34-200 Seneca I	05-00762	**$1,459.00**
Fwd. Bulkhead	PA28-161 Warrior	05-02671	**$665.00**
Spinner Dome	PA34-200 Seneca I	05-00763	**$1,675.00**
Rear Bulkhead	PA24-400	05-15385	**$1,459.00**
Spinner	PA24-400	05-15384	**$1,459.00**
Spinner Dome	C-172R (Skyhawk) Not FAA/PMA Approved	05-11281	**$835.00**
Rear Bulkhead	150A, 150F, 150FA Pending PMA	05-15374	**$645.00**
Rear Bulkhead	170B, 172 (1956-1959) Pending PMA	05-15376	**$675.00**
Spinner	150 (L-M) Pending PMA	05-15375	**$729.00**
Spinner	172 (1960-172A-F) Pending PMA	05-15378	**$939.00**
Spinner	172 (G-Q) Penn Yann Conversion	05-15379	**$695.00**
Spinner	180, 182 A-D (Early Model) Pending PMA	05-15380	**$935.00**
Spinner	Pending PMA206 3 Bladed McCauley Props (Centurion)	05-15381	**$1,432.00**
Spinner	337 Rear Spinner Pending PMA	05-15382	**$729.00**
Spinner	337 Front Spinner Pending PMA	05-15383	**$729.00**
Spinner	172RG Pending PMA	05-15386	**$939.00**
Spinner	150 AVCON Conversion Pending PMA	05-15388	**$729.00**
Spinner Dome	C-177/C-177A	05-11282	**$1,045.00**
Spinner Dome	Grumman AA-1/A/B/C	05-11283	**$935.00**
Bulkhead	Grumman AA-5, AA-5A Forward	05-11284	**$645.00**
Bulkhead	Grumman AA-5B, AG5B Forward	05-11285	**$525.00**

SN-5 SPINNER KIT



12" diameter, 11-1/8" long. Similar to a Piper design and adaptable to many homebuilts. Fabricated from .080" aluminum for durability. Furnished with predrilled rear bulkhead. Wt. 2 lbs. Mounting hardware and trimming and installation instructions furnished. To order, see "How to Order Spinner Kits.Optional Front Bulkhead available for 2 1/16 Hub Thickness. ACS Plates will only work with ACS Domes. Made in the U.S.A.

Description	Specifications	Part No.	Price
SN-5 Rear Bulkhead 10312	Standard 2-5/8 inch center hole	10312	**$83.85**
SN-5 Dome only 10311	Undrilled	10311	**$166.75**
SN-5 Front Bulkhead	Hub Thickness of 2-1/16 inch Standard center ONLY hole 2-5/8 inch	10314	**$87.75**
SN-5 Spinner Kit 10313	Standard Undrilled.SN-5 Spinner, Kit SAE: 2 inch Bolt: 1/2 inch, Bush:3/4 inch	05-13300	**$236.95**
SN-5 Spinner Kit 10313-1	Drilled, SAE: 2, Bolt:1/2 inch, Bush: 3/4 inch, Standard Center Hole	05-03433	**$236.95**

SN-2 SPINNER KIT



The SN-2 aluminum spinner kit features an 11.5" long dome and 11-5/8" dia. Furnished complete with a rear bulkhead & hardware kit. Note: ACS Plates will only work with ACS Domes. Made in the U.S.A. SN-2 spinner kit with drilled plates.

P/N 10330 .....**$245.95**
SN-2 dome only ..... P/N 10331 .....**$166.75**
SN-2 bulkhead only..... P/N 10332 .....**$68.75**
SN-2 spinner kit w/undrilled plates..... P/N 05-13400.....**$238.95**

For spinner kits with drilled plates, please furnish information required for spinners orders as noted on page 176.

UHS FIBERGLASS SPINNERS



UHS spinners are practical, attractive, and flight proven having enhanced the appearance of many different aircraft. The spinners are available in various diameters for different engine and propeller combinations. For GSC, Ivoprop, Warp Drive, and Power Fin propellers using Rotax, Lycoming, Cont. & Mosler engines, spinners are sent cut out and assembled.

Note: kits include hardware and bulkhead.
For pre-drilled cut-outs we require the following information:

1. Make and size of engine.
2. Make of Propeller.
3. Number of Blades.
4. Size required.

Given adequate information, we can also fabricate spinners for many other propeller-engine combinations. Call with your requirements and we will assess your particular application.

Size	Description	P/N	Price	Size	Description	P/N	Price
8"	UHS Spinner	05-09000	**$175.00**	12"	UHS Spinner	05-09400	**$235.00**
9"	UHS Spinner	05-09100	**$195.00**	14"	UHS Spinner	05-09500	**$247.95**
9"	9P Spinner	05-08377	**$195.00**	11.5"	Spinner Kit	05-09700	**$239.00**
10"	UHS Spinner	05-09200	**$206.00**	13"	Spinner Kit	05-09800	**$255.00**
11"	UHS Spinner	05-09300	**$235.00**	13.5"	UHS Spinner	05-11995	**$255.00**
				14"	UHS Spinner	05-09500	**$280.00**

UHS SPINNERS FOR SENSENICH SPORT PROPS

9" SENSENICH PROP SPINNER - Dimensions (inches): W 8.75 x L 10.375
P/N 05-08371 .....**$190.75**

9.75" SENSENICH PROP SPINNER - Dimensions (inches): W 9.75 x L 8.25
P/N 05-08373 .....**$199.95**

10.5" SENSENICH PROP SPINNER - Dimensions (inches): W 10.5 x L 8.5
P/N 05-08374 .....**$230.00**

Prices Subject to Change Without Notice

SPINNERS – PROP GUARD



WHIRLWIND SPINNERS

The Whirlwind spinner/back plate is constructed from carbon fiber and glass fiber epoxy matrix with balance lay up. This insures a light and durable spinner for years of trouble free operation. Each spinner comes with a smooth primed surface ready for paint.

Application	Spinner Size	Part No.	Price
Lycoming 0320-0340-I0360 Cub Style	12”	05-11893	**$335.00**
Lycoming 0320-0340-I0360 RV Style	13”	05-11894	**$454.00**
Rotax 912/914, UL350SI, Continental O-200, Lycoming O-233/O-235	11.3”	05-11892	**$335.00**
Lycoming 0320-0340-I0360 Carbon Cub	12”	05-11895	**$356.00**



GSC ALUMINUM SPINNER

Aluminum spinner is machined from solid stock and provides an attractive aerodynamic finish. Weight: 12 oz.

P/N 15-06474 .....**$95.00**



CN-4 SPINNER KIT

Similar in shape to Cessna 172 Spinner. Not FAA approved. Spinner kit includes: dome, front and back plates, hardware & instructions.

Description	Part No.	Price
CN-4 Spinner Kit	05-12632	**$358.00**
CN-4 Dome Only	05-12633	**$199.85**
CN-4 Back Plate 10112	05-12634	**$73.65**
CN-4 Front Plate 10113	05-12635	**$78.85**

CATTO CARBON FIBER SPINNERS



Carbon fiber spinners for experimental aircraft.

The spinner kits include:

- Required hardware
- Unfinished spinner dome
- Both forward/rear bulkheads.

Catto installs the self-centering forward bulkheads prior to shipment to ensure a high quality centered fit that allows the spinner to spin true about the propeller’s central axis.

The uncut spinners are available in various diameters.

Description	Part No.	Price
10” Spinner	05-12764	**$358.00**
12” Spinner	05-12765	**$199.85**
13” Spinner	05-12766	**$499.00**

ROTAX PROPELLER SPINNERS



For all props with standard Rotax® 75mm bolt pattern. Spinner bulk head is predrilled and installs between prop and gearbox flange. Spinner installs with single bolt.

4” Diameter.....P/N 05-01129 .....**$129.90**
5” Diameter.....P/N 05-01131 .....**$124.95**
6-3/4” Diameter .....P/N 05-01132 .....**$228.95**
7” Diameter.....P/N 05-04447 .....**$171.75**



PROP GUARD FOR 2 OR 3 BLADE PROPELLER

Anti-abrasion boot for your metal propeller It is more economical to protect your propeller blades with PROP GUARD than to continually file, dress, paint and balance your blades until they have to be replaced. Water, sand, rock, and airborne abrasives are constantly eroding your propeller. As the name suggests, this product can eliminate this destructive process. Virtually all propeller blade failures start as leading edge nicks.

PROP GUARD is a 0.018” thick clear anti-abrasion boot that is bonded to the leading edge of the propeller

PROP GUARD is made from a special high strength heat processed polymer engineered for centrifugal loads. It is NOT just a piece of tape!

Easy to install (approximately 20 minutes installation time)

No performance loss

Fully tested

Repairable

STC FAA-PMA approved (minor alteration, no form 337 required)

Kit contains:

PROP GUARD boot for a two or three bladed propeller, adhesion accelerator, placard, lint-free cotton cloth, complete installation instructions and a copy of the STC.

Description	Part No.	Price
Prop Guard 2 Blade Kit	05-05330	**$76.75**
Prop Guard 3 Blade Kit	05-05335	**$83.75**
Prop Guard Repair Kit (12’)	05-11832	**$36.55**
Prop Guard Repair Kit (24’)	05-11833	**$42.80**

PROP GUARD SEAM ROLLER TOOL



This rubber coated roller makes working air bubbles out during installation easier than using the spatula included with the PROP GUARD kit. The rubber conforms to the shape of the propeller, and the rolling action allows you to press harder to eliminate small air bubbles. It is recommended for customers who may be installing more than one PROP GUARD or those who just want to make the job faster and easier.

P/N 05-11984 .....**$17.50**



PROP & SPINNER POLISHING KIT

This kit was developed specifically to maintain the propeller and spinner on prop & spinner in pristine condition. P/N 09-23525 .....**$26.95**



PROP PROTRACTOR

Perfect for precision setting of all ground-adjustable props, as well as precision alignment of control surfaces.

P/N 05-31970 ..... **$45.50**



THERM-X HOT PROP PROPELLER DE-ICING KIT

De-icing in under 90 seconds with the push of a button! No Fluids! No Mess! • Therm-X Hot Prop is a complete propeller deicing kit made up of Part 23 certified products (no more scrounging parts to build system) • Available for 2 blade props (currently Continental only, Lycoming to follow) 12V or 24V • 1 year Warranty • Installation documentation • Manufacturer provides support • Weight 4.9 lbs.

2 Blade ..... P/N 05-03383 .....**$3,685.00**

HARTZELL PROPELLER HARDWARE

Description	Part No.	Price
Hartzell Prop O-ring C-3317-228	05-11998	**$4.50**
Hartzell Prop O-ring C-3317-230	05-12380	**$4.90**
Hartzell Prop Fiber Washer A-1020	05-11999	**$0.95**



A1633-11 O-RING FOR HARTZELL COMPACT HUB PROPELLERS

The O-ring is A1633-11 or PRP909-6; commonly made by Parker Seal Company. Outside Diameter: .048 Length Under Flange: .096 Flange Diameter: .072 P/N 04-04566 .....**$1.25**

AP

PROP EXTENSIONS – DUC PROPELLERS

CRUSH PLATES FOR WOOD PROPS

OD	Thickness	Bolt Circle	Bolt Dia.	Part No.	Price
6”	3/8”	SAE 1 (4.375”)	3/8”	05-02464	**$72.75**
6”	3/8”	SAE 2 (4.75”)	3/8”	05-02465	**$72.75**
7”	3/8”	SAE 2	3/8”	05-02466	**$87.75**
7”	3/8”	SAE 2	7/16”	05-02467	**$88.75**
7”	3/8”	SAE 2	1/2”	05-02468	**$79.75**
7”	1/2”	SAE 2	3/8”	05-02469	**$99.85**
7”	1/2”	SAE 2	7/16	05-02470	**$89.75**
7”	1/2	SAE	1/2	05-02471	**$99.85**

PROP SPACERS



Solid Prop Spacers, 6 thru holes. The prop bolt goes thru the prop and spacer and threads into the engine.

Bolt Diameter	Part No.	Price
Prop Spacer 1.5”x5” Rotax	05-02472	**$340.95**
Prop Spacer 2”x5” Rotax	05-02473	**$407.00**
Prop Spacer 2.25”x5” Rotax	05-02474	**$340.95**
Prop Spacer 3”x5” Rotax (Spool)	05-02475	**$361.00**
Prop Spacer 4”X5” Rotax (Spool)	05-04418	**$361.00**



DRIVE LUGS FOR EXTENSIONS

Part No.	Type	O.D.	I.D.	Thread	Price Ea.
05-28310	Threaded	5/8	- - -	3/8-24	**$31.65**
05-04417	Threaded	5/8”	- - -	7/16-20	**$32.75**
05-28410	Threaded	3/4	- - -	1/2-20	**$33.25**

DUC SWIRL PROPELLERS



The aerodynamic design of this propeller has been designed to have a "constant speed" effect.
The blades that are made from unidirectional layers of carbon fiber prepeg epoxy and their structure has been defined in order to obtain the maximum stresses in torsion and bending. Therefore the effect of "constant speed" is not related to the deformation of the blade but its geometry and its particular profile.
Because of the extra flat profile and low chord,excellent performance is obtained in both: Aerodynamic and acoustic performance, but also in fuel consumption.
Thanks to the "constant speed" effect, there is very small engine speed difference between the aircraft on ground and in flight.
This propeller allows for excellent performance throughout the flight envelope including:

- Improved efficiency at takeoff and climb rate due to higher engine speed
- Many cruise extension
- A high user comfort

Propeller is available in Two-Blade and Three-Blade.
For engines with high power, its structure can be reinforced (SWIRL-R).
The Inconel SWIRL blade is protected with Inconel metallic reinforcement. It increases the life of the propeller and also its performance due to a change in its inertial behavior.

DUC SPINNERS



The DUC spinners are carried out in preimpregnated carbon fiber materials with on the surface woven carbon fabric.
The mounting plate, entirely out of carbon, thickness 0.12" (3mm), is produced with the Carbon Forge® process, also used for the manufacture of the DUC propeller hubs.
This patented process makes it possible to increase considerably the mechanical characteristics of the composite parts.

PROP EXTENSIONS



Precision machined prop shaft extensions are available from Aircraft Spruce & Specialty Co. Don’t settle for lesser quality at advertised “savings”. Prop extensions are machined from solid 2024 T-351 aluminum bar, and are supplied with clear anodized finish and stainless steel drive lugs (installed). 7” diameter prop side is recommended for 0-320 engines running wood props, and is required for 0-360 engines (or larger) running wood props. For Cont. 0-200, you may choose 5.5” diam on engine side. If prop is metal, please measure depth of drilled counterbore at all 6 bolt hole positions.

Flange Engine	SAE No.	Bolt Circle	Lug Diameter	Eng. Bolt Dia.
Cont. A-65, A-75, C-85, C-90, 0-200	SAE 1	4-3/8	5/8”	3/8”
Lycoming 0-235	SAE 1 or 2		5/8”	3/8”
Lycoming 0-290	SAE 2	4-3/4”	5/8”	3/8”
Lycoming 0-320	SAE 2	4-3/4”	5/8”	3/8 or7/16
Lycoming 0-360	SAE 2	4-3/4”	3/4”	1/2”
Lycoming O-540	SAE 2	4-3/4”	3/4”	1/2”

PLEASE ORDER USING THE FOLLOWING PART NO.

___X____–____E –____P_____– SAE___– ENGINE – PROP – PROP

length	diam prop side (6 or 7)	engine bolt 3/8 or 7/16 or 1/2	prop bolt 3/8 or 7/16 or 1/2	thr or non (threaded or non-threaded lugs installed in extension)	1 or 2	HUB (wood or composite or metal)	TYPE (Fixed Pitch or constant speed)

Example: 4 X 7 - 7/16 E - 3/8P thr - S2 - Lyc 0320 - wood - wood

12 HOLE SOLID PROP EXTENSION WITH THREADED DRIVE LUGS

Length x Dia.	Length x Dia.
1.25”x6”	1.25”x7”
2.25”x6”	2.25”x7”
3”x6”	4”x7”
4”x6”	6”x7”
6”x6”	8”x7”
8”x6”	

PRICES ON PROP EXTENSIONS CAN VARY PER APPLICATION PLEASE CALL AND REQUEST A QUOTE FOR YOUR APPLICATION.

PROP HUB FRONT PLATES



Required for wooden propellers. Flange equivalent to Cont. P/N 3991. For use with A-65, C-85 installations or Lyc. 0-235 with SAE1 (43/8”) bolt pattern.
P/N 10351Cont..... **$37.50**

Flange equivalent to Lyc. P/N 45688, for use with Lyc. 0-235 thru 0-360 engines with SAE2 Bolt Pattern engines.
P/N 10352 Lyc..... **$39.50**

DUC FC WINDSPOON PROPELLERS



The FC WINDSPOON propeller, with its revolutionary shape called WINDSPOON, offers unrivalled performance.
Its technical innovations have several consequences:

- Better performance.
- Lower fuel consumption
- Less Noise

The very special profile of the FC WINDSPOON blade has been calculated to optimize the airflow over the whole surface of the WINDSPOON.
The offset of the twisting results in better reduction of friction and a longer life.
The FC WINDSPOON propellers are produced in accordance with the strictest standards of the industry, with unique equipment specially made to ensure the highest quality.
Propeller is available in Two-Blade and Three-Blade.
For engines with high power, its structure can be reinforced (FC-R WINDSPOON).
The Inconel FC WINDSPOON blade is protected with Inconel metallic reinforcement. It increases the life of the propeller and also its performance due to a change in its inertial behavior.
Available Diameter: 068”

SEE WWW.AIRCRAFTSPRUCE.COM FOR COMPLETE DISCRIPTIONS & PRICING ON ALL DUC PROPELLERS, SPINNERS, AND ACCESSORIES.

Prices Subject to Change Without Notice



SMOKE SYSTEM KIT MODELS SA-100 SERIES

All of the SA-100 series smoke system oil tanks are the same size (dimensions). Models Differ by oil suction tube design, oil pump mounting location and oil tank configuration. Note: ***All kits are available with 12 or 24 volt DC smoke oil pumps. Please specify 12 or 24 volt DC when ordering.***

SA-101 -

•For continuous inverted flight.
•Top mounted oil pump.
•All hardware for complete installation.
•Step by step instructions.
•Height (To top of fill cap is) is 15”
•Width (End where oil pump is mounted) is 11”
•Depth (Pump to opposite end of tank) is 8.5”
•Oil tank capacity: 3.5 US Gallons
•Approx. oil used per minute: .8 Us Gallons
•Approx. total run time: 5+ minutes

P/N 05-01439 .....**$1,157.00**

SA-101H-

•For continuous inverted flight.
•Side / End mounted oil pump.
•All hardware for complete installation.
•Height (To top of fill cap is) is 11”
•Width (End where oil pump is mounted) is 12”
•Depth (Pump to opposite end of tank) is 15”
•Oil tank capacity: 3.5 US Gallons
•Approx. oil used per minute: .8 Us Gallons
•Approx. total run time: 5+ minutes

P/N 05-02889 .....**$1,157.00**

NOTE: Add 1.5” to base on each side or end for bracket width.

AP

SMOKE SYSTEM KIT MODELS SA-200 SERIES

Both of the SA-200 series smoke system oil tanks are the same size (dimensions). Models Differ by oil suction tube design.



SA-201-

•For continuous inverted flight.
•Any Dimension top.
•Pump can be mounted on top or any side surface.
•Fill cap and any other fittings installed where you want them.
•All hardware included for complete installation.
•Height (To top of fill cap is) is 14”
•Width (End where oil pump is mounted) is 10”
•Depth (Pump to opposite end of tank) is 17.25”
•Oil tank capacity: 5.5 US Gallons
•Approx. oil used per minute: .8 Us Gallons
•Approx. total run time: 7+ minutes

P/N 05-02891 ..... **$1,267.00**

NOTE: Add 1.5” to base on each side or end for bracket width.



SA-201T SMOKE KIT OIL PUMP

This 5.5 Gallon smoke system kit is for continuous inverted flight with oil pump mounted on the top of the oil tank. This particular kit has been installed in the baggage area of a CJ6A, T34A and RV7 to date. Use this kit when height is not an issue.

Dimensions: Height (to top of oil pump) 16-1/4”, Width (left to right) 13”, Depth (end with label) 10”

P/N 05-03398..... **$1,267.00**

Note: Add 1.5” at base of tank on sides and ends for bracket width.

ACCESSORIES FOR THE SA-100 & SA-200 SERIES

Accessories	Description	Part No.	Price
All components less the oil tank	Virtually every part you will need to complete your smoke system except the oil tank	05-03366	**$909.00**
External Fill Kit	This kit has everything right down to the vinyl letter transfer “Smoke Oil Only” and detailed installation instructions.	05-03595	**$214.95**



SMOKE SYSTEM FIREWALL T BULKHEAD ASSEMBLY

This is a complete assembly of several parts (7 parts) to penetrate your firewall. It is NOT just a plain bulkhead fitting alone. Available with 90 degree hose fitting as shown or 45 degree or straight hose fitting.

P/N 05-15345 .....**$59.50**



SMOKE SYSTEM FLOP TUBE COMPLETE ASSEMBLY

Complete Flop Tube. If you are making your own tank you will need this if you do any acro at all. Included is a 1/2 npt fitting for welding into your aluminum tank. It screws directly into this fitting. Cut tubing to your desired length. P/N 05-15344 .....**$55.00**



STICK GRIP SMOKE SYSTEM CONTROL KIT

Turn your smoke on and off from a button on your stick grip. Your grip must already have a button on it. Kit includes a relay, indicator light, fuse holder and fuse, wire and wire terminals and a simple wiring diagram. You must hold down the button to keep the smoke on.

P/N 05-15343 .....**$60.00**

SMOKE SYSTEM 1 WAY CHECK VALVES



This kit uses one way check valves, it is for those who are serious about ending smoke dribble. No electric solenoid needed and this is as good as it gets. Attaches to Injector and existing oil line. These are custom made to my specifications, not an off the shelf item.

P/N 05-15346 .....**$170.00**



SMOKE OIL PUMP TO TANK MOUNTING KIT

Kit enables you to mount the pump anywhere on the tank that you like. Kit contains 2 mounting bars which are attached to the tank using a 2 part structural epoxy. The pump attaches to the bars.

P/N 05-15347.....**$50.00**

SMOKE SYSTEMS



HOMSLEY SMOKE SYSTEMS

All tanks come with an aerobatic flop tube installed and a vented filler cap plus a separate vent fitting. COMPLETE is the key word, tank, two oil injectors, low pressure and stainless steel, hoses, all hose ends, oil pump, oil regulator valve, on/off switch, bulkhead fitting, wire with connections, zip ties, all screws, bolts, nuts, washers, everything you need is in the box along with complete written and photo directions. Typical install time is 1 full day.

Description	Part Number	Price
Smoke System Complete Kit Aluminum 3 Gal	05-11543	**$764.75**
Smoke System Complete Kit Aluminum 4 Gal	05-11544	**$805.90**
Smoke System Complete Kit Rv-6-7-9 Hidden Tank	05-11545	**$899.00**
Smoke System Complete Kit Rv-8 Deep Well Tank	05-11546	**$905.90**
Smoke System Complete Kit Aluminum 8 Gal	05-11550	**$914.00**
Smoke System Complete Kit Rv-14 Hidden Tank	05-15339	**$900.00**
Smoke System Complete Kit Aluminum 5 Gal	05-15340	**$875.00**

HOMSLEY ACCESSORIES

Description	Part Number	Price
3 Gallon Aluminum Universal Tank 12x8x8	05-11537	**$206.95**
4 Gallon Aluminum Universal Tank 12x9x9.5	05-11538	**$250.95**
8 Gallon Aluminum Universal Tank 12.5x12.5x12.5	05-11539	**$313.00**
4.25 Gallon Hidden Oil Tank For Rv-6-7-9	05-11540	**$375.00**
3 Gallon Aluminum Universal Tank 12(l) x 8(w) x 8(h)	05-11537	**$206.95**
4 Gallon Aluminum Universal Tank 12(l) x 9(w) x 9.5(h)	05-11538	**$250.95**
7.5 Gallon Fuel Tank For Rv-6-7-9	05-11542	**$462.50**
4 Gallon RV-8	05-11549	**$312.50**
Smoke Oil Pump	05-11548	**$250.00**
Smoke Oil Regulator Valve	05-11547	**$59.95**

AP



INJECTOR ONLY KIT

The kit includes:• 1 Injector • 2 Injector Mounting Clamps • 1 AN-4 90 degree fitting • 1 AN-4 Straight Fitting • 1 Piece of Safety Wire • 1 Installation Instructions

Customer must provide: Engine Make , Engine Model and/or Exhaust Diameter at Injector Location (injector should be installed just after the Y in the header pipes on typical Lycoming O-360 / O-540 or similar and 15" or more before the end of the tail pipe on radial engines).

NOTE: This injector is intended for PISTON ENGINES.

P/N 05-06884 ..... **$121.75**



HOMSLEY SMOKE OIL INJECTOR

Homsley Smoke Oil Injector, sprays oil in a razor thin 180 degree pattern for more smoke using less oil. No welding required. Attaches to exhaust pipe thru a ¼ inch hole and a single hose clamp. Two required for great smoke.

P/N 05-06918 ..... **$79.75**

SMOKING AIRPLANES PREMIUM BLEND SMOKE OIL

Smoking Airplanes Premium Blend Smoke Oil is recommended for use with all Smoking Airplanes brand smoke system kits. Features: • Brilliant white smoke • Persistent hang time • Equal or better than leading smoke oil brands.

5 Gallon ..... P/N 05-06949 ..... **$111.95**
55 Gallon ..... P/N 05-06950 ..... **$825.00**



TYPICAL PROPERTIES	
API Gravity	38.3
Viscosity, cSt @ 40° C.	4.3
Viscosity, SUS @ 100° C	40.2
Viscosity Index	95
Flash Point, (°F.)	240 (min)
Distillation, Vol%	
IBP	500F (min)
EP	625F (max)
Pounds Per Gallon	6.94
Color	Clear

SUPER-DRI® SKYSMOKE AVIATION FLUID

Super Dri® SkySmoke® Aviation Smoke Fluid is a professional grade, crystal clear, proprietary blend of the best fluids available. Super Dri®, established in 1976, formulated SkySmoke® especially for aircraft to be the cleanest, best smoking fluid available. SkySmoke® provides the most intense smoke and longest hang time. SkySmoke® is Environmentally Safe, Non-Hazardous and Non-Staining. Super Dri® may be used in wind tunnels, leak testing, special effects or anywhere intense smoke is required.

1 Gallon ..... P/N 05-04972 ..... **$56.75**
5 Gallon ..... P/N 05-04975 .... **$166.85**
55 Gallon ..... P/N 05-04976 . **$1,399.00**

55 GALLON IS DROP SHIP ONLY.



SMOKE OIL PUMP ONLY

The kit includes: • 1 Smoke Oil Pump • 1 Molex Quick Disconnect Wire Harness • 1 Instructions • 1 90 Degree AN-6 Fitting • 2 Straight AN-6 Fittings • 2 14 Gauge Wire Butt Connectors • Screws, Nuts Washers – Mounting Hardware • Customer Must Specify 12 Volt DC or 24 Volt DC.

12V ..... P/N 05-04477 ..... **$322.00**
24V ..... P/N 05-07814 ..... **$346.00**

SMOKE OIL TRANSFER PUMP KIT



No more spills! Fill your smoke oil tank quickly and cleanly with this 8 gallon per minute smoke oil transfer pump kit. Made with high quality components including Goodyear rubber hose, heavy duty pump, dispensing nozzle with built in swivel and aluminum hose connection fittings with filter screen and clamps! All you will need to complete the kit is any automotive (or aircraft) type 12 Volt DC battery, and your container of smoke oil! The step by step instruction manual makes set up and use safe and easy. This kit will work with any smoke oil supply container. Included: Dispensing nozzle with built in swivel and ¾" barb fitting, Oil pump with built in on/off switch and 6 foot cable with clamps for connection to battery, 18 foot x ¾" id delivery hose and 13 foot x ¾" id suction hose, Suction screen barb fitting and oil pump barb fittings with clamps.

P/N 05-04971 ..... **$364.00**

COPPER STATE AVIATION SMOKE OIL



Copper State Petroleum's Aviation Smoke Oil is a low viscosity, amber colored petroleum base oil for many aviation smoke applications. It is non-toxic and specially formulated to produce a brilliant white smoke trail with incredible hang time. Features: • Made from highly refined base stocks and contains no additives that can harm smoke systems. • Its low viscosity and ability to produce billowing white smoke clouds that are reluctant to dissipate make it the perfect choice for professionals looking to impress a crowd. • Its non-flammable formulation makes it an extremely safe and superior alternative to dangerously ignitable home-made oil and fuel mixtures.

1 Gallon Bottle ..... P/N 05-06946 ..... **$21.50**
5 Gallon Pail ..... P/N 05-06947 ..... **$88.50**
55 Gallon Drum..... P/N 05-06948 ..... **$420.00**
16 oz. Single ..... P/N 05-07447 ..... **$7.50**
16 oz. 4 Pack ..... P/N 05-07449 ..... **$63.99**



SNAKE OIL SMOKE OIL

This Smoke Oil is completely environmentally friendly, pure and clear as a glass of water. On many planes a slight amount of smoke gets into your cockpit, this oil has almost no odor and will not burn your eyes or lungs like some inferior quality oil.

5 Gallon ..... P/N 05-15341 ..... **$80.00**
55 Gallon ..... P/N 05-15342 ..... **$550.00**

SEAT BELTS & SHOULDER HARNESSES

FAA CERTIFIED PERSONAL RESTRAINTS

These are top quality, new manufactured assemblies. They are designed, manufactured, and proof tested to rigid FAA standards. All belts use proven lift to release style Davis metal to metal buckles. Push-to-release buckles are not used due to difficulties in releasing under emergency conditions. Aircraft quality alloys and 2-inch nylon webbing are used throughout. Belts are certified to FAA TSO-C22f.

STYLE NO. 1A SEAT BELT



Most popular metal-to-metal seat belt. This 56" adjustable seat belt offers a heavy-duty combination of an all-nylon 2" wide herringbone webbing and a metal-to-metal "quick release" buckle. Buckle mates with harness adapters (Shoulder Harness Items 3B or 3C) for safety belt/harness set or use belt alone. The end fittings for each side of the lap belt have a .325 in. dia. hole which allows for a fastener/bolt to slide through, depending on the design of the aircraft/aircraft seat is where it attaches.

P/N	Color	Price
13-00201	Black	$99.85
13-00202	Brown	$114.75
13-00203	Tan	$79.85
13-00204	Navy Blue	$99.85

P/N	Color	Price
13-00205	Royal Blue	$79.85
13-00206	Gray	$100.75
13-00207	Red	$80.90

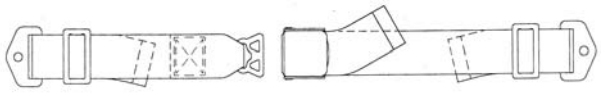
STYLE NO. 1B SEAT BELT



Same as style No. 1A above except with #442868 clip type end fittings. The end fitting hooks have spring loaded clips that allows each side of the lap belt to clip on to an existing fastener or rod. When the clip is closed the effective hole dia. for both these belts is .37 in.

P/N	Color	Price
13-00301	Black	$79.85
13-00303	Tan	$77.75
13-00304	Navy Blue	$112.75
13-00306	Gray	$101.75
13-00307	Red	$95.75

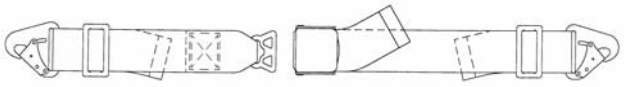
STYLE NO. 2A SEAT BELT



If belts are needed to replace worn ones in an aircraft in which the attachment fittings have been installed and approved, it is customary to install belts with a slide adjustment bar which permits weaving webbing through existing fitting and through bar for secure installation. Drawing shows correct method of lacing the webbing through bar. Belt is 56" long x 2" wide.The end fittings for each side of the lap belt have a .325 in. dia. hole which allows for a fastener/bolt to slide through, depending on the design of the aircraft/aircraft seat is where it attaches.

P/N	Color	Price
13-00401	Black	$87.75
13-00402	Brown	$89.75
13-00403	Tan	$85.85
13-00406	Gray	$83.75

STYLE NO. 2B SEAT BELT



Same as style No. 2A above except with #442868 clip type end fittings. Standard equipment in White Lightning aircraft. Black only.

P/N 13-19601 ..... **$114.75**

SEAT BELT HARDWARE



CLIP TYPE END FITTING
P/N 442868 (Steel)
$28.50 Ea.



SLIDE ADJUSTER
P/N 442663
$17.85 Ea.



TRIANGULAR END FITTING
P/N 13-04101
$17.70 Ea.

STYLE NO. 2C TWO PERSON SEAT BELT

Two Person Seat Belt - Although FAA requires that each person be provided an individual seat belt, some early aircraft were licensed using an extra-long belt in the rear seat to accommodate two people. If it is not possible to modify the aircraft to accept two belts, a two person belt is permissible. Same metal-to-metal belt as illustrated in Figure 1 but rated at 3000 lbs. test. Length 60". Advise if different length is required. Two-person belts with slide bars not acceptable by FAA. The 3" wide belt and 2" wide harness are of heavy-duty nylon webbing.

P/N	Color	Price
13-00501	Black	$86.75



STYLE NO. 4 – MILITARY STYLE SEAT BELT AND SHOULDER HARNESS COMBINATION



Harness has forged steel belt buckles permitting "one-stroke" release from both belt and harness. Stocked in Black.

Complete Set(Black).....P/N 13-01000 ..... **$267.95**
Certified Belt Only .....P/N 13-01100 ..... **$183.75**
Harness Only(Black).....P/N 13-01200 ..... **$84.75**

OTHER COLORS

	Olive Green	Price	Royal Blue	Price	Neutral	Price
Set Kit	13-04105	$246.95	13-04124	$248.95	---	---
Belt	13-04106	$174.80	13-04125	$175.75	13-04119	$193.50
Harness	13-04107	$72.50	13-04126	$73.80	---	---
	Silver Grey	**Price**	**Brown**	**Price**	**Navy Blue**	**Price**
Set Kit	13-04108	$261.95	13-04127	$248.95	13-04130	$248.95
Belt	13-04109	$183.75	13-04128	$174.95	13-04131	$169.95
Harness	13-04110	$78.75	13-04129	$74.75	13-04132	$79.95
	Red	**Price**	**Tan**	**Price**		
Set Kit	13-04121	$245.95	13-04133	$264.95		
Belt	13-04122	$172.80	13-04134	$186.75		
Harness	13-04123	$73.80	13-04135	$78.75		

STYLE NO. 5 SEAT BELT/HARNESS SET FOR HOMEBUILTS



Specially designed for the VariEze, this popular combination is also used in the Long-EZ, Quickie, Q2, Cozy, Sea Hawk and several other homebuilts. The belts are made to fit snugly, and the aluminum end fittings save weight. Order two sets for all above aircraft except Quickie which uses one set. Not FAA approved for certificated aircraft.

P/N 13-01300 ..... **$207.95 Set**

PIPER SEAT BELT DECAL SETS



This is a beautiful decal set for all the Piper Seat Belt Buckles. The seat belt buckles on Piper's are always being dinged and pitted and nothing looks worse than to have a beautiful interior with ugly belt buckles. With our new decals, the ugly belt buckles become an attraction instead of an eyesore.

Four Place Piper Set ..... P/N 05-02448 ..... **$47.80 Set**
Six Place Piper Set ..... P/N 05-02449 ..... **$33.50 Set**

NOTE: SEE NEXT PAGE FOR SHOULDER HARNESSES COMPATIBLE WITH THESE SEAT BELTS.

AP

SEAT BELTS & SHOULDER HARNESSES

STYLE NO. 3A "Y" SHOULDER HARNESS



Harness with stitched-in webbing loops for use with any 2" wide seat belt. Belt simply slides through loops and secures. Harness is "Y" type with one attachment fitting furnished.

Black Only..... P/N 13-00601 ..... **$72.75**

STYLE NO. 3B "Y" SHOULDER HARNESS



Harness with two chrome-plated steel adapters on front webbing extensions which mate with metal-to-metal buckle for safety belt/harness set. Harness is "Y" type with one attachment fitting furnished. Lift buckle to release belt and harness. Order belt separately.

P/N	Color	Price
13-00701	Black	**$102.80**

STYLE NO. 3C TWO STRAP SHOULDER HARNESS



Harness with two chrome-plated steel adapters on front webbing extensions which mate with metal-to-metal buckle for safety belt/harness set. Harness has two separate straps with two attachment fittings furnished. Lift buckle to release belt and harness. Order belt separately.

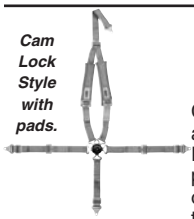
P/N	Color	Price
13-00801	Black	**$93.75**

CS-647 Fittings - Left & Right (As used on 3B & 3C harnesses)
P/N 13-03957..... **$46.50 /set**

PLEASE VISIT OUR WEBSITE FOR A DETAILED DRAWING OF THESE SHOULDER HARNESSES.

NOTE: These shoulder harnesses mate with #1 and #2 seat belts on the previous page but the harnesses are not FAA approved for certificated aircraft. Only the seat belts carry FAA approval.

AP



Cam Lock Style with pads.

CROW RESTRAINT SYSTEMS FOR RV AIRCRAFT

Crow restraint systems feature 5 attach points and are available in Latch & Link or Cam Lock versions. For RV series aircraft, the Cam Lock version is most popular. These restraint systems are available with or without 2 inch sewn-on shoulder pads, which are the same color as the rest of the belts and harness. All mounting brackets require 7/16" bolts for installation Available in black, grey, blue, or red. Specify aircraft model (RV-7, 7A, etc.) and tandem or side-by-side seating when ordering. Not FAA approved. For experimental aircraft only

Crow Cam Lock Restraint RV-6A with Shoulder Pads

Our Part #	Part #	Color	RV-6A RV-7A RV-9A RV-14	Seat Belt	Harness	Price
05-04951	40002P	Red	5-Way Restraint 50" Seat Belt Pull Up Adj. With Y-Type Harness & Anti Submarine belt		Bolt in	**$191.85**
05-04950	40003P	Blue			Bolt in	**$193.85**
05-04948	40004P	Black			Bolt in	**$193.85**
05-04949	40007P	Gray			Bolt in	**$193.85**
05-12792	R40032P	Red			Latch & Link	**$193.85**
05-12793	R40033P	Blue			Latch & Link	**$193.85**
05-12794	R40034P	Black			Latch & Link	**$193.85**
05-12795	R40036P	Gray			Latch & Link	**$193.85**

Crow Cam Lock Restraint RV-6A WITHOUT Shoulder Pads

Our Part #	Part #	Color	RV-6A RV-7A RV-9A RV-14	Seat Belt	Harness	Price
05-04943	R40032	Red	5-Way Restraint 50" Seat Belt Pull Up Adj. With Y-Type Harness & Anti Submarine belt		Latch & Link	**$98.75**
05-04942	R40033	Blue			Latch & Link	**$98.75**
05-04940	R40034	Black			Latch & Link	**$98.75**
05-04941	R40036	Gray			Latch & Link	**$98.75**

Crow Cam Lock Restraint RV-8A with Shoulder Pads

Our Part #	Part #	Color	RV-8A	Seat Belt	Harness	Price
05-06422	40012P	Red	5-Way Restraint 50" Seat Belt Pull Up Adj. Individual Harness & Anti-Submarine Belt Front Seat Harness Wrap Around Back Seat Harness Bolt-in	Bolt-in	Bolt-in	**$382.95**
05-06423	40013P	Blue		Bolt-in	Bolt-in	**$382.95**
05-06424	40014P	Black		Bolt-in	W/A	**$382.95**
05-06425	40017P	Gray		Bolt-in	Bolt-in	**$382.95**

Crow Cam Lock Restraint RV-10A with Shoulder Pads

Our Part #	Part #	Color	RV-10A	Seat Belt	Harness	Price
05-06430	40022P	Red	5-Way Restraint 50" Seat Belt Pull Up Adj. Individual Harness & Anti-Submarine Belt Front Seat Harness Mount on Canopy with bent 45 degree bolt in ends.	Bolt-in	Bolt-in	**$191.75**
05-06431	40023P	Blue		Bolt-in	Bolt-in	**$191.75**
05-06432	40024P	Black		Bolt-in	Bolt-in	**$191.75**
05-06433	40027P	Gray		Bolt-in	Bolt-in	**$191.75**

CHRISTEN 820 AEROBATIC SEAT BELT/HARNESS SYSTEM



The Christen 820 Seat Belt/Harness System was designed specifically for use in unlimited-class competition aerobatic flying. The System holds the pilot firmly in the aircraft seat during high negative-g maneuvers and supports the body laterally against side forces during tumbling, slipping or knife-edge flight. Although of extremely light-weight design, all components are of the highest aviation quality, and the system is manufactured in full compliance with the requirements of FAA TSO C22f. The basic Christen 820 System consists of a black shoulder harness, lap belt and crotch strap. Also available are a lap pad, a secondary seat belt for back-up safety, and accessory hardware to facilitate installation in a variety of aircraft. The lap belt, crotch strap, and shoulder harness are locked in a single buckle with flush latch which provides positive retention. All belts are released quickly and simultaneously by simply lifting the edge of the buckle latch. Standard end fittings attach to airframe brackets using 5/16 inch bolts (not included). All metal components bright chrome plated. All webbing 2 inches wide, black color. Includes detailed product manual. Meets FAA TSO C22f, 180 lb. Tensile. Maximum extended lengths of belt assemblies from end fitting to connector are: shoulder harness 50 inches, buckle lap belt 30 inches, connector lap belt 32 inches, crotch strap 26 inches. Weight 2.9 lb.

Seat Belt/Harness System..... P/N 05-01133..**$1,185.00**
Lap Pad (Black)..... P/N 05-01134.....**$199.95**
Crotch Strap Connector for 7/8" Tubing... P/N 05-01135.....**$77.75**
Crotch Strap Connector for 1" Tubing..... P/N 05-01136.....**$83.75**
Seat Belt Brochure ..... P/N 05-01137.....**$0.95**

STT BELT/HARNESS CAM LOCK STRAPS

Cam Lock Seat Belts Harness. Cam Lock 2" Webbing Pull Down.
With crotch strap ..... P/N 05-12264.....**$154.50**
Without crotch strap ..... P/N 05-12262.....**$141.85**

Prices Subject to Change Without Notice

BALLISTIC PARACHUTES SYSTEMS



CANISTER - The BRS Canister is waterproof when the original factory seal remains intact, making it the perfect design for exterior installations. With a six year repack schedule and versatile mounting hardware, it is one of the most popular systems.

SOFTPACK - The BRS Softpack is best suited for aircraft manufacturers that require a ballistic parachute mounted inside their aircraft. When mounted internally, this system also has a six year repack schedule..

VLS - Built specifically for aircraft with limited interior space, the VLS (Vertical Launch System) installs on top of the wing or fuselage. Upward firing works well with pusher designed aircraft.

SEE OUR WEBSITE FOR COMPLETE LIST OF BRS SYSTEMS FOR GENERAL AVIATION, LSA, ULTRALIGHT, AND EXPERIMENTAL AIRCRAFT.

NAVION SEAT BELTS AND SHOULDER HARNESSES



Navion Shoulder Harness Kits
2 Point Read
3 Point Diagonal Systems

*Complete New Belt Assemblies
*Shoulder and Lap Belts for 2 Seats - Pilot & Co-Pilot
*All Required Hardware
*Instruction Manual
*Supplemental Type Certificate

Description	Part No.	Price
Bucket/Drill Tower - Front Pilot/Co-Pilot IR	05-15042	$496.00
Bucket/Drill Doublers - Front 3 Pt. Pilot/Co-Pilot DIR (Mounts to Seat)	05-15043	$496.00
Black Standard Tube Frame -Front 3 Pt. Pilot/ Co-Pilot DIR	05-15045	$496.00
Gray Standard Tube Frame - Front 3 Pt. Pilot/ Co-Pilot DIR	05-15046	$496.00
Fawn Standard Tube Frame - Front 3 Pt. Pilot/ Co-Pilot DIR	05-15047	$496.00
Rangemaster - Front 3 Pt. Pilot/Co-Pilot IR	05-15048	$496.00
Rear Seat Lap Belt - 2 Pt. Passenger Position	05-15049	$98.75
Rear Seat - 3 Pt. Restraint FS	05-15050	$386.00

CESSNA APPLIQUES



P/N 09-03759 *P/N 09-03762* *P/N 09-03763* *P/N 09-03764*

Cessna Seatbelt Buckle Applique ..... P/N 09-03759.....**$19.50**
Cessna SkyHawk II Yoke Button..... P/N 09-03762.....**$25.85**
Cessna Skyhawk Yoke Button ..... P/N 09-03763.....**$24.85**
Cessna Yoke Button..... P/N 09-03764.....**$40.80**

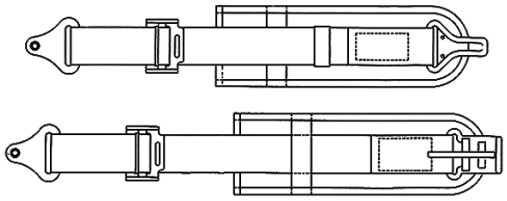
HOOKER CUSTOM HARNESSES

SPORT HARNESS SET (PER SEAT)

The popular Sport Harness kit from Hooker is ideal for a wide variety of experimental aircraft. The set includes one 1-3/4" military style seat belt, one 1-3/4" military style shoulder harness, one 1-3/4" crotch strap, one pad set and yoke assembly for front seat.

With pad set ..... P/N 13-00925.....**$310.00**
With pad rear..... P/N 13-08054.....**$249.95**
Without crotch strap ..... P/N 13-00930.....**$224.95**

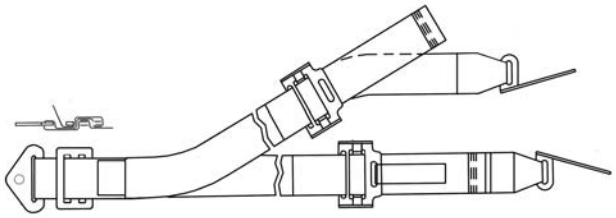
AEROBATIC HARNESS SET (PER SEAT)



The Hooker Aerobatic Harness kit is very popular with sport and competitive aerobatic pilots. The set includes two 1-3/4" military style seat belt, one 1-3/4" military style shoulder harness, one 1-3/4" crotch strap, one pad set and yoke assembly for front seat.
Note: The aerobatic is the same with the exception of the ratchet being replaced with a standard adjuster.

With one pad set.....P/N 13-00935 .....**$332.95**
With stainless ratchet tightener .....P/N 13-00950 .....**$442.00**

HOOKER CESSNA FIXED SHOULDER HARNESS KIT (PER SEAT)



This set includes new double adjustable seat belt, shoulder harness, installation kit with necessary hardware, brackets and the STC paperwork. The STC currently covers installation in Cessna models 120, 140, 140A, 150, 152, 170, 172, 175, 180, 182 (except R182 and TR 182), 185, 205, 206, and 210 (through F model). Installation of this set does not require drilling holes in the external skin or the removal of the wings. The installation is accomplished from within the airplane and installation time usually runs 60-90 minutes with the headliner removed. Pads are not included. .....P/N 13-00955 .....**$244.95**

NOT AVAILABLE IN THE REAR. SPECIFY AIRCRAFT TYPE & COLORS OF WEBBING WHEN ORDERING.

COLORS AVAILABLE (HOOKER)

2" Webbing: Red, Dragon Red, Burgundy, Orange, Air Force Gold, Olive Drab, Sage Green, Baby Blue, Royal Blue, Navy Blue, Tan, Beige, Silver Gray, Dark Gray, Black
1-3/4" Webbing: Red, Air Force Gold, Kelly Green, Olive Drab, Sage Green, Jade Green, Royal Blue, Navy Blue, Purple, Silver Gray, Dark Gray, Tan, Black
Pad Fabric: Red, Burgundy, Navy Blue, Royal Blue, Lemon Yellow, Air Force Gold, Dark Gray, Olive Drab, Sage Green, Silver Gray, **Pink,** Turquoise, Orange, Green, Jade, Lavender, Purple, Tan, Brown, Black
Trim: **Red,** Burgundy, Navy Blue, Royal Blue, Lemon Yellow, Air Force Gold, Dark Gray, Olive Drab, Sage Green, Silver Gray, Pink, Turquoise, Orange, Green, Jade, Brown, Lavender, Purple, Tan, Black

SPECIFY WEBBING,(PAD TRIM AND PAD COLORS WHERE APPLICABLE) WHEN ORDERING ALL HOOKER HARNESS PRODUCTS

PIPER SEATBELT BUCKLE PLACARD



This set of two beautiful seat belt placards installs on the buckle to add beauty and class to your seat belts. Each placard is silk-screened on chrome metallic Mylar and coated in a hard scratch-resistant clear epoxy that looks like crystal glass. They install quickly and easily with a special pressure-sensitive bonding adhesive.

Piper Seatbelt Buckle Placard (Qty. 2)... P/N 05-03638..... **$13.50**
Piper Seatbelt Buckle Placard (Qty. 4)... P/N 05-02448..... **$47.80**
Piper Seatbelt Buckle Placard (Qty. 6)... P/N 05-03640..... **$29.75**

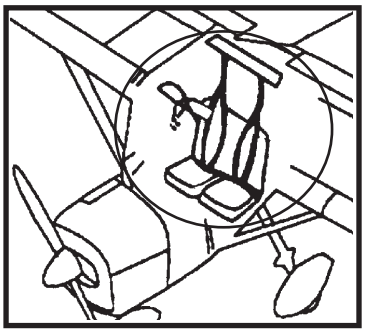
AP

CESSNA & PIPER SEAT BELTS & HARNESSES

BECAUSE WE KNOW SAFETY IS A PRIORITY IN YOUR AIRPLANE!

FAA Approved shoulder restraint systems in your aircraft provide the best possible safety for your crew and passengers. We developed these affordable systems for production aircraft in cooperation with the FAA, therefore each H-600 series comes with an FAA STC/PMA. Our high quality belts come in a full array of colors. The kits include one standard belt with a 3-bar slide (retain your present fitting), one "Y" style shoulder harness (with attaching hardware) and installation instructions.
Our line of seat belts and harnesses is constructed with the highest quality materials and with careful attention to workmanship. Each installation kit shown includes one belt, one harness, attaching hardware and installation instructions. The standard seat belt with 3-bar slide and the Y-style shoulder harness included is shown and described further on page 179.

CESSNA HARNESS KITS

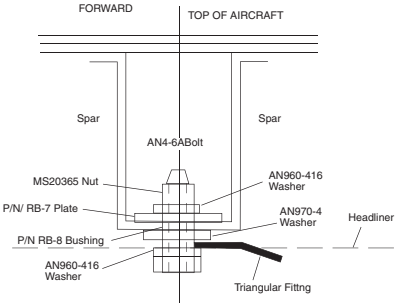


Harness/Seat Belt Installation Kits
Only $179.99 each

FAA Approved

FAA Approved

Typical Installation for Cessna Aircraft



Choose from the following kits for your FAA/STC/PMA approved installation For Cessnas!

Color	CESSNA 120/140	CESSNA 150A-H, J-M A152/152	CESSNA 170A & B	CESSNA 172, A-I,K,L-N, P F172N, P	CESSNA 175A,B,C	CESSNA 180 A-H, J, K	182, A-H J-N, P-R T,TR182	CESSNA 185A-E A185E	CESSNA 206, U206A-F TU206A-F	CESSNA 207, 207A T207, T207A
Black	13-00901-1	13-00902-1	13-00903-1	13-00904-1	13-00905-1	13-00906-1	13-00907-1	13-00908-1	13-00909-1	13-00910-1
Brown	13-00901-3	13-00902-3	13-00903-3	13-00904-3	13-00905-3	13-00906-3	13-00907-3	13-00908-3	13-00909-3	13-00910-3
Red	13-00901-5	13-00902-5	13-00903-5	13-00904-5	13-00905-5	13-00906-5	13-00907-5	13-00908-5	13-00909-5	13-00910-5
Navy	13-00901-2	13-00902-2	13-00903-2	13-00904-2	13-00905-2	13-00906-2	13-00907-2	13-00908-2	13-00909-2	13-00910-2
Royal Blue	13-00901-4	13-00902-4	13-00903-4	13-00904-4	13-00905-4	13-00906-4	13-00907-4	13-00908-4	13-00909-4	13-00910-4
Tan	13-00901-6	13-00902-6	13-00903-6	13-00904-6	13-00905-6	13-00906-6	13-00907-6	13-00908-6	13-00909-6	13-00910-6
Silver Gray	13-00901-8	13-00902-8	13-00903-8	13-00904-8	13-00905-8	13-00906-8	13-00907-8	13-00908-8	13-00909-8	13-00910-8
Olive Green	13-00901-7	13-00902-7	13-00903-7	13-00904-7	13-00905-7	13-00906-7	13-00907-7	13-00908-7	13-00909-7	13-00910-7

PIPER HARNESS KITS

FAA Approved!

PA-11 Harness Kits

	Front $191.75 ea.	Rear $222.95 ea.
Black	13-00913-1	13-00914-1
Navy	13-00913-2	13-00914-2
Brown	13-00913-3	13-00914-3
Royal Blue	13-00913-4	13-00914-4
Red	13-00913-5	13-00914-5
Tan	13-00913-6	13-00914-6
Olive Green	13-00913-7	13-00914-7
Silver Gray	13-00913-8	13-00914-8



PA-18 Harness Kits

	Front $179.95 ea.	Rear $242.95 ea.
Black	13-00921-1	13-00922-1
Navy	13-00921-2	13-00922-2
Brown	13-00921-3	13-00922-3
Royal Blue	13-00921-4	13-00922-4
Red	13-00921-5	13-00922-5
Tan	13-00921-6	13-00922-6
Olive Green	13-00921-7	13-00922-7
Silver Gray	13-00921-8	13-00922-8



PA-20 Front Seat Harness Kits ea.$179.95

Black	13-00915-1
Brown	13-00915-3
Red	13-00915-5
Navy	13-00915-2
Royal Blue	13-00915-4
Tan	13-00915-6
Silver Gray	13-00915-8
Olive Green	13-00915-7



PA-22 S-150, 160, PA-22/22-108, 135, 150, 160, Front Seat Harness Kits ea.$177.75

Black	13-00916-1
Brown	13-00916-3
Red	13-00916-5
Navy	13-00916-2
Royal Blue	13-00916-4
Tan	13-00916-6
Silver Gray	13-00916-8
Olive Green	13-00916-7



PA-28 Front Seat Harness Kits pr. $529.00
Includes seat belts, harnesses and hardware for front seats.

Black	*13-00917-1*
Navy	*13-00917-2*
Brown	*13-00917-3*
Royal Blue	*13-00917-4*
Red	*13-00917-5*
Tan	*13-00917-6*
Olive Green	*13-00917-7*
Silver Gray	*13-00917-8*



For ceiling vent system, modification may be needed to the existing system for our seat belt/shoulder harness installation. Drawings & instructions are unavailable for this modification.

AERONCA HARNESS KITS

Front $198.75 ea.

Black	13-00918-1
Navy	13-00918-2
Brown	13-00918-3
Royal Blue	13-00918-4
Red	13-00918-5
Tan	13-00918-6
Olive Green	13-00918-7
Silver Gray	13-00918-8

FAA Approved!



Rear $193.95 ea.

Black	13-00919-1
Navy	13-00919-2
Brown	13-00919-3
Royal Blue	13-00919-4
Red	13-00919-5
Tan	13-00919-6
Olive Green	13-00919-7
Silver Gray	13-00919-8

Note: Not approved for AC15 Aeronca

BEECH HARNESS KITS

35 Series A-G, R

Pilot $208.95 ea.

Black	13-00911-1
Navy	13-00911-2
Brown	13-00911-3
Royal Blue	13-00911-4
Red	13-00911-5
Tan	13-00911-6
Olive Green	13-00911-7
Silver Gray	13-00911-8

FAA Approved!



Co - Pilot $259.95 ea.

Black	13-00912-1
Navy	13-00912-2
Brown	13-00912-3
Royal Blue	13-00912-4
Red	13-00912-5
Tan	13-00912-6
Olive Green	13-00912-7
Silver Gray	13-00912-8

FAA Approved!

STINSON HARNESS KITS

Stinson 108-1, 2, 3 $191.75 each

Black	13-00920-1
Navy	13-00920-2
Brown	13-00920-3
Royal Blue	13-00920-4
Red	13-00920-5
Tan	13-00920-6
Olive Green	13-00920-7
Silver Gray	13-00920-8

FAA Approved!



Prices Subject to Change Without Notice

SEAT BELTS

FAA Approved!

Standard TSO'd. Standard metal to metal seat belt retrofits most popular production aircraft. High-strength nylon webbing, fully tested belt is rated at 1500 lbs. Belt features standard metal to metal type buckle and meets the latest FAA requirements. Adjusts from 13" to 62" in length.



Color	3-BAR SLIDE (Retain your present end fittings.) ea. $64.75	TRIANGULAR & 3-BAR SLIDE ea. $82.75	QUICK DISCONNECT & 3-BAR SLIDE ea. $106.75
Black	05-06225-2	05-06226-2	05-06227-2
Navy	05-06225-8	05-06226-8	05-06227-8
Brown	05-06225-7	05-06226-7	05-06227-7
Royal Blue	05-06225-6	05-06226-6	05-06227-6
Red	05-06225-5	05-06226-5	05-06227-5
Tan	05-06225-9	05-06226-9	05-06227-9
Olive Green	05-06225-3	05-06226-3	05-06227-3
Silver Gray	05-06225-4	05-06226-4	05-06227-4

Y-TYPE SHOULDER HARNESS

FAA Approved!

Hardware mates to buckle of model Cat. No. H-701 Series and most American Safety models. Retain your own aircraft fittings. Longest length, 79"; Shortest length, 29".1 lb. ea. ..... **$79.75 ea.**



Color	Part No.
Black	05-06228-2
Navy	05-06228-8
Brown	05-06228-7
Royal Blue	05-06228-6
Red	05-06228-5
Tan	05-06228-9
Olive Green	05-06228-3
Silver Gray	05-06228-4

TSO'd SEATBELTS PMA'd SHOULDER HARNESSES

SEAT BELTS & "Y" HARNESS COMBINATION

Set includes one Cat. No. H-701 series seat belt with 3 bar slide and one Cat. No. H-702 series "Y" type shoulder harness with metal to metal hardware. Hardware not included. Retain your own aircraft fittings. ..... **$135.75 each set**

Color	Part No.
Black	05-06236-2
Navy	05-06236-8
Brown	05-06236-7
Royal Blue	05-06236-6
Red	05-06236-5
Tan	05-06236-9
Olive Green	05-06236-3
Silver Gray	05-06236-4

END FITTINGS

Experimental Only.



P/N 05-06239



P/N 05-06237



P/N 05-06240



P/N 05-06241

Description	Part No.	Price
3-Bar Slide	05-06239	$7.50
Quick Disconnect Fitting	05-06237	$29.95
Triangular End Fitting	05-06240	$12.75
2" Chrome Seat Belt Tip Ends	05-06241	$4.70

2" SEAT BELT EXTENSIONS

Mates with Wag-Aero's seat belts only. 24" long. Experimental Only.



$47.50 ea.	Part No.	$47.50 ea.	Part No.
Black	05-06230-2	Red	05-06230-5
Navy	05-06230-8	Tan	05-06230-9
Brown	05-06230-7	Olive Green	05-06230-3
Royal Blue	05-06230-6	Silver Gray	05-06230-4

PIPER SEAT BELT DECAL



Hardware Not Included

The placard is silk-screened on chrome metallic Mylar and coated in a hard, scratch-resistant clear epoxy that looks like crystal glass. Easy to install with a special pressure-sensitive bonding adhesive. Once installed, they will not come off.

P/N 05-06242 ..... **$15.50 pr.**

AEROBATIC/MILITARY



FULL RESTRAINT

The ultimate for aerobatic competition, this full restraint system consists of a 3" lap belt with lap restraint pads, 2" shoulder harness with shoulder harness restraint pads, plus a fully adjustable crotch strap. Unique features allow for quick comfort adjustment, including a positive lock buckle with quick release. Black. 1500 lb. rating. Lap belt portion of restraint system is TSO'd.

Complete System

P/N 05-06238 ..... **$286.95**

FAA Approved!

MILITARY STYLE SEAT BELT

TSO'd. 3" metal to metal, heavy duty construction with military style quick release buckle for convenience. Extra strength webbing provides increased durability. Complete with triangle end fittings to accommodate most aircraft. Retain your own aircraft fittings. Adjusts from 33-1/2" to 49-1/2" in length..... **$172.80 ea.**



Color	Part No.
Black	13-01100
Olive Green	13-04106
Neutral	13-04119
Silver Gray	13-04109

Color	Part No.
Red	13-04122
Royal Blue	13-04125
Brown	13-04128
Navy	13-04131
Tan	13-04134

AEROBATIC SHOULDER HARNESSES



Metal fitting for attachment to seat belt buckle. Easily adjustable, harness combines with the 3" aerobatic seat belt for a matched set. Retain your own aircraft fittings. Experimental Only.



Divided Harnesses	Part No.	Y-Style Harnesses	Part No.
Black	05-06232-2	Black	13-01200
Olive Green	05-06232-3	Olive Green	13-04107
Neutral	05-06232-1	Neutral	05-06234-1
Silver Gray	05-06232-4	Silver Gray	13-04110
Red	05-06232-5	Red	13-04123
Royal Blue	05-06232-6	Royal Blue	05-06234-6
Brown	05-06232-7	Brown	13-04129
Navy	05-06232-8	Navy	13-04132
Tan	05-06232-9	Tan	13-04135

ADJUSTABLE CROTCH STRAP

Experimental Only

Color	Part No.	Price
Black	05-06233-2	$51.75
Navy	05-06233-8	$52.75
Brown	05-06233-7	$34.65
Royal Blue	05-06233-6	$52.75
Red	05-06233-5	$50.00
Tan	05-06233-9	$46.25
Silver Gray	05-06233-4	$46.25
Lap Restraint Pads (Black)	13-10271	$26.75/pr.
Shoulder G-Restraint Pads (Black)	13-10272	$26.75/pr.

SEAT BELT WEBBING

Minimum order: 5 yards.

Meets AN, MS, NAS, or Mil. Spec.

	2" Webbing		3" Webbing	
Color	Part No.	Price/yd	Part No.	Price/yd
Black	05-06224-2	$9.50	05-06223-2	$14.50
Navy	05-06224-8	$9.50	05-06223-8	$8.50
Brown	05-06224-7	$9.65	05-06223-7	$9.70
Royal Blue	05-06224-6	$9.50	05-06223-6	$13.50
Red	05-06224-5	$9.55	05-06223-5	$13.50
Tan	05-06224-9	$8.80	05-06223-9	$13.50
Olive Green	05-06224-3	$9.50	05-06223-3	$12.90
Silver Gray	05-06224-4	$9.95	05-06223-4	$8.50

AP

STC'D SEAT BELTS & SHOULDER HARNESSES

ALPHA AVIATION RESTRAINT SYSTEMS

Note: FAA/ STC/ PMA Installation kits include complete new TSO-C114 belt assemblies for each pilot position. FAA/ STC/ PMA Installation kits include all hardware to upgrade both pilot positions. OEM quality, AMSAFE Incorporated belt assemblies meeting TSO-C114. Standard colors are black, gray & fawn. For custom colors, please order the color swatches (P/N 05-03146). STC sets are for two seats; OEM sets are for one seat..



BEECHCRAFT STC SHOULDER HARNESS KITS

3 Point Diagonal Systems

* Complete New Belt Assemblies
* Shoulder and Lap Belts for 2 Seats-Pilot & Co-Pilot
* All Required Hardware
* Instruction Manual
* Supplemental Type Certificate

STC, 3RS-114FS Fixed Restraint, Kit..... P/N 05-03127 ..... **$999.00**
STC, 3RS-114IR Inertial Reel, Kit..... P/N 05-03128 .. **$1,299.00**
Beechcraft Replacement Rear Lap Belt ..... P/N 05-06886 ..... **$177.90**

BEECHCRAFT APPROVED MODEL GUIDE							
35	H35	36	35-33	95	B95	A56TC	58
35R	J35	A36	35-A33	95-5	B95A		58A
A35	K35		35-B33	95-A55	D95A		
B35	M35		35-C33	95-B55			
C35	N35		35-C33A	95-B55A	D55		
D35	P35			95-B55B	D55A		
E35	S35		E33	95-C55			
F35	V35		E33A	95-C55A	E55		
G35	V35A		E33C		E55A		
	V35B				E95		
			F33				
			F33A				
			F33C				
			G33				



CESSNA STC SHOULDER HARNESS KITS

Cessna Shoulder Harness Kits

* New Belt Assemblies -Shoulder & Lap Belts for Pilot & Co-Pilot
* All Required Hardware
* Instruction Manual
* Supplemental Type Certificate

STC, C100-114IR, Front Inertial Reel, Kit..... P/N 05-03131 .. **$1,099.00**
Cessna STC, C100-114FS,
Front Fix Strap, Kit..... P/N 05-04193 ..... **$899.00**

Cessna 100 Model List						
Original Type Certificate #	Aircraft Models					
A-799	170	170A	170B			
3A12	172	172A	172B	172C	172D	172E
	172F	172G	172H*	172I	172K	
*172F (USAFT41A) *172H (USAFT41A)						
3A17	175	175A	175B	175C	P172D	
5A6	180	180S	180B	180C	180D	180E
	180F	180G	180H			
3A13	182	182A	182B	182C	182D	182E
	182F	182G	182H	185J	182K	182L
	182M	182N	182P			
3A24	185	185A	185B	185C	185D	185E
	A185E	A185F				



CESSNA OEM REPLACEMENT BELTS

* Replace Your Existing Shoulder Harnesses
* Complete New Belt Assemblies - Shoulder and Lap Belts

Cessna 100/200 OEM Replacement
Front, Fixed Strap (Sold as each) ..... P/N 05-03132 ..... **$369.00**
Cessna 100/200 OEM
Replacement Inertial Reel, Upgrade. Sold as each.
P/N 05-03133 ..... **$489.00**
Cessna OEM Replacement (all models)
Rear Lap Belts (Sold as each) ..... P/N 05-06887 ..... **$98.99**



177, 177A NEEDING SHOULDER HARNESS INSTALLATION KIT

177B Replacement Belt Assemblies OEM Replacement, 3-Point Restraint Systems

* Replace Your Existing Shoulder Harnesses
* Complete New Belt Assemblies - Shoulder and Lap Belts

Cessna 177/177A Minor Change Kit ..... P/N 05-03135 ..... **$20.00**

PA 23 STC APPROVED MODELS		
PA-23	PA-23-160	PA23-235
PA-23-250	PA-E23-250	
PA28/32 STC APPROVED MODELS		
PA28-140	PA28R-180	PA32-260
PA28-150	PA28R-200	PA-32-300
PA28-160		
PA28-180	PA28S-160	PA32S-300
PA28-235	PA28S-180	



MOONEY SHOULDER HARNESS INSTALLATION

3 Point Diagonal Systems

* M20, A, B, C, D, E, F, G 3 Point Diagonal Harness Installation
* M20J Replacement Seat Belts
* Complete New Belt Assemblies - Shoulder and Lap Belts

3-Point System "Minor Change Kit" M20 A-G (Includes the Required Hardware for Two Pilot Positions)..... P/N 05-03139 ..... **$19.75**
Mooney M20 Inertial Reel Upgrade
Front Inertial Reel 1..... P/N 05-06891 .... **$489.00**
Mooney M20 Replacement
Front Fixed Strap ..... P/N 05-06890 .... **$369.00**
Mooney Replacement Rear Lap Belt ..... P/N 05-06888 ..... **$98.99**



PIPER STC SHOULDER HARNESS KITS

3 Point Diagonal Systems

* Complete New Belt Assemblies
* Shoulder and Lap Belts for 2 Seats - Pilot & Co-Pilot
* All Required Hardware
* Instruction Manual
* Supplemental Type Certificate

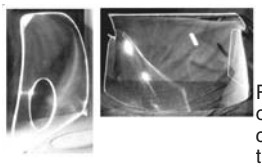
STC, PA23-114IR Front Inertial Reel, Kit..... P/N 05-03141 .. **$1,099.00**
Piper STC, PA28-1141R Front
Inertial Reel, Kit ..... P/N 05-03143 .. **$1,199.00**
Piper OEM Replacement Front Inertial Reel ..... P/N 05-04194 ..... **$489.00**
Piper Replacement All Model Rear Lap Belt ..... P/N 05-03134 ..... **$98.99**
Piper STC, PA23-114FS Front Fixed Strap, Kit ..... P/N 05-03140 ..... **$899.00**
Piper STC, PA24-114FS Front Fixed Strap, Kit ..... P/N 05-04928 ..... **$999.00**
Piper STC, PA24-114IR Front Inertial Reel, Kit..... P/N 05-04929 .. **$1,199.00**
Piper STC, PA28-114FS Front Fixed Strap, Kit ..... P/N 05-04930 ..... **$999.00**

COLOR SWATCHES

Color swatches for your desired color group are available to be shipped to you via priority mail. When you have chosen your color, you can place your order by phone (1-877-4-SPRUCE) or order online. Then return the color swatches to Aircraft Spruce and we will credit you the $25.00 charge when you place your order for seatbelts/harnesses. For domestic orders only. International customers, please call for pricing. Custom color belts/ harnesses are special order and are non-returnable. Lead time is three weeks for a custom color order.

P/N 05-03146..... **$25.00**

L&P AERO WINDSHIELDS



L&P AERO WINDSHIELDS
COMPLETE WINDOW SETS - SKYLIGHTS -LANDING LIGHT LENSES

Replacement glass for over 350 different aircraft models from the oldest to the latest production - both domestic and foreign. Each can be confirmed with serial and model number, year of manufacture, thickness of material and cross-referenced with OEM part number. Manufactured of high optic quality acrylics. Available in clear, green and solar gray tints. For ease of installation, they are trimmed to OEM specifications with instructions furnished. Our manufacturer's quality control systems are approved by both the FAA and the Department of Defense. To assure quick delivery at minimum cost, orders are shipped directly from our manufacturer's warehouse in Pennsylvania or California. Extensive inventories on hand in both locations making shipment possible in 24 hours in most cases. Generally speaking, one-piece windshields require shipment by motor freight, two-piece windshields can be shipped by United Parcel Service. Windshields requiring motor freight shipment on the following list are marked with an asterisk. Attractive Air Freight rates All windshields/windows are special order, they are non-cancelable and non-returnable. Only a few models are listed - over 35 available. Advise complete aircraft model and serial number, Leave the rest to us!

VISIT WWW.AIRCRAFTSPRUCE.COM FOR MORE INFORMATION AND MODELS AVAILABLE.

FLY COOLER, HEALTHIER AND SMARTER

with UV-SG and UV-GT tint windshields and windows from LP Aero Plastics

Say so long to sun damage. Blocking the sun's damaging rays benefits you, your passengers and your aircraft. With far less UV and IR radiation entering the cabin, occupants are less likely to suffer sun-related skin and eye damage - and they'll enjoy cooler cabin temperatures to boot. **UV-SG Solar Gray and UV-GT Green tints can reduce interior temperatures by as much as 20 degrees.** While you and your passengers bask in greater comfort, you'll also reduce the workload on the air conditioning systems. UV and IR radiation can also wreak havoc on avionics and interior components, such as plastic panels and seat materials. That damage is significantly reduced with the UV-SG and UV-GT tints.

Aircraft	Clear PN	Clear Price	Smoke PN	Smoke Price	Green PN	Green Price
192 Aeronca Citabria 7ECA, 7GC4A, 7GCBC, 7KCAB	192C	$266.95	192SG	$266.95	192C	$266.95
Aeronca Chief 11AC, BC, CC	05-02177	$244.95	05-02229	$295.95	05-02228	$294.95
Bellanca Viking	05-02188	$387.00	05-02231	$461.00	05-02330	$461.00
Beech Bonanza Lft. 187 thru G-35	250C	$140.75	05-02227	$168.75	05-02226	$168.75
Beech Bonanza Rt. 187 thru G-35	251C	$140.75	05-02233	$169.75	05-02232	$169.75
Beech Bonanza Lft. 250 H-35-V-35, Baron 55	280C	$259.95	05-02235	$309.00	05-02234	$309.00
Beech Bonanza Rt. 250 H-35-V-35, Baron 55	281C	$259.95	05-02237	$309.00	05-02236	$322.00
Cessna 120-140 S/N 8001 to 8799	301C	$267.95	05-02239	$319.00	05-02238	$322.00
Cessna 120-140 S/N 8800 + up	300C	$266.95	300SG	$321.00	05-02240	$329.00
Cessna 140A, 150, 152	303C	$260.95	303SG	$314.00	303G	$317.00
Cessna 170 1948-49 to S/N 18728	310C	$264.95	05-02242	$318.00	--	--
Cessna 170A S/N 18729 to 20676	306C	$275.95	05-02243	$334.00	05-02244	$334.00
Cessna 172 S/N 47747 to 49544	05-02178	$354.00	05-02245	$426.00	05-02246	$426.00
Cessna 170B S/N 20267+up 1952 to 1955	312C	$288.95	05-02247	$345.00	312G	$343.00
Cessna 172 S/N 28000 to 47746	312C	$288.95	05-02247	$345.00	312G	$343.00
Cessna 172 S/N49545 to 50572	313C	$366.00	05-02250	$440.00	05-02249	$441.00
Cessna 172 S/N 50573 to 72884	345C	$367.00	345SG	$439.00	345G	$439.00
Cessna 172 S/N 72885 & up	337C	$341.00	05-02251	$412.00	337G	$411.00
Cessna R172K S/N R2000 to R3199	05-02179	$497.00	05-02252	$595.00	05-02179	$497.00
Cessna 177, 177RG	329C	$412.00	05-02253	$496.00	05-02254	$498.00
Cessna 180 S/N 30000 to 31260	309C	$339.00	05-02255	$405.00	05-02256	$407.00
Cessna 180 S/N 31261 to 50355	315C	$399.00	05-02257	$479.00	05-02258	$479.00
Cessna 180 S/N 50356 to 51183	316C	$399.00	316SG	$478.00	05-02259	$478.00
Cessna 182 S/N 33000-51556	315C	$399.00	05-02257	$479.00	05-02258	$479.00
Cessna 182 S/N 52556-53598	316C	$399.00	316SG	$478.00	05-02259	$478.00
Cessna 182 S/N 53599 to 55844	338C	$439.00	05-02262	$526.00	05-02261	$525.00
Cessna 182 S/N 55845 to 64296	339C	$468.00	339SG	$560.00	339G	$558.00
Cessna 205	325C	$397.00	05-02263	$476.00	05-02264	$476.00
Cessna 206 S/N U206-0001 thru U206-0437	325C	$397.00	05-02263	$476.00	05-02264	$476.00
Cessna P206 S/N 0001 thru 0160	325C	$397.00	05-02263	$476.00	05-02264	$476.00
Cessna U206 S/N 0438+up	326C	$470.00	05-02265	$560.00	326G	$560.00
Cessna P206 S/N 0161+up	326C	$470.00	05-02265	$560.00	326G	$560.00
Cessna 207	05-02180	$469.00	05-02269	$561.00	05-02268	$561.00
Cessna 210 S/N 57841 to 58220	325C	$397.00	05-02263	$476.00	05-02264	$476.00
Cessna 210 S/N 58221 to 58510	05-02182	$397.00	05-02266	$476.00	05-02267	$476.00
Cessna 210 S/N 58511 to 58715	325C	$397.00	05-02263	$476.00	05-02264	$476.00
Cessna 210 S/N 58716 to 58818	326C	$470.00	05-02265	$560.00	326G	$560.00
Cessna 210 S/N 58937 + up	05-02183	$437.00	05-02271	$525.00	05-02270	$522.00
Cessna 310 S/N 35000 to 35546	05-02184	$419.00	05-02272	$502.00	05-02273	$502.00
Cessna 310 S/N 35547 to 39299	05-02187	$408.00	05-02275	$490.00	05-02274	$490.00
Cessna 310 S/N 310-0001 to 310 K-0245	05-02187	$408.00	05-02275	$490.00	05-02274	$490.00
Cessna 310 S/N Looo1 to 310Q0400	05-02185	$609.00	05-02277	$728.00	05-02276	$730.00
Cessna 310 S/N Q0401+up	05-02186	$673.00	05-02280	$808.00	05-02281	$808.00

Aircraft	Clear PN	Clear Price	Smoke PN	Smoke Price	Green PN	Green Price
Ercoupe 415 or G-Bubble	351C	$399.00	05-02283	$377.00	05-02285	$376.00
Grumman AA1, AA1A, AA1B	657C	$337.00	05-02286	$403.00	05-02287	$403.00
Grumman AA1,AAA-1A, AA-1B Canopy	658C	$379.00	05-02288	$453.00	05-02289	$453.00
Grumman AA5, AA-5A, AA5B	05-02189	$556.00	05-02290	$667.00	05-02291	$665.00
Luscombe 8 Series	400C	$207.95	400SG	$250.95	--	--
Mooney MK20-21,1959-64 Lft.	100C	$151.75	05-02292	$159.90	05-02293	$159.90
Mooney MK 20-21,1959-64 Rt.	101C	$151.75	05-02294	$159.90	05-02295	$159.90
Mooney 1965-1969 (4 cabin Windows) Lft.	133C	$143.75	05-02296	$169.95	05-02297	$169.95
Mooney 1965-1969 (4 cabin Windows) Rt	134C	$143.75	05-02298	$169.95	05-02299	$169.95
Mooney 1967-1969 (6 cabin Windows 1 pc.)	05-02190	$187.75	05-02301	$221.95	05-02302	$222.95
Mooney M20J and M20K	05-02192	$316.00	05-02303	$376.00	05-02304	$378.00
Piper J-3	450C	$156.75	450SG	$183.75	05-02278	$184.75
Piper PA-12-Round Top	455C	$218.95	05-02305	$261.95	05-02306	$261.95
Piper PA-12 Square Top	456C	$248.95	456SG	$260.95	05-02352	$261.95
Piper PA-15, 16, 17	459C	$262.95	05-02308	$317.00	05-06842	$317.00
Piper PA-22 Tripacer, 108 Colt, Bubble	463C	$262.95	463SG	$317.00	463G	$317.00
Piper PA-23 Apache S/N 1502 + up Rt.	05-02193	$287.95	05-02310	$347.00	05-02311	$347.00
Piper PA-23-250 S/N 27-2000 +up Lft.	421C	$297.95	05-02312	$356.00	05-02313	$356.00
Piper PA-23-250 S/N 27-2000 + up Rt.	422C	$297.95	05-02314	$356.00	05-02315	$356.00
Piper PA-24 Comanche Lft.	05-02194	$183.75	05-02316	$219.95	05-02317	$219.95
Piper PA-24 Comanche Rt.	05-02195	$183.75	05-02320	$219.95	05-02321	$219.95
Piper PA-25 Pawnee S/N 1-655	485C	$156.75	05-02318	$173.75	05-02319	$174.90
Piper PA-25 Pawnee S/N 656 + up	486C	$145.75	05-02322	$173.75	05-02323	$174.90
Piper PA-28 Cherokee S/N 1 + up Lft. (.125)	490C	$148.75	490SG	$177.95	490G	$176.75
Piper 28 Cherokee S/N 1 + up Rt. (.125)	491C	$148.75	491SG	$177.95	491G	$176.75
Piper PA-28 Cherokee (.250) Lft.	905C	$172.95	905SG	$207.95	05-02324	$207.95
Piper PA-28 Cherokee (.250) Rt.	907C	$172.95	907SG	$207.95	05-02325	$207.95
Piper PA-32-260 S/N 1-7300076 Lft.	492C	$163.75	05-02326	$191.75	05-02327	$192.75
Piper PA-32-260 S/N 1-7300076 Rt.	493C	$161.95	05-02328	$191.75	05-02329	$192.75
Piper PA-38-112 Tomahawk S/N 78A0001 to 82A0122	795C	$504.00	05-02330	$602.00	05-02331	$603.00
Rockwell 112, 114	508C	$427.00	05-02332	$511.00	05-02333	$511.00
Stinson 108 Lft.	552C	$163.00	05-02334	$194.99	05-02335	$194.99
Stinson 108 Rt.	553C	$163.00	05-02336	$194.99	05-02337	$194.99
T/Craft BC-12d,1946+up	650C	$245.95	05-02338	$292.95	05-02339	$291.95
T/Craft BC-1940-41, Pre-war BC-65	651C	$249.95	05-02340	$296.95	05-02341	----
Piper PA-28 Cherokee A-28, -140, -150, -160, -180, -235	055C	$55.75	05-02346	$84.75	05-02347	$84.75
Cessna 152, A152, F152, FA152	303/302C	$291.95	303/302SG	$351.00	303/302G	$350.00
Cessna 152, A152, F152, FA152	312/CMB	$434.00	05-02353	$497.00	05-02354	$497.00
Cessna 170B S/N 20267+up 1952 to 1955	312/CON	$411.00	05-02359	$477.00	05-02360	$477.00
Cessna 150, A150, F150, FA150	360C	$206.95	05-02348	$246.95	05-02349	$246.95
PA-18,PA-19(L-18C)	464C	$215.95	462SG	$315.00	05-02350	$256.95
PA-20,PA-22	462C	$261.95	462SG	$315.00	462G	$317.00
Cessna 172,P172,F172	05-02358		05-02351	$231.95	389G	$230.95

L & P AERO HEAVY THICKNESS WINDSHIELDS

STC Conversions

We now carry these STC Conversion extra thick windshields which are FAA approved for the following aircraft and which install as easily as the standard .250 thick windshields. Available in 3 thicknesses.

Available In Three Thicknesses

Part No.	Thickness	Price
269.312	.312	$869.00
269.375	.375	948.00
269.500	.500	1,098.00

Note: Verify that your serial number is eligible before ordering.

FAA APPROVAL LIST

Beech Bonanza F33
s/n CD-1235 – CD 1254
Beech Bonanza G33
s/n CD-1255 – CD 1304
Beech Bonanza F33A
s/n CE-290 and up
Beech Bonanza F33C
s/n CJ-26 and up
Beech Bonanza 33 thru E33A
s/n CD-1 – CD-1234,CE-1 - CE-289, CJ-1 – CJ-25
Beech Bonanza H35 thru V35A-TC
s/n D4866 – D9068
Beech Bonanza V35B thru V-35B-TC
s/n D9069 and up
Beech Bonanza 36 & A36
s/n E-1 and up
Beech Bonanza A36TC & B36TC
s/n EA-1 and up
Beech Baron 58 & 58A
s/n TH-1 and up
Beech Baron TC58 & 58TCA
s/n TK-1 and up
Beech Travelair 95 thru E95
s/n TD-1 – TD-721

CESSNA 150/152/172/177/182/210 WINDOWS

Aircraft Spruce stocks replacement windows for Cessna single and twin engine aircraft as well as all windshields and windows manufactured by LP Aero Plastics. Call or email Aircraft Spruce for quotation and specify year, serial number of aircraft and windows required.

Call: 1-877-4SPRUCE • Email: info@aircraftspruce.com



WINDSHIELD INSTALLATION ACCESSORIES

This is an adhesive backed, closed cell foam tape which is available as a 100' roll. This tape can be wrapped around the edges of the windows to both cushion and seal. DO NOT STRETCH DURING APPLICATION, IT WILL PULL BACK AND LEAVE GAPS. Piper used this extensively in their window installations.

1/4"x1/16" x 100' roll..... P/N 05-99100 . **$29.85/rl**
1-1/4" x 1/16" x 25" roll..... P/N 05-04864 . **$19.95/rl**
1-1/4" X 1/16" ..... P/N 05-02132 ... **$0.55/ft**
Felt – Adhesive-backed 1-1/2" x 1/16"..... P/N 05-99110 ... **$4.35/ft**



FOAM TAPE

An adhesive backed, closed cell foam tape. Can be wrapped around the edges of the windows to both cushion and seal. Do not stretch during application, it will pull back and leave gaps. Piper used this extensively in their window installations. The 1/4" tape IS used mainly for vent window gaskets. 1/4" x 1/8" x 10' Roll ..... P/N 05-04754 ..... **$9.90**

AEROCANOPY EXPERIMENTAL CANOPIES

Aircraft	Clear	Buy Clear	Tinted	Buy Tinted
Aerocanard	05-15281	**$785.00**	05-15282	**$785.00**
Christian Eagle	05-15283	**$675.00**	05-15284	**$675.00**
Cozy-4	05-15285	**$785.00**	05-15286	**$785.00**
Dr-107	05-15287	**$325.00**	05-15288	**$325.00**
Extra 230	05-15289	**$325.00**	05-15290	**$325.00**
Extra 300	05-15291	**$675.00**	05-15292	**$675.00**
Extra 300 1 Place	05-15293	**$610.00**	05-15294	**$610.00**
Harmon Rocket	05-15295	**$675.00**	05-15296	**$675.00**
Long EZ	05-15297	**$675.00**	05-15298	**$675.00**
Pitts S-1	05-15299	**$325.00**	05-15301	**$325.00**
Pitts S-2	05-15302	**$675.00**	05-15303	**$675.00**
RV-3	05-15304	**$550.00**	05-15305	**$550.00**
RV-4	05-15306	**$675.00**	05-15307	**$675.00**
RV-8	05-15308	**$675.00**	05-15309	**$675.00**
Skybolt	05-15310	**$675.00**	05-15311	**$675.00**
Sonerai II	05-15312	**$495.00**	05-15313	**$495.00**
Zenith Zodiac Ch-250	05-15314	**$495.00**	05-15315	**$495.00**
Zenith Zodiac 601	05-15316	**$525.00**	05-15317	**$525.00**

L & P AERO INDIVIDUAL WINDOWS

Window Model No.	Aircraft	Description	Each
231	Aeronca	Left front sliding-forward	**$32.95**
232	7AC	Left front sliding-rearward	**$27.95**
233		Left or Right rear	**$44.95**
234		Right front door	**$37.95**
225	Aeronca	Left or Right front door (sliding)	**$28.95**
226	11AC	Left or Right rear (Door) (sliding)	**$28.95**
227		Left or Right rear	**$31.95**
342	Cessna	Left or Right door	**$43.50**
343	120/140	Left or Right rear	**$31.50**
344		Left or Right skylight	**$33.50**
370	Cessna	Left or Right rear	**$38.00**
374	170	Left or Right door	**$52.00**
362	Cessna	Left or Right rear	**$31.50**
369	180	Left or Right door	**$62.50**
006	J-3	Skylight	**$34.95**
008		Left front triangle	**$23.95**
009		Left pilot sliding	**$34.95**
010		Left rear	**$33.95**
011		Right rear	**$27.95**
012		Right door	**$45.95**
436	PA-12	Left front (sliding)	**$28.00**
437		Left rear	**$29.00**
438		Door	**$28.00**
439		Right rear	**$24.50**
015	PA-16,20	Right door	**$31.95**
016	22	Right rear	**$17.95**
021		Left front stationary	**$27.95**
017		Left front sliding	**$27.00**
019		Left rear door	**$17.95**
465	PA-18	Right door	**$47.75**
466		Right or Left rear	**$24.50**
467		Rear sliding	**$36.50**
468		Front sliding (left)	**$36.50**
469		Left pilot	**$22.95**
020	Late PA-20	Left or Right square (rear)	**$22.95**
021		Left front pilot	**$26.95**
023		pilot-vented	**$13.00**

SEE OUR WEBSITE FOR COMPLETE LIST OF LP AERO WINDSHIELDS AND WINDOWS.

GREAT LAKES AERO WINDSHIELDS & WINDOWS

Great Lakes Aero windshields and windows are made from Acrylic sheet conforming applicable portions of ASTM D-4802, LP-391 & MIL-P-5425-D and are FAA/PMA Approved.

Most vent windows or pilot windows which have a vent hole will come with a vent seal. Most single engine Cessna windshields and rear windows come with the felt tape for the edges. PA-28, 32, 34 & 44 Windshields are also supplied with the Foam tape. For some Cessna side windows Rubber U-Channel or the Felt tape is available at an additional cost, and the foam tape used on some Piper side windows is also available (specify at time of order).

It is recommended that all installations are done by a certified A&P, and the proper installation manuals, installation procedures & practices recommended by the aircraft manufacturer are followed.

Special order PN: 00-00100

Please provide the required Info: • Aircraft Make • Aircraft Model • Complete Engine# • Aircraft Serial#.

Prices Subject to Change Without Notice

ASHBY AIRCRAFT GLARESHIELDS



ASHBY AIRCRAFT GLARESHIELDS

Produced from 100% fiberglass that is hand-laminated to form a one-piece structure. They are manufactured out of fire retardant resin that meets Federal Aviation Regulations (FAR) parts 23 and 25. Prevent sun from reflecting in your instruments, allowing you to read them clearly. It will also protect sensitive instruments from heat and is impervious to damage from the sun's rays. Molded with a rich leather texture, which is pleasing to the eye, and has a semi-gloss black finish. On most models it fits flush with the windshield, and extending 3" past the front of the panel. A reinforced lip for mounting optional lights to illuminate the instrument panel, which also serves as hand-holds when entering and exiting the cockpit, or when adjusting your seats. There is also space for switches and annunciator lights. This part can be manufactured under contract with the owner operator under FAR 21.303b2. It is the owner operator's responsibility to determine airworthiness and applicability.

CESSNA

For Model	Glareshield		w/ 12V Lights		w/24V Lights	
	Part No/	Price	Part No/	Price	Part No/	Price
120, 140, 150 (thru F, 1959-1966),	05-03871	**$325.00**	05-03908	**$401.95**	05-03945	**$401.95**
152 (1978-1986)	05-03872	**$325.00**	05-03909	**$401.95**	05-03946	**$401.95**
170, 170A (1948-1951), 172 (1956-1958)	05-03873	**$325.00**	05-03910	**$507.00**	05-03947	**$453.95**
170B, 1952-1956	05-03874	**$325.00**	05-03911	**$507.00**	05-03948	**$453.95**
172A thru D(1960-1963), 175 (all)	05-03876	**$325.00**	05-03913	**$507.00**	05-03950	**$453.95**
***172** 1959 only*	05-03875	**$325.00**	05-03912	**$507.00**	05-03949	**$453.95**
172E thru N, 172P, 172Q, 172XP, 172RG 1974-1986 (all)	05-03877 Stc'd	**$325.00**	05-03914	**$507.00**	05-03951	**$453.95**
*180A thru H, 182 thru D, **185** thru E, F Models Prior to 1974*	05-03878 Stc'd	**$325.00**	05-03915	**$507.00**	05-03952	**$453.95**
***180J, 185** (1974-1986)*	05-03879	**$325.00**	05-03916	**$507.00**	05-03953	**$453.95**
***182** (1962-1963)*	05-03880	**$325.00**	05-03917	**$507.00**	05-03954	**$453.95**
182 1964-1965 (Early Slight Radius on Top.)	05-03881	**$325.00**	05-03920	**$507.00**	05-03957	**$453.95**
182 (1969-1974)	05-03884	**$325.00**	05-03921	**$507.00**	05-03958	**$453.95**
182 (1975 only)	05-03885	**$325.00**	05-03922	**$507.00**	05-03959	**$453.95**
182 1976-1986, 182R	05-03886	**$325.00**	05-03923	**$507.00**	05-03960	**$453.95**
205 (1963-1965 early)	05-03887	**$325.00**	05-03924	**$507.00**	05-03961	**$453.95**
206 1965 (Late) -1967 Not avail. for 1968-1969, 210 1965 (Late) -1967 Not avail. for 1968-1969.	05-03888	**$325.00**	05-03925	**$507.00**	05-03962	**$453.95**
206 (1970-1986), 210 (1970-1986)	05-03889	**$325.00**	05-03926	**$507.00**	05-03963	**$453.95**
210 (1960-1961)	05-03890	**$325.00**	05-03927	**$507.00**	05-03964	**$453.95**
210 (1962 only)	05-03891	**$325.00**	05-03928	**$507.00**	05-03965	**$453.95**
XP210	05-04096	**$325.00**	05-04097	**$532.00**	05-04098	**$459.95**
336 (all), 337 (all)	05-03892	**$285.00**	05-03929	**$467.95**	05-03966	**$413.95**

PIPER

For Model	Glareshield		w/ 12V Lights		w/24V Lights	
	Part No/	Price	Part No/	Price	Part No/	Price
PA-23 (1956-1963)	05-03893	**$325.00**	05-03930	**$507.00**	05-03967	**$453.95**
PA-24, PA24-250, 260, 400, PA-30 (all)	05-03894 Stc'd	**$325.00**	05-03931	**$507.00**	05-03969	**$453.95**
*PA-28-140, 150, 151, 160, 161, 181, 201T, 235, 236, **PA-28S**-160, 180, **PA-28R**-180, 200, 201, 201T, **PA-28RT**-201, 201T, **PA-44**-180, 180T*	05-03895 Stc'd	**$325.00**	05-03932	**$507.00**	05-03970	**$453.95**

PIPER PA28/32/34 GLARESHIELDS



These beautiful new Glareshields are designed for the Piper models PA28, PA32 and PA34. The new Glareshield is made of FAA approved temperature stable Lexan covered with sound proofing foam and a new non-glare vinyl that looks like leather. With a 3 inch eyebrow over the instrument panel, it not only adds beauty to your plane but also improves forward visibility. The new Glareshield is easy to install and comes with all hardware and detailed instructions. The standard PA-28 glare shield has 20 inches from center to center between the defroster holes and has the SCAT defroster hose application. This is most PA-28 aircraft made before 1974. Post 1978 aircraft have 22 2/4" separation between holes, and a fiberglass distribution system. Please confirm applicability and dimensional information prior to order.

Piper PA28 Pre 1974..... P/N 05-02221 ..... **$319.95**
Piper PA28 Post 1974..... P/N 05-12762 ..... **$319.95**
Piper PA32 & 34..... P/N 05-02222 ..... **$339.95**
(Piper C Model) ..... P/N 05-02223 ..... **$345.95**

PIPER CONT.

For Model	Glareshield		w/ 12V Lights		w/24V Lights	
	Part No/	Price	Part No/	Price	Part No/	Price
*PA-28(1964-1967), **PA-28**-150, 160, 180, 235 (Large Hump over Radio Stack)*	05-03896 Stc'd	**$325.00**	05-03933	**$507.00**	05-03971	**$453.95**
*PA-32-260, 300, 301, 301T, 301FT, 301XTC, **PA-32S**-300, **PA-32R**-300, 301T, 301(SP), 301(HP), **PA-32RT**-300, 300T PA-34-200, 200T, 220T*	05-03897 Stc'd	**$325.00**	05-03934	**$507.00**	05-03972	**$453.95**
***PA-38** (all)*	05-03898	**$325.00**	05-03935	**$507.00**	05-03973	**$453.95**

BEECHCRAFT

For Model	Glareshield		w/ 12V Lights		w/24V Lights	
	Part No/	Price	Part No/	Price	Part No/	Price
BE-23	05-04093	**$325.00**	05-04094	**$532.00**	05-04095	**$459.95**
BE-33 1947-1961, BE-35 1947-1961	05-03899	**$325.00**	05-03936	**$507.00**	05-03974	**$453.95**
*BE-33 1962-1971, **BE-35** 1962-1971, **BE-55** 1962-1971, **BE-95** 1962-1971*	05-03901	**$325.00**	---	**---**	---	**---**
*BE-33 1962-1971, **BE-35** 1962-1971, **BE-55** 1962-1971, **BE-95** 1962-1971*	05-03903 With Plenum	**$395.00**	05-03940	**$577.00**	05-03977	**$523.00**
*BE-33 1972-1983, **BE-35** 1972-1983, **BE-36** 1971-1983, **BE-58** 1971- 1983*	05-03905 With Plenum	**$395.00**	05-03942	**$577.00**	05-03979	**$523.00**
*BE-33 1962-1983, **BE-35** 1962-1983*	05-03904	**$395.00**	---	**---**	---	**---**

MOONEY

For Model	Glareshield		w/ 12V Lights		w/24V Lights	
	Part No/	Price	Part No/	Price	Part No/	Price
201 (1977-1983)	05-03907	**$325.00**	05-03944	**$507.00**	05-03981	**$453.95**

LIGHTS

PMA Approved Panel Rope Lights, 12 or 24 Volts DC, 18" or 34" Long. Illuminates instruments with 8 or 12 2000+ hour bulbs, respectively.

Lights	Part No.	Price
12 Volts, 8 Bulbs, 18"	05-03998	**$77.75**
24 Volts, 8 Bulbs, 18"	05-03999	**$77.75**
12 Volts, 12 Bulbs, 34"	05-03994	**$183.75**
24 Volts, 12 Bulbs, 34"	05-03995	**$129.95**

GLARE SHIELD KIT



Superior Panel Technology's Glare Shield Kit provides the materials to produce a professional looking custom padded glare shield. The kit can work with any aircraft that has a smoothly curved glare shield (without raised sections or bumps). The pictures show the Glare Shield kit installed on a Cessna 175 and a Marchetti. The kit contains 1.5 linear yards of 54" wide of leather-like vinyl, 1.5 linear yards of 48" wide 1/8" foam cushioning, 1/6" x 8" x 50" ABS flexible base plastic, aluminum stiffener, bull-nose for the front edge (allows for a nice rounded front lip), flexible foam and cardboard material used for making a template plus complete installation instructions. The material passes the FAR 25.853 burn requirements and a burn certificate is provided with the kit. Superior Panel Technology's electroluminescent Glow Strips glare shield lighting (ACS#11-10618 and 11-10619) work beautifully with this Glare Shield. P/N 11-06324 .....**$239.95**

WINDSHIELDS – VORTEX GENERATOR KITS

CEE BAILEY AIRCRAFT WINDSHIELDS



Cee Bailey's Aircraft Plastics has been producing superior replacement windows and windshields for light aircraft since 1955. These windshields are custom built to fit your aircraft's serial number. This handcrafting insures a perfect, distortion-free windshield, trimmed and ground to fit your aircraft with little or no modification. Optical qualities, contour, shape and fit are exceptional. All windshields and windows are FAA/PMA approved. Cee Most windows and windshields are available in clear, green, and solar grey. Prices are for clear. Add 15% to prices for green or grey tints. When ordering, specify model number, year, and serial number of the aircraft.

See www.aircraftspruce.com for unlisted windshields and windows for Beechcraft Bonanza, Debonair, Baron, Musketeer, Travelair, Bellanca, Cruisair, Aeronca Champion, Aeronca Sedan, and Aerocommander.

Make/Model	Price
Aero Commander 2pc w/s Left	$183.00
500, 520, 560, 680 Right	$183.00
Aero Commander 100 Darter-Lark Volaire 10 or Volaire 10A	$373.00
Aeronca Citabria	$260.00
Aeronca Chief	$299.00
Beechcraft Musketeer, Sundowner, Sierra, Sport (.125)	$338.00
Musketeer, Sundowner, Sierra, Sport (.187)	$391.00
Bonanza 33/35, 2pc w/s (per side)	$178.00
Bonanza 33/35/36/55/58/95 1pc w/s (must check s/n carefully)	$500.00
Bellanca Cruisemaster models 14-19, 14-19-2, 14-19-3	$367.00
Viking, Super Viking 14-19-3A,17-30 17-30A, 17-31A, 17-31ATC	$296.00
Cessna 120-140 (S/N 8800 & up)	$251.00
140A, 150, 152	$251.00
152	$281.00

Make/Model	Price
172 (S/N50573 to 72884)	$365.00
180,182 (S/N52556 to 53598)	$393.00
182 (S/N 53599 to 55844)	$400.00
182 (S/N 55845 to 64296)	$450.00
205, 206, U206, P206	$400.00
207	$460.00
210 (S/N 58716 to 58818)	$454.00
Ercoupe - Fornair (bubble type w/s)	$245.00
Grumman - AA1, AA1A, AA1B	$302.00
GrummanCanopy-AA1,AA1A,AA1B	$328.00
Luscombe 8 series	$230.00
Mooney M20, M20a/b/c/d/e prior to 1965 (2pc w/s)	$176.00 per side
Mark21,M20c,Super21,M20e,Master M20d, Executive21 M20f, after 1965	$118.00 per side
Ranger M20c, Chaparral M20e, Executive M20f, Statesman M20g	$230.00
Navion A/B/D/E/F Std. or flush type (2pc w/s)	$137.00 per side
Navion Rangemaster G&H 2pc w/s	$137.00

Make/Model	Price
Piper J-3 Cub	$158.00
PA-12 square top (late model)	$261.00
PA-12 square top (early model)	$282.00
PA-15/16/17/22 108 colt bubble	$285.00*
Apache 23 (S/N 1502 & up) RorL	$250/side
Pawnee 25 (S/N 656 & up)	$130.00
Cherokee PA-28 (.125) RorL	$142./side
Cherokee PA-28 (.250) RorL	$172./side
Stinson HW-75 2pc	$176./side
Stinson Voyager108, 108-1/2/3 2pc w/s	$171./side
Taylorcraft BC-12D, 1946 & up	$229.00
Taylorcraft B 1940–41	$229.00
Yak 52 Windshield (4 sections) *all windows available canopy, side windows, center fixed, aft siding, rear fixed	$395.00
Yak CJ69 (*all windows available canopy, fwd sliding,center fixed,aft siding,rear fixed)	$360.00

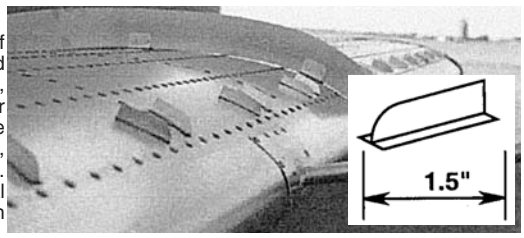
RV WINDSHIELD FAIRING



* A one-piece fiberglass fairing for Van's Aircraft RV6, RV7, RV9 series aircraft (Slider option)
* Designed with generous overlap areas to fit any installation
* Built from 4-layers of 8.8oz cloth and epoxy resin. Fully primed and ready for trimming/installation
* Save 25+ hours and lots of mess versus the traditional build-up method
* Large box is 30"x30"28", but just 8lbs.

P/N 05-03664.....**$495.00**

MICRO VORTEX GENERATOR KITS



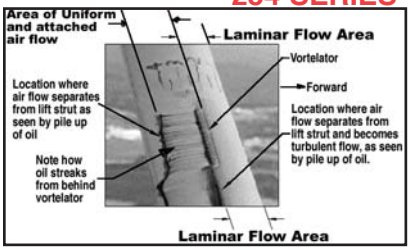
Micro Vortex Generators from Micro Aerodynamics, Inc. are available for a wide range of aircraft and can reduce stall speed, improve aileron response, improve cross wind control, and reduce landing and takeoff roll. The kits consist of vortex generators mounted on the wings, the horizontal stabilizer, and the vertical stabilizer. The generators are manufactured under FAA/PMA from 6063T6 aluminum and are curved to fit the contour of the wing. Included in the kits are installation tools, detailed drawings and instructions, templates for positioning VG's, spares, Loctite Depend adhesive and all the materials needed for the easy one-day installation. When ordering, specify aircraft, serial number, N number, paint name and number (additional **$250.00** to match), make and model, and any modifications to aircraft. Generic VG kit used on LongEZ, RV-4/6/8, Rans, Murphy Rebel and others. Specify Aircraft make and model.

Make/Model	Part No.	Price
CESSNA TWINS 310G thru 310Q	05-00602	$1,950.00
310R & T310R (ZFW & GWI - 180 lbs)	05-00604	$2,450.00
320B/C/D/E/F	05-00605	$1,950.00
310I & 310J	05-04258	$1,950.00
336 & 337	05-04404	$1,950.00
340A, 340, 335 (GWI 300 lbs)	05-00606	$2,950.00
401, 401A, 401B	05-00607	$1,950.00
402, 402A, 402B	05-00608	$1,950.00
402C (ZFW & GWI - 360 lbs)	05-00609	$2,950.00
411, 411A	05-00610	$2,450.00
414	05-00611	$1,950.00
414A, 414AW (ZFW & GWI - 350 lbs)	05-00613	$2,950.00
421, 421A	05-00614	$1,950.00
421B & 421C (GWI - 129 lbs)	05-00615	$2,950.00
CESSNA SINGLES		
120, 140 Series	05-04393	$695.00
150, 152 (all models)	05-04394	$695.00
170 "Rag Wing"	05-04189	$950.00
170A, 170B	05-00616	$1,450.00
172, 175 Series	05-00618	$1,450.00
177, 177A, 177B, 177RG, F177RG	05-04397	$1,450.00
180, 185 Series	05-00617	$1,450.00
180, 185 Vertical Tail Upgrade	05-04396	$150.00
182 Series	05-04469	$1,450.00
205, 206, 207 Series	05-00619	$1,450.00
210 (all models)	05-04470	$1,450.00
Cessna P210N	05-04265	$1,450.00
Cessna P210R	05-04266	$1,450.00
Cessna (T)210 SER	05-04264	$1,450.00
Cessna 310I/310J	05-04258	$1,950.00
Cessna 402B	05-04259	$1,950.00
Cessna 421C	05-04261	$2,950.00
Baron 55 A/B/C/D/E	05-00621	$2,450.00
Baron 58, 58A	05-00623	$2,950.00
Hawker Beechcraft G58 Baron	05-04471	$2,950.00
Baron 58TC, 58P	05-00624	$2,450.00
Baron 55 Upgrade kit (w/older VG system)	05-00625	$950.00
Duke 60, A60, B60	05-00626	$2,450.00
Twin Bonanza	05-00627	$1,950.00
Travel Air	05-00628	$1,950.00
BEECH SINGLES		
Musketeer, Sierra, Sundowner	05-04391	$1,450.00

Make/Model	Part No.	Price
Bonanza 35 Series	05-00629	$1,450.00
Bonanza 33, 36, A36, A36TC, B36TC	05-00630	$1,450.00
Beechcraft Debonair 33	05-04392	$1,450.00
Hawker Beechcraft G36 Bonanza	05-04192	$1,450.00
PIPER TWINS		
Aztec PA-23-250	05-00633	$1,950.00
Geronimo PA-23-180	05-00634	$1,950.00
Twin Comanche PA-30, PA-39	05-00635	$1,950.00
Seneca II (ZFWI - 168 lbs)	05-04472	$1,950.00
Seneca I, III, IV, V	05-04398	$1,950.00
Seminole PA-44-180, PA-44-180T	05-00636	$1,950.00
PIPER SINGLE		
J-3, J-4, J-5, PA-11 (includes the horizontal stabilizer)	05-00640	$695.00
J-3 Upgrade Kit - Tail VGs on underside of stabilizer provide full-span elevator authority and improve controllability.	10-04227	$150.00
PA-12/PA-18	05-00639	$695.00
PA-15, PA-16, PA-17	05-04399	$695.00
PA-22, PA-20	05-00641	$695.00
PA-24 Comanche	05-04401	$1,450.00
PA-28 All Models	05-00642	$1,450.00
PA-32 Cherokee Six, Lance (except T-Tail)	05-00939	$1,658.00
PA-32 Saratoga	05-00938	$1,450.00
MOONEY		
M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20L, M20M, M20R, M20S	05-04402	$1,450.00
ROCKWELL COMMANDER		
112, 112TC, 112TCA, 114, 114A, 114B, 114TC, 115TC	05-00646	$1,450.00
LAKE		
LA-4, LA-4A, LA-4P LA-4-200, Model 250	05-00647	$1,950.00
AMERICAN CHAMPION		
Aeronca Champ, Scout Citabria: 7AC, 7ACA, 7BCM, 7CCM, 7DC, 7EC, 7ECA, 7FC, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7GCBC, 7HC, 7JC, 7KC, 7KCAB, 8KCAB, 8GCBC	05-00644	$695.00
Aeronca Chief: 11AC, S11AC, 11BC, S11BC, 11CC, S11CC	05-04473	$695.00
Aeronca Sedan: 15AC, S15AC	05-04190	$950.00
AVIAT Husky A-1, A-1A, A-1B	05-00643	$695.00
MAULE M-4, M-5, M-6, M-7 MT-7, MX-7, MXT-7, M-8	05-00645	$695.00
STINSON 108, 108-1, 108-2, 108-3, 108-5	05-04403	$695.00
TAYLORCRAFT Taylorcraft Series	05-01208	$695.00
AGRICULTURAL Air Tractor, Ayres Thrush, Brave, Cessna 188, Dromader, Weatherly	05-00648	$1,750.00
KIT PLANES RV, Murphy Rebel, Long EZ	05-00001	$493.95

VORTELATOR KITS

254 SERIES VORTELATOR KITS FOR HOMEBUILT AIRCRAFT



Can increase your homebuilt aircraft speed by 4 to 7.5 mph. This is accomplished by placing vortelators at certain critical locations which will cause the boundary layer to stay attached to flying surfaces for a greater distance, and to keep the boundary layer thinner. The net result of these two actions is that it reduces both the profile drag and skin friction drag components of the parasite drag. Contains a 100 foot roll of vortelator, more than enough for most homebuilts, plus clear instructions with pictures on how to determine where to, and how to, place the vortelators to increase your aircraft's speed. Though it's not a requirement for homebuilt aircraft these vortelators are FAA STC'd and manufactured under a FAA PMA because they are also approved for certified aircraft. That means you get the benefit of FAA certified aircraft parts. The booklet 120-1 "Fly to use less fuel" (PN 08-00732) includes an adhesive backed aluminum placard to list the working airspeeds of your aircraft.

Kit Number	Description or Effect of Installing Vortelator Kit
254-AD	Delineates a procedure for determining where vortelators should be placed on an aircraft, for increased speed, by visualizing surface air flow through simple flight tests at straight and level flight at cruising speed. This kit is ideal for those aircraft models that do not have enough aircraft out in the field for Aircraft Development to economically warrant the time and expense of developing kits for.
254-RV3 254-RV4 254-RV6/6A 254-RV7/7A 254-RV8/8A	The vortelating of the airframes of these RV aircraft will give about a 4 to 5 MPH increase in speed and a decrease in the stalling of about 2 MPH. The vortelating of the propellers of these aircraft is more random in nature. From flight tests the increase in speed can be from 2 to 4 MPH depending on the propeller used. The vortelator kit for the RV6A takes about 8 hours to install on the aircraft. Between the decrease in stall speed and the increase in the aircraft's speed one gets about 7 MPH or more of additional MPH usage.
254-LANCAIR	The vortelating of the airframes of the Lancair 235, 320, 360 aircraft will give about a 4 to 5 MPH increase in speed. The vortelating of propellers of these aircraft is more random in nature. From flight tests the increase in speed can be from 2 to 4 MPH depending on the propeller used.
254-T18	The vortelating of the airframes of the T-18 aircraft will give about a 4 to 5 MPH increase in speed. The vortelating of propellers of the aircraft is more random in nature. From flight tests the increase in speed can be from 2 to 4 MPH depending on the propeller used.

Description	Part No.	Price
Vortelator Kit 254-AD	05-00851	**$250.00**
Vortelator RV3 Kit 254-RV3	05-00852	**$255.95**
Vortelator RV4 Kit 254-RV4	05-00853	**$255.95**
Vortelator RV6/6A Kit	05-00854	**$255.95**

Description	Part No.	Price
Vortelator RV7/7A kit	05-00855	**$255.95**
Vortelator RV8/8A kit	05-00856	**$255.95**
Vortelator Kit for Lancair	05-00857	**$255.95**
Vortelator kit for T18 254-T18	05-00858	**$255.95**

246-100 CESSNA VORTELATOR KIT - can increase Cessna speeds by up to 6 MPH. This is accomplished by placing vortelators at certain critical locations which cause the boundary layer to stay attached to flying surfaces for a greater distance, and to keep the boundary layer thinner. The basic procedure for installing the kit is to prepare the surface to which the vortelator is going to be applied by thoroughly cleaning the surface. Then simply peel the liner backing off the adhesive back vortelator and apply it to the cleaned surface. The vortelator is clear and therefore takes on the color of the surface to which it is applied. This vortelator kit is FAA STCd and manufactured under a FAA PMA approval. The kit comes with 200 feet of vortelator, more than enough for one airplane, and clear simple instructions on how to install the kit. The kit can easily be installed in one day and will add about 5 ounces of weight to the aircraft and not change the handling qualities of the aircraft. Please visit our website for a list of FAA approved Cessna models..... P/N 08-00731 ..... **$750.00**



FLY TO USE LESS FUEL - Explains the working speeds of the aircraft such as, steepest climb speed, best rate of climb speed from 0 to 5,000 ft., best rate of climb speed from 5,000 to 10,000 ft., speed of most flight time per gallon of fuel, speed of most miles per gallon of fuel, speed of slowest decent power off, speed of shallowest glide. It explains these working speeds of the aircraft in simple to understand graphics, no complicated mathematical formulas used. And what's even better there's no need to do a time consuming flight test program to determine the working speeds of your aircraft. Or for that matter any type certified aircraft. This booklet gives simple multiplication factors, based on cruising speed, to determine the working speeds for your homebuilt aircraft. Knowing the speed to fly at to go the greatest distance or stay up the greatest amount of time can be critical under certain conditions. Flying your aircraft using the techniques described in this booklet will save on the cost of gasoline an item that will only continue to escalate in cost as time goes by. This booklet comes with an adhesive backed aluminum placard to list the working airspeeds of your aircraft Fly To Use Less Fuel booklet..... P/N 08-00732 ..... **$19.95**

PROPELLER VORTELATOR KITS FOR ULTRALIGHT, HOMEBUILT AND CERTIFIED AIRCRAFT

Capable of increasing your aircraft speed and RPMs. This is accomplished by placing vortelators at certain critical locations on the propeller's most inefficient highest air drag areas. The vortelators will cause the boundary layer to stay attached to the propeller surface for a greater distance, and to keep the boundary layer thinner. Though it's not a requirement for ultralight or homebuilt aircraft these vortelators are FAA STC'd and manufactured under a FAA PMA because they are also approved for certified aircraft. Contains a three foot strip of vortelator, more than enough to vortelate up to a three bladed propeller. Plus clear instructions with pictures on where to place the vortelators on the propeller. The vortelator kit weighs less than .05 ounces and takes less than a half hour to install. The vortelators have a pressure sensitive adhesive backing so the installation process is simply to clean the area of the propeller where the vortelators will be placed and stick them on to the propeller. Can be used on virtually all propellers that are attached to engines of less than 500 HP be they metal, composite, or wood are approved for the installation of vortelator kits. This kit is not recommended for propellers that are equipped with anti-icing devices.

259-100 Propeller Vortelator Kit for Ultralight Aircraft - Capable of INCREASING Your ultralight aircraft speed by 2 to 5 mph and increasing your engine speed by up to 150 rpm. P/N 05-01465..... **$33.75**

259-200 Propeller Vortelator Kit for Homebuilt Aircraft - Capable of Increasing your homebuilt aircraft speed by 2 to 4 mph and your rpm by 20 to 50 rpm. That's if you have a fixed pitch propeller. If you have a constant speed propeller, for a given RPM and manifold pressure the propeller will be at a slightly larger pitch giving you more speed. P/N 05-01466..... **$33.75**

260-100 Propeller Vortelator Kit for Certified Aircraft - Of increasing your aircraft speed by 2 to 4 mph and your rpm by 20 to 50 rpm. That's if you have a fixed pitch propeller. If you have a constant speed propeller, for a given RPM and manifold pressure the propeller will be at a slightly larger pitch giving you more speed. Please visit our website for a list of FAA approved propeller models P/N 05-01467..... **$104.95**

VORTEX GENERATOR STOL KIT

The vortex generators are precision injected molded and made from UV stabilized clear polycarbonate material. This material is extremely strong and lightweight. 100 vortex generators will weigh approximately 1 ounce. The bottom of the vortex generator has a slight curve to match the wings airfoil. They have a full sweeping sail which wind tunnel testing has shown to be superior to those with a flat top. The vortex generator has a base of 1.0" X .40". There are many advantages to this kit: 1) increased lift, 2) slower stall speed by 4 to 6 MPH, 3) shorter landing distances, 4) shorter takeoff distances, 5) higher angle of climb, 6) tighter turns, 7) gentler stalls, 8) better aileron authority at slow speed, 9) aircraft is more controllable at slow speed, 10) in general increased total performance and safety. These kits come with clearly written installations instructions that allow you to determine where on the aircraft to install the vortex generators. also includes the number of vortex generators (VG's) listed in the table below for the kit selected. Plus a 3M very high bond adhesive tape.

Kit No.	Description of Vortex Generator Kit	No. of VG's	Part No.	Price
261-AD1	Deluxe generic vortex generator STOL kit for homebuilt aircraft	150	05-01776	**$438.00**
261-AD2	Generic Vortex Generator STOL Kit for Homebuilt Aircraft	65	05-01780	**$197.75**
261-RV1	Vortex Generator STOL Kit for the RV-3 Aircraft	65	05-01777	**$262.95**
261-RV1	Vortex Generator STOL Kit for the RV-4 Aircraft			
261-RV1	Vortex Generator STOL Kit for the RV-6/6A Aircraft			
261-RV1	Vortex Generator STOL Kit for the RV-7/7A Aircraft			
261-RV1	Vortex Generator STOL Kit for the RV-8/8A Aircraft			

AP

AIRCRAFT SPEED BRAKES



SPEEDBRAKES FOR EXPERIMENTAL AIRCRAFT

Deployable at any speed below Vne (175 Knot limit if you have tip tanks). Doubles aircraft drag. Doubles normal rate of descent. Helps prevent engine shock cooling. Improves aircraft value and utility. Kit will arrive complete with cockpit switch, all installation hardware and documentation. Average installation time is 35-45 hours with an installed weight of 9 pounds.

12V ..... P/N 05-07198.....**$5,651.00**
24V ..... P/N 05-07199.....**$5,651.00**



SPEEDBRAKES FOR LANCAIR LEGACY AIRCRAFT

Deployable at any speed below Vne (175 Knot limit if you have tip tanks. Doubles aircraft drag. Doubles normal rate of descent. Helps prevent engine shock cooling. Improves aircraft value and utility. Kit will arrive complete with cockpit switch, all installation hardware and documentation. Average installation time is 35-45 hours with an installed weight of 9 pounds.

12V ..... P/N 05-07201.....**$5,644.00**
24V ..... P/N 05-07202.....**$5,644.00**



SPEEDBRAKES FOR PIPER PA 28 AND PA 32 AIRCRAFT

2000 Series Aftermarket SpeedBrake Kit For Piper PA28/32 Series Aircraft, STC SA00762SE. Available for both 12 or 24 volt aircraft

Kit will arrive complete with STC, cockpit switch, all installation hardware and documentation. Average installation time is 25-35 hours with an installed weight of 9 pounds.

STC'd For: PA28R-201, PA28-201T, PA28RT-201, PA28R-201T, PA32-260, PA32-300, PA32S-300, PA32R-300, PA32RT-300, PA32R-301, PA32R-301T, PA32-301, PA32-301T

Deployable at any speed below Vne (175 Knot limit if you have tip tanks). Doubles aircraft drag. Doubles normal rate of descent. Helps prevent engine shock cooling. Improves aircraft value and utility.

12V ..... P/N 05-07203.....**$5,508.00**
24V ..... P/N 05-07204.....**$5,508.00**



SPEEDBRAKES FOR PIPER PA 30 AND PA 39 AIRCRAFT

2000 Series Aftermarket SpeedBrake Kit For Piper PA30, PA39 Series Aircraft, STC SA0107SE. Available for both 12 or 24 volt aircraft

Kit will arrive complete with STC, cockpit switch, all installation hardware and documentation. Average installation time is 25-35 hours with an installed weight of 9 pounds.

STC'd For: PA-30, PA39

Deployable at any speed below Vne (175 Knot limit if you have tip tanks). Doubles aircraft drag. Doubles normal rate of descent. Helps prevent engine shock cooling. Improves aircraft value and utility.

12V ..... P/N 05-07206.....**$5,508.00**
24V ..... P/N 05-07207.....**$5,508.00**



SPEEDBRAKES FOR PIPER PA 46 AIRCRAFT

2000 Series Aftermarket SpeedBrake Kit For Piper PA46 Malibu/Mirage Series Aircraft (STC SA00520SE).

Kit will arrive complete with STC, cockpit switch, all installation hardware and documentation. Average installation time is 25-35 hours with an installed weight of 9 pounds.

STC'd For: PA46-310P & PA46-350P

Deployable at any speed below Vne (175 Knot limit if you have tip tanks). Doubles aircraft drag. Doubles normal rate of descent. Helps prevent engine shock cooling. Improves aircraft value and utility.

12V ..... P/N 05-07208.....**$5,508.00**
24V ..... P/N 05-07209.....**$5,508.00**



SPEEDBRAKES FOR MOONEY M20 AIRCRAFT

2000 Series Aftermarket SpeedBrake Kit For Mooney M20 Series, STC SA4342NM. Available for both 12 or 24 volt aircraft.

Kit will arrive complete with STC, cockpit switch, all installation hardware and documentation. Average installation time is 25-35 hours with an installed weight of 9 pounds.

STC'd For: M20 Series Mooney

Deployable at any speed below Vne (175 Knot limit if you have tip tanks). Doubles aircraft drag. Doubles normal rate of descent. Helps prevent engine shock cooling. Improves aircraft value and utility.

12V ..... P/N 05-07211.....**$5,495.00**
24V ..... P/N 05-07212.....**$5,508.00**



SPEEDBRAKES FOR BEECH 33 AIRCRAFT

2000 Series Aftermarket SpeedBrake Kit For Beechcraft Bonanza Model 33 Series, STC SA0107SE. Available for both 12 or 24 volt aircraft.

Kit will arrive complete with STC, cockpit switch, all installation hardware and documentation. Average installation time is 35-45 hours with an installed weight of 9 pounds.

STC'd For: 35-33, 35-A33, 35-B33, 35-C33, 35-C33A, E33, E33A, F33, F33A, F33C & G33

Deployable at any speed below Vne (175 Knot limit if you have tip tanks). Doubles aircraft drag. Doubles normal rate of descent. Helps prevent engine shock cooling. Improves aircraft value and utility.

12V ..... P/N 05-07213.....**$5,508.00**
24V ..... P/N 05-07214.....**$5,508.00**

SPEEDBRAKES FOR BEECH 36 AIRCRAFT



2000 Series Aftermarket SpeedBrake Kit For Beechcraft Bonanza Model 36 Series, STC SA0107SE. Available for both 12 or 24 volt aircraft.

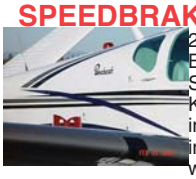
Kit will arrive complete with STC, cockpit switch, all installation hardware and documentation. Average installation time is 25-35 hours with an installed weight of 9 pounds.

STC'd For: 36, A36 & A36TC

Deployable at any speed below Vne (175 Knot limit if you have tip tanks). Doubles aircraft drag. Doubles normal rate of descent. Helps prevent engine shock cooling. Improves aircraft value and utility.

12V ..... P/N 05-07216.....**$5,508.00**
24V ..... P/N 05-07217.....**$5,511.00**

SPEEDBRAKES FOR BEECH 35 AIRCRAFT



2000 Series Aftermarket SpeedBrake Kit For Beechcraft Bonanza Model 35 Series, STC SA0107SE. Available for both 12 or 24 volt aircraft. Kit will arrive complete with STC, cockpit switch, all installation hardware and documentation. Average installation time is 35-45 hours with an installed weight of 9 pounds.

STC'd For: A35, B35, C35, D35, E35, F35, G35, 35R, H35, J35, K35, M35, N35, P35, S35, V35, V35A & V35B

Deployable at any speed below Vne (175 Knot limit if you have tip tanks). Doubles aircraft dra. Doubles normal rate of descent. Helps prevent engine shock cooling. Improves aircraft value and utility.

12V ..... P/N 05-07218.....**$5,508.00**
24V ..... P/N 05-07219.....**$5,508.00**



SPEEDBRAKES FOR CESSNA 210 AIRCRAFT

2000 Series Aftermarket SpeedBrake Kit For Cessna 210 Series, STC SA2602NM. Available for both 12 or 24 Volt aircraft.

Kit will arrive complete with STC, cockpit switch, all installation hardware and documentation. Average installation time is 25-35 hours with an installed weight of 9 pounds.

STC'd For: 210G, T210G, 210H, 210J, T210K, T210J, 210L, T210L, 210M, T210M, 210N, P210N, T210N, P210R, T210R, T210H

Deployable at any speed below Vne (175 Knot limit if you have tip tanks). Doubles aircraft drag. Doubles normal rate of descent. Helps prevent engine shock cooling. Improves aircraft value and utility.

12V ..... P/N 05-07221.....**$5,508.00**
24V ..... P/N 05-07222.....**$5,508.00**

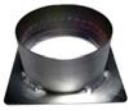
WEMAC AIRCRAFT LIGHT & EYEBALL AIR VENT REMOVAL TOOL



The WEMAC Aircraft Overhead Cabin Light & Air Vent Removal Tool quickly and safely removes WEMAC cabin light and air vent housings for servicing. **Features:** • Does not damage the housing when removing. • Manufactured with high friction elastomer tip for maximum grip. • Made of high quality durable material and will not break or crack • Saves time and money on airplane technician labor costs. **Specifications:** • 3 5/8" High x 2 1/8" Diameter

P/N 06-01565..... **$34.95**

EYEBALL AIR VENT ADAPTER



The extension on the back of these aluminum eyeball air vents is very narrow and allows little room to attach SCAT ducting. This adapter enables the user to attach 2" diameter SCAT ducting to the back of the vent using a stainless steel clamp. P/N 05-04067..... **$24.85**

EYEBALL SWIVEL VENT



Front *Back*
P/N 05-00779

This high quality, economical swivel air vent is made from 2024T351 aluminum and is available anodized black or grey. Diameter of the flange is 2.75" and the vent is designed to attach with a standard 2" air duct flange. The vent hole of this eyeball swivel vent is 7/8". The knurled collar on the vent swivels 60° to adjust air volume and direct air flow as desired. The vent features 4 mounting holes (1/8" dia.) which are spaced 2-3/8" apart or a mounting plate with a thickness of .71". Made in USA

Eyeball Swivel Vent - Black.....P/N 05-00779 ..... **$63.75**
Eyeball Swivel Vent - Grey.....P/N 05-00787 ..... **$59.75**
2" Flange Adapter.....P/N 10350-8 ..... **$9.50**

PLASTIC EYEBALL AIR VENTS



These ball and socket air vents are injection molded T grade ABS. The vent orifice is 1" dia., and the ball swivels 45°. The mounting flange is 2-1/8" square, and the distance between mounting hold centers is 1-11/16". Mounts in 1.75" dia. hole & uses 1-3/4" ducting. Wt: 1.25 oz. ea.

Gray.....P/N 05-04082 ..... **$17.95**
Black.....P/N 05-04079 ..... **$17.95**
White.... P/N 13-01943 . **$17.95**
Beige.... P/N 05-04081 . **$17.95**

CESSNA 210 FRESH AIR VENT SYSTEM



Replaces the forward cabin vent. Features durable Wemac air vents, full/partial closure, directional control, and positive shut-off. All metal construction. Completely replaces the old style, plastic overhead fresh air vents in most Cessna 210 aircraft. Full system includes the forward center, and aft systems. STC approved.

Full system..... P/N 05-04092 **$1,538.00**
Pilot & Co-Pilot..... P/N 05-04083 ...**$965.00**
Center Vents (total of 2 units)... P/N 05-04085 ...**$298.95**
Rear Vents (total of 2 units)..... P/N 05-04087 ...**$490.95**

ACTIVENT ACV-100 COCKPIT VENTILATOR



Solar Powered Cockpit ventilator installs in place of the normal can type vent while the aircraft is parked. An 8ft cord allows use with the panel on the glare shield or outside the aircraft when an outsidecover is used. The system provides a minimum of 7CFM airflow through the cabin per vent. The fan is a ball bearing design with a 10,000 hr design life. Made from aircraft grade aluminum. The Solar Panel is injection molded acrylic with an integral lens system.

Standard.....P/N 05-04072 ..... **$129.95**
For Cessnas with ventubes.....P/N 05-04074 ..... **$113.95**

CABIN WINDOW VENTILATOR



Plexiglass cabin ventilator. Mounts firmly at four points. Closes tight for winter flying. Uses 2-1/2" dia. hole.

P/N 05-08078.....**$19.50**

PIPER FAA / PMA ORIGINAL STYLE AIR VENT



PA-22 Style Air Vent. Can be installed in side window, door skin or side skin. 2-3/4" square with 1-1/2" square opening.

P/N 05-08093.....**$82.75**

VENTUBE FOR CESSNAS



The Ventube is a plastic unit that consists of an exterior tube and a lockable interior tube with a cap. Air flow control is accomplished by extending or retracting the interior tube. Ventube enhances pilot and passenger comfort, allows reliable closure of the air vent, controls vent direction and flow, and reduces air vent noise and leakage. FAA approved for Cessna 120, 140, 150, 152, 170, 172, 175, 180, 182, 185, 190, 195, 205, 206, 207, 210-210F, and 305. Detailed instructions, STC, FAA Form 337, etc. are enclosed with each pair. P/N 05-04091..... **$94.65/pr.**

AIRFLOW ENHANCEMENT KIT



Improves the cabin airflow in General Aviation aircraft, specifically Cessnas. Combined with Ventubes they enhance the pilot and passengers comfort (cooling & heating), allow reliable closure of the inlet air vents, control cabin air direction, increase cabin air flow, and reduce inlet air noise and leakage. The kit consists of two cabin exit vents, CEV, to allow the cabin air to exit into the aft fuselage and the fuselage exit vent, FEV in the modified inspection plate, to allow the cabin air to exit the fuselage of the aircraft. P/N 05-04080 ..... **$82.75**

THE COMPLETE AIRFLOW KIT



Ventubes™ (pair) - controls air flow into the cabin. Cabin Exit Vents - allows air to exit to fuselage. Fuselage Exit Vent - allows air to exit the aircraft.

P/N 13-03577 ..... **$176.95**

VISTA-VENTS



Knob adjustment permits complete control of cabin air. Mounts at four points in 2-1/2" dia. hole. Cessna Supplemental Approval available online. P/N 13-03500 ..... **$21.95**

CABIN AIR VENTILATOR



Aluminum 90° elbow type. Knurled collar rotates to control air volume. Mounts to a 2 1/2 in. Dia flange. For 1-1/4 Id scat ducting. Also good for cabin heat vents.

P/N 05-04075 ..... **$96.80**

"WHISPERFLO" VENTILATORS



Large molded plastic vent with 40° swivel. Thumb operated closure controls degree of opening. Mounts in 2-1/2" dia. hole. Large orifice (1-3/4") provides maximum cooling. Mounting in floor of aircraft assures full cabin ventilation. Use with SCAT-11 ducting.

Black .....P/N 05-04073 ..... **$21.75**
Ivory .....P/N 05-04071 ..... **$21.50**

SNAPVENT™ AIR VENTS



Adjustable plastic ventilators for use as fresh air intakes or air exhausts. Easily installed in plastic windshield or metal cowling. Two sizes:

MODEL A-2-100 Mounts in a 2" dia. opening. Can be turned to provide any degree of ventilation. The "Off" position is with the opening downward. P/N 05-01178 .....**$15.65/pr.**

MODEL CC3251 Mounts in 31/4" dia. opening. Rotates to provide any degree of ventilation. Retracts to a closed position nearly flush with the mounting surface. P/N 05-01179 .....**$17.75/pr.**

MODEL F325A Large tabs on lower flange and tapered profile make this vent ideal for higher airspeeds. Mounts in 3-1/4" opening in plastic windshield or metal cowling. P/N 05-04088 .....**$15.85/pr.**

MODEL F318 Tapered in profile in back provides a more direct flow of air. Mounted in 3-3/16" opening in plastic windshields or metal cowling. P/N 05-04089 .....**$15.85pr.**

MODEL CC3251F - This Snapvent is a custom hand manufactured part. It has two tabs welded opposite each other on the outer ring to better facilitate holding itself in the window and in addition, it also has a custom made thicker wire inserted internally to give great support laterally. ***This is a non-standard part custom made specifically for faster aircraft. It is Not Required for normal applications. For normal application, please install the standard (CC3251) 05-01179 Snapvents, which are sold in pairs.*** P/N 05-01253.....**$26.85**

AP

NACA INLETS - AIR VENTS

LARGE ROUND FLANGE EYEBALL VENT



This The round flange version of our large square-flange eyeball vent. Fits in a 2-3/4" hole, and has a 3" outside flange diameter.

w/ 2" Scat Adptr., Black ..... P/N 05-04064 ....**$163.50**
w/ 2" Scat Adptr., Clear ..... P/N 05-04066 ....**$163.50**
w/ Plenum Nut, Clear..... P/N 05-04414 ....**$161.95**
w/ Plenum Nut, Black..... P/N 05-04415 ....**$161.95**

STEINAIR AV125B EYEBALL VENT



These high quality vents have a nylon/delrin bushing encapsulated between the eyeball and the flange to protect the aluminum! With these vents you simply cut a hole, install the vent and tighten the plenum or retaining nut behind it and hook up the tubing! The vents include everything needed for install. On the small vents you can just directly attach a 2" scat tube to the vent - and on the large vents they have 2" plenums. These will come with a "BAC" part number on them, but that's because they are normally for the cockpits of fighters.

Description	PN	Price
1 1/4" Aluminum Eyeball Vent - (Air outlet size). Anodized BLACK. OD is 2" and allows for direct connection of a 2" scat tube. AV125B	05-04061	**$129.95**
1 1/4" Aluminum Eyeball Vent - (Air outlet size). Anodized CLEAR. OD is 2" and allows for direct connection of a 2" scat tube. AV125C	05-04063	**$129.65**
1 3/4" Aluminum Eyeball Vent - (Air outlet size). Anodized BLACK. OD is 2 3/4" (hole size required for mounting). INCLUDES 2" Plenum Cup. AV1625B	05-04084	**$136.95**
1 3/4" Aluminum Eyeball Vent - (Air outlet size). Anodized CLEAR. OD is 2 3/4" (hole size required for mounting). INCLUDES 2" Plenum Cup. AV1625C	05-04086	**$135.95**

NACA INLETS



These are in two half pieces. Assembly is required.

Part No.	Model No.	0° Axes or air flow	90° Axes Total w/ Length	Duct Outlet Size Openings	Duct Flange Angle	Price
05-00859	904 MI	11.75"	8.25"	4"	90°	**$88.75**
05-00862	001 HE	7.75"	4"	2.5"	Straight	**$48.75**
05-00864	903 DA-B	7.5"	4"	2.5"	30°	**$38.60**
05-00865	007 JO	5.75"	2.75"	2"	Straight	**$41.50**
05-04250	009 MU-B	3"	2.75"	N/A	--	**$15.85**
05-04249	009 MU-A	6.5"	3.5"	N/A	--	**$20.85**

LARGE NACA SCOOP



This large NACA scoop is the largest inlet available anywhere. 0° axes of air flow 17", 90° axes total width, 10 inches with a 9" x 2" outlet or 18 square inches. A separate two-part duct can be purchased separately. This allows the user to take the air directly into a 2" or 4" hose connection. High impact polycarbonate, formed at 375° F.

Cameron NACA inlet 006-TR-A (Scoop Only).... P/N 05-01701 ....**$78.85**
Cameron NACA inlet 006-TR-B (2 Req. for ea.).... P/N 05-01702 ....**$44.50**

KOOL SCOOP VENTS



Very popular with Piper owners who need quick, high volume ventilation during ground operations on hot days. Kool Scoop is very easy to mount; simply peel off the adhesive backing sealer and stick it in place on the side window. It will fit any side window vent that does not have a thick frame. Made of top quality plexiglass. Really "scoops" the air from the outside to keep the pilot and passengers comfortable. Window frame not included.

Left hand (Pilot Side)..... P/N 05-04076..... **$34.70**
Right hand (Co-Pilot Side) ..... P/N 05-04078..... **$34.70**

LONESTAR VENTILATION BLOWER KIT



LoneStar Aviation's Ventilation Blower was designed for AIR circulation, ventilation and cooling for the pilot, co-pilot and or passengers. Aircraft with large Plexiglas canopies are especially susceptible to heat generation from the sun during taxi, ramp time as well as low altitude flying. Pilot or passenger can adjust the AIRFLOW with the potentiometer through a panel mounted eye-ball vent. Additional benefits include defrosting the windshield, AIRFLOW for heat circulation, air-conditioning and or cooling an electronics bay equipment.

12 Volt ..... P/N 11-08627 ..... **$389.95**
24 Volt ..... P/N 11-08640 ..... **$389.95**

AVEOAIR™ - BALL VENTS



AveoAir™ Ball Vents are machined from 2024 aluminium alloy, and these lightweight vents are anodized in your choice of 2 color finishes: Silver or Black.

Installation is simple with 2-piece design, no screws are required as they simple thread together to hold securely.

ONLY AVEO VENTS come with a choice of 3 rear standard SCAT tube coupler diameters so you can optimize your air flow. Choose from 1.5", 1.75" or 2.0" diameters (38 mm, 44 mm, 50 mm).

1.5 Inch			1.75 Inch			2.0 Inch		
Black	05-04198	**$99.95**	Black	05-04459	**$99.95**	Black	05-04464	**$100.75**
Silver	05-04199	**$99.95**	Silver	05-04460	**$99.95**	Silver	05-04465	**$99.95**

AVEOAIR™ - MAXI VENTS



AveoAir™ vents line is the Maxi version. At 44% larger outlet diameter now you can get greater air flow in low speed aircraft and low-flow situations. Available with 1.5" or 2.0" diameter rear SCAT adapters and made to the same fine standards as the standard AveoAir™ vents. Features: • CNC machined from 2024 aluminum • Anodized in matte silver or matte black • Single-hand operation • Easy install • Fits all SCAT tubing • Adjustable air flow.

Matte Black 1.5" ..... P/N 05-04649 ..... **$129.00**
Matte Black 1.75"..... P/N 05-04935 ..... **$129.00**
Matte Black 2" ..... P/N 05-04650 ..... **$129.00**
Matte Silver 1.5" ..... P/N 05-04651 ..... **$129.00**
Matte Silver 1.75" ..... P/N 05-04936 ..... **$129.00**
Matte Silver 2" ..... P/N 05-04652 ..... **$129.00**

AVEOAIR FOR PIPER AIRCRAFT



AveoAir Vents for Piper - the identical top quality air vent from Aveo but with a square mounting plate that is a drop-in replacement for standard plastic Piper aircraft vents.

Features: • CNC machined from 2024 aluminum • Single-hand operation • Easy install • Adjustable air flow

Silver..... P/N 05-05170 ..... **$99.00**
Black..... P/N 05-05171 ..... **$99.00**

ROUND ALUMINUM EYEBALL AIR VENT (SMALL)



Small round-flange eyeball vent. Made from aircraft-grade 6061-T6 aluminum and hard anodized, it weighs just 3 oz. and mounts in a 2" round hole. Outside flange diameter is 2-1/4", and has 25 degrees of freedom from the vent centerline. The vent is secured with a mounting ring that will accept a 1-1/2" or 2" scat hose OR a plenum mounting nut. This vent has an opening of 1.2" which is larger than competitive vents that mount in the same size hole.

w/ 1-1/2" Scat Adptr., Aluminum ..... P/N 05-04410..... **$159.75**
w/ 1-1/2" Scat Adptr., Black..... P/N 05-04411..... **$159.90**
w/ 2" Scat Adptr., Aluminum..... P/N 05-01903..... **$168.95**
w/ 2" Scat Adptr., Black..... P/N 05-01904..... **$168.95**
w/ Plenum Nut, Aluminum..... P/N 05-04412..... **$151.95**
w/ Plenum Nut, Black..... P/N 05-04413..... **$168.95**

LARGE SQUARE EYEBALL AIR VENTS



Large square-flange eyeball vent. Made from aircraft-grade 6061-T6 aluminum and hard anodized, it weighs just 5 oz. and mounts in a 2-3/4" hole. The mounting flange is 3" square with a 2-1/2" mounting hole pattern, and has 25 degrees of freedom from the vent centerline (50% more than in our first generation vents.) This is a direct replacement for the "whisperflo" black plastic vents. Flows 30% more air and eliminates 99% of the leakage associated with the plastic vents when closed.

Aluminum... P/N 05-04068 .. **$159.90** Black... P/N 05-04070 ... **$159.90**

SMALL SQUARE FLANGED EYEBALL VENT



Small square-flange eyeball vent. Made from aircraft-grade 6061-T6 aluminum and hard anodized, it weighs just 3 oz. Mounting flange is 2.20" square, with a hole mounting pattern of 1.70". Vent adjustment is 25 degrees of freedom from the vent centerline, and has an opening of 1.2" which is much larger than vents typical of this size.

Aluminum.....P/N 05-01905 ..... **$153.75**
Black.....P/N 05-01906 ..... **$152.95**

REPLACEMENT VENTS FOR CESSNA 172



This vent will replace both the upper and lower vent in most Cessna 172. It is available in Black Anodized or Clear Coat Anodized and will attach to a 2" hose or the plastic cup that fit's the lower vent with 1" hose (Adapter cup not included. Reuse the cup off old OEM vent).

Black.....P/N 05-08323 ..... **$168.00**
Clear .....P/N 05-10785 ..... **$168.75**

ACS DUAL AIR VENTS

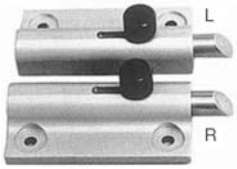


ACS Dual Air Vents. The vent orifices are 1" diameter and both balls swivel 45°. The mounting flange is 5 1/4" x 2 1/2" rectangular.

Black.....P/N 05-12636 ..... **$79.95**
Gray.....P/N 05-12637 ..... **$79.95**

Prices Subject to Change Without Notice

UNIVERSAL SPRING LOADED LATCHES



These universal spring loaded latches are designed for aircraft canopies, cockpit doors, and baggage doors. They are available in right hand and left hand models with different striker angle lock pins on the two models. These latches work great on a wide variety of experimental aircraft. Latch flange has 3/16" holes drilled for mounting.



Left hand latch (Lock Pin)
P/N 05-04520.....**$42.50**
Right hand latch (Lock Pin)
P/N 05-04521.....**$42.50**
Also available in retracted bolt lock type latch with blunt striker (left hand and right hand).
Left hand latch (Retracted Bolt Lock)
P/N 05-00895.....**$42.95**
Right hand latch (Retracted Bolt Lock)
P/N 05-00896.....**$42.95**

SLIDING CANOPY RAILS



2 heavy-duty channels of 2014T6 anodized aluminum provide smooth sliding tracks for canopy installations. Length 23" fully retracted, 45" fully extended. 22" travel. Wt:3.5 lbs./pair. Used on Pazmany 1 & 2, Skybolts & others. Instructions for installing these rails in the Pazmany PL-2 are available for $50 from Pazmany Aircraft Corp., P.O. Box 80051, San Diego, CA 92138. These instructions are a useful reference for installing channels in any homebuilt aircraft. P/N 03-49300 ..... **$694.00/ea.**

BAGGAGE DOOR LOCKING LATCH FLUSH MOUNT



The locking latch has a 90° rotation handle that opens by pushing the key side of the base face. This deflection opens with the help of a spring and by rotating the handle you will pull locking pins out of the receptacles that are mounted to the inside skin of the Aircraft and outside of baggage door frame. Face opening dimension H 1 3/8" W 5.5" with radius at both ends and a .090 deep lip that will insure a flush mounting. Latch base has 4 10-32 anchor nuts for mounting to the door. The base is made of aluminum and nickel plated. Internal parts are nickel plated or stainless. Locks are weather resistant with 90° cam rotation. Keyed different 2 key pull and stainless shutter mechanism. Baggage door bases can be ordered left or right.

Left Hand Latch..... P/N 05-12512.....**$470.00**
Right Hand Latch ..... P/N 05-12513.....**$470.00**

SLIDER PINS AND BRACKET FOR BAGGAGE DOOR LATCH ASSEMBLY



Slider pins and bracket kit for baggage door latch assembly.
In the box: *Quantity 2 - Kit consists of 3/8" diameter 303 SS slider pins with 3/16 diameter bolt hole at one end of slider for linkage to baggage door assembly. *Quantity 2 - Slider bracket dimension H 2" W 1.2" *Quantity 1 - Switch receptacle bracket dimension H 2/3/4" W 1.4" *Quantity 1 - Receptacle bracket dimension H 2" W 1.2" *All brackets are aluminum gold anodized with 10-32 anchor nuts.

P/N 05-12514.....**$227.95**

RV-12 CANOPY LOCK



This is an easy to retrofit canopy handle for the RV-12 with an integrated locking mechanism. Over two years was put into the design and testing of this handle. This handle was designed as an easy to install accessory that can be retrofit to an existing aircraft whether painted or unpainted. In addition, it is cnc machined and powder coated and provides a much nicer finish than the stock handle.
P/N 05-12908 .....**$229.95**

RV SLIDING CANOPY LOCK



Lock your RV with confidence. Finally, a lock for your sliding canopy that installs in minutes. Tools required are one 1/4" drill bit and a drill. All you have to do is drill a hole, deburr and start using your lock. No more worries about having your avionics or your personables in someone elses aircraft. P/N 05-01414 ..... **$154.75**

EXPERIMENTAL AIRCRAFT DOOR LATCH





3D view Opening from Exterior Interior View Open Position This door latch was originally designed for a gull wing door with linkage rods extending both forward and aft, however it can be adapted to virtually any style door with appropriately designed linkage rods. The linkage rods are not included.
Features: • Identically keyed locks for set • Armrest flush mount interior handle • Spring loaded, flush mount exterior handle • Spring ball detent for positive open/ closed stop action
Specifications: • Made from 2024-T3 aluminum • Each latch weighs approx. 10 ounces • Dimensions for applicability pictured below • Driver travel approx. 1.25" forward and aft
For linkage rods the following aluminum is recommended: 1/4" x 1/2"
2024T3 ..... P/N 03-00104 ..... **$1.98**
Left Hand Door Latch ..... P/N 05-01415 ..... **$364.00**
Right Hand Door Latch..... P/N 05-01416 ..... **$364.00**
Set of Left/Right Latches..... P/N 05-01420 ..... **$728.00**

CESSNA EXTERIOR DOOR HANDLE



The "Help You Out Handle" is a FAA-PMA approved replacement part for a wide variety of Cessna aircraft. When your flimsy cast pot metal OEM door handle breaks in your hand, replace it with this solid metal handle milled from a single Billet of Aluminum. Never again wonder if the OEM handle will break the day someone tries to get you out of the aircraft. P/N 05-15411 .....**$199.00**

THE GAS SPRING



The gas spring is a self-contained counterbalance unit consisting of a piston and piston rod in a hermetically closed cylinder. The cylinder is factory-loaded with an inert gas at a given pressure. The outward force generated is continuous and linear at 45 lbs. Ideal for a canopy closure on homebuilts, as designed for George Meads Adventure. Thread size: 5/16-18
P/N 05-01177 .....**$21.75**

SMALL GAS SPRING H-9530-22



Gas Springs with Composite Ends. Applications Include: Doors, lids, hatches, furniture, boats, recreational vehicles, office equipment and many more. Note: All composite end props use 10 mm ball studs. Safety clips are not necessary. P/N 06-03054 .....**$16.70**

DOOR STEWARD™



The Door Steward is an STC and FAA-PMA approved modification for aircraft doors. The modern gas spring greatly improves and replaces easily broken, malfunctioning mechanical type door stops and restraints that become ineffectual with repeated use and age. Pilots enjoy the fact that the Door Steward gently opens and firmly holds the door open. The Door Steward consists of a modern inert gas spring with all the necessary brackets and hardware. Detailed installation instructions are included and make it easy to install and requires virtually no maintenance. Model 200C10
Features: With the Door Steward the door will open and stay open when needed. No more door flopping around in wind gusts or prop wash from taxiing aircraft. The cost is usually much less than repairing or replacing existing OEM door stops. Great on float equipped aircraft when water taxiing.. FAA Approved on many single and light twins.

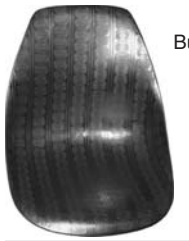
Application	Part No.	Price
Cessna 170,172, 175, 180, 182, 185, 205, 206, 207 and 210(nonpressurized)	05-00922 Pair	$347.00
Cessna Left Hand Only	05-11841	$175.00
Cessna Right Hand Only	05-11842	$175.00
Beech model Series 33, 35, 36, 55, 56, 58 and 95 Piper Model Series 23, 24, 28, 30, 32, 34, 39, 40 and 44	05-03574	$210.00
Fwd Utility Door Cessna 206, 206H, U206, TU206 and 207	05-03575	$150.00
Cessna 177, 177A, 177B and 177RG	05-04251	$428.00

AP

FIBERGLASS PARTS – COWLING KITS

AP

ULTRALIGHT BUCKET SEAT



Bucket seat for Ultralight aircraft.

Description	Part No.	Price
Bucket Seat Only	15-06383	$61.75
Bucket Seat Kit with Cover and Hardware	15-05070	$144.95
Accessories		
Bucket Seat Bracket 17.25"	15-05066	$9.95
Bucket Seat Bracket 18.5"	15-05067	$10.75
Bucket Seat Cover Only	15-05068	$57.85
Bucket Seat Hardware Bracket Kit	15-05069	$14.95
Bucket Seat Expanding Anchor (Anchor Only)	15-08284	$1.80
Bucket Seat Clamp (Clamp Only)	15-08285	$1.14

HALL BROTHERS VORTEX GENERATORS FOR HOMEBUILTS



These Vortex Generators can be temporarily attached to the wing with tape for testing without harming the wing surface and then moved or attached permanently. This temporary attachment capability allows the pilot to prove out their effectiveness before permanent attachment. The design also gives a generous surface area for bonding.The Vortex Generators are made from .025" 6061-T6 aluminum for maximum durability. Hall Brothers Vortex Generators are not just used for lowering the stall speed. The stall characteristics are normally improved as well as aileron response. Some pilots have reported an increase in the rate of climb of their airplane. Many pilots say that the overall "feel" and handling of their airplane has improved throughout its speed range. The Hall Brothers Vortex Generator Kit includes enough Vortex Generators for a typical homebuilt wing (46 pairs) and stabilizer (16 pairs), tape for temporary attachment, adhesive for permanent attachment and instructions.

P/N 05-01480. ..... **$184.50**

STOLSPEED VORTEX GENERATORS



Stolspeed VGs are streamlined for less drag and better appearance than other VGs. Stolspeed VGs have no sharp points and are flexible, so it's easier to wash or cover the wings. The special 3M adhesive is removable without damaging aircraft paint. Stolspeed VGs have a very slim rounded fin to give them good flexibility, and a rounded, tapered base that 'flows' into the wing surface. In clear material they're almost invisible.

80 (Enough for the tail)..... P/N 05-04458..... **$64.50**
120 (Enough for the main wing plus spares) .. P/N 05-04457..... **$96.50**

AIR WAVE VORTEX GENERATOR



As air normally flows over the wing of an aircraft in flight, the air "sticks" to the surface of the wing. This adherence to the wing's surface produces lift. If the airflow loses its adherence and separates from the wing, aircraft performance can suffer in the form of increased drag, loss of lift and higher fuel consumption. The kit contains 100pcs which is enough to do the wings. They are made from a durable poly carbonate clear material with UV protective additive. The kit comes with the instructions of where and how to attach them. The only other thing you will need is the glue..... P/N 05-04662..... **$59.80**

FIBERGLASS WING BOLT COVERS



Fiberglass Wing Bolt Covers. Piper PA-28 / PA-32 / PA-34 / PA-44 Models. FAA-PMA Approved.

Description	Part No.	Price
GF63942-00 Wing Bolt Cover, Left	05-15278	$86.00
GF63942-01 Wing Bolt Cover, Right	05-15279	$86.00

COWLING/HOOD SCOOPS INLET/EXIT SCOOPS



BLI-16.9A..... 05-04306..... **$69.85**



BLI-16.9B ..... 05-04308..... **$56.75**



BLI-24.1A ..... 05-04305 .... **$69.85**



BLI-24.1B ..... 05-04304..... **$56.75**

VINTAGE WHEEL PANTS



Vintage style Wheel Pants, when fiberglass just won't do for that true vintage appeal. Formed out of .024 thick stainless steel. Weigh 2.9 lbs each. Fit 5x5 wheels. P/N 05-12791 ..... **$698.00**

CARBON FIBER REPLACEMENT COWLINGS FOR CESSNAS



This line of carbon fiber cowlings are a part for part replacement for Cessna cowlings. These cowlings install just like the original Cessna parts, however no hardware is provided. North Central Aircraft Products are made of the finest quality carbon fiber and resin. Complete cowls are available on request.

Cessna 172 products are STC-PMA pending as of Sept. 2012.
Cessna 182 products are STC-PMA approved.

172 Series - Upper Nose Cap - 300

Year	Serial No.	Description	Part No.	Price
56-58	28000-36965	Std. Nose Cap	05-04664	$850.00
59-60	36966-47746	Elliptical Nose Cap	05-04665	$815.00
61-65	47747-53392	1/4 Nose Cap-Cont.	05-04666	$270.95
77-81	67585-75034	Std. Nose Cap - Lyc. Single Light	05-04667	$760.00
75-76	63459-67584	Std. Nose Cap - Lyc. Dual Light	05-04668	$760.00
82-86	75035-76673	Std. Nose Cap- Camloc-Lyc.	05-04669	$760.00
83-85Q	75869-76516	Std. Nose Cap- Camloc-Lyc.	05-04670	$760.00

172 Series - Lower Nose Cap - 600

Year	Serial No.	Description	Part No.	Price
56-58	28000-36965	Std. Center Piece Nose Cap	05-04671	$850.00
59-60	36966-477-46	Elliptical Nose Cap	05-04672	$815.00
61-65	47747-53392	Cont. 3/4 Nose Cap	05-04673	$730.00
66-67	53393-67584	Cont. Standard Nose Cap	05-04674	$730.00
68-81	56513-75034	Std. Nose Cap - Lyc. No Light	05-04675	$730.00
82-86	75035-76673	Std. Nose Cap - Lyc. No Light	05-04676	$730.00
71-74	59224-63458	Std. Nose Cap - Lyc. Single Light	05-04677	$730.00
75-81	63459-75034	Std. Nose Cap - Lyc. Single Light	05-04678	$730.00
74	61899-63458	Std. Nose Cap - Lyc. Dual Light	05-04679	$730.00
75-76	63459-67584	Std. Nose Cap - Lyc. Dual Light	05-04680	$730.00
83-85	75869-76516	Std. Nose Cap - Lyc. No Light	05-04681	$730.00

180/182 Series - Upper Nose Cap - 300

Year	Serial No.	Description	Part No.	Price
53-56	30000-32661	Upper Nose Cap- Ctr. Nose- Screws	05-04682	$790.00
57-59	32662-50661			
C182 56-58	33000-51556	Upper Nose Cap- Elliptical Nose- Screws	05-04683	$840.00
60	50662-50911			
C182 59-60	51557-53007	Upper Nose Cap - 185 Style - Screws	05-04684	$990.00
61-68	50912-51980	Upper Nose Cap - 185 Style - Camloc	05-04685	$990.00
68-81	51981-53203	Upper Nose Cap - Rev. CL Nose RH to Dzus	05-04686	$990.00

180/182 Series - Lower Nose Cap - 600

Year	Serial No.	Description	Part No.	Price
53-56	3000-32661	Lower Nose Cap- Ctr. Nose- Screws	05-04687	$930.00
57-59	62662-50661			
C182 56-58	33000-51556	Lower Nose Cap- Elliptical Nose- Screws	05-04688	$849.00
60	50662-50911			
C182 59-60	51557-53007	Lower Nose Cap - 185 Style - Screws	05-04689	$1,040.00
61-68	50912-51980	185 Style - Camloc	05-04690	$1,040.00
68-73	51981-52284	Lower Nose Cap - Rev. CL Nose RH to Dzus	05-04691	$1,040.00
73-81	52285-53203	Lower Nose Cap - Addes Landing Lights	05-04692	$1,350.00

Please provide aircraft N number and serial number when ordering.

Prices Subject to Change Without Notice

FIBERGLASS COWLINGS

All parts are aircraft quality, hand layed for uniform thickness and light weight. Items are finished with white primer gel coat.
Note: Light fill and sanding is required for smooth ready to paint surface. A finishing service is available as an option at checkout that will leave a primer smooth surface.

MC-1A NOSE COWL



Styled after the Piper Comanche, this cowl can be used on just about any homebuilt powered by the Lycoming engine. It is made in two parts, allowing the easy removal of the cowl without having to remove the prop. Used on the following airplanes: Starduster I and II, Playboy, EAA Bipe, Jodel D-11, Tailwind, Tempete & the Skybolt. Measures 35" wide by 21" high. Will accommodate a spinner approx. 12" in dia. P/N 05-01180 ..... **$103.75**

MC-1B NOSE COWL



Similar in shape and dimensions as the MC-1A cowl except, it is manufactured as a one piece unit for those who prefer a cleaner front end. The MC-1B is a few inches larger than the MC-1A.
P/N 05-01181 ..... **$112.95**

MC-2 NOSE COWL



This design can be used with most any Continental or Lycoming engine. Used on the original Smith Miniplane but has been installed on the Pitts, EAA Bipe, Playboy, Flybaby & Baby Great Lakes. Measures 35"wide by 19.5" high.Face of center opening 8-1/2" O.D.
P/N 05-01182 ..... **$129.85**

MC-3A NOSE COWL



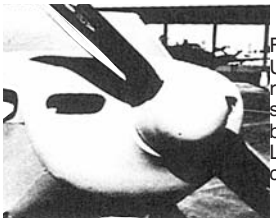
Suitable for just about any Lycoming powered aircraft, this cowl comes equipped with a bump that conceals the starter motor. It is the standard Pitts Special cowl but has been installed on these aircraft: Mong, Miniplane, Playboy, Emeraude, Playmate, Baby Ace, Junior Ace, EAA Bipe, Baby Great Lakes, Skyhopper and the Falconar F-11 & 12 series. Measures 35-1/2" wide and 22-1/2" high. Center opening 8-1/ 2" dia. P/N 05-01183 ..... **$129.85**

MC-3B NOSE COWL



Same shape and size as used on the Piper PA-14. Can be used on the same aircraft as listed for the MC-3A design. For builders not wishing to use an electrical system and is seen on most Pitts Specials built for competitive aerobatics. 35" wide x 21" high. Center opening 9-1/4" dia. P/N 05-01184 ..... **$129.85**

MC-10 NOSE COWL



For installation on Tailwind or Cougar. Used with 4" prop extension. Shape rounds out the boxy appearance of the standard design. Size: 35"w x 22.5"h. Has been installed on Starduster I and various Lycoming powered homebuilts. Face of center opening 11-3/4" O.D.
P/N 05-01185 ..... **$143.75**

QUICK RELEASE PINS



These pins of stainless steel, are made to exacting standards. Pushing the button on top, it contracts and releases two (or four) balls at the end of the shank. These balls lock onto and release from the part for fast removal. The following types and sizes are most commonly used for hang gliders and not for structural aircraft. Request quote on special sizes (25 piece minimum).
Less 10% for 12, Less 15% for 25, Less 20% for 50. May be assorted.

Part No.	Alternate Part No.	MS Part No.	Head Type	Shank Dia.	Leng.	Price
04-01486	LG4C-T-0.343	---	TEE	1/4"	0.343"	**$35.50**
04-01473	LG4C-T-1.40	MS17985-414	TEE	1/4"	1.400"	**$19.50**
04-01487	LG4C-T-2.10	MS17985-421	TEE	1/4"	2.080"	**$22.50**

MC-3C NOSE COWL



Identical to the MC-3B, but, has an opening for an oil cooler. Measures 35" wide by 21" high. P/N 05-01186 ..... **$129.75**

MC-4 NOSE COWL



This nose cowl was designed for the T-18 pressure cowl system. A 4-inch prop extension is required and it is generally used with the MC-5 Bottom Cowl. Measures 36" wide by 20"high. Face of center opening 12-5/8" O.D. P/N 05-00551 ..... **$134.95**

MC-7 NOSE COWL



Originally made for the Thorp T-18, this cowl has been used on several other types. The starter ring is enclosed when used with the Lycoming. Makes a nice front end on the CA-61 & CA-65. Measures 35"W by 19.5" high. Face of center opening 13-1/2" O.D.
P/N 05-01176 ..... **$129.85**

AP

CAMLOC ACCESS DOORS FOR WHEEL PANTS



These 1" diameter spring loaded access doors can be riveted into your wheel pants. They open inward, so that using an appropriate tool, you can check pressure or inflate your tires easily without removing the wheel pants. Made of stainless steel which can be polished if desired. P/N 05-02124 ..... **$23.70 ea.**

DZUS COWL LATCHES

These Dzus "over the center" type latches are used extensively on cowl doors and other applications on aircraft such as Cessna, Piper, Grumman, and many homebuilts. Available in 2 styles as shown.

MODEL #1



These Dzus over the center type latches are used extensively on cowl doors and other applications on aircraft such as Cessna, Piper, Grumman, and many homebuilts.
Model I latch: This latch provides 700 lbs. Ultimate strength and 100 lbs. Working strength. Pull up ability is 0.6 inch. Mounting holes will accept .156 in. diameter rivets or #6 round head screws. Order strikes separately.

Part No.	Description Dimensions (closed)	Price Ea.
05-01187	Cowl Latch Model I	**$2.14**
05-01188	Latch Strike C8	**$0.68**
05-01189	Latch Strike C7	**$0.90**

MODEL #2



These Dzus over the center type latches are used extensively on cowl doors and other applications on aircraft such as Cessna, Piper, Grumman, and many homebuilts. Model II latch: This latch provides 220 lbs. of ultimate strength and 45 lbs. of working strength. Pull up ability is .2 inch. Mounting holes will accept .156 in. diameter rivets or #6 round head screws. Order strikes separately. Cowl latch will ship in either clear zinc, or Cad plated. Cowl latch will ship in either clear zinc, or Cad plated.

Part No.	Description Dimensions (closed)	Price Ea.
05-01190	Cowl Latch Model II	**$2.35**
05-04183	Latch Strike C9	**$1.20**
05-04184	Latch Strike C2	**$0.71**

FLUSH LATCH



The H-5000-2 style latch is a unique spring-loaded, trigger action latch for cowling and access doors. Made of corrosion resistant steel. Rivet or spot weld to structure. Bolt Offset: .132. Trigger Offset: .102. Max. Depth: 1.23
H-5000-2 P/N 05-11830 ..... **$117.65**
New Surplus H5000-2
P/N 05-01017 ..... **$46.50**

FIBERGLASS COMPONENTS

MC-6 NOSE CHEEKS



From the latest design of John Thorp, this is a 2 piece cowl used on the T-18. Can be adapted to most homebuilts where the builder wishes to use cheeks. They have been installed on the Midget Mustang as well as the Miniplane. Makes a fine nose section.

P/N 05-01213 ..... **$129.75**

MT-1 WING TIPS



Manufactured from the original T-18 plans and come ready to slip over the ends of the wing. Nav. lights are normally installed by notching the leading edge corner of these fairings and installing Plexiglass.

P/N 05-01214 ..... **$221.95**

CARBURETOR INTACT SCOOP



Carburetor intake scoop with 4-1/4" x 8" rectangular opening. P/N 05-22500 ..... **$49.85**

HEAD REST



Originally designed for the Smith Miniplane but can be used on other bipes.

P/N 05-22100 ..... **$35.85**

BABY GREAT LAKES COWL



Fiberglass Cowl set fits Baby Great Lakes, Super Baby Great Lakes, and Buddy Great Lakes. Top and Bottom Cowl halves sold separately.

Dimensions:
33"x29"x9-1/2" (PN 05-02883) 33"x33"x19" (PN 05-02884)

Top Nose Cowl
P/N 05-02883 ..... **$398.00**

Bottom Nose Cowl
P/N 05-02884 ..... **$398.00**

BUDDY BABY GREAT LAKES SEAT



This fiberglass seat was designed to fit the Baby Great Lakes aircraft and is recommended by the designer. Dimension: 26"x30"x19"

P/N 05-02885 ..... **$250.00**

GEL-COATED FIBERGLASS WHEEL PANTS



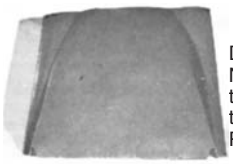
Keep gravel, mud, dew and grass out of your prop, off your wings and off your face with these easy-to repair fiberglass reinforced polyester wheel pants. Supplied in gel-coated finish, they have a small seam along the top edge, easily removed by sanding, if desired. Sorry, no mounting hardware is included. Easy to cut and customize. White, red, black.

Wheel Pant Dimensions

Size	Width	Height	Length	Opening	Weight
4"	5	9	22	4.4X12	1
5"	7	9	23	5.5X13.75	1.3
6"	8	9	28	8X15.75	11.5

Description	Part No.	Price
5" White Flat	06-01293	**$116.95**
6" White Flat	06-01294	**$125.95**
4" White Aero	06-01299	**$109.95**
5" White Aero	06-01296	**$125.75**
6" White Aero	06-01295	**$125.95**
6" Red Flat	06-01304	**$125.95**
4" Red Aero	06-01602	**$109.95**
5" Red Aero	06-01603	**$116.95**
6" Red Aero	06-01604	**$125.95**
5" Black Flat	06-01606	**$116.95**
6" Black Flat	06-01607	**$125.95**
4" Black Aero	06-01302	**$150.95**
5" Black Aero	06-01297	**$158.95**
6" Black Aero	06-01301	**$167.95**

MC-5 BELLY PAN



Designed to work in conjunction with the MC4 Nose Cowl. This is the most popular combination being used today and it gives your T-18 all the compound curves and beauty it deserves.

P/N 05-00025..... **$119.75**

BUCKET SEATS



For Starduster or Skybolt. Flat Gray finish, 18" wide. Can be upholstered or used plain. Contoured bottom for parachute. These are not chopped glass seats. Hand layed up for extreme lightness. Wt. 3 lbs. 10 oz. Note: This oversized item ships in a 21 x 21 x 21 box with a dimensional weight of 48 lbs. (56 lbs internationally)

P/N 05-22600..... **$83.75**

TURTLE DECK



Fits the Acroduster or Skybolt. With flat mounting pad to accommodate a VHF antenna. Approx. Height 19" at front, 13" at back. Overall length, approximately 57".

P/N 05-22200..... **$124.95**

HOERNER DESIGN WING TIPS

These wing tips are constructed of hand laid-up fiberglass which is extremely strong, has great impact strength, and is resistant to chemicals. The Hoerner design of these wing tips reduce the vortex that emanates from the trailing edge of the wing tip thereby reducing drag on the aircraft, leaving more energy available for lift and speed. Stall speed is decreased and lateral stability is improved. You will see increased cruise speed, more positive aileron control, increased rate of climb, decreased take-off distance, and improved appearance with these tips. All STC and approval data is furnished.



Cherokee Straight Wing Tips
PA-28 140 thru 200R models.
P/N 05-90000 ..... **$848.00 pr.**



Cherokee Taper Wing Tips
PA-28 151 thru 236 models
P/N 05-91000 ..... **$718.00 pr.**



Cessna Wing Tips
140A, 150, 170B, 172, 175, 180, 182,185,210 (pre 1974 models only)
P/N 05-94000 ..... **$680.00 pr.**



Comanche Wing Tips
All singles and PA-30 twins.
P/N 05-92000 ..... **$728.00 pr.**



Cherokee Dorsal Fin Forward
PA-28/PA-32
P/N 05-93000 ..... **$219.11 pr.**



Bonanza Wing Tips
35 series thru P models
P/N 05-95000 ..... **$983.00 pr.**

Other Products:

DESCRIPTION	PART NO.	PRICE
Beech Wing Tips	05-00769	**$772.00**
Piper Tailcone (PA-28 & PA-32)	05-98000	**Call for Price**
Piper Dorsal Fin (PA-28 & PA-32)	05-99000	**Call for Price**
Cherokee Dorsal Fin Forward	05-93000	**$219.11**
Cherokee Dorsal Fin Aft.	05-02602	**$231.76**
Cherokee Tail Cone Upper	05-02603	**$238.54**
Cherokee Tail Cone Lower	05-02604	**$246.06**
Cessna 172-206 Left Wing Tip	05-12917	**$328.00**
Cessna 172-206 Right Wing Tip	05-12918	**$328.00**

WHEEL FAIRINGS

All wheel fairings furnished with reinforcing bulkheads for added stability and cleanliness. Note: Light fill and sanding is required for smooth ready to paint surface. A finishing service is available as an option at checkout that will leave a primer smooth surface.



MF-1A - 5:00 X 5 fairing that is small and compact. The same shape and size as the early model Cessna 150 & measures 26" long by 7" wide. Has been used on the CA-61, Tailwind, T-18, Baby Ace, Cougar, or any homebuilt that requires this size.
P/N 05-01215 ..... **$228.95 Pair**



MF-2 - 5:00 X 5 teardrop style as used on the later model Cessna 150. Measuring 36" by 7", it has been installed on Tailwinds, Smyth Sidewinder, Cougar or any wheel this size.
Overall size: 35"L x 7-1/2"W
Opening Size:7.5"W x 151/2"L
P/N 05-01216..... **$204.95 Pair**



MF-3 - 5:00 X 5 with the long, narrow profile. A standard on Pitts Specials, Acro Sport, T-l 8, Cassutt & Midget Mustang. Truly a universal shape.
Overall size: 39"l x 7.5"w Opening Size:4-3/4"W x 101/2"L
P/N 05-01217 ..... **$228.95 Pair**



MF-4 - 5:00 X 5 Thorp T-18 fairing. This style was one of our original developments specifically for the T-18 and has proven to be very popular. Like all other listed pants, it will fit any wheel this size.
Overall size: 31.5"L x 7-1/2"w
Opening Size:14.75"wx 7"L
P/N 05-01218 ..... **$228.95 Pair**



MF-5 - 6:00 X 6 wheel fairing in the same shape as the J-3 Cub but, scaled down to fit this size wheel. Popular on the bi-planes, Spezio and the parasols. Gives a very classic look to your airplane.
Overall size: 30"L x 9-1/2"W
Opening Size: 7-1/2"W x 18-1/2"L
P/N 05-01219 ..... **$198.50 Pair**



MF-6 - 6:00 X 6 fairing styled after the late model Cessna 172 and is used on just about any designed aircraft. Measure 42" by 8" and are very pretty.
Overall size: 44"L x 8-1/4"W.
Opening Size: 8-1/4"W x 23-1/4"L
P/N 05-01220..... **$230.95 Pair**



E-Z WHEEL FARING - This wheel fairing was originally designed to fit aircraft that are using 11x400x5 wheels and tires but is suitable for many other aircraft using that tire size. This wheel fairing is made from woven fiberglass and epoxy and is split vertically (lap joint) just forward of the axle center line. Aerodynamically, this fairing is very clean. Requires screws and nutplates to attach sections, hardware not included. L-31 3/8" x H-10 1/4" x W- 8 1/2".
P/N 05-12769..... **$375.00**



MF-7 - 6:00 X 6. Same size and shape as the Piper Cherokee fairings. A standard on the Stardusters, Skybolt and used on m any other designs.
Overall size: 37"L x 8"W
Opening Size: 13-1/2"W x 7"L
P/N 05-01221 ..... **$228.95 Pair**



MF-8 - 5:00 X 5 pant. Almost the same dimension as the MF-3 however, has more of a point on the tip. Also popular on the Pitts, Cassutt, T-18 and Midget Mustang.
Overall size: 37-1/2"L x 8"W
Opening Size: 14-3/4"W x 6"L
P/N 05-01222..... **$229.00 Pair**



MF-9 - J-3 Cub design for any bi-plane or parasol using the larger size wheels.
Overall size: 29"L x101/2"W
Opening Size:8-1/4"Wx18"L
P/N 05-01223 ..... **$228.95 Pair**



MF-10 - 7:00 X 6. For aircraft using the larger wheels and also for the Stinson or Funk. Much lighter than the factory originals.
Overall size: 31"L x 11"W
Opening Size: 19"L x 10"W
P/N 05-01224 ..... **$228.95 Pair**



MF-11 - 6:00 X 6 wheel fairings. Same size and shape as used on the Tripacer, Pacer or Colt. More streamlined design than the MF-9. A nice installation on the Super Cub w/ 8.00 x 4 wheels.
Overall size: 43"L x 9-1/2"w
Opening Size: 9.5"w x 18.5"L
P/N 05-01225 ..... **$228.95 Pair**



MF-12 - 5:00 X 5 RACING FAIRINGS. Fits the V-Witt, Cassutt, Owl or any Formula One, Formula V or Bi-plane using this size wheel. Race proven.
Overall size: 40"L x 7-1/2"W
Opening Size: 4.5"W x10-3/4"L
P/N 05-01226..... **$228.95 Pair**

WHEEL PANT COVERS



Stop tow-bar wheel pant scuffing. & Avoid costly wheel pant repainting. Available in standard black, navy or burgundy. Fits models: Cessna 172 I 182 I 206 Cherokee

- Made from heavy-duty vinyl
- Padded backing
- Attaches quickly using Velcro(tm)
- Stores easily
- Personalization available

Cover Navy
P/N 05-03048 ..... **$78.95**
Cover Black
P/N 05-03049 ..... **$78.95**
Cover Burgundy
P/N 05-03050 ..... **$78.95**

PA28/PA32 REFINED SPEED PANTS



FAA approved Laminar Flow Speed Pants will add up to 10.5 mph over bare wheels and up to 8 mph over stock wheel pants for all Piper PA-28 and PA-32 aircraft models. A special pressure recovery design improves rate of climb with most installations.
At 10 pounds, these second generation Speed Pants are lighter and up to 5 times stronger than conventional Piper wheel pants. They are made of three layers of hand-laid, 10 ounce fiberglass which is oven cured with a high strength resin. Additional layers of cloth are applied to stress areas. A removable panel allows easy access to brakes. Wing to wheel fairing improve the aesthetics of the main gear.
P/N 05-03627..... **$3,972.00**

AP

F. ATLEE DODGE REPLACEMENT PARTS



F. Atlee Dodge has been providing quality aviation services since 1957, known for modifications to Super Cubs and many other types of aircraft, along with supplying a wide selection of general aviation aircraft parts. Products such as: Engine Cowlings, Exhaust Systems, Heaters, Folding Seats, Long Range Fuel Tanks, Float Fittings, Skis & Ski Rigging Parts, Enclosed Baggage Compartments, Shoulder Harnesses & Attach Mounts, Custom Steps & Stainless Steel Handles, Super Cub Landing Gear Components, Super Cub Tailfeathers, Standard & oversize, and External Load Modification. It is emphasize that some of these products are intended to provide components primarily for non-certificated/experimental aircraft, and other possible non-aviation uses. Just because it fits doesn't make it appropriate for aircraft, please be sure to check with the FAA if using outside the parameters of experimental aircraft. ***When requesting STC Documents an additional charge may apply. STC Documents must be requested at time of order and may not be cancelled or returned.***

A/C Type	Description	FAA PMA	STC	OEM Part No.	Part No.	Price
150	RH Tailpipe			K0450338-66	05-07837	**$126.75**
150	LH Tailpipe			K0450338-67	05-07839	**$126.75**
150	RH Muffler			K0450400-26	05-07841	**$416.00**
150	RH Muffler			K0450400-26M	05-07843	**$416.00**
150	LH Muffler			K0450400-3	05-07844	**$473.00**
150	LH Riser			K0450400-69	05-07847	**$126.75**
150	RH Riser			K0450400-70	05-07849	**$74.75**
150	RH Riser			K0450400-74	05-07851	**$74.75**
150	152 MUFFLER			K0454009-6	05-07852	**$626.00**
170	Muffler			KAVCON-01	05-07853	**$689.00**
172	Right Rear Riser			K1754007-1	05-07861	**$234.95**
172	Left Rear Riser			K1754008-1	05-07862	**$239.95**
172	Left Front Riser			K1754009-1	05-07863	**$239.95**
172	Right Front Riser			K1754010-1	05-07864	**$239.95**
180	Left hand collector	N	Y	0750290-23	05-07866	**$830.00**
170, 180, 185, 206	Water Rudder - Lift Handle	N	N	3359-1	05-07797	**$424.00**
170/172	Right hand muffler			K0550157-32	05-07858	**$651.00**
170/172	Riser			K0550157-7	05-07857	**$92.95**
170/172	Riser			K0550157-8	05-07856	**$126.75**
170/172	Left hand muffler			K0550157-9	05-07854	**$651.00**
170/172	172/175 MUFFLER			K0550176-59	05-07859	**$626.00**
180/182	Muffler			K0750130-12	05-07873	**$530.00**
180/182	Muffler			K0750130-9	05-07874	**$543.00**
180/182	Collector STC'd			K0750130M-48	05-07871	**$963.00**
180/182	Collector 12.5"			K0750161-67A	05-07868	**$785.00**
180/182	Collector 13"			K0750161-67B	05-07869	**$785.00**
180HP	Fuel Caps	N	N	3267-180	05-03458	**$104.75**
206/207/210	Muffler RH			K1250251-13	05-07878	**$524.00**
206/207/210	Right Hand Collector			K1250264-2	05-07877	**$729.00**
28-140/150/160/180	Left Front Stack			K63726-02	05-07894	**$505.00**
28-140/150/160/180	Right Rear Stack			K63726-03	05-07891	**$595.95**
28-140/150/160/180	Right Front Stack			K63726-04	05-07892	**$413.00**
28-140/150/160/180	Left Rear Stack			K63726-05	05-07893	**$252.95**
28-150/151/160/161/180/181	Left Front Riser			K35300-00	05-07901	**$208.00**
28-150/151/160/161/180/181	Left Rear Riser			K35301-00	05-07902	**$228.95**
28-150/151/160/161/180/181	Right Front Stack			K62230-00	05-07898	**$236.95**
28-150/151/160/161/180/181	Right Rear Stack			K62232-00	05-07899	**$181.75**
28-150/151/160/161/180/181	Muffler			K66894-00	05-07897	**$421.00**
28-150/151/160/161/180/181	Piper 28-140 Muffler			K99482-00	05-07904	**$683.00**
28-150/151/160/161/180/181	Piper 28-180 Muffler			K99482-02	05-07906	**$683.00**
28-235	Muffler			K65012-00	05-07909	**$566.00**
28-235	Left hand stack			K65038-00	05-07907	**$753.00**
28-235	Right hand stack			K65039-00	05-07908	**$714.00**
28-235	Muffler			K65813-00	05-07912	**$651.00**
28-235	Muffler			K68718-03	05-07911	**$733.00**
28R-180	Muffler			K67517-00	05-07918	**$483.00**
28R-180	Left Front Riser			K67617-00	05-07913	**$211.95**
28R-180	Left Rear Riser			K67618-00	05-07914	**$211.95**
28R-180	Right Front Riser			K67619-00	05-07915	**$1,383.00**
28R-180	Right Rear Riser			K67620-00	05-07916	**$211.95**
31-300/310/325	Left hand elbow			K16000-11	05-07926	**$131.75**
31-300/310/325	Left rear elbow			K16000-13	05-07924	**$375.00**
31-300/310/325	Right hand elbow			K16000-15	05-07926	**$131.75**
31-300/310/325	Right rear elbow			K16000-17	05-07925	**$375.00**
31-300/310/325	Left hand tube			K16000-3	05-07922	**$185.75**
31-300/310/325	Right hand tube			K16000-5	05-07927	**$185.75**
31-300/310/325	Right hand assembly			K16825A	05-07921	**$1,085.00**
31-300/310/325	Left hand assembly			K16826A	05-07919	**$1,085.00**
31-300/310/325	Upper tailpipe			K40310-08	05-07928	**$657.00**
31-300/310/325	Lower tailpipe			K40310-09	05-07929	**$708.00**
31-350	Right rear elbow			K16000-7	05-07932	**$377.00**
31-350	Right hand elbow			K16000-9	05-07931	**$131.75**
31-350				K40310-09	05-07933	**$657.00**
31-350	Upper tailpipe			K40310-10	05-07929	**$708.00**
32-300	Left Rear Stack			K38137-02	05-07939	**$242.95**
32-300	Left Center Stack			K38137-03	05-07938	**$242.95**
32-300	Left Front Stack			K38137-04	05-07937	**$235.95**
32-300	Right Front Stack			K38137-05	05-07941	**$261.95**
32-300	Right Center Stack			K38137-06	05-07942	**$261.95**
32-300	Right Rear Stack			K38137-07	05-07943	**$261.95**
32-300	Muffler			K67517-00	05-07918	**$483.00**
32-300	Stack			k68793-00	05-07946	**$632.00**
32-300	Muffler: Listed as "STEERING HORN:			K68796-00	05-07944	**$825.00**
C-170	Ski Attach Kit Cessna	N	N	3168-170	05-07738	**$416.00**

F. ATLEE DODGE REPLACEMENT PARTS

A/C Type	Description	FAA PMA	STC	OEM Part No.	Part No.	Price
C-170	Step Kit Replacement - Strut	N	N	3354-11	05-07758	$108.90
C-170, C-180, C-185	Step Kit Replacement - Side Cowl	N	N	3354-S	05-07756	$109.95
C-170, C-180, C-185	Step Kit Replacement - Handle	N	N	3354-H	05-07757	$106.80
C-170, C-180, C-185	Step Powder Coated White	Y	N	8013-01	05-07754	$543.00
C-170, C-182, C-185	V-Brace - CUSTOM FABRICATED				05-07789	$536.00
C-180	Ski Attach Kit Cessna	N	N	3168-180	05-07739	$416.00
C-180	Step Kit Replacement - Strut	N	N	3354-12	05-07759	$112.75
C-180	V-Brace	Y	Y	180-VBE	05-07788	$671.00
C-180, C-185	Shroud - Muffler	Y	N	4236	05-03478	$568.00
C180-C185	Muffler - Seaplane Extended	Y	N	AD750161-89	05-07686	$875.00
C-185	Collectors	N	N	CES0002	05-07552	$1,232.00
C-185	Collector HD	N	N	CES0003(HD)	05-07553	$1,518.00
C-185	Ski Attach Kit Cessna	N	N	3168-206	05-07741	$416.00
C-185	Step Kit Replacement - Strut	N	N	3354-13.5	05-07761	$109.95
C-206	Exhaust Deflector	Y	Y	3238	05-07568	$555.00
C-206	Ladder - Boarding	Y	Y	3193	05-07652	$1,116.00
C-206	Ski Attach Kit Cessna	N	N	3168-185	05-07742	$416.00
C-206	Tail Pipe Deflector	Y	Y	3238	05-07786	$492.00
C-206	TAILPIPE - LANDPLANE	N	N	LH = AD1250256-7	05-07779	$594.00
C-206	TAILPIPE - LANDPLANE	N	N	RH = AD1250264-6	05-07781	$594.00
C-206	TAILPIPE - SEAPLANE	N	N	LH = AD1242013-1	05-07782	$732.00
C-206	TAILPIPE - SEAPLANE	N	N	RH = AD1242013-2	05-07783	$732.00
C-206, C-207	Muffler - 206 Heavy Duty, LH	Y	N	AD1250250-5	05-07679	$696.00
C-206, C-207	Muffler - 206 Heavy Duty, RH	Y	N	AD1250251-16	05-07681	$467.00
C-206, C-207	Seat Back Frame - Heavy Duty	Y	N	3226	05-07714	$620.00
C-206, C-207	Shroud - Muffler, LH, HD	N	N	AD125250-6	05-07731	$594.00
C-206, C-207	V-Brace	Y	N	AD1242001-18	05-07787	$671.00
C-207	TAILPIPE	N	N	LH = AD1254004-3	05-07777	$351.00
C-207	TAILPIPE	N	N	RH = AD1254004-4	05-07778	$351.00
C-208	Seat Removal Tool	N	N	208-SRT	05-07723	$53.80
C-208	Seat Track Tie Downs	Y	Y	TDC-208	05-07724	$97.75
Cessna	Battery Rack Firewall	Y	Y	8008-01	05-03460	$492.00
Cessna	Clamp - Exhaust 206	Y	N	AD1250259-1	05-07539	$459.00
Cessna	DOOR HINGE PINS - LARGE DIA 1/8	N	N	AD0711038-1	05-07563	$41.50
Cessna	DOOR HINGE PINS - SMALL DIA 3/32	N	N	AD0711001-59	05-07562	$34.50
Cessna	Filler Neck Red. Dia (Shaw) W/O CAP	Y	Y	3188	05-07586	$339.00
Cessna	Filler Neck Red. Dia (Wisco) W/O CAP	Y	Y	3189	05-07584	$467.00
Cessna	JACK PAD	N	N	AD180-JP-2	05-07647	$90.75
Cessna	Seat Jump - Folding	Y	Y	3187-L, -R	05-07722	$3,164.00
Citabria/Bellanca	Front stack	N	N	7-1298	05-07949	$804.00
Citabria/Bellanca	Rear stack	N	N	7-1299	05-07947	$804.00
Citabria/Bellanca	Muffler w/ Tailpipe			K3-1493	05-07952	$420.00
Citabria/Bellanca	Muffler w/o Tailpipe			K4-1104	05-07951	$369.00
DHC-2	Beaver Ladder - Boarding	N	N	N/A	05-07508	$849.00
DHC-2	Beaver Floor Tie Down Attach	Y	Y	3181	05-07511	$594.00
DHC-2	Beaver Strut Assy Door Post	Y	Y	3309	05-07509	$734.00
DHC-2	Beaver Tube - Torque; Tail Wheel Steering	N	N	N/A	05-07512	$1,257.00
DHC-2	Front Fuselage Strut Assy	Y	Y	3309	05-07509	$734.00
DHC-2	Gasket - Inspection Cover	N	N	N/A	05-07613	$19.50
DHC-2	Gasket - Sending Unit	N	N	N/A	05-07612	$22.50
DHC-2	Ladder - Boarding	N	N	N/A	05-07653	$849.00
DHC-2	Seat - Center Row Folding Seat	Y	Y	3180	05-07719	$3,156.00
DHC-2	Seat Belt Tie Down	Y	Y	3181	05-07511	$594.00
DHC-2	Water Rudder Tiller	N	N	N/A	05-07802	$140.75
EDO 2000	EDO 2000 Post & Blade Assy	N	N	N/A	05-07564	$989.00
EDO 2000	Float Pulleys	N	N	N/A	05-07598	$13.85
EDO 2000	Rudder Posts	N	N	N/A	05-07699	$702.00
EDO 2000	Splash Rails Kit 89-8000	N	N	N/A	05-07753	$218.95
EDO 2000	Water Rudder - Blade Assy	N	N	N/A	05-07792	$351.00
EDO 2000	Water Rudder - Blade Only	N	N	N/A	05-07793	$159.90
EDO 2000	Water Rudder - Hinge	N	N	N/A	05-07794	$83.75
EDO 2000	Water Rudder - Posts	N	N	N/A	05-07799	$702.00
EDO 89-2000	Float Splash Rails	N	N	N/A	05-07602	$191.75
EDO 89-2000	Water Rudder - Pickup Handle	Y	N	3359-2	05-07798	$95.75
Helio Courier	Right hand stack			K395-061-001-02	05-07953	$755.00
Helio Courier	Left hand tailpipe			K395-061-001-52	05-07956	$208.95
Helio Courier	Right hand tailpipe			K395-061-001-54	05-07957	$208.95
J3	Right Stack			K70671-00	05-07879	$548.00
J3	Muffler			K71053-02	05-07881	$675.00
J3	Left Stack			K71082-00	05-07882	$548.00
J3	Tailpipe			K74501-00	05-07883	$295.95
J3 & PA-11, -18	Float Fittings - Weld On	Y	Y	3143-18	05-02529	$610.00
J-3 thru PA-18	Shoulder Harness Attach Bracket - Front	Y	N	3232-1	05-07728	$110.75
J-3 thru PA-18	Shoulder Harness Attach Bracket - Rear	Y	N	3232-2	05-07729	$168.75
J-3 thru PA-18	Stick Covers	N	N	3343	05-07767	$316.00
J-3 thru PA-18	Stringers, Large or Small	N	N	1232-162	05-07768	$42.00
J3 thru PA-19	Step Main Landing Gear - Long	Y	Y	3195	05-03461	$287.95
J3 thru PA-22	Fuel Caps - VENTED	Y	Y	3267	05-03459	$107.75
J3 thru PA-22	Remote Compass Mount Bracket	Y	Y	1033	05-07694	$223.95
J3 thru PA-22	Step Refueling	Y	Y	3190-10	05-07762	$106.80
J3 thru PA-22	Step Refueling	Y	Y	3190-11	05-07764	$106.80
J3 thru PA-22	Step Refueling	Y	Y	3190-12	05-03462	$143.75
J-3 thru PA-22	Tail Handles - Weld On	N	N	J20652-000	05-07502	$185.75

F. ATLEE DODGE REPLACEMENT PARTS

AP

A/C Type	Description	FAA PMA	STC	OEM Part No.	Part No.	Price
J-3, PA-11, -18	Water Rudder - Pickup Tubes	N	N	3359-6	05-07803	$85.75
J3, PA-11, -18, -19	Main Landing Gear - 1 1/4" Std RH or LH	Y	N	3225-1, -2	05-07661	$594.00
J-3, PA-11, -18, -19	Safety Cables MLG - STD	Y	Y	2089-18	05-03463	$253.95
PA-11 thru -18	Seat Belt Attach Kit Front	Y	Y	3246	05-07716	$314.00
PA-12	Boot Cowling Assy	N	N	12-BC	05-07516	$1,371.00
PA-12	Bracket - Lift Strut Reinforcing	Y	Y	3192-12	05-07518	$73.75
PA-12	Defroster Kit	N	N	3242-12	05-07558	$670.00
PA-12	Firewall - Titanium	N	N	12-TFW	05-07592	$798.00
PA-12	Float Fittings - Weld On	Y	Y	3143-12	05-03476	$912.00
PA-12	Instrument Panel	N	Y	1034	05-07642	$479.00
PA-12	Muffler - PA-12 under repair station	N	N	AD10308-002	05-07682	$748.00
PA-12 STC ONLY	X Brace Top Deck - SA02379AK	N	Y	8031	05-07812	$315.00
PA-12, -14	Cabane	Y	Y	3166-2	05-07523	$458.00
PA-12, -14	Cabane Attach Fittings - Weld On	N	N	3166-2AF	05-07526	$211.95
PA-12, -14	Fuel Tank 30.5 Gal RH w/ Kit	Y	Y	3140-516	05-07608	$3,411.00
PA-12, -14	Fuel Tank 30.5 Gal LH w/ Kit	Y	Y	3140-516	05-11160	$3,411.00
PA-12, -14	Muffler - Hot Rod, PA-12	N	Y	AD10308-HR	05-07683	$1,844.00
PA-12, -14	Safety Cables MLG - 3X	Y	Y	3344-12	05-03466	$293.95
PA-12, -14	Safety Cables MLG - STD	Y	Y	2089-12	05-03465	$252.95
PA-12, -14	Tailbrace Beef Up	N	N	1022-12	05-07773	$211.95
PA-12, -14, -18	Shock Strut- 3" EXT	Y	Y	3164-3, -4	05-07658	$151.99
PA-12, -14, -18	Shock Strut- STD	Y	Y	3164-1, -2	05-07657	$151.99
PA-12, -18	Aircraft Tie Down Loop	Y	N	3218	05-07499	$60.95
PA-12, -18	Elevator Square	N		Ron Sullivan	05-07548	$555.00
PA-12, -18	Lumber Rack	N	N	12-LR, 18-LR	05-07656	$734.00
PA-12, -18	Rudder Square	N		Ron Sullivan	05-07551	$620.00
PA-12, -18	Shock Strut- 6" EXT	N	N	3164-5, -6	05-07659	$201.95
PA-12, -18	Stabilizer Square	N		Ron Sullivan	05-07549	$555.00
PA-14	Instrument Panel	N	N	1034-2	05-07644	$470.00
PA-18	Aircraft Tie Down Bracket	Y	Y	3197	05-07498	$146.95
PA-18	Baggage - Extended	Y	Y	2103	05-07503	$983.00
PA-18	Battery Rack Front Seat	Y	Y	3304	05-04766	$439.00
PA-18	Battery Strap	Y	N	3278	05-07507	$52.85
PA-18	Blank Panel	N	N	1034-B	05-07646	$172.75
PA-18	Boot Cowling Assy	N	N	18-BC	05-07514	$1,512.00
PA-18	Boot Cowling Assy - Titanium	N	N	N/A	05-07517	$2,073.00
PA-18	Bracket - Lift Strut Reinforcing	Y	Y	3192-18	05-07519	$73.75
PA-18	Brake Reinforcing Channel	Y	N	4231	05-07521	$112.95
PA-18	Bungee Covers	N	N	BUNGEE COVER	05-07522	$102.75
PA-18	Cabane	Y	Y	3166-1	05-07524	$358.00
PA-18	Cables Push Pull	Y	N	3310	05-07528	$60.80
PA-18	Carb Heat Box	N	N	AD15005-00	05-07529	$1,358.00
PA-18	Cargo Nets	N	N	3234	05-07531	$543.00
PA-18	Channels - Cowling Lower	Y	N	3277	05-07536	$117.95
PA-18	Channels - Cowling Upper	Y	N	3276	05-07537	$117.95
PA-18	Defroster Kit	N	N	3242-18	05-07559	$670.00
PA-18	Exterior Paneling - Boot Cowl L.H. Rear	N	N	N/A	05-07567	$50.95
PA-18	Exterior Paneling - Boot Cowl R.H. Rear	N	N	N/A	05-07566	$50.95
PA-18	Fairings	Y	N	AD12274-00	05-07572	$51.75
PA-18	Fairings	Y	N	AD12274-02	05-07573	$51.75
PA-18	Fairings	Y	N	AD12275-00	05-07574	$90.75
PA-18	Fairings	Y	N	AD12275-01	05-07576	$53.75
PA-18	Fairings	Y	N	AD11523-00	05-07577	$60.95
PA-18	Fairings	Y	N	AD12276-00	05-07579	$51.75
PA-18	Fairings	Y	N	AD12276-01	05-07581	$51.75
PA-18	Fairings	Y	N	AD11719-00	05-07582	$64.75
PA-18	Fairings	Y	N	AD11719-01	05-07583	$83.85
PA-18	Filler Neck Repair Kit	N	N	3140-60R	05-07587	$206.95
PA-18	Firewall - SS	Y	N	8007-01	05-07588	$467.00
PA-18	Firewall - Titanium	Y	N	8007-02	05-07591	$728.00
PA-18	Firewall - Titanium w/ Boot Cowl	N	N	18-BC-T	05-07593	$2,037.00
PA-18	Fuel Tank 30.5 Gal LH w/ Kit	Y	Y	3140-L	05-07609	$3,411.00
PA-18	Fuel Tank 30.5 Gal RH w/ Kit	Y	Y	3140-R	05-11161	$3,411.00
PA-18	Headliner	N	N	18-HL	05-07622	$671.00
PA-18	Hydrasorb units	N	N	12998-S	05-07627	$1,257.00
PA-18	Instrument Panel - w/ Insert	N	Y	1034-1	05-07643	$470.00
PA-18	Interior Panel Set (Excludes Upper Wing Panels)	N	N		05-07641	$722.00
PA-18	Interior Paneling - LH Center	N	N	12308-05	05-07629	$113.75
PA-18	Interior Paneling - LH Front, FWD	N	N	10776-02	05-07628	$76.75
PA-18	Interior Paneling - LH Rear	N	N	12444-00	05-07631	$76.75
PA-18	Interior Paneling - RH Center	N	N	10930-00	05-07633	$70.75
PA-18	Interior Paneling - RH Front	N	N	12311-00	05-07632	$83.75
PA-18	Interior Paneling - RH Rear	N	N	12445-00	05-07634	$108.90
PA-18	Interior Paneling - Throttle Panel FWD	N	N	12309-00	05-07636	$195.75
PA-18	Interior Paneling - Throttle Panel Rear	N	N	12314-00	05-07637	$109.00
PA-18	Interior Paneling - Upper Wing RH	N	N	12618-00	05-07638	$70.75
PA-18	Interior Paneling -Upper Wing Butt LH	N	N	12617-03	05-07639	$70.75
PA-18	Knobs - Mixture	Y	N	3312-1	05-07651	$12.75
PA-18	Lifting Eyes	N	N	3217	05-07654	$98.85
PA-18	Main Landing Gear - 1 1/2" 3" Ext RH or LH	Y	Y	3284-1A, -2A	05-07664	$620.00
PA-18	Main Landing Gear - 1 1/2" Std RH or LH	Y	Y	3225-A1, -A2	05-07662	$594.00
PA-18	Main Landing Gear - 1 1/4" 3" Ext RH or LH	Y	Y	3284-1, -2	05-07663	$548.00
PA-18	Mount - Oil Cooler LH	Y	Y	6018	05-07674	$492.00
PA-18	Mount - Oil Cooler RH	Y	Y	6003	05-07673	$172.75

F. ATLEE DODGE REPLACEMENT PARTS

A/C Type	Description	FAA PMA	STC	OEM Part No.	Part No.	Price
PA-18	Mounting Brackets - Alternator	Y	Y	6020	05-07672	$268.95
PA-18	Muffler - Hot Rod, PA-18	Y	Y	3241-HR	05-07684	$1,550.00
PA-18	Muffler - STD - Heavy Duty	Y	Y	3241	05-03425	$41.50
PA-18	Oversize Round Elevator	N	N		05-07556	$594.00
PA-18	Oversize Round Rudder	N	N		05-07554	$696.00
PA-18	Rear Seat Cross Bar	Y	Y	3146	05-07692	$242.95
PA-18	Rear Seat Heater w/ Hose	Y	Y	3175	05-07693	$747.00
PA-18	Safari Seat	Y	Y	6151	05-07701	$747.00
PA-18	Safety Cables - 3X, LOWER ONLY	N	N	3344-18-LOWER	05-07712	$185.75
PA-18	Safety Cables MLG - 3X, WIDE BODY	N	N	3344-18-4W	05-07708	$236.95
PA-18	Safety Cables MLG - 3X	Y	Y	3344-18	05-03464	$246.95
PA-18	Seat - Folding Front Kit	Y	Y	3186	05-03474	$532.00
PA-18	SEAT BOTTOM - FOLDING	N	N	3186-SBL	05-07718	$99.95
PA-18	Shroud - Muffler, 2 Piece	Y	Y	3236	05-03456	$596.00
PA-18	Shroud - Pre-Heat, 2 Piece	Y	Y	3182	05-03457	$349.00
PA-18	Sight Gage 30.5	Y	Y	3286-1	05-07737	$75.75
PA-18	Ski Spring - Gold	Y	Y	2127	05-07746	$197.75
PA-18	Ski Springs - Silver	Y	Y	2097	05-07747	$197.75
PA-18	Strobe Light Mounting Bracket	Y	Y	2087	05-07769	$214.95
PA-18	Water Rudder Tiller	N	N	PP1023	05-07801	$57.90
PA-18	Winter Front	N	N	WINTER FRONT	05-07809	$83.75
PA-18	Front Stack			K12457-12	05-07569	$685.00
PA-18	Rear Stack			K12457-13	05-07571	$798.00
PA-18 STC ONLY	X Brace Top Deck - SA2011AK	N	Y	3261	05-07813	$287.95
PA-18, -19	Header Tanks - Front	Y	Y	3169-1	05-07619	$358.00
PA-18, -19	Header Tanks - Rear	Y	Y	3169-2	05-03469	$372.00
PA-18, -19	Tailbrace Beef Up	N	N	1022-18	05-07774	$232.95
PA-18-150	Dome - Carb Air Filter	Y	N	3281	05-07561	$149.85
PA-22	Fuel Tank 30.5 Gal LH w/ Kit	Y	Y	3258	05-11162	$3,411.00
PA-22	Fuel Tank 30.5 Gal RH w/ Kit	Y	Y	3258	05-07611	$3,411.00
PA-22	Front Stack			K12093-23	05-07888	$722.00
PA-22	Rear Stack w/shroud			K13238-05	05-07889	$938.00
Piper	Cabin Heater Box	N	N	18-CHB	05-07527	$365.00
Piper	Seat Track Tie Downs	Y	N	TDP-31	05-07727	$111.95
Piper & Husky MLG	Axe - Survival	N	N	AD-18-SA	05-07502	$185.75
	6X Safety Cable Kits / Built to Order			3344-12-6X	05-07709	$236.95
	6X Safety Cable Kits / Built to Order			3344-18-6X	05-07711	$236.95
	Axel Adapter, Pair	N	N	2079	05-07501	$211.95
	Belly Pan Clean Out Kit	Y	N	3285	05-07513	$358.00
	Cargo Tie Down Bases	N	N	40000-11	05-07532	$19.75
	Cargo Tie Down Hooks - Weld On 4130N	N	N	3234-10	05-07534	$35.50
	Cargo Tie Down Rings	N	N	40340-20	05-07533	$19.50
	Clamps - Heavy Duty 1/2"	N	N	N/A	05-07542	$12.50
	Clamps - Heavy Duty 1/4"	N	N	N/A	05-07543	$12.50
	Clamps - Heavy Duty 3/8"	N	N	N/A	05-07544	$12.50
	Clamps - Heavy Duty 5/8"	N	N	N/A	05-07546	$12.50
	Clamps - Muffler	N	N	N/A	05-07547	$60.95
	Clamps Umpco Any Size	N	N	N/A	05-07541	$13.50
	Cleveland Wheel & Brake - Will Not Work With Cessna Tubular Style Land Gear	N	N	STC Only	05-07538	$314.00
	Exhaust Stack - Front	N	N	K12457-12	05-07569	$685.00
	Exhaust Stack - Rear	N	N	K12457-13	05-07571	$798.00
	Float Pulley w/ Brackets	N	N		05-07599	$23.99
	Float Pulleys w/ Eyebolts	N	N		05-07601	$59.95
	FUEL CAP KEEPER w/o CAP	N	N	3267-KPR	05-07607	$30.50
	Gaskets - Gas Cap	N	N	4050	05-07616	$22.50
	Gaskets - Gas Cap	N	N	4969	05-07617	$23.75
	GUST LOCKS	N	N	AD18-GL	05-07618	$111.95
	Heat Shield Engine Mount	N	N	3274-8, -10, -12	05-07624	$47.85
	Husky Gear	Y	N	AD45017- 501HD, -502HD	05-07626	$2,226.00
	Knobs - Push Pull (Plain)	N	N	3311	05-07649	$12.75
	Main Landing Gear - 1 1/2" 6" Ext RH or LH / Built to Order				05-07666	$722.00
	Main Landing Gear - HD Cabane for 6X MLG / Built to Order				05-07669	$467.00
	Main Landing Gear Bolt Kits	N	N	N/A	05-07668	$67.75
	MLG 3X3 - Fabricated Per Customer Request/Needs Cabane				05-07671	$696.00
	Muffler - Maul	Y	N	AD5266 (LH)	05-07677	$1,136.00
	Muffler - Maul	Y	N	AD5267 (RH)	05-07678	$1,136.00
	Muffler Clamp	N	N		05-07676	$60.95
	Northern Companion Taildragger	N	N	NC5A	05-04767	$954.00
	Northern Companion Tricylce	N	N	NC5B	05-04768	$856.00
	Reservoir - for Hydraulic Skis	N	N	2080-S1, -H1, -L1	05-07696	$331.00
	Rigging - w/ Springs	N	N	2609-S	05-07697	$810.00
	Rigging - w/o Springs	N	N	2609-X	05-07698	$416.00
	Right hand collector			0750290-24	05-07867	$527.00
	Safety Cable Bolt Kit	N	N	N/A	05-07713	$29.50
	Ski / Brake Keepers	N	N	2609-BK	05-07743	$60.95
	Ski Plates	N	N	VA1013	05-07751	$27.50
	Ski Selector Valve	N	N	2609-SV	05-07744	$223.95
	Ski Tabs	N	N	2089-6.125	05-07749	$12.50
	Ski Washers	N	N	VA1016	05-07752	$12.50
	Washer - Axle	N	N	N/A	05-07791	$12.50

PMA PRODUCTS REPLACEMENT PARTS



For more than 15 years PMA Products, Inc. has been the reliable, affordable alternative for the highest quality FAA/PMA approved parts for Piper, Beech, Cessna, Embraer, and Pratt & Whitney. In 2006 PMA Products, Inc. received the Leadership Award from MARPA, the Modification & Replacement Parts Association. Aircraft Spruce is proud to offer more than 200 PMA Products Inc. parts to the general aviation community.

Oem	Description	Oem Part No.	Spruce Part No.	Price
Beech / Cessna	Fuel Cap Seal	38241	05-07332	**$34.70**
Cessna	Fuel/alcohol Pump	476411	05-07373	**$319.00**
Embraer	Back Up Ring	Bds3115-026c	05-07493	**$5.35**
Lear	Bolt, Main Gear	2341114-3	05-07306	**$82.75**
Lear	Bushing	2341120-1	05-07307	**$41.50**
Lear	Bushing	2341127-1	05-07308	**$19.50**
Marvel Sc	Gasket, Fuel Screen	16-a48	08-06629	**$5.35**
Mccauley	Carbon Block	B5121	05-07492	**$106.75**
Mooney	Transducer, Fuel Press.	3060-00017	05-07318	**$146.75**
Mooney	Transducer, Oil Press.	3060-00018	05-07319	**$198.75**
Mooney	Transducer, Fuel Press.	880007-501	05-07463	**$146.75**
Mooney	Transducer, Oil Press.	880008-501	05-07464	**$146.75**
Piper	Bushing, Landing Gear	14843-016	05-07289	**$8.50**
Piper	Bushing, Landing Gear	14843-018	05-07291	**$19.95**
Piper	Bushing, Steering	14976-102	05-07292	**$26.70**
Piper	Cap, Fuel	16097-000	05-07297	**$86.75**
Piper	Cap, Fuel	17672-000	05-07299	**$128.00**
Piper	Bushing, Gear Housing	20737-023	05-07301	**$26.55**
Piper	Bushing, Nose Gear Idler	20737-032	05-07302	**$22.70**
Piper	Bushing	20737-040	05-07303	**$26.70**
Piper	Bushings, Door Mech.	20737-044	05-07304	**$21.50**
Piper	Fastener	26246-000	05-07309	**$36.65**
Piper	Cap, Fuel	27221-000	05-07311	**$97.75**
Piper	Axle, Nose Wheel	31797-000	05-07327	**$300.95**
Piper	Bulkhead	35323-012	05-07328	**$261.95**
Piper	Fuel Pump	35328-800	05-07329	**$246.95**
Piper	Hinge, Aileron	35636-000	05-07331	**$115.75**
Piper	Bushing, Nose Gear Housing	40250-002	05-07333	**$68.95**
Piper	Bushing, Flap Roller	41413-005	05-07334	**$15.90**
Piper	Bushing, Seat Roller	41413-038	05-07336	**$24.50**
Piper	Bushing, Door Mech.	41413-041	05-07337	**$22.75**
Piper	Bushing, Main Gear Fork	43256-002	05-07339	**$24.90**
Piper	Bushing, Main Gear Housing	43256-005	05-07341	**$29.75**
Piper	Bushing, Nose Gear Housing	43256-006	05-07342	**$33.50**
Piper	Stall Switch Assembly	450-742	05-07344	**$599.00**
Piper	Bearing, Rod End	452-334	05-07346	**$19.70**
Piper	Bearing, Rod End	452-335	05-07347	**$24.50**
Piper	Bearing, Rod End	452-336	05-07348	**$25.75**
Piper	Bearing, Rod End	452-368	05-07349	**$55.75**
Piper	Bearing, Flap	452-387	05-07351	**$33.95**
Piper	Bearing, Stabilator	452-394	05-07352	**$57.75**
Piper	Bearing, Rod End	452-412	05-07353	**$34.65**
Piper	Bearing, Rod End	452-439	05-07354	**$66.75**
Piper	Bearing, Stabilator	452-538	05-07356	**$396.00**
Piper	Bearing, Landing Gear	452-575	05-07357	**$93.80**
Piper	Bearing, Aileron	452-584	05-07358	**$31.50**
Piper	Bearing, Rod End	452-860	05-07359	**$26.50**
Piper	Bushing	453-903	05-07361	**$14.90**
Piper	Static Discharger	456-802	05-07362	**$21.50**
Piper	Universal	46203-002	05-07366	**$1,268.00**
Piper	Universal	62834-000	05-10890	**$309.00**
Piper	Pitot Heater Element	464-356	05-07367	**$93.75**
Piper	Pitot Heater Element	464-357	05-07368	**$95.75**
Piper	Pitot Heater Element	464-440	05-07369	**$98.95**
Piper	Pitot Heater Element	464-441	05-07371	**$98.99**
Piper	Quad Ring	484-769	05-07374	**$4.95**
Piper	Quad Ring	484-770	05-07377	**$6.95**
Piper	Ring Scraper	486-188	05-07378	**$13.75**

Oem	Description	Oem Part No.	Spruce Part No.	Price
Piper	Transducer, Fuel Press.	486-439	05-07379	**$158.75**
Piper	Transducer, Oil Press.	486-440	05-07381	**$158.75**
Piper	Bulkhead	587-330	05-07393	**$259.00**
Piper	Hinge Pin	62002-002	05-07396	**$5.65**
Piper	Hinge Pin	62002-003	05-07397	**$5.95**
Piper	Hinge Pin	62002-004	05-07398	**$7.70**
Piper	Hinge, Aileron	62371-008	05-07399	**$89.90**
Piper	Universal	62834-802	05-07401	**$279.95**
Piper	Bushing, Torque Link	63310-000	05-07402	**$18.70**
Piper	Barrel, Trim	63530-000	05-07403	**$86.75**
Piper	Hinge, Tab	63560-002	05-07404	**$11.90**
Piper	Hinge, Tab	63560-003	05-07406	**$16.50**
Piper	Capacitor, Alternator	63897-006	05-07407	**$46.85**
Piper	Bushing, Flap Hinge	63900-019	05-07408	**$12.50**
Piper	Bushing, Landing Gear	63900-089	05-07409	**$12.50**
Piper	Bushing, Nose Gear	63900-109	05-07411	**$16.50**
Piper	Bushing, Nose Gear	63900-122	05-07412	**$18.85**
Piper	Bushing, Main Gear	65003-041	05-07413	**$16.50**
Piper	Bushing, Main Gear	65003-044	05-07414	**$16.50**
Piper	Bushing Nse. Gr. Drag Brce.	65003-045	05-07416	**$19.85**
Piper	Bushing, Nose Gear	65003-046	05-07417	**$26.70**
Piper	Shaft, Trim	65246-000	05-07422	**$86.75**
Piper	Shaft, Trim	65246-002	05-07423	**$79.85**
Piper	Tube, Nose Strut	65280-000	05-07424	**$734.00**
Piper	Fuel Pump	65628-800	05-07426	**$243.95**
Piper	Gasket, Fuel Cap	66815-000	05-07427	**$7.50**
Piper	Bushing, Torque Link	67026-007	05-07428	**$17.50**
Piper	Bearing	67026-011	05-07429	**$12.50**
Piper	Bushing, Main Gear	67026-012	05-07431	**$45.50**
Piper	Switch, Landing Gear	67411-002	05-07432	**$109.80**
Piper	Switch, Landing Gear	67411-003	05-07433	**$109.80**
Piper	Switch, Landing Gear	67411-004	05-07434	**$109.80**
Piper	Switch, Landing Gear	67411-005	05-07436	**$109.80**
Piper	Switch, Landing Gear	67411-006	05-07437	**$109.80**
Piper	Switch, Landing Gear	67411-007	05-07438	**$109.80**
Piper	Switch, Landing Gear	67411-008	05-07439	**$109.80**
Piper	Switch, Landing Gear	67411-020	05-07441	**$109.80**
Piper	Switch, Landing Gear	67411-021	05-07442	**$109.80**
Piper	Down Limit Switch	95232-000	05-10891	**$149.75**
Piper	Bushing, Teflon	69790-000	05-07443	**$9.85**
Piper	Plate, Cowl	69791-000	05-07444	**$28.50**
Piper	Fitting, Swivel	70371-002	05-07446	**$9.50**
Piper	Stud Swivel	70371-003	05-07448	**$21.85**
Piper	Gasket, Fuel Bowl	751-871	05-07451	**$7.90**
Piper	Bushing, Torque Link	77780-005	05-07452	**$21.50**
Piper	Strut, Alternator Brace	78483-000	05-07453	**$33.90**
Piper	Bumper, Nose Gear	79072-000	05-07454	**$5.65**
Piper	Roller, Flap	86102-104	05-07457	**$16.50**
Piper	Roller, Flap	86102-105	05-07458	**$17.50**
Piper	Roller, Flap	86102-106	05-07459	**$18.85**
Piper	Bulkhead, Spinner	87325-010	05-07461	**$335.00**
Piper	Roller, Seat	87332-002	05-07462	**$19.95**
Piper	Bushing, Aileron Hinge	95061-108	05-07469	**$10.90**
Piper	Bushing, Nose Gear	95061-133	05-07471	**$27.95**
Piper	Hinge,tab	95864-002	05-07472	**$14.75**
Piper	Hinge,tab	95866-002	05-07473	**$13.55**
Piper	Barrel, Trim	96596-002	05-07474	**$160.75**
Pratt & Whitney	Fuel Transfer Tube	3011155	05-07312	**$42.50**
Pratt & Whitney	Bearing, Rod End	3011587	05-07313	**$96.75**
Pratt & Whitney	Fuel Transfer Tube	3020030	05-07314	**$59.90**

Oem	Description	Oem Part No.	Spruce Part No.	Price
Pratt & Whitney	Gasket, Fuel Nozzle	3029566	05-07316	$1.99
Pratt & Whitney	Gasket, Fuel Nozzle	3029678	05-07317	$2.94
Pratt & Whitney	Retainer Plate	3103345-01	05-07321	$89.75
Pratt & Whitney	Diaphragm	3103346-01	05-07322	$180.75
Pratt & Whitney	Diaphragm	3103347-01	05-07323	$179.95
Pratt & Whitney	Shim, Prop Shaft	3110998-01	05-07324	$113.75
Pratt & Whitney	Gasket	3118962-01	05-07326	$14.70
Pratt & Whitney	Gasket, Fuel Nozzle	Ms9371-16	05-07497	$2.50
Raytheon / Beech	Seat Foot	100-530448-5	05-07239	$79.95
Raytheon / Beech	Seat Foot	100-530448-7	05-07242	$79.95
Raytheon / Beech	Bushing, Nose Gear	100-820017-1	05-07243	$16.50
Raytheon / Beech	Bushing, Landing Gear	101-810014-1	05-07244	$53.75
Raytheon / Beech	Bushing	101-810014-3	05-07246	$21.50
Raytheon / Beech	Bushing, M. Torque Link In Gr	101-810024-3	05-07252	$26.70
Raytheon / Beech	Torque Link Bushing	101-810024-5	05-07253	$28.50
Raytheon / Beech	Pin, Torque Link	101-810025-1	05-07254	$199.85
Raytheon / Beech	Bolt	101-810090-1	05-07257	$145.80
Raytheon / Beech	Bolt	101-810090-3	05-07258	$131.75
Raytheon / Beech	Bolt, Main Gear Drag Brace	101-810145-1	05-07261	$227.95
Raytheon / Beech	Bolt, Main Gear Drag Brace	101-810146-1	05-07262	$213.95
Raytheon / Beech	Door Closure Roller	105739x-yn1437	05-07263	$19.90
Raytheon / Beech	Bushing, N. Torque Link Ctr	105740x-ya0630	05-07264	$13.50
Raytheon / Beech	Bushing, M. Torque Link Ctr	105740x-ya1625	05-07266	$29.50
Raytheon / Beech	Bushing	105740x-yd0160	05-07267	$39.90
Raytheon / Beech	Bushing	105740x-yk0563	05-07269	$29.50
Raytheon / Beech	Bushing	105740x-yn0520	05-07271	$46.70
Raytheon / Beech	Bushing, N. Torque Link Ctr	105740x-yn0625	05-07272	$17.50
Raytheon / Beech	Bushing, M. Torque Link Ctr	105740x-yn0677	05-07273	$21.50
Raytheon / Beech	Bushing, Gear Door	105740x-zu0260	05-07274	$18.85
Raytheon / Beech	Bushing, Nose Steering	105740x-zv0312	05-07276	$7.35
Raytheon / Beech	Bushing, Main Drag Link Ctr	114-810038-1	05-07277	$45.50
Raytheon / Beech	Bushing, Mn Drag Link In Gr	114-810042-1	05-07279	$41.50
Raytheon / Beech	Bushing, Mn Drag Link In Gr	114-810049-3	05-07281	$54.75
Raytheon / Beech	Bushing, Nose Attach Lug	114-820113-1	05-07282	$26.70
Raytheon / Beech	Steering Roller	114-820062-1	05-07283	$21.50
Raytheon / Beech	Bushing	115-610019	05-07284	$21.50
Raytheon / Beech	Bushing, Main Gear	115-810064-1	05-07286	$53.75
Raytheon / Beech	Bushing	115-810066-3	05-07287	$38.00

Oem	Description	Oem Part No.	Spruce Part No.	Price
Raytheon / Beech	Thrust Washer	115-810074	05-07288	$24.50
Raytheon / Beech	Switch, Stall	151	05-07294	$575.00
Raytheon / Beech	Fuel Cap Seal	457-98	05-07363	$21.50
Raytheon / Beech	Bushing, Torque Link	45-815013	05-07364	$37.50
Raytheon / Beech	Fuel Pump	476284	05-07372	$320.00
Raytheon / Beech	Washer	50-105000-3	05-07382	$4.65
Raytheon / Beech	Wiper Blade(refill Only)	50-384082-1	05-07383	$22.85
Raytheon / Beech	Bushing	50-524476-1	05-07384	$66.75
Raytheon / Beech	Bushing	50-524476-3	05-07386	$79.80
Raytheon / Beech	Seat Foot	50-534436-5	05-07387	$32.50
Raytheon / Beech	Bushing,n. Upper Torque Lk	50-810034	05-07388	$21.65
Raytheon / Beech	Main Strut Upper Bearing	50-810326	05-07389	$152.75
Raytheon / Beech	Pin	50-810343-5	05-07391	$33.50
Raytheon / Beech	Pin	50-810343-7	05-07392	$33.50
Raytheon / Beech	Switch, Mic	601-4300	05-07394	$53.75
Raytheon / Beech	Bushing, Ns Torque Link Ctr	90-810019-1	05-07466	$19.75
Raytheon / Beech	Bushing, Drag Link	90-820010-1	05-07467	$37.50
Raytheon / Beech	Bolt, Nose Gear	90-820011-1	05-07468	$174.85
Raytheon / Beech	Mic Switch	99-340253-1	05-07476	$73.75
Raytheon / Beech	Bushing, Torque Link	99-810060-1	05-07477	$22.70
Raytheon / Beech	Bushing	99-810064-1	05-07478	$28.65
Raytheon / Beech	Bushing	99-810064-3	05-07479	$66.75
Raytheon / Beech	Bushing, Main Drag Link Ctr	99-810066-1	05-07481	$13.50
Raytheon / Beech	Bearing, Nose Gear	99-820099	05-07482	$238.95
Raytheon / Beech	Yoke	A3025	05-07483	$51.90
Raytheon / Beech	Carbon Block	A3026	05-07484	$69.75
Raytheon / Beech	Carbon Block Assy	A3044	05-07486	$122.75
Raytheon / Beech	Seal, Drain Valve	Cca1269	05-07494	$3.35
Raytheon / Beech	Seal, Drain Valve	Cca1319	05-07496	$3.35
Saab	Bearing	Air130986	05-07488	$440.00
Saab	Bearing	Air130988	05-07489	$494.00
Various	Filter / Gasket	Various	05-07338	$17.95

CESSNA PARTS

(FAA/PMA APPROVED)



CESSNA COWL FLAP RIGHT AND LEFT

These cowl flaps feature a replaceable stainless steel hinge that may be removed and replaced using screws. The specific model applicability for these cowl flaps are the C-180C, D, E, F, G, H, J and 180K; the 182B, C and D; 185, 185A, B,C,D, 185E, A185E and A185F. FAA Approved.

Left..... P/N 05-03393..... **$1,289.00**
Right ..... P/N 05-03394..... **$1,285.00**



HORIZONTAL STABILIZER ADJUSTING SCREW AND BARREL
FOR C-180, 185 AND C-182 THRU C-182D

Screw ..... P/N 05-07000..... **$324.00**
Barrel..... P/N 05-07005..... **$123.75**



HORIZONTAL STABILIZER ADJUSTING CAM

Cessna Adjusting Cam. - U0712502; Trim screw adjusting cam. FAA/PMA Approved. P/N 05-07010..... **$42.95**



STABILIZER TRIM SCREW BOOT
FOR C-180, C-185, AND C-182 THRU C-182D

Boot ..... P/N 05-07015..... **$65.75**





CESSNA 120/140 FUEL VALVE KIT

This valve has a very smooth action with positive detents. Like the original valve, it has positions for left-on, right-on and both-off. Unlike the original, it is not prone to sticking or binding. It does not require periodic seal replacement or lubrication. This PMA'd replacement valve will mount almost identically to the original OEM valve. It uses the same tank selector plate and the same mounting hardware as the original. This valve is sold in a kit that includes the handle and installation instructions. The handle has no "pointer." This is in compliance with AD47-43-02..... P/N 05-03407..... **$473.00**



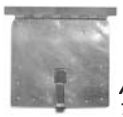
C-120, C-140 LIFT STRUT ROD ENDS

Front Rod End.... P/N 05-07020..... **$107.75**
Rear Rod End..... P/N 05-07025..... **$89.75**



C-172 OIL DOOR

Applicable on the following models:
(172, 172A, B, C, D, E, F, G, H, I, J, K, L, M, N, P, Q)
P/N 05-07030 ..... **$304.00**



C-180, 182, & 185 SERIES COWL OIL DOOR

Applicable on the following models: For 180—180G, 182—182G & 185—185C .....P/N 05-07035 ..... **$378.00**



CESSNA AILERON HINGE

For all C-150, 152, 170A, 170B, 172, 180, 182 & 185 .....P/N 05-07040 ..... **$96.75**



CESSNA STYLE TAIL SKID

This easy-to-install tail skid is designed to save the tail feathers on most single engine Cessna's. Made from 4130 aircraft steel, this tail skid fits Cessna 150, 152, 172, 177, and 182. P/N 13-17010.....**$14.75**



REPLACEMENT REAR SEAT AIR VENT TUBE ADAPTER

The vent tube adapter for Cessna aircraft models offers an aluminum replacement with a limited lifetime warranty, and won't crack like the old plastic style adapters. Restores rear seat airflow. FAA/PMA Approved. P/N 05-04645.....**$76.80**



EXHAUST CUFF FOR CESSNA 340

The problem * The exhaust pipe creates parasitic drag within the slip stream * Non-laminar flow conditions occur at the opening of the cowl * Aircraft esthetics are affected by the protrusion of the pipe. The exhaust cuff solution eliminates non-laminar airflow about the exhaust port * Reduces cylinder head temperatures * Cruise performance increased * Enhances the esthetics of the aircraft

Cessna Exhaust Cuff 340.....P/N 05-04475 .....**$395.00**



C-170 TAILWHEEL SPRINGS

Tailwheel Spring Assembly .....P/N 06-15000 .....**$242.95**
Main Leaf Only .....P/N 06-15100 .....**$106.75**

C-120/140 TAILWHEEL SPRING SETS
(LATER CESSNA SPRING SET SHOWN)



Early 120-140 (single bend, originally on SN 8001-14026)
P/N 05-07055 ..... **$251.95**
120-140 (SN 14027 and up) P/N 06-14800 ..... **$246.95**
120-140 main leaf only (SN 8001-14026) P/N 05-07065 ..... **$70.75**
120-140 main leaf only (SN 14072 & up) P/N 06-14900 ..... **$73.95**



RUDDER BELLCRANK
FOR C-120, 140 & 170

P/N 05-07075 ..... **$347.00**



WING FABRIC CLIP
FOR C-120/140/170

P/N 09-19900 ..... **$0.77**



RUDDER & ELEVATOR SKINS

Cessna 180, 185, 182-182B FAA-PMA. Sold in pairs only, includes both Right and Left sides.
P/N 05-07090 ..... **$420.00**

SK152-24B CESSNA RUDDER STOP FOR SHEET METAL BULKHEAD

P/N 05-04655 ..... **$525.00**



ALL METAL COWLING PARTS
FOR 120-140

1946 Cowling Items
Lower Cowl Skin, Left P/N 05-07165 ..... **$1,193.00**
Lower Cowl Skin, Right P/N 05-07170 ..... **$1,193.00**
Nose Cowl Only P/N 05-07175 ..... **$857.00**



C-120/140 COWL GRILLS

FAA/PMA Approved. Also approved for 170, 170A, and 170B thru SN 25372.
Cessna 140/170 left hand grill (U0452207)
P/N 05-07180 ..... **$211.95**
Cessna 40/170 right hand grill (U0452207-1) . P/N 05-07185 ..... **$217.95**



C-120/140 ENGINE MOUNT ASSEMBLY

120-140 ..... P/N 05-07190 ..... **$1,016.00**
140A..... P/N 05-07195 ..... **$1,375.00**



FLAP TRACK WEAR GAGE

McFarlane Aviation Products has developed a new tool to determine Flap track wear. McFarlane developed this tool to positively indicate when the flap track is worn beyond service limits. Flap Track Wear Gage Use to determine if a Cessna flap track is worn beyond service limits. Flap Track Wear Gage Instructions: Run the gage plug along each slot in each flap track while verifying that the gage will not enter the slot. Reposition the flaps as required to gage the entire length of each slot. If the gage enters a slot at any point the track is worn beyond service limits. The diameter of the gage is .6035 inches (diameter tolerance +.000/-.002)Periodically verify the gage diameter by measuring the age diameter with a calibrated micrometer.
P/N 05-02145.....**$46.85**



VENT TUBE ADAPTER BRACKET CESSNA

CW-172001 replacement for Cessna part #0700325-2 adapter assembly. Eligible for installation on Cessna 172, 172A, 172B, 172C, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172Q.
P/N 05-04645.....**$76.80**

(FAA/PMA APPROVED)

LEVER TYPE WINDOW LATCHES & COMPONENT PARTS


PN 05-07130

Latch Assembly Applicable on: 120, 140, 140A, 170, 170A, 170B, (SN 20267 thru 25372)
P/N 05-07100 ..... **$347.00**
W/ High Polish
P/N 05-11449 ..... **$416.00**


PN 05-07145 PN 05-07135 PN 05-07125

Latch Assembly Applicable on: 170B (SN 25373 & on), 172, 175, 180 & 182
P/N 05-07105 ..... **$347.00**
W/ High Polish
P/N 05-11450 ..... **$416.00**

COMPONENT PARTS

Arm (for -2 assy.)(U0413362-8)	P/N 05-07110	**$45.80**
Arm (for -3 assy.)(U0413362-9)	P/N 05-07115	**$47.85**
Bracket (U0413362-13)	P/N 05-07120	**$74.85**
Knob (U0413359)	P/N 05-07125	**$23.50**
Extension Arm (U0413362-12)	P/N 05-07130	**$71.75**
Angle (left side)(U0413362-10)	P/N 05-07135	**$9.80**
Angle (right side)(U0413362-11)	P/N 05-07140	**$9.00**
Pin (U0413362-14)	P/N 05-07145	**$21.50**
Pin (U0413362-16)	P/N 05-07150	**$21.50**
Pin (U0413362-15)	P/N 05-07155	**$21.50**
Spacer (U0413362-7)	P/N 05-07160	**$10.50**
Washer (2 req'd)	P/N AN960-10	**$0.02**
Washer (2 req'd)	P/N AN960-10L	**$0.02**

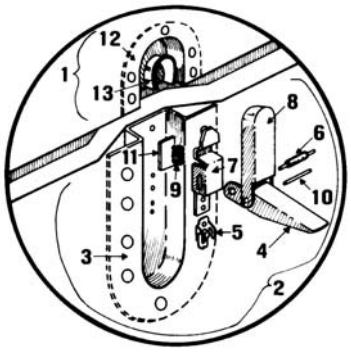
CABIN ENTRY STEP FOR CESSNA AIRCRAFT



Cabin Entry Step for Cessna Aircraft.
Applicable to:
170, 170A, B - 18000 thru 27169
180,180A, B, C, D, E, F - 30000 thru 18051312
185, 185A, B, C, D, E, A185E* - 1850001 thru 1851300
* Partial model eligibility

Left Cabin Access	P/N 05-04176	**$410.00**
Right Cabin Access	P/N 05-04177	**$408.00**

COWL LATCHES AND DETAILS FOR 120-140 AND 170 SERIES



HOOK & LEVER ASSEMBLIES

1) Hook Assembly	P/N 05-07200	**$100.75**
2) Lever Assembly	P/N 05-07205	**$322.00**

DETAIL PARTS

3) Recess	P/N 05-07210	**$37.55**
4) Lever	P/N 05-07215	**$28.50**
5) Clip	P/N 05-07220	**$34.65**
6) Pin	P/N 05-07225	**$15.95**
7) Housing	P/N 05-07230	**$30.50**
8) Hook	P/N 05-07235	**$35.95**
9) Spring	P/N 05-07240	**$22.50**
10) Pin	P/N 05-07245	**$16.99**
11) Shim	P/N 05-07250	**$2.17**
12) Recess	P/N 05-07255	**$59.75**
13) Hook	P/N 05-07260	**$54.75**

AILERON HINGE FOR CESSNA



FAA – PMA APPROVED AS0523816-1
P/N 05-00048 ..... **$93.80 ea.**

CESSNA SPINNERS


PN 05-07275 PN 05-09030

NOTE:Cessna 172 Spinner Dome PN 05-09045 will not work for 1960 Cessna 172A.
Cessna spinner dome for - F, G, H, J, 150 K
P/N 05-09030 ... **$375.00**
Cessna front plate for - 150 F, G, H, J, 150 K
P/N 05-09035 ... **$614.00**
Cessna rear plate for - 150 F, G, H, J, 150 K
P/N 05-09040 ... **$347.00**
Cessna spinner backplate for - early Cessna 170 & 172 for Continental 8 hole flanges ..... P/N 05-07265 ... **$358.00**
Cessna spinner dome for- early Cessna 170 & 172 for Continental 8 hole flanges ..... P/N 05-07270 ... **$789.00**
Cessna spinner kit - early Cessna 170 & 172 for Continental 8 hole flanges ..... P/N 05-07275 **$1,125.00**
Cessna dome for - 172 A-F ..... P/N 05-09045 ... **$635.00**
Cessna front plate for - 172 A-F ..... P/N 05-09050 ... **$525.00**
Cessna rear plate for - 172 A-F ..... P/N 05-09055 ... **$384.00**
Cessna dome for - 172 I, K, L, M, N, & P ..... P/N 05-07280 ... **$452.00**
Cessna front plate for - 172 I, K, L, M, N, & P .. P/N 05-07285 ... **$262.95**
Cessna rear plate for - 172 I, K, L, M, N, & P ... P/N 05-07290 ... **$337.00**

CESSNA 182 ALUMINUM SPINNERS



These aluminum spinners and spinner support spacers are FAA approved for installation on several models of Cessna 182 series aircraft using McCauley two blade constant speed propellers. The Spinner Dome replaces original Cessna p/n 0752637K200, 0752637-5 and 0752637-11. The Spinner Spacer replaces original Cessna p/n 0752620-1 and 0752620-3. The Spinner Dome is approved on the Cessna 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q and the 182R. The Spinner Support Spacer is approved on Cessna Models 180H, 180J, 180K, A185E, A185F, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 210-5 (205), 210-5A (205A), 206, U206, P206 and the U206A.

Spinner Dome U0752637K200 . . . . . 05-01901 ..... **$843.00**
Spinner Sport Spacer U0752620-3 . . . . 05-01902 ..... **$7.99**

CESSNA TRIM CONTROL CHAINS



We carry FAA-PMA approved replacement trim control chains for Cessna 120 through 210 series aircraft. Call the Cessna/Piper parts specialist at Aircraft Spruce (1-877-4-SPRUCE) for assistance in determining the correct chain for your aircraft.

Model No.	Part No.	Price Ea.
ASS2294-25	05-00289	$4.95
ASS2295-25-185	05-00291	$140.85
ASS2295-25-249	05-00292	$182.80
ASS2295-25-321	05-00293	$135.95
ASS2295-25-43	05-00294	$66.75
ASS2295-25-47	05-00295	$52.75
ASS2295-25-61	05-00296	$111.80
ASS2295-25-63	05-00297	$71.99
ASS2295-25-67	05-00298	$95.90
ASS2295-25-70	05-00299	$79.75
ASS2295-25-71	05-00301	$99.75
ASS2295A25-111	05-00302	$108.75
ASS2295P25-113	05-00303	$113.75
ASS2295P25-155	05-00304	$171.75
ASS2295P25-159	05-00305	$150.75
ASS2295P25-185	05-00306	$157.80
ASS2295P25-321	05-00307	$166.99
ASS2295P25-47	05-00308	$66.80
ASS2295P25-55	05-00309	$69.80
ASS2295P25-59	05-00311	$62.75
ASS2295P25-63	05-00312	$82.75
AS2295P25-67	05-00313	$103.75
ASS2295P25-69	05-00314	$81.80
ASS2295P25-71	05-00315	$89.80
AS0432138-2	05-00316	$179.75

CESSNA WHEEL PANT MOUNTING PLATES



These FAA-PMA approved mounting plates are anodized for improved corrosion resistance and will save over $100 compared to factory mounting plates. Approved with partial eligibility for the Cessna 150, 152, and 172. Verify approval for your aircraft with Aircraft Spruce prior to ordering.

Cessna P/N	Aircraft Model	Our P/N	Price Each
0441225-1 (Left)	150/152	05-01497	$171.85
0441225-2 (Right)	150/152	05-01498	$172.90
0441220-1 (Left)	172	05-01499	$112.75
0441220-2 (Right)	172	05-01501	$95.75

AP

CESSNA PARTS

Aircraft Spruce and Specialty stocks a large inventory of Cessna replacement parts. Some of the most commonly required parts are listed on this page. If you require Cessna parts not listed here, please provide us with the Cessna part numbers and we will provide you with a prompt quotation. All of the parts listed here are authentic Cessna factory parts and all carry our low price guarantee. Please verify that the parts are correct for your Cessna model/ year by referring to the applicable Cessna parts manual prior to ordering.

Call for Prices on Unlisted Cessna Parts

Part. No.	Description	Price
S1258-1	Sump	**$17.50**
SK172-1F	Strut Kit	**$44.80**
S1093-1	Flap Buttons	**$0.15**
NAS75-3-009	Bushing	**$3.65**
NAS77-3-23	Bushing	**$3.95**
NAS77-8-88	Bushing	**$6.00**
MS25171-1	Nipple	**$1.22**
MS25171-2	Nipple	**$1.18**
C156003-0101	Fuel Cap	**$159.75**
C592001-0201	Static Wick Certified	**$52.75**
11-10574	Static Wick Non Certified	**$22.95**
B100142-1	Fuel Cap Gasket	**$16.65**
S1991A1	Contactor	**$191.00**
S2020-2	Drain Valve	**$32.75**
S2106-2	Drain Valve	**$36.50**
S2160-1	Switch	**$8.50**
S2237-3	Seat Belt Bushing	**$1.84**
S2416-1-31.0	Alt Belt	**$47.55**
0400213-6	Compass Placards	**$65.75**
0413613-1-279	Panel Nut	**$2.49**
0511242-1	Seat Stop	**$16.75**
1220114-1	Spacer	**$1.00**
1243030-5	Shim	**$18.50**
1243030-6	Shim	**$15.50**
1243030-7	Shim	**$13.50**
1250860-29234	Clamp	**$98.00**
1298119-4	Exhaust Spring	**$12.50**
0711021-9	Door Spring for Window	**$12.75**
1414104-54	Bushing	**$41.50**
1513174-3	Grey Panel Nut	**$12.80**
1513174-5	Black Panel Nut	**$12.80**
1555014-2	Clamp Half	**$14.50**
0523919	Bushing	**$12.95**
0523920	Roller	**$89.75**
0523921	Roller	**$114.75**
0541139	Plug	**$56.99**
9910306-1	Westgate Gasket	**$41.55**
0711001-59	Hinge Pin	**$25.50**
0713348-1	Stall Horn	**$81.75**

Part. No.	Description	Price
S2488-1	Stall Horn Reed	**$51.75**
0756009-8	Gasket	**$49.50**
0851559-1	Washer	**$5.35**
0756010-6	Plunger	**$264.95**
0756011-1	Standpipe	**$425.00**
S1450-6B14-010	Washer	**$3.35**
S1597-1-37.5	Belt V	**$74.75**
B3-5-1	Filter Vac	**$2.90**
S1921-1	Clamp	**$178.54**
U10C062-262M	Clamp	**$50.60**
B40012	Brush	**$258.95**
A2748	Seal	---
A2749	Seal Wiper	**$15.85**
MS25253-1	Switch	**$15.50**
1234665-10	Tab	**$2,332.00**
S1906-1	Switch	**$31.85**
S1906-2	Switch	**$15.50**
S1230-17	Control	**$161.75**
S1230-19	Control	**$241.95**
RD0015H1600JBL	Rheostat	**$2,372.00**
0441139-6	Shim	**$99.75**
0541111-2	Shim	**$252.95**
0441157-2	Shim	**$386.00**
0441157-1	Shim	**$125.80**
1250405-1	Nut	**$443.00**
MS29513-338	O-Ring	**$2.06**
AN6235-2A	Filter Hyd	**$8.50**
AN6235-3A	Element	**$7.95**
1250922-200	Adapter	**$1,246.00**
1250922-201	Adapter	**$4,592.00**
1250922-202	Adapter	---
0750142-1	Gasket	**$77.75**
0756009-1	Fuel Filter	**$66.75**
0741623-4	Tread	**$22.50**
0441157-3	Shim	**$229.85**
0556010-200	Adapter Ass'y.	**$963.00**
1232040-5	Boot	**$112.95**
79C1	Drain Valve	**$176.75**
S2485-1	Drain Valve	**$101.75**

Part. No.	Description	Price
P52-0016	Contactor	**$217.95**
S1579A2	Contactor	**$164.00**
S1580A1	Contactor	**$152.90**
S1588-1	Gasket	**$90.75**
S1588-2	Gasket	**$35.50**
0750143-2	Deflector	**$44.75**
0750143-3	Bracket	**$52.65**
0851559-1	Washer	**$5.35**
S1915-1	Capacitor	**$122.75**
S1915-2	Capacitor	**$137.75**
S1994-1-1	Switch	**$41.55**
S2334-3	CHT Probe	**$376.00**
S1258-1	Sump	**$17.50**
S3010-1	Switch	**$53.85**
S1104-3	Rod End	**$33.80**
S1105-4	Rod End	**$52.75**
C592001-0201	Wick	**$52.75**
C592001-0203	Wick	**$65.75**
S1704-1	Roller	**$2.70**
1714000-22	Washer	**$5.35**
16165	Wick	**$69.75**
KM610-64	Latch	**$47.80**
B3-11-1	Gasket	**$55.75**
S1477-3	Nut	**$1.34**
S1477-08	Nut Clip	**$1.73**
NH1000897-30	Clamp	**$510.00**
NH1000897-40	Clamp	**$681.00**
NH1000897-50	Clamp	**$435.00**
NH1000897-60	Coupling	**$543.00**
DGR3	ACU	**$431.00**
DGR6	Regulator	**$216.95**
SK152-25A	Rudder Stop	**$102.75**
P52-0016	Contactor	**$217.95**
S16278-111	O-Ring	**$6.75**
390K4E	Alternator Belt	**$139.00**
0422344	Tie Down Bolt	**$209.95**
P264-5037-1	Oil Pressure Sender	**$618.00**



CESSNA CARAVAN BUSHING KITS ELEVATOR AND RUDDER

Cessna has issued several non-mandatory service bulletins and service kits for the rudder and elevator hinge bearings on the Caravan due to a corrosion issue with the needle bearing.

The service kits require modification to the hinge structure, not just the bearing itself. The new bearing is a different size than the "original" design, so the mounting hardware is different as well. Because of these structural changes any aircraft that has had the service kits installed cannot use hardware from a non-service kit aircraft. Includes bearings and all attaching hardware.

Description	Part No.	Price
Caravan Elevator Bushing Kit EBC-KT-7	05-06879	**$133.95**
Caravan Elevator Bushing Kit EBC-KT-8	05-06880	**$441.95**

Description	Part No.	Price
Rudder Bushing Kit RBC-KT-9	05-06881	**$79.50**
Rudder Bushing Kit RBC-KT-10	05-06882	**$259.00**



CESSNA CABLE & CHAIN KITS

Complete flight control and trim chain kits for each of the 150 different cable groups required to service all single engine aircraft from the model 120 through model 185 airplanes. It is a tedious and time consuming job to research the part manuals for all of the cables required for a complete aircraft. We carry stock on all of the cables in either Galvanized-Carbon Steel or Stainless Steel. All components are fully traceable, high quality, and proof tested.

Cable & Chain Kit CCKT206H-01S .....P/N 05-04605 ..... **$1,840.00**
Cable & Chain Kit CCKT182-13S.....P/N 05-04603 ..... **$1,246.00**
Cable & Chain Kit CCKT172175-13 .....P/N 05-04598 ..... **$1,826.00**
Cable & Chain Kit CCKT172175-13S ..... P/N 05-04599.... **$1,755.00**
Cable & Chain Kit CCKT206H-01G ..... P/N 05-04604.... **$1,830.00**
Cable & Chain Kit CCKT182-13G..... P/N 05-04601.... **$1,776.00**



INTER-CYLINDER BAFFLE

Intercylinder Baffles for Teledyne Six Cylinder Engines. Replaces Cessna Part Number 0750135-1 and 0851833-1
P/N 05-02362 ..... **$69.75**

CESSNA FLAP TRAILING EDGE STIFFENER



Improved Fit to Reduce Skin Stress. The stiffeners are accurately shaped to the same angle that the top and bottom skins come together to completely eliminate the bending stress due to riveting the skins together. FAA/PMA Approved.For application please call or visit our website.

79.5" length ..... P/N 05-00046..... **$78.75**
Flap Tracing Edge Stiffener 116.25" ..... P/N 05-07237..... **$145.75**

MC600 SERIES UNIVERSAL SOLID WIRE VERNIER MIXTURE CONTROL



FAA-PMA approved for use as a minor alteration part on the following aircraft:
• Cessna • Raytheon • Maule • Cessna/Reims • Mooney •Univair (Stinson) • Piper Call for Specific Models - Easily field approved for other applications - Trim to exact length..... P/N 05-01254.....**$188.75**

THROTTLE CONTROL



Fittings and components are made from anodized aluminum, stainless steel, and brass. All critical swage connections are metal to metal for continued dependability. Vernier locking devices are precision formed and heat treated in critical wear areas. ..... P/N 05-02209..... **$376.00**



6260 RETAINING NUT 7/16-20

The retaining nut threads onto the threaded section of the control on the back side of the instrument panel to secure the control. Replacement retaining nut p/n 6260 for all McFarlane MC6350 dual push-to-unlock controls. P/N 05-04581 ..... **$7.55**



FAA-PMA APPROVED CONTROLS FOR CESSNAS
THROTTLES – PROP – MIXTURE

Throttle, Propeller, Mixture, controls are available for most Cessna single engine aircraft from the Cessna 120 through the 210 series. These FAA-PMA controls are ultra-smooth, flexible with no stretch, arctic tested to -50°F, and tested to 250,000 cycles. They feature brass body assembly, teflon lined conduit, stainless steel ends, viton dust boots, aluminum friction lock, and a high quality phenolic knob (throttle, mixture, and prop).

Throttle Controls

Model	Serial No.	Model No.	Part No.	Price
120	8000 thru 11846	MC0411091-7	05-00272	$336.00
140	11847 thru 15075	MC0411091-7	05-00272	$336.00
140A	15200 thru 15724	MC0411091-7	05-00272	$336.00
150	17001 thru 59018	MC0411091-7	05-00272	$336.00
150A,B,C, D,E,F	15059019 thru 15064532	MCS1222-11S	05-00197	$236.95
F150F	F1500001 thru F1500067	MCS1222-11S	05-00197	$236.95
150G	15064533 thru 15067198	MCS1222-14S	05-00199	$340.00
F150G	F1500068 thru F1500219	MCS1222-14S	05-00199	$340.00
150H,I,J, K,L,M	15067199 thru 15079405	MCC299505-0202S	05-00262	$269.95
A150K,L,M	A1500001 thru A1500734	MCC299505-0202S	05-00262	$269.95
F150H,J, K,L,M	F1500220 thru F1501428	MCC299505-0202S	05-00262	$269.95
FA150K,L	FA1500001 thru FA1500120	MCC299505-0202	05-00262	$269.95
152*	15279406 thru 15282031	MC9863053-20	05-00248	$489.00
A152*	A1520735 thru A1520808	MC9863053-20	05-00248	$489.00
F152*	F15201429 thru F15201528	MC9863053-20	05-00248	$489.00
FA152*	FA1520337 thru FA1520347	MC9863053-20	05-00248	$489.00
152*	15282032 thru 15286033	MC9863056-1	05-00251	$302.00
A152*	A1520809 thru A1521049	MC9863056-1	05-00251	$302.00
F152*	F15201529 thru F15201929	MC9863056-1	05-00251	$302.00
FA152*	FA1520348 thru FA1520425	MC9863056-1	05-00251	$302.00
170, 170A,B*	18000 thru 25372	MC0411091-2	05-00269	$368.00
170B*	25373 thru 27169	MCS1222-2S	05-00206	$255.95
172, 172A, B,C,D	28000 thru 17250572	MCS1222-2S	05-00206	$255.95
F172D	F1720001 thru F1720018	MCS1222-2S	05-00206	$255.95
172E,F,G,H	17250573 thru 17256512	MCS1222-15S	05-00201	$325.00
F172E,F,G,H*	F1720019 thru F1720559	MCS1222-15S	05-00201	$325.00
172I,K,L,M	17256513 thru 17267584	MCC299505-0102	05-00259	$363.00
F172M*	F17201035 thru F1720151	MCC299505-0102	05-00259	$363.00
172N*	17267585 thru 17271034	MC9863053-15	05-00246	$478.00
F172N*	F17201515 thru F17201749	MC9863053-15	05-00246	$478.00
172N*,P,Q	17271035 thru 17276673	MC9863056-3	05-00253	$438.00
F172N*,P	F17201750 thru F17202254	MC9863056-3	05-00253	$438.00
172R	17280001 and On	MC565-549-021	05-00988	$264.95
172S	172S8001 and On	MC565-549-021	05-00988	$264.95
175*	55001 thru 55703	MC0411091-27	05-00271	$349.00
177	17700001 thru 17701164	MCS1222-19	05-00203	$595.00
177A,B*	17701165 thru 17702539	MCC299505-030	05-00264	$235.95
180,A,B,C, D,E,F,G	30000 thru 18051445	MCS1222-1S	05-00204	$193.75
180H*	18051446 thru 18051875	MCS1222-13S	05-00198	$208.95
180H*,J	18051876 thru 18052770	MCC299505-0201S	05-00261	$242.95

Throttle Controls

Model	Serial No.	Model No.	Part No.	Price
180K*	18052771 thru 18053000	MC9863053-5	05-00249	$536.00
182,A,B,C,D	33000 thru 18253598	MCS1222-1S	05-00204	$193.75
182E,F,G	18253599 thru 18255844	MCS1222-6S	05-04606	$294.95
182H,J,K	thru 18258505	MCS1222-13S	05-00198	$208.95
182L,M,N,P*	18258506 thru 18261425	MCC299505-0201S	05-00261	$242.95
182P*	18261426 thru 18264835	MCC299505-0205	05-00263	$277.95
182P*,Q*	18264836 thru 18266590	MC9863053-5	--	--
F182P*,Q	F18200001 thru F18200094	MC9863053-5	--	--
182S	18280001 thru 18280944	MC565-549-031	05-00989	$311.00
182T	18280945 and On	MC565-549-031	05-00989	$311.00
T182T	T18208001 and On	MC565-549-031	05-00989	$311.00
T182	18267716 thru 18268615	MC9863056-7	05-00257	$451.00
R182*	R18200001 thru R18200583	MC9863053-11	05-00244	$511.00
FR182*	FR18200001 thru FR18200020	MC9863053-11	05-00244	$511.00
R182*	R18200584 thru R18202041	MC9863056-6	05-00256	$399.00
FR182*	FR18200021 thru FR18200070	MC9863056-6	05-00256	$399.00
TR182	R18200584 thru R18202041	MC9863056-7	05-00257	$451.00
A185E*	185-1301 thru 185-1599	MCC299505-0301	05-00264	$235.95
A185E*	18501600 thru 18502007	MCC299505-0301	05-00264	$235.95
A185E*	18502026 and 18502027	MCC299505-0301	05-00264	$235.95
A185E*,F*	18502008 thru 18502025	MCC299505-0501	05-00265	$546.00
A185E*,F*	18502028 thru 18503153	MCC299505-0501	05-00265	$546.00
188A, A188B*	18800833 thru 18802745	MCS2149-1	05-00226	$705.00
A188B*	18802746 thru 18803856	MCC299508-0301	05-00184	$376.00
205,205A	205-0001 thru 205-0577	MCS1219-1	05-00193	$566.00
206	206-0001 thru 206-0275	MCS1219-1	05-00193	$566.00
P206C,D,E	P206-0420 thru P20600647	MCC299505-0101	05-00258	$355.00
U206C,D,E,F	U206-0915 thru U20603521	MCC299505-0101	05-00258	$355.00
U206G*/ TU206G*	U20603522 thru U20604649	MC9863053-13	05-00245	$552.00
U206G*/ TU206G*	U20604650 thru U20606439	MC9863056-2	05-00252	$517.00
206H	20608001 and On	MC565-549-041	05-00990	$360.00
T206H	T20608001 and On	MC565-549-041	05-00990	$360.00
207, T207	20700007 thru 20700362	MCS1222-25A	05-00205	$250.95
207A*/ T207A*	20700363 thru 20700482	MC9863053-16	05-00247	$588.00
207A*/ T207A*	20700483 thru 20700788	MC9863056-4	05-00254	$423.00
210B,C,D	21057841 thru 21058510	MCS1219-1	05-00193	$566.00
210H,J,K,L	21058937 thru 21061573	MCC299505-0101	05-00258	$355.00
T210H,J,K,L	T210-0308 thru 21061573	MCC299505-0101	05-00258	$355.00
210M/ T210M	21061574 thru 21062954	MC9863053-13	05-00245	$552.00
210N*/ T210N*	21062955 thru 21064897	MC9863056-2	05-00252	$517.00
P210N*	P21000001 thru P21000150	MC9863053-13	05-00245	$552.00
P210N*	P21000151 thru P21000834	MC9863056-2	05-00252	$517.00

PARTIAL MODEL ELIGIBILITY

Accessories

Cessna Rod End S1104-3..... P/N 06-00684.....**$33.80**

Cessna Controls 1230-17..... P/N 06-00686.....**$161.75**

Propeller Controls

Model	Serial Number	P/N	Our P/N	Price
177B*	17701371 thru 17702539	C299506-0105	05-00177	$351.00
177RG*	177RG0001 thru 177RG1051	C299506-0105	05-00177	$351.00
F177RG*	F177RG0001 thru F177RG0160	C299506-0105	05-00177	$351.00
180A,B,C,D,E,F,G	30000 thru 18051445	S1223-4	05-00209	$269.95
180H*, J	18051876 thru 18052770	S1223-4	05-00209	$266.95
182,A,B,C,D	33000 thru 18253598	C299506-0103	05-00268	$269.95
182E,F,G	33000 thru 18253598	S1223-4	05-00209	$269.95
182E,F,G	18253599 thru 18255844	S1223-6S	05-00207	$404.00
182H,J,K	18255845 thru 18258505	S1223-3	05-00208	$293.95
182L,M,N,P	18258506 thru 18265175	S1223-6	05-00211	$249.95
FR182P	F18200001 thru F18200025	C299506-0102	05-00267	$249.95
182Q,R	18265176 thru 18268615	C299506-0102	05-00267	$600.00
180H, 185, 185A,B,C,D,E, A185E	18051446 thru 18051875, 185-0001 thru 185-0237, 185-0238 thru 185-1149, 185-0968-185-1300	MCS1223-5	05-11062	$395.00
A185E*	185-1301 thru 18502007	C299506-0103	05-00268	$266.95
A185E*	18502026 and 18502027	C299506-0103	05-00268	$266.95
A185E*,F	18502008 thru 18502025	C299506-0201	05-00178	$526.00
A185E*,F	18502028 thru 18503153	C299506-0201	05-00178	$526.00
A188B*	18800833 thru 18802745	S2149-2	05-00228	$716.00
A188B*	18802746 thru 18803856	C299508-0302	05-00187	$530.00
T188C	T18803297T thru T18803422T	C299508-0304	05-00191	$657.00
U206, U206A,B, TU206A,B	U206-0276 thru U206-0914	S1223-4	05-00209	$269.95
P206, P206A,B	U206-0276 thru U206-0914	S1223-4	05-00209	$269.95
U206C,D,E,F	P2060001 thru P2060419	S1223-4	05-00209	$269.95
TU206C,D,E,F	U2060915 thru U20603521	C299506-0101	05-00266	$256.95
P206C,D,E	U2060915 thru U20603521	C299506-0101	05-00266	$256.95
U206G, TU206G	P206-0420 thru P20600647	C299506-0101	05-00266	$256.95
207A, T207A	U20603522 thru U20607020	9862067-1	05-00241	$564.00
210E,F,G	20700363 thru 20700788	9862067-12	05-00242	$412.00
T210F,G	21058511 thru 21058936	S1223-4	05-00209	$269.95
210H,J,K,L	T2100001 thru T2100307	S1223-4	05-00209	$269.95
	21058937 thru 21061573	C299506-0101	05-00266	$256.95

Mixture Controls

Model	Serial Number	P/N	Our P/N	Price
T210H,J,K,L	T2100308 thru T2100454	C299506-0101	05-00266	$256.95
210M,N,T210M,N	21061574 thru 21064897	9862067-1	05-00241	$564.00
P210N	P21000001 thru P21000834	9862067-1	05-00241	$564.00
R172E,F,G,H,J,K	R1722000 thru R1723454	9862066-6	05-00239	$592.00
185A,B,C,D,E	185-0238 thru 185-1599	C299507-0201	05-00181	$296.95
A185E,F*	18501600 thru 18502007	C299507-0201	05-00181	$296.95
A185E,F*	18502026 and 18502027	C299507-0201	05-00181	$296.95
A185F*	18502008 thru 18502025	C299507-0401	05-00183	$610.00
A185F*	18502028 thru 18503153	C299507-0401	05-00183	$610.00
188,188A	1880001 thru 1880572	S1220-13	05-00195	$645.00
A188	18800573 thru 18800832	S1220-13	05-00195	$645.00
188B, A188B*	1880833 thru 18802745	C299507-0301	05-00182	$651.00
A188B*	18802746 thru 18803856	C299508-0401	05-00189	$479.00
T188C	T18803297T thru T18803422T	C299508-0402	05-00191	$657.00
205, 205A	205-0001 thru 205-0577	S1220-3	05-00196	$600.00
206	206-0001 thru 206-0275	S1220-3	05-00196	$600.00
U206, U206A,B	U206-0276 thru U206-0914	S1220-3	05-00196	$600.00
P206, P206A,B	P206-0001 thru P206-0419	S1220-3	05-00196	$600.00
U206C,D,E,F	U206-0915 thru U20603521	C299507-0101	05-00179	$318.00
TU206C,D,E,F	U206-0915 thru U20603521	C299507-0101	05-00179	$318.00
P206C,D,E	P206-0420 thru P2060647	C299507-0101	05-00179	$318.00
U206G, TU206G	U20603522 thru U20607020	9862066-1	05-00237	$571.00
207, T207	20700001 thru 20700362	S1220-12A	05-00194	$246.95
207A, T207A	20700363 thru 20700788	9862066-5	05-00238	$460.00
210B,C,D,E,F,G	21057841 thru 21058936	S1220-3	05-00196	$600.00
T210F,G	T210-0001 thru T210-0307	S1220-3	05-00196	$600.00
210K,L, T210K,L	21059200 thru 21061573	C299507-0101	05-00179	$318.00
210M,N, T210M,N	21061574 thru 21064897	9862066-6	05-00239	$592.00
P210N	P21000001 thru P21000834	9862066-6	05-00239	$592.00
182S	18280001 - 18280944	C565-548-042	05-00994	$389.00
182T	18280945 - On	C565-548-042	05-00994	$389.00

FOR CARBURETOR HEAT CONTROLS FOR CESSNA 140-185, VISIT OUR WEBSITE AT WWW.AIRCRAFTSPRUCE.COM.

CESSNA COWL FLAP CONTROLS



Cowl Flap controls are available for most Cessna single engine aircraft from the Cessna 120 through the 210 series. These FAA-PMA controls are ultra-smooth, flexible with no stretch, arctic tested to -50°F, and tested to 250,000 cycles. They feature brass body assembly, teflon lined conduit, stainless steel ends, viton dust boots, aluminum friction lock, and a high quality phenolic knob (throttle, mixture, and prop). Our P/Ns are interchangeable with Cessnas P/Ns; "AS" prefix denotes Aircraft Spruce!

Model	Serial Number	Location	P/N	Our P/N	Price	Location	P/N	Our P/N	Price
R172K	R1722000 thru R1723454	1 per A/C	S1391-26	05-00222	**$156.75**	----	----------	-----	------
FR172K	FR17200591 thru FR17200675	1 per A/C	S1391-26	05-00222	**$156.75**	----	----------	-----	------
177B	17701371 thru 17702752	Left	S1391-25	05-00221	**$189.95**	Right	S1391-26	05-00221	**$189.95**
177RG	177RG0001 thru 177RG1366	Left	S1391-27	05-00223	**$142.95**	Right	S1391-27	05-00223	**$142.95**
180D,E	18050912 thru 18051183	Left	S1245-1	05-00217	**$227.95**	Right	S1245-1	05-00217	**$227.95**
180F	18051184 thru 18051312	Left	S1245-1	05-00217	**$227.95**	Right	S1245-2	05-00218	**$162.75**
180G	18051313 thru 18051445	Left	S1245-3	05-00219	**$299.95**	Right	S1245-2	05-00218	**$162.75**
180H,J	18051446 thru 18052770	Left	S1572-1	-----	-----	Right	S1245-2	05-00218	**$162.75**
180K	18052771 thru 18053203	Left	9860074-3	05-00232	**$437.00**	Right	9860074-4	05-00233	**$436.00**
182D	18253008 thru 18253598	Left	S1245-1	05-00217	**$227.95**	Right	S1245-1	05-00217	**$227.95**
182E,F,G,H,J,K,L,M,N,P,Q,R	18253599 thru 18268615	Left	9860058-3	05-00229	**$362.00**	Right	9860058-4	05-00231	**$367.00**
T182	18267716 thru 18268541	Left	9860075-3	05-00234	**$475.00**	Right	9860075-4	05-00235	**$462.00**
R182/TR182	R18200002 thru R18202041	Left	9860075-3	05-00234	**$475.00**	Right	9860075-4	05-00235	**$462.00**
182S, 182T	18280001 and On	Left	580-703-024	05-01736	**$254.95**	Right	580-703-025	05-01737	**$249.95**
T182T	T18208001 and On	Left	580-703-024	05-01736	**$254.95**	Right	580-703-025	05-01737	**$249.95**
185, 185A,B,C	185-0001 thru 185-0776	Left	S1245-3	05-00219	**$299.95**	Right	S1245-2	05-00218	**$162.75**
185D,E, A185E,A185F*	185-0777 thru 18503153	Left	S1572-1	-----	-----	Right	S1245-2	05-00218	**$162.75**
A185F*	185603154 thru 18504448	Left	9860074-3	05-00232	**$437.00**	Right	9860074-4	05-00233	**$436.00**
205, 205A	205-0001 thru 205-0577	Left	S1244-5	05-00216	**$205.95**	Right	S1244-31	05-00214	**$263.95**
206, U206	206-0001 thru 206-0275	Left	S1244-5	05-00216	**$205.95**	Right	S1244-31	05-00214	**$263.95**
U206A,B,C,D,E,F*	U206-0276 thru U20602199	Left	S1244-5	05-00216	**$205.95**	Right	S1244-31	05-00214	**$263.95**
P206, P206A,B,C,D,E	P206-0001 thru P20600647	Left	S1244-5	05-00216	**$205.95**	Right	S1244-31	05-00214	**$263.95**
TP206A*	P206-0161 thru P206-0274	Left	S1244-5	05-00216	**$205.95**	Right	S1244-31	05-00214	**$263.95**
TU206A*	U206-0438 thru U206-0617	Left	S1244-5	05-00216	**$205.95**	Right	S1244-31	05-00214	**$263.95**
TP206A*,B,C,D,E	P206-0275 thru P20600647	Left	S1244-32	05-00215	**$333.00**	Right	S1244-31	05-00214	**$263.95**
TU206A*,B,C,D,E,F,G	U206-0618 thru U20607020	Left	S1244-32	05-00215	**$333.00**	Right	S1244-31	05-00214	**$263.95**
U206F*,G	U20602200 thru U20607020	Left	S1244-32	05-00215	**$333.00**	Right	S1244-31	05-00214	**$263.95**
206H	20608001 and On	Left	580-703-026	05-01738	**$313.00**	Right	580-703-027	05-01739	**$295.95**
T206H	T20608001 and On	Left	580-703-026	05-01738	**$313.00**	Right	580-703-027	05-01739	**$295.95**
207, 207A,T207,T207A	20700001 thru 20700788	Left	S1244-29	05-00212	**$186.99**	Right	S1244-30	05-00213	**$152.75**
210, 210A	57001 thru 21057840	Left	1213040-1	05-00224	**$381.00**	Right	1213040-2	05-00225	**$393.00**
210B,C,D,E,F,G,H,J,K*	21057841 thru 21059240	Left	S1244-5	05-00216	**$205.95**	Right	S1244-31	05-00214	**$263.95**
T210F	T210-0001 thru T210-0197	Left	S1244-5	05-00216	**$205.95**	Right	S1244-31	05-00214	**$263.95**
210K*,L,M,N	21059241 thru 21064897	Left	S1244-32	05-00215	**$333.00**	Right	S1244-31	05-00214	**$263.95**
T210G,H,J,K,L,M,N	T210-0198 thru 21064897	Left	S1244-32	05-00215	**$333.00**	Right	S1244-31	05-00214	**$263.95**
P210N*	P21000001 thru P21000834	Left	S1244-32	05-00215	**$333.00**	Right	S1244-31	05-00214	**$263.95**

Denotes partial model eligibility



UNIVERSAL PUSH TO UNLOCK CONTROLS

Universal Push to Unlock Controls MC6150/ MC6250 - Perfect for home built or custom projects! Quality stainless steel construction • Teflon lined for smooth operation • Heavy duty strength and long life • 3" maximum travel and 15lb. locking force • Anodized aluminum knobs in red, black, blue or clear • Custom laser marking available. **MC6150 Series: -** • Solid wire end • Available in 4, 6, 8, 10 and 12 foot lengths • Maybe cut to length. **MC6250 Series: -** • 10-32 threaded end • Available in 4, 6, 8, 10 and 12 foot lengths

MC6150 Controls (Solid Wire End)

Description	Part No.	Price
Black Knob, 4Ft.	05-04151	**$81.75**
Black Knob, 6Ft.	05-04152	**$83.80**
Black Knob, 8Ft.	05-04153	**$89.75**
Black Knob, 10Ft.	05-04154	**$91.75**
Black Knob, 12Ft.	05-04155	**$93.80**
Clear Knob, 4Ft.	05-04490	**$81.75**
Clear Knob, 6Ft.	05-04491	**$85.80**
Clear Knob, 8Ft.	05-04492	**$89.75**
Clear Knob, 10Ft.	05-04493	**$91.75**
Clear Knob, 12Ft.	05-04494	**$94.90**
Blue Knob, 4Ft.	05-04495	**$78.75**
Blue Knob, 6Ft.	05-04496	**$85.80**
Blue Knob, 8Ft.	05-04497	**$89.75**
Blue Knob, 10Ft.	05-04498	**$91.75**
Blue Knob, 12Ft.	05-04499	**$94.90**
Red Knob, 4Ft.	05-04156	**$81.75**
Red Knob, 6Ft.	05-04157	**$83.80**
Red Knob, 8Ft.	05-04158	**$89.75**
Red Knob, 10Ft.	05-04159	**$91.75**
Red Knob, 12Ft.	05-04160	**$93.95**

MC6250 Controls (Threaded End)

Description	Part No.	Price
Black Knob, 4Ft.	05-04501	**$93.80**
Black Knob, 5Ft.	05-04502	**$95.90**
Black Knob, 6Ft.	05-04503	**$96.95**
Black Knob, 7Ft.	05-04504	**$99.80**
Black Knob, 8Ft.	05-04505	**$100.75**
Black Knob, 9Ft.	05-04506	**$101.75**
Black Knob, 10Ft.	05-04507	**$103.80**
Clear Knob, 4Ft.	05-04508	**$94.90**
Clear Knob, 5Ft.	05-04509	**$95.90**
Clear Knob, 6Ft.	05-04510	**$95.90**
Clear Knob, 7Ft.	05-04511	**$99.80**
Clear Knob, 8Ft.	05-04512	**$100.75**
Clear Knob, 9Ft.	05-04513	**$101.75**
Clear Knob, 10Ft.	05-04514	**$103.80**
Blue Knob, 4Ft.	05-04515	**$93.80**
Blue Knob, 5ft	05-04516	**$95.90**
Blue Knob, 6ft.	05-04517	**$97.99**
Blue Knob, 7Ft.	05-04518	**$99.80**
Blue Knob, 8Ft.	05-04519	**$100.75**
Blue Knob, 9Ft.	05-04522	**$102.75**
Blue Knob, 10ft.	05-04523	**$103.80**
Red Knob, 4Ft.	05-04524	**$93.80**
Red Knob, 5Ft.	05-04525	**$95.90**
Red Knob, 6Ft.	05-04526	**$96.95**
Red Knob, 7Ft.	05-04527	**$99.80**
Red Knob, 8Ft.	05-04528	**$100.75**
Red Knob, 9Ft.	05-04529	**$101.75**
Red Knob, 10Ft.	05-04530	**$104.80**

WIRE CLAMP BOLTS FOR CESSNAS



Wire clamps for solid wire controls for Cessna Aircraft. Wire clamps are used on solid wire controls including cabin air, mixture control, strainer drain, cabin heat, defrost, flap and many others.

FAA-PMA approved for Cessna 120 through the 425 series aircraft. Unique design to reduce wire stress. Manufactured from heat treated stainless steel for better wear and corrosion resistance.

Please visit our website for part specifications and application information.

Manufacturer Part No.	Part No.	Price
MCS2323-1	05-04583	**$15.55**
MCS2323-2	05-04584	**$19.50**
MCS2323-3	05-04585	**$16.80**
MCS2323-4	05-04586	**$18.65**
MCS2323-5	05-04587	**$16.55**
MCS2323-6	05-04588	**$16.85**
MCS2323-7	05-04589	**$30.50**
MCS2323-8	05-04590	**$32.65**
MCS2323-9	05-04591	**$29.90**
MCS2323-10	05-04592	**$23.55**
MCS2323-11	05-04593	**$22.90**
MCS2323-12	05-04594	**$18.75**
MCS2323-13	05-04595	**$18.99**
MCS2323-14	05-04596	**$22.75**
MCS2323-19	05-04597	**$23.55**

MC1660300-30 AILERON DIRECT CABLE



This Aileron Direct cables eligible for installation in Cessna 188A and A188A aircraft, serial range 18800573 thru 18800707. This cable has also been added to the cable kit CCKT188-04 188A, A188A 1970-1971 Serial Number 18800573-18800707 P/N 05-04614 .....**$99.75**

Prices Subject to Change Without Notice

CESSNA FLAP SKINS – AILERON SKINS



* Better and costs less!
* No pre-drilled holes to misalign
* Precisely formed and trimmed
* Plastic coated on both sides for better protection during handling (remove before installation)
* Direct replacement - No STC required

FLAP SKIN KIT COMPONENTS

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-FLP1	Flap skin kit	05-04164	**$401.00**
1 ea	MC0426901-10	Flap Upper RH	05-03371	**$105.99**
1 ea	MC0426901-11	Flap Upper LH	05-03372	**$107.75**
1 ea	MC0426901-6	Flap Lower LH	05-03369	**$93.75**
1 ea	MC0426901-7	Flap Lower RH	05-03370	**$91.95**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-FLP2	Flap skin kit	05-04169	**$388.00**
1 ea	MC0523901-4	Flap Upper LH	05-04113	**$125.75**
1 ea	MC0523901-5	Flap Upper RH	05-04114	**$127.99**
1 ea	MC0523901-6	Flap Lower LH	05-04115	**$109.85**
1 ea	MC0523901-7	Flap Lower RH	05-04116	**$110.95**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-FLP3	Flap skin kit	05-04170	**$405.00**
2 ea	MC0523901-201	Flap Upper LH RH	05-04125	**$131.99**
1 ea	MC0523901-6	Flap Upper LH	05-04115	**$109.85**
1 ea	MC0523901-7	Flap Lower RH	05-04116	**$110.95**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-FLP4	Flap skin kit	05-04171	**$333.00**
1 ea	MC0523901-21	Flap Upper LH	05-04119	**$99.85**
1 ea	MC0523901-22	Flap Upper RH	05-04120	**$99.90**
1 ea	MC0523901-19	Flap Lower LH	05-04117	**$99.85**
1 ea	MC0523901-20	Flap Lower RH	05-04118	**$99.85**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-FLP5	Flap skin kit	05-04172	**$537.00**
1 ea	MC0523901-25	Flap Upper LH	05-04121	**$168.75**
1 ea	MC0523901-26	Flap Upper RH	05-04122	**$168.75**
1 ea	MC0523901-27	Flap Lower LH	05-04123	**$157.75**
1 ea	MC0523901-28	Flap Lower RH	05-04124	**$157.75**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-FLP6	Flap skin kit	05-04173	**$1,022.00**
1 ea	MC0523901-25	Flap Upper Inbd LH	05-04121	**$168.75**
1 ea	MC1220100-20	Flap Upper Inbd RH	05-04135	**$164.75**
1 ea	MC1220100-5	Flap Upper Otbd LH	05-04132	**$151.75**
1 ea	MC1220100-6	Flap Upper Otbd RH	05-04133	**$150.75**
1 ea	MC1220100-27	Flap Lower Inbd LH	05-04123	**$157.75**
1 ea	MC1220100-18	Flap Lower Otbd RH	05-04134	**$164.75**
1 ea	MC1220100-3	Flap Lower Otbd LH	05-04130	**$143.75**
1 ea	MC1220100-4	Flap Lower Otbd RH	05-04131	**$143.75**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-FLP7	Flap skin kit	05-04174	**$1,013.00**
1 ea	MC0523901-25	Flap Upper Inbd LH	05-04121	**$168.75**
1 ea	MC1220100-26	Flap Upper Inbd RH	05-04122	**$168.75**
1 ea	MC1220100-5	Flap Upper Otbd LH	05-04132	**$151.75**
1 ea	MC1220100-6	Flap Upper Otbd RH	05-04133	**$150.75**
1 ea	MC1220100-27	Flap Lower Inbd LH	05-04123	**$157.75**
1 ea	MC1220100-28	Flap Lower Inbd RH	05-04124	**$157.75**

FLAP SKIN KIT COMPONENTS CONT.

Qty	MFG P/N	Description	P/N	Price
1 ea	MC1220100-3	Flap Lower Otbd LH	05-04130	**$143.75**
1 ea	MC1220100-4	Flap Lower Otbd RH	05-04131	**$143.75**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-FLP8	Flap skin kit	05-04175	**$1,014.00**
1 ea	MC1220100-33	Flap Upper Inbd LH	05-04133	**$150.75**
1 ea	MC1220100-34	Flap Upper Inbd RH	05-04134	**$164.75**
1 ea	MC1220100-5	Flap Upper Otbd LH	05-04132	**$151.75**
1 ea	MC1220100-6	Flap Upper Otbd RH	05-04133	**$150.75**
1 ea	MC1220100-35	Flap Lower Inbd LH	05-04138	**$160.75**
1 ea	MC1220100-36	Flap Lower Inbd RH	05-04139	**$160.75**
1 ea	MC1220100-3	Flap Lower Otbd LH	05-04130	**$143.75**
1 ea	MC1220100-4	Flap Lower Otbd RH	05-04131	**$143.75**

AILERON SKIN KIT COMPONENTS

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-AIL1	Skin Kit	05-04140	**$893.00**
1 ea	MC0523800-6	Aileron Upper Inbd LH	05-03373	**$88.75**
1 ea	MC0523800-7	Aileron Upper Inbd RH	05-03374	**$88.75**
1 ea	MC0523800-8	Aileron Upper Otbd LH	05-03375	**$97.80**
1 ea	MC0523800-9	Aileron Upper Otbd RH	05-03376	**$94.80**
1 ea	MC0523800-10	Aileron Lower Inbd LH	05-03377	**$121.75**
1 ea	MC0523800-11	Aileron Lower Inbd RH	05-03378	**$114.80**
1 ea	MC0523800-12	Aileron Lower Otbd LH	05-03379	**$124.75**
1 ea	MC0523800-13	Aileron Lower Otbd RH	05-03380	**$115.80**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-AIL2	Skin Kit	05-04141	**$1,195.00**
1 ea	MC1624001-5	Aileron Upper Inbd LH	05-04145	**$164.85**
1 ea	MC1624001-6	Aileron Upper Inbd RH	05-04146	**$164.85**
1 ea	MC1624001-9	Aileron Upper Otbd LH	05-04149	**$175.75**
1 ea	MC1624001-10	Aileron Upper Otbd RH	05-04150	**$175.75**
1 ea	MC1624001-3	Aileron Lower Inbd LH	05-04143	**$164.85**
1 ea	MC1624001-4	Aileron Lower Inbd RH	05-04144	**$164.85**
1 ea	MC1624001-7	Aileron Lower Otbd LH	05-04147	**$175.75**
1 ea	MC1624001-8	Aileron Lower Otbd R	05-04148	**$175.75**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-AIL3	Skin Kit	05-04142	**$629.00**
1 ea	MC1220085-11	Aileron Upper LH	05-04126	**$178.75**
1 ea	MC1220085-12	Aileron Upper RH	05-04127	**$176.80**
1 ea	MC1220085-13	Aileron Upper LH	05-04128	**$176.80**
1 ea	MC1220085-14	Aileron Upper RH	05-04129	**$188.75**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-AIL4	Skin Kit	05-13255	**$651.00**
2 ea	MC0424000-10	Skin, Aileron	05-13234	**$169.75**
2 ea	MC0424000-20	Skin, Aileron	05-13235	**$169.75**

SEE OUR WEBSITE FOR CESSNA AIRCRAFT APPLICATION CHART

CESSNA FLAP – ELEVATOR – RUDDER SKINS



More precise corrugation spacing and shape
No pre-drilled holes to misalign
Precisely formed and CNC cut to shape to match OEM skins
Direct replacement - No STC required

FLAP SKIN KIT COMPONENTS

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-FLP9	Flap Skin Kit	05-13258	**$497.00**
2 ea	MC0425000-10	Skin, Flap Upper	05-13244	**$129.75**
2 ea	MC0425000-20	Skin, Flap Lower	05-13245	**$128.99**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-FLP10	Flap Skin Kit	05-13259	**$492.00**
2 ea	MC0426900-2	Skin, Flap Upper	05-13246	**$128.75**
2 ea	MC0426900-4	Skin, Flap Lower	05-13247	**$127.80**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-FLP11	Flap Skin Kit	05-13260	**$532.00**
2 ea	MC0525000-10	Skin, Flap Upper	05-13246	**$128.75**
2 ea	MC0525000-10	Skin, Flap Lower	05-13247	**$127.80**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-FLP12	Flap Skin Kit	05-13261	**$525.00**
2 ea	MC0523900-10	Skin, Flap Upper	05-13248	**$169.75**
2 ea	MC0523900-20	Skin, Flap Lower	05-13250	**$136.75**

ELEVATOR SKIN KIT COMPONENTS

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-ELEV8	Elevator Skin Kit	05-13256	**$874.00**
1 ea	MC0434134-4	Skin, Elevator, Lower, RH	05-13239	**$166.75**
1 ea	MC0434135-10	Skin, Elevator Tab, Upper	05-13240	**$125.99**
1 ea	MC0434135-11	Skin, Elevator Tab, Lower	05-13241	**$125.99**
1 ea	MC0434140-2	Skin, Elevator, Upper, RH	05-13237	**$163.75**
1 ea	MC0434141-1	Skin, Elevator, Upper, LH	05-13236	**$163.75**
1 ea	MC0434142-3	Skin, Elevator, Lower, RH	05-13238	**$163.75**
Qty	**MFG P/N**	**Description**	**P/N**	**Price**
KIT	SKN-KT-ELEV9	Elevator Skin Kit	05-13257	**$882.00**
1 ea	MC0434134-4	Skin, Elevator, Lower, RH	05-13239	**$166.75**
1 ea	MC0434135-15	Skin, Elevator Tab, Upper	05-13242	**$130.80**
1 ea	MC0434135-16	Skin, Elevator Tab, Lower	05-13243	**$130.80**
1 ea	MC0434140-2	Skin, Elevator, Upper, RH	05-13237	**$163.75**
1 ea	MC0434141-1	Skin, Elevator, Upper, LH	05-13236	**$163.75**
1 ea	MC0434142-3	Skin, Elevator, Lower, RH	05-13238	**$163.75**

RUDDER SKIN KIT COMPONENTS

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-RUD6	Rudder Skin Kit	05-13262	**$420.00**
1 ea	MC0433000-30	Skin, Rudder, LH	05-13252	**$163.75**
1 ea	MC0433000-40	Skin, Rudder, RH	05-13253	**$163.75**
1 ea	MC0433127	Skin, Rudder tab	05-13254	**$110.75**

CESSNA RUDDER TIP



FAA-PMA replacement parts from Knots 2U are made from the highest quality hand laid fiberglass. This provides for superior strength, reduced weight, and long life. The latest technology resins are used to prevent warping and shrinkage that can happen with other fiberglass. Advanced tooling and pattern techniques assure a superior fit. **Visit www.aircraftspruce.com for aircraft eligibility chart.** P/N 05-11965..... **$119.75**

CESSNA TAILCONE FAIRING



Fairing, Tailcone (Cable Covers), LH or RH. Small triangle at the front of the dorsal fin. White ABS plastic. Parts are trimmed for easy installation. Replaces Cessna part number 0530011-2.
Visit www.aircraftspruce.com for aircraft eligibility chart. P/N 05-11973 **$28.85**

CESSNA DORSAL FIN FAIRING TIP



Dorsal Fin Faring Tip 28-16. Replaces Cessna part number 0531020-1. Small triangle at the front of the dorsal fin. White ABS plastic. Parts are trimmed for easy installation. Replaces Cessna part number 0531020-1. **Visit www.aircraftspruce.com for aircraft eligibility chart.**
P/N 05-11972..... **$36.90**

CESSNA STRUT FAIRING KIT



Strut Fairing Kit for Cessna. The tie-down bolt projects through the upper strut fairings. White ABS plastic. Parts are trimmed for easy installation. Replaces Cessna part numbers 0522150-1, 0522150-2, 0523047-1 and 0523047-2. **Visit www.aircraftspruce.com for aircraft eligibility chart.**
P/N 05-11967 ..... **$278.95**

CESSNA LANDING GEAR FAIRING KIT



Landing Gear Fairing Kit for Cessna Replacement part numbers 1741005-239 and 1741005-240.
P/N 05-11966..... **$199.85**

CESSNA STEERING RODS



These Cessna Steering Rods are better than the originals. Replace old, weak steering rods with these stainless steel, FAA-PMA approved steering rods and save up to $100 each.

Cessna Series	Serial Number	Part Number	Replaces Cessna P/N	Price Each
150	ALL	05-00273	0543022-3; L	$399.00
152	ALL	05-00274	0543022-4; R	$412.00
172,172A	28000 to 17247746	05-00275	0543022-1; L	$409.00
		05-00276	0543022-2; R	$395.00
172B,C	17247747 to 17249544	05-00589	0743008-1; L	$603.00
		05-00590	0743008-2; R	$603.00
172D, E, F, G, H, I, K, L, M, R172K	17247747 to 17249544 R1722000 to R1723454	05-00275	0543022-1; L	$409.00
F172D, E, F, G, H, K, L, M, N, P FP172 FR172E, F, G, H, J, K	F1720001 to F17202254 FP1720001 to FP1720003 FR17200001 to FP17200675	05-00276	0543022-2; R	$395.00
175,175A/B/C	55001 to 17557119	05-00589	0743008-1; L	$603.00
		05-00590	0743008-2; R	$603.00
182,182A/B/C/D	33000 to 53007 18253008 to 18253598	05-00589	0743008-1; L	$603.00
		05-00590	0743008-2; R	$603.00

CESSNA NOSE GEAR TORQUE LINK REPAIR KITS



This convenient kit includes all commonly replaced torque link parts. * FAA approved and certified standard hardware * Fits most single engine Cessna aircraft Please visit our website for kit components.

P/N 05-04427

TL-KT-1 ..P/N 05-04427 ..**$114.75** TL-KT-2 .. P/N 05-04619.. **$166.85**
TL-KT-4 ..P/N 05-04620 ..**$155.75** TL-KT-5 .. P/N 05-04621.. **$146.75**
TL-KT-6 ..P/N 05-04622 ..**$136.75** TL-KT-7 .. P/N 05-04623.. **$144.99**

CESSNA STEERING ROD BOOTS



Keep the exhaust and cold out of the cabin with these Kevlar/Fiberglass FAA/PMA approved Steering Rod Boots. These will last much longer & are less expensive than original Cessna boots.

FAA/PMA approved Steering Rod Boot application chart for Cessna Model Series 150, 152, 172, 175, and 182 Aircraft.

Model	Serial No.	Part No.	Price/
150 150A,B,C,D,E, F,G,H,J,K,L,M A150K, L, M F150F,G,H,J,K,L,M FA150K, L FRA150L,M	17001 – 59018 15059019 – 15079405 A1500001 – A1500734 F1500001 – F15001428 FA1500001 – F1500120 FRA1500121 – FRA1500336	05-00277	$81.75
152 A152 F152 FA152	15279406 – 15286033 A1520735 – A1521049 F15201429 – F15201980 FA1520337 – FA1520425	05-00277	$81.75
172 172A,B,C,D,E,F, G,H,I,K,L,M,N,P F172D,E,F,G,H, K,L,M,N,P FP172 FR172E,F,G,H,J,K	28000 – 46754 46755 – 17276673 F1720001 – F17202254 FP1720001 – FP1720003 FR17200001 – FR17200675	05-00279	$87.75
175 175A, B, C	55001 – 56238 56239 – 17557119	05-00279	$87.75
182 182A, B, C, D	33000 – 53007 18253008 – 18253598	05-00279	$87.75

INTAKE HEAT SHIELD DEFLECTOR



This part replaces Cessna part number 0750121. This intake Heat Shield Deflector is vibration dampened to prevent cracking! It is made of polished stainless steel for better heat control. FAA approved.

P/N 05-02361 ..... **$156.75**

Eligibility List	
Aircraft Models	**Serial Numbers**
175*, A,B,C	56083 thru 17557118
P172	P17257120 thru P17257188
180, A,B,C,D,E,F,G,H,J,K	30000 thru 18053203
182,A,B,C,D,E,F,G,H,J,K,L,M,N,P,Q,R	33000 thru 18268615
F182P,Q	F18200001 thru F18200169
A182J,K,L,M,N	A182-0001 thru A182-0148
T182	18267716 thru 18268615
185,A,B,C,D,E/A185E,F	185-0001 thru 18504448
185,A,B/A188,A,B	188-0001 thru 18803968T
T188C	T18803297T thru T18803968T
205,A	205-0001 thru 205-0577
206	206-0001thru 206-0275
U206,A,B,C,D,E,F,G	U206-0276 thru U20607020
P206,A,B,C,D,E,/TP206A,B,C,D,E	P206-0001 thru P20600647
TU206A,B,C,D,E,F,G	U206-0438 thru U20607020
207,A/T207,A	20700001 thru20700788
210,A,B,C,D,E,F,G,H,J,K,L,M,N,R/	57001 thru 21065009
T210K,LM,N,R	P21000001 thru P21000874
P210N,R	T210-0198 thru T210-0454
T210G,H,J	

Our P/N's are interchangeable with Cessna's P/N's; "AS" prefix denotes Aircraft Spruce! Call our parts specialists at Aircraft Spruce for part number assistance.

CESSNA FUEL SCREEN STANDPIPE



This FAA-PMA approved stainless steel Cessna Fuel Screen Standpipe is the last one you will need to buy. Improved design eliminates corrosion pits and stripped threads. 1963 and on.

P/N AS0756011-1..... **$156.75**

CESSNA FUEL QUANTITY TRANSMITTERS



Saves hundreds of dollars in labor and kits and eliminates replacement of fuel quantity gages and wiring when not required. Engineered to be compatible with the original fuel quantity gage and wiring which uses time proven technology and reliability. Made from dupont viton, offering flexibility and fuel resistance at all temperature extremes.

Part No.	Description	Price Ea.
AS0426517-1	Fuel Transmitter	$312.00
AS0523557-1	Fuel Transmitter	$343.00
AS0726110-1	Fuel Transmitter	$332.00
ASS1588-1	Gasket (Viton Fuel Trans.)	$30.95
ASS1588-2	Gasket (Viton Fuel Trans.)	$19.99
ASS35010R10	Screw (5 Needed) Sold each	$4.70
ASS35010R14	Screw/Seal Fuel Trans.	$5.65

CESSNA / PIPER FUEL QUANTITY TRANSMITTER KITS



Manufacturer PN	Description	Kit Contents	Part Number	Price
FQT-KT-1	Fuel Quantity Transmitter Kit	1 each Transmitter (MC0426517-1), 1 each Cover Gasket (C0523619-1), 1 each Gasket (MCS1588-1, 5 each Screw Seal (MCS35010R10)	05-04109	$369.00
FQT-KT-2	Fuel Quantity Transmitter Kit	1 each Transmitter (MC0523557-1), 1 each Cover Gasket (MC0523619-1), 1 each Gasket (MCS1588-1), 5 each Screw Seal (MCS35010R10)	05-04110	$386.00
FQTP-KT-1	Transmitter Kit FQTP-KT-1	1 each Transmitter (MC68101-02), 1 each Gasket (MC462-021), 5 each Screw/seal assemblies (MC1802)	05-04874	$340.00
FQTP-KT-2	Transmitter Kit FQTP-KT-2	1 each Transmitter (MC68101-02), 1 each Gasket (MC461-931), 5 each Screw/seal assemblies (MC1802)	05-04875	$343.00
FQT-KT-3	Fuel Quantity Transmitter Kit FQT-KT-3	1 each Transmitter, 1 each Gasket (C0726110-1), 1 each Gasket (MCS1588-2), 25 each Screw Machine, 10-32 x 0.625	05-12944	$368.00
FQT-KT-4	Fuel Quantity Transmitter Kit FQT-KT-4	1 each Transmitter (MCC668002-0201), 1 each Gasket (MCS1588-1), 1 each Gasket (MCS1588-2), 25 each Screw Machine, 10-32 x 0.625	05-12945	$363.00
FQT-KT-5	Fuel Quantity Transmitter Kit FQT-KT-5	1 each Transmitter (MC0726110-1), 2 each Gasket (MCS1588-2), 25 each Screw Machine 10-32 x 0.625 (MS35207-264)	05-12946	$310.00
FQT-KT-6	Fuel Quantity Transmitter Kit FQT-KT-6	1 each Transmitter (MC0726110-1), 1 each Gasket (MCS1588-1), 25 each Screw Machine 10-32 x 0.625 (MS35207-264)	05-12947	$350.00

FUEL SELECTOR PLATE FOR CESSNAS



Before After

This new fuel selector plate is billet machined and anodized, with the text engraved on the plate. It is an efficient one piece design which is easy to install & factory guaranteed. FAA-PMA approved.

Cessna 172 - 37 Gals..... P/N 05-00227..... **$72.75**
Cessna 170 - 37 Gals..... P/N 05-00899..... **$72.75**
Cessna 172 - 36 Gals..... P/N 05-00901..... **$72.75**
Cessna 180 - 55 Gals..... P/N 05-00902..... **$72.75**
Cessna 180 - 60 Gals..... P/N 05-00903..... **$64.75**
Cessna 180 - 79 Gals..... P/N 05-00904..... **$66.75**
Cessna 172 - 84 Gals..... P/N 05-00905..... **$68.80**
Cessna 182 - 55 Gals..... P/N 05-00906..... **$72.75**

CESSNA FUEL SELECTOR VALVES



P/N 05-04298



P/N 05-04299

Description	Model	Part No.	Price
Left/Right/Off FAA PMA C120 AND C140	SHA200F202-120	05-04298	$617.00
Left/Right/Both/off FAA PMA C120 AND C140	SHA200F204-140	05-04299	$637.00

SEAT RAIL WEAR GAUGE FOR CESSNA AIRCRAFT



For checking seat rail wear limits as per FAA A.D. 87-20-03, Effective 09/24-/1990 Seat Rail Directive The gauge is to be used for inspection of the Cessna seat rail wear. This gauge is designed to measure the actual radius wear near the seat stop holes. Notice the different sized steps in each corner.

P/N 05-04428 ..... **$43.50**

AP

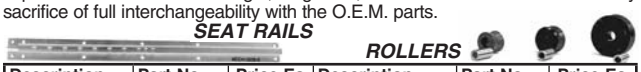
REPLACEMENT CESSNA PARTS

AP

CESSNA SEAT RAILS, ROLLERS, WASHERS, & BUSHINGS

These FAA-PMA replacement seat parts were developed to assist in complying with the parts replacement requirements of A.D. 87-20-03. This A.D. requires the periodic inspection and replacement of seat components of the entire Cessna light aircraft fleet. Our Parts are direct replacements for the wear related seat components. These seat parts are superior to the O.E.M. parts in many ways. Our rollers are fabricated from molydisulfide filled nylons for improved strength and self lubrication. All rollers are fully machined from extruded stock for finer surface finishes and higher strength. Our wear washers are tougher with far better wear and aging resistance. Seat rails were carefully engineered with small improvements for added strength, longer life, and easier installation without any sacrifice of full interchangeability with the O.E.M. parts.

SEAT RAILS ***ROLLERS***



Description	Part No.	Price Ea.	Description	Part No.	Price Ea.
AS0410219-1	05-00327	**$189.75**	AS0711693-4	05-00380	**$214.95**
AS0410219-2	05-00328	**$229.95**	AS0711693-6	05-00381	**$357.00**
AS0410230-2	05-00329	**$187.80**	AS0711693-7	05-00382	**$310.00**
AS0410230-3	05-00341	**$255.95**	AS0711693-8	05-00383	**$315.00**
AS0410235-1	05-00342	**$178.75**	AS0711693-9	05-00384	**$286.95**
AS0410235-2	05-00343	**$242.95**	AS1210025-2	05-00385	**$262.95**
AS0410235-6	05-00344	**$264.95**	AS1210025-3	05-00386	**$261.95**
AS0411545-1	05-00345	**$70.75**	AS1210408-1	05-00387	**$248.95**
AS0411545-2	05-00346	**$76.75**	AS1210408-12	05-00388	**$240.95**
AS0411545-3	05-00347	**$126.75**	AS1210408-14	05-00389	**$239.95**
AS0411545-4	05-00348	**$76.85**	AS1210408-15	05-00390	**$265.95**
AS0511000-14	05-00331	**$313.00**	AS1210408-16	05-00391	**$269.95**
AS0511000-15	05-00332	**$269.95**	AS1210408-17	05-00392	**$281.95**
AS0511000-64	05-00333	**$300.95**	AS1210408-18	05-00393	**$392.00**
AS0511000-68	05-00334	**$234.95**	AS1210408-21	05-00394	**$250.95**
AS0511000-69	05-00335	**$413.00**	AS1210408-22	05-00395	**$237.95**
AS0511000-70	05-00336	**$337.00**	AS1210408-23	05-00396	**$405.00**
AS0511240-10	05-00337	**$216.95**	AS1210408-24	05-00397	**$454.00**
AS0511240-11	05-00338	**$257.95**	AS1210408-4	05-00398	**$147.99**
AS0511240-12	05-00339	**$151.95**	AS1210408-5	05-00399	**$324.00**
AS0511240-14	05-00349	**$173.75**	AS1210408-6	05-00401	**$163.80**
AS0511240-15	05-00351	**$180.80**	AS1210408-8	05-00402	**$188.85**
AS0511240-2	05-00352	**$219.95**	AS1210408-9	05-00403	**$307.00**
AS0511240-3	05-00353	**$260.95**	AS1210520-11	05-00404	**$197.85**
AS0511240-4	05-00354	**$205.95**	AS1210520-12	05-00405	**$323.00**
AS0511240-5	05-00355	**$291.95**	AS1210520-15	05-00406	**$372.00**
AS0511240-6	05-00356	**$189.75**	AS1210520-16	05-00407	**$474.00**
AS0511240-7	05-00357	**$351.00**	AS1210520-2	05-00408	**$406.00**
AS0511240-8	05-00358	**$283.95**	AS1210520-3	05-00409	**$115.75**
AS0511240-9	05-00359	**$256.95**	AS1210520-4	05-00410	**$98.75**
AS0511243-4	05-00362	**$284.95**	AS1210520-9	05-00411	**$271.95**
AS0511243-5	05-00363	**$221.95**	AS1211514-1	05-00412	**$412.00**
AS0511243-6	05-00364	**$177.75**	AS1211514-2	05-00413	**$410.00**
AS0511293-1	05-00365	**$375.00**	AS2414002-1	05-00414	**$288.95**
AS0511293-2	05-00366	**$382.00**	AS2414002-2	05-00415	**$288.95**
AS0511293-3	05-00367	**$246.95**	ASS1551-1	05-00420	**$7.95**
AS0511293-4	05-00368	**$246.95**	ASS1554-1 Qty-8	05-00421	**$17.70**
AS0611134-2	05-00369	**$281.95**	ASS1704-1	05-00423	**$2.93**
AS0611134-3	05-00370	**$281.95**	AS1714000-22	05-00419	**$19.65**
AS0710618-1	05-00371	**$247.95**	AS1714000-41	05-00422	**$19.65**
AS0710618-4	05-00372	**$246.95**	AS0311310	05-00325	**$9.85**
AS0710618-5	05-00373	**$245.95**	AS0311586	05-00326	**$15.50**
AS0710618-6	05-00374	**$297.95**	AS0311715-3	05-00416	**$180.80**
AS0710658-2	05-00375	**$293.95**	AS0311715-4	05-00417	**$184.80**
AS0711693-1	05-00376	**$413.00**	AS43DD1-9	05-00432	**$3.70**
AS0711693-10	05-00377	**$414.00**	AS1613423-3	05-00418	**$110.80**
AS0711693-11	05-00378	**$281.95**	AS1414104-54	05-00424	**$13.65**
AS0711693-2	05-00379	**$158.80**			

SEAT KIT COMPONENTS (1 SEAT)

Kit No.	Description	Qty.	Part No.	Price
05-00425	Full articulating seat (2 crank handles).	Washers 8 Rollers 4 Bushings 4	AS1714000-22 ASS1704-1 AS1414104-54	**$69.90**
05-00427	Standard seat (1 or no crank handles).	Washers 8 Rollers 4 Bushings 4	ASS1554-1 ASS1551-1 AS1414104-54	**$83.75**
05-00428	1946-1962 and all 150-152	Rollers 4 Bushings 4	AS0311310 AS0311586	**$93.80**

For Cessna Roller Kit 141410-212 use:
- (1) Roller (P/N ASS155-1)
- (1) Bushing (P/N AS1414104-54)
- (2) Washers (P/N ASS1554-1)

These parts are generally used on the standard seats

For Cessna Roller Kit 1714000K200 use:
- (1) Roller (P/N ASS1704-1)
- (1) Bushing (P/N AS1414104-54)
- (2) Washers (P/N AS1714000-22)

These parts are generally used on the infinitely adjustable seats.

FAA-PMA Application chart for replacement parts for Cessna seats.

Description	Part No.	Model Series Eligible
AS0311310 roller	05-00325	150, 152, 170, 172, 175, 180, 182, 185, 195, 210
AS0311586 bushing	05-00326	
ASS1554-1 washer	05-00421	172, 180, 182, 185, 188, 205, 206, 207, 210
AS1714000-22 washer	05-00419	
AS1714000-41 washer	05-00422	
AS1414104-22 bushing	05-00323	
ASS1704-1 roller	05-00423	
ASS1551-1 roller	05-00420	

CESSNA FLAP ROLLER KITS

FLP-KT-1 FLP-KT-2



Flap attachment kits are available for Cessna aircraft from Cessna 150 thru T210. Each kit contains FAA-PMA replacement rollers, bushings, and spacers for the flap attachment of one airplane. Our ASS1450-5N12-050 shims are stainless steel for better corrosion resistance. Individual FAA-PMA components are available on request.

Model	Serial No.	Year	Kit No.	Part No.	Kit Price
150	17001-15071128	59-69	FLP-KT-1	05-00317	**$397.00**
150	15071129 & on	70-77	FLP-KT-2	05-00318	**$399.00**
152	15279406 - 15285564	78-80	FLP-KT-2	05-00318	**$399.00**
152	15285565 & on	81 & on	FLP-KT-3	05-00319	**$337.00**
F152	F15201429-F15201908	78-80	FLP-KT-2	05-00318	**$399.00**
F152	F15201909 & on	81 & on	FLP-KT-3	05-00319	**$337.00**
A152	A1520735-A1521014	78-80	FLP-KT-2	05-00318	**$399.00**
A152	A1521015 & on	81 & on	FLP-KT-3	05-00319	**$337.00**
FA152	FA1520337-FA1520387	78-80	FLP-KT-2	05-00318	**$399.00**
FA152	FA1520388 & on	81 & on	FLP-KT-3	05-00319	**$337.00**
170B	ALL	52-54	FLP-KT-1	05-00317	**$397.00**
172	28000-17249544	55-62	FLP-KT-1	05-00317	**$397.00**
172	17249545-17274009	63-80	FLP-KT-2	05-00318	**$399.00**
172	17274010 & on	81 & on	FLP-KT-3	05-00319	**$337.00**
177	ALL	68-78	FLP-KT-4	05-00321	**$553.00**
175	ALL	58-62	FLP-KT-1	05-00317	**$397.00**
180	ALL	53-82	FLP-KT-1	05-00317	**$397.00**
182	33000-18253598	56-62	FLP-KT-1	05-00317	**$397.00**
182	18253599 & on	63 & on	FLP-KT-3	05-00319	**$337.00**
185	ALL	61-82	FLP-KT-1	05-00317	**$397.00**
188	ALL	66-84	FLP-KT-3	05-00319	**$337.00**
205	ALL	63-64	FLP-KT-1	05-00317	**$397.00**
206	2060001-20601568	64-70	FLP-KT-4	05-00321	**$553.00**
207	ALL	69-84	FLP-KT-4	05-00321	**$553.00**
210	57001-21058220	60-63	FLP-KT-1	05-00317	**$397.00**
210	21058819 & on	80 & on	FLP-KT-7	05-00324	**$465.00**
T210	T2100001-T2100197	64-66	FLP-KT-6	05-00323	**$668.00**

ASS14503510-032 Wear washer kit (8 req/kit)..P/N 05-00587 ..**$3.35 ea.**



CESSNA FLAP ROLLER UPGRADE KIT FLP-KT-9U

Upgrade kits include: rollers, bushings, shims, spacers where required, MCSK100 Flap Service Kits, wear washers, a copy of SEB95-3 Rev 1, and hardware (nuts, bolts, washers). Part numbers for the upgrade kits end in "U" SEB95-3 Rev 1 is not applicable to 172R,S, 182S,T, T182T, 206H, T206H, 208, 336 and 337 aircraft. Flap upgrade kits contain nuts, bolts and washers for several aircraft models. The installer must determine the correct nut, bolt and washer combination for each installation. Each flap roller kit contains enough components for one aircraft. See our website for Aircraft Eligibilitylist P/N 01-01345.....**$604.00**

SEAT ROLLER HOUSING GAUGE



Aircraft Spruce now offers a seat roller housing measuring tool for Cessna aircraft. This gauge is designed to facilitate inspection of seat roller housings for wear as required by mandatory FAA AD 2011-10-09. This gauge simplifies determining whether the housing is in or out of tolerance by allowing the areas of concern to be gauged as opposed to measuring individual attributes of each housing with calipers. Results are positive and quick with this gauge. P/N 05-06819 .....**$128.75**

SEAT STOP KITS FOR CESSNAS

These seat stops and related hardware are available in convenient kits for your aircraft. Call for the correct kit part no. for your Cessna aircraft.
Seat stop kit #1 (1 ea. AS0713074-1, 1 ea. MS24665-132-1, 1 ea. MS20392-1C21) P/N 05-00580 .....**$17.75**
Seat stop kit #2 (1 ea. AS0511242-1, 1 ea. MS35265-41) P/N 05-00581 .....**$14.80**
Seat stop kit #3 (1 ea. AS0713074-1, 1 ea. MS24665-132, 1 ea. MS20392-1C21, 2 ea. NAS43DD1-9) P/N 05-00582 .....**$24.99**



CESSNA SEAT RAIL TEMPLATES

These template blanks are used to transfer holes from the old seat rail to the new seat rail when replacing Cessna seat rails. These templates are economical and convenient to use. One per seat rail is required. For seat rail series AS511240, AS511243, and AS24114002 use SRTEM2. All other seat rail series can use SRTEM1. NOTE: Models 150-152 do not require templates as the screw holes are predrilled. Model 177 cardinal seat rails require (2) SRTEM1 templates per rail. * Dimensions: * SRTEM1-1.5" x 38" x .025" * SRTEM2-2.25" x 30" x .025"

SRTEM1..... P/N 05-00449 .....**$6.85**
SRTEM2..... P/N 05-00450 .....**$6.70**

Prices Subject to Change Without Notice

SEAT RAILS FOR CESSNA AIRCRAFT



These seat rails have only pilot holes drilled in the rail base allowing the installer to exactly match the aircraft floor rivet pattern. The manufacturer discovered while installing and developing our replacement seat rails that the seat rail attachment hole pattern was not consistent from aircraft to aircraft. Even small inconsistencies in the hole locations in the aircraft floor make installation of new seat rails very difficult. For this reason, all these seat rails have only a few smaller pilot attachment holes drilled at the factory. This allows the installer to precisely locate the attachment holes to match the holes in the aircraft floor. All special sized or machined attachment holes are factory machined to finish dimensions. It is necessary to install all required fasteners when seat rails are installed.

After studying countless worn and failed seat rails these rails were designed with 15% more metal in critical areas. The result is more crack resistant, durability, strength and longer life.

Installation Tip: The aircraft floor is subject to corrosion from moisture under the seat rails, be sure to remove and treat any corrosion before installing the new seat rails.

Description	Part No.	Price
AS0411545-2	05-00346	$76.75
AS0411545-1	05-00345	$70.75
AS0411545-3	05-00347	$126.75
AS0411545-4	05-00348	$76.85
AS0410219-2	05-00328	$229.95
AS0410219-1	05-00327	$189.75
AS0410230-2	05-00329	$187.80
AS0410230-3	05-00341	$255.95
AS0410235-6	05-00344	$264.95
AS0410235-1	05-00342	$178.75
AS0410235-2	05-00343	$242.95
AS0511000-14	05-00331	$313.00
AS0511000-15	05-00332	$269.95
AS0511293-1	05-00365	$375.00

Description	Part No.	Price
AS0511293-3	05-00367	$246.95
AS0511293-4	05-00368	$246.95
AS0511293-2	05-00366	$382.00
AS0511240-4	05-00354	$205.95
AS0511240-2	05-00352	$219.95
AS0511240-3	05-00353	$260.95
AS0511240-6	05-00356	$189.75
AS0511240-7	05-00357	$351.00
AS0511240-8	05-00358	$283.95
AS0511240-9	05-00359	$256.95
AS0511243-4	05-00362	$284.95
AS0511243-5	05-00363	$221.95
AS0511243-6	05-00364	$177.75
AS2414002-1	05-00414	$288.95
AS2414002-2	05-00415	$288.95

RUDDER PEDALS FOR CESSNA AIRCRAFT



COMPLETELY NEW RUDDER PEDAL -

* Less money and longer life!
* Bronze bushings at the pivot points resist wear and vibration for longer pedal life.
* Precision cast heat treated aluminum alloy
* Power coat finish for durability and corrosion protection.
* FAA-PMA direct replacement for Cessna (Part #1460320-1)

Model AP2000-01 ..... PN 05-04165.....**$123.80**

SAF-T-STOP



Saf-T-Stop is an auxiliary seat stop mechanism approved by the FAA for use with Cessna seat track A. D. #87-20-03. Installs easily, sliding over seat track. Approved for: Cessna 150, 152, 172, R172, 175, 180, 182, 185, 190, 205, 206, 207, 210, 303, 337. Not a seat lock, Saf-T-Stop is designed to restrict rearward motion if the seat lock fails.

P/N 13-18510 ....**$44.85**

SEAT STOPPERS



Insert in the seat track before flight to secure pilot and passenger seats and prevent any aft movement if the seat lock fails. Effective in all flight conditions and in turbulence. The o-ring is sized to ensure a snug fit in the seat track. Easy to reach back, insert and remove from the seat track when you're seated. Designed for use in the Piper Aerostar when the EZ-Glide upgrade is incorporated but compatible with any aircraft using 210078 or equivalent seat track. Make it your key fob and never have to search for your keys again! Package of 1.

P/N 05-14950 ....**$84.75**

FUEL STRAINER KIT FOR CESSNA AIRCRAFT



FUEL STRAINER SEAL KIT. - Kit contains: Gasket and 3 O- Rings Approved for Cessna models: 180H*, J, K

P/N 05-01705.....**$16.65**

FS-KT-2 FUEL BOWL KIT (FAA-PMA) - Kit contains: 1 MC0756009-8 Gasket 1 MC0756008-1 Fuel bowl 1 MCM83248/1-010 O-ring 1 MCM83248/1-111 O-ring 1 MCM83248/1-138 O-ring 1 MC0756015-1 Washer 1 MCS1573-3 Nut P/N 05-04425..... **$163.90**





FS-KT-3 FUEL STRAINER REBUILD KITS - Kit contains: (1) FS-KT-1 Gasket kit (1) MC0756008-1 Fuel bowl (1) MC0756015-1 Washer (1) MCS1573-3 Nut (1) MC0756010-11 Plunger (1) MC0756011-1 Standpipe (2) MCS145027 A7-032 Washer (1) 0756012-1 Spring P/N 05-04426.....**$399.00**

FUEL STRAINER PLUNGER - MC0756010-11 .... * Special electro polished shaft for longer o-ring life. * McFarlane's blue Viton rubber tip will outlast the original in any fuel!

P/N 05-04424.....**$118.75**



FUEL STRAINER ASSEMBLY - Kit contains: Gasket Kit, Fuel Bowl, 2Washers, Nut, Plunger, Standpipe, Spring, and Top Assembly. Approved for Cessna models: 182H*,J, K, L , M, N , P , Q, R

P/N 05-04111.....**$715.00**



FUEL STRAINER AND CABLE KIT - Kit contains: Gasket Kit, Fuel Bowl, 2 Washers, Nut, Plunger, Standpipe, Spring, Top Assembly, Filter, and Strainer Drain Cable Approved for Cessna models: F182P, Q

P/N 05-04112.....**$799.00**



FUEL STRAINER BOWL - Engineered to last! Manufactured using improved materials for added strength and gold anodized for corrosion resistance. Computer machined (not die cast).

P/N 05-01704..... **$155.95**



FUEL STRAINER STANDPIPE - The last one you will buy! Stainless steel, No more corrosion pits or stripped threads, Costs less! P/N 05-00281..... **$156.75**

CESSNA 177RG FUEL RESERVOIR DRAIN PLUNGER



For the Cessna Cardinal 177RG aircraft. McFarlane's blue vulcanized Viton rubber tip will outlast the original in any fuel! All metal, one piece design eliminates the flimsy C-clip.

Model	Serial No.	Replaces
177RG	177RG0001 thru 177RG1366	2016021-4
F177RG	F177RG0001 thru F177RG0177	2016021-4

* 1 each required for aircraft serial numbers 177RG0001 thru 177RG0282 and F177RG0001 thru F177RG0062. * 2 each required for aircraft serial numbers 177RG0283 thru 177RG1366 and F177RG0063 thru F177RG0177.

P/N 05-04613..... **$286.95**

FUEL STRAINER TOP ASSEMBLY FOR CESSNA AIRCRAFT



Applicable to many Cessna aircraft models. Assembly, part number MC0756005-2 includes multiple improvements to address corrosion related service problems with the original Cessna housing. The fuel inlet tube attached has also been improved with redundant methods of attachment to ensure a reliable, secure fit. FAA Approved.

P/N 05-07238..... **$337.00**

AEROTAR BELLCRANK FOR CESSNA



Aerotar 0514030-4 Bellcrank for Cessna.

P/N 08-15787..... **$349.99**

FUEL STRAINER SEAL KIT FOR CESSNA AIRCRAFT



For Cessna models using aluminum Gasket and "O" Rings. Kit contains: Gasket and 3 O- Rings.

P/N 06-02463..... **$8.75**

AP

RUDDER AND ELEVATOR BUSHING KITS FOR CESSNA

These kits include two bushing sizes for each hinge location. This allows a selective fit and solves the common Cessna fit and interference problems. • Hardened corrosion resistant stainless steel. • Cessna models 120 thru 177 • All components are also available separately.

Model	Elevator Bushing Kit	Rudder Bushing Kit
120, 140, 140A (Bushing)	MC0422215	MC0431119K
150, 150A, B, C, D, E	EBC-KT-1	RBC-KT-1
150F, G, H, J	EBC-KT-1	RBC-KT-2
150K*, A150K* Eligibility Note 1 (150K S/N 15071129 THRU 15071621;		
A150K S/N A1500001 THRU A1500129)	EBC-KT-1	RBC-KT-3
150K*, L,M, A150K*, L,M Eligibility Note 2 (150K S/N 15071622 THRU 15072003; A150K S/N A1500130 THRU A1500226)	EBC-KT-2	RBC-KT-3
A-150L, A-A150L	EBC-KT-2	RBC-KT-3
F150F,G,H,J	EBC-KT-1	RBC-KT-2
F150K,L*, FA150K* Eligibility Note 3 (F150L S/N 15000659 THRU F15000699; FA150K S/N FA1500001 THRU FA1500039)	EBC-KT-1	RBC-KT-3
F150L*, M, FA150K*,L,M Eligibility Note 4 (F150L S/N 15000700 THRU F15001143; F150K S/N FA1500040 THRU FA1500081)	EBC-KT-2	RBC-KT-3
FRA150L, M	EBC-KT-2	RBC-KT-3
152*, A152* Eligibility Note 5 (152 S/N 15279406 THRU 15285833; A152 S/N A1520735 THRU A1521025)	EBC-KT-3	RBC-KT-3
152*, A152* Eligibility Note 6 (152 S/N 15285834 THRU 15286033; A152 S/N A1521026 THRU A1521049)	EBC-KT-4	RBC-KT-3
F152*, FA152* Note Eligibility Note 7 (F152 S/N 15201429 THRU F15201943; FA152 S/N FA1520337 THRU FA15203879)	EBC-KT-3	RBC-KT-3
F152*, FA152* Eligibility Note 8 (F152 S/N F1501944 THRU F15201980; FA152 S/N FA1520388 THRU FA1520425)	EBC-KT-4	RBC-KT-3
172, 175	EBC-KT-5	RBC-KT-4
172A,B,C* 175A,B,C* Eligibility Note 9 (172C S/N 17248735 THRU 17249085; 175C S/N 17557003 THRU17557064)	EBC-KT-5	RBC-KT-5
172C*,175C* Eligibility Note 10 (172C S/N 17249086 THRU 17249544; 175C S/N 17557065 THRU 17557119)	EBC-KT-5	RBC-KT-6
172D,E,F,G,H,I,K,L,M,N,P* Eligibility Note 11 (172P S/N 17274010 THRU 17275963)	EBC-KT-5	RBC-KT-6
172P*,Q,R,S Eligibility Note 12 (172P S/N 17275964 THRU 17276654)	EBC-KT-5	RBC-KT-7
172RG, ,P172D, R172K	EBC-KT-5	RBC-KT-6
F172D,E,F,G,H,K,L,M,N,P* Eligibility Note 13 (172P S/N F17202040 THRU F17202208)	EBC-KT-5	RBC-KT-6
F172P* Note Eligibility Note 14 (172P S/N F17202209 THRU F17202254)	EBC-KT-5	RBC-KT-7
F172, FR172E,F,G,H,J,K	EBC-KT-5	RBC-KT-6
177,177A,B,177RG,F177RG	-	MC0532104K

Unless otherwise noted, approval is for all serial numbers for each model listed. The eligibility for the kits also applies to the component bushings and bearings.



ELEVATOR BUSHING KIT COMPONENTS: 2 Bearings, 2 Bushings, 2 Bolts, 2 Washers, 2 Nuts, and 2 Pins.

EBC-KT-1.....P/N 05-04576 .....**$34.65**
EBC-KT-2.....P/N 05-04577 .....**$37.85**
EBC-KT-3.....P/N 05-04578 .....**$36.50**
EBC-KT-4.....P/N 05-04579 .....**$69.75**
EBC-KT-5.....P/N 05-04580 .....**$72.75**



RUDDER BUSHING KIT COMPONENTS: 2 Bearings, 2 Bushings, 2 Bolts, 2 Washers, 2 Nuts, and 2 Pins.

RBC-KT-1.....P/N 05-04569 .....**$18.50**
RBC-KT-2.....P/N 05-04570 .....**$56.75**
RBC-KT-3.....P/N 05-04571 .....**$55.75**
RBC-KT-4.....P/N 05-04572 .....**$35.55**
RBC-KT-5.....P/N 05-04573 .....**$55.75**
RBC-KT-6.....P/N 05-04574 .....**$55.80**
RBC-KT-7.....P/N 05-04575 .....**$52.99**

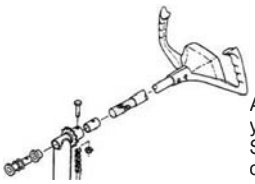
ELEVATOR & RUDDER HINGE BEARING TOOL



This unique tool is specifically designed to prevent damage when installing or removing sintered bronze elevator and rudder hinge bearings in Cessna aircraft. Seven piece kit for common bearing sizes. Heat treated stainless steel will last a lifetime. Kit comes in a convenient storage pouch. P/N 05-04869 .....**$79.75**

CESSNA ROD ENDS

Description	Part Number	Price
Cessna Rod End S1105-4	06-00685	**$52.75**
Cessna Rod End S1819-3	05-01819-3	**$45.50**



CESSNA YOKE UNIVERSAL JOINT AND PROTECTIVE SLEEVE

A universal joint attaches to each control yoke shaft behind the instrument panel. Slack or roughness in control yoke motion commonly indicates excess universal joint wear or corrosion that may necessitate replacement.

CESSNA CONTROL YOKE UNIVERSAL JOINT FAA-PMA



MC0411257 **-** A universal joint attaches to each control yoke shaft behind the instrument panel. Slack or roughness in control yoke motion commonly indicates excess universal joint wear or corrosion that may necessitate replacement. Restores safe, responsive control. Cessna models 120 thru 185 P/N 05-04558 ..... **$264.95**

CESSNA UNIVERSAL JOINT KIT



UJC-KT-2 **-** A universal joint attaches to each control yoke shaft behind the instrument panel. Slack or roughness in control yoke motion commonly indicates excess universal joint wear or corrosion that may necessitate replacement.

Kit Contents		
Part Number	Description	Qty
AN3-10A	BOLT	2
AN3-11A	BOLT	2
MC0411257	UNIVERSAL JOINT, Control Yoke	1
MS21044N3	NUT, Lock, Nylon, 10-32	2

P/N 05-04561 ..... **$262.95**

SLEEVE, PIN RETENTION FAA-PMA



MC6183 **-** A universal joint attaches to each control yoke shaft behind the instrument panel. Slack or roughness in control yoke motion commonly indicates excess universal joint wear or corrosion that may necessitate replacement.

The universal joints and the sleeve are available separately or together in the kit UJC-KT-1 for Cessna models 150 thru A185. Each convenient kit also includes installation hardware. P/N 05-04559 ..... **$7.50**

BLUE SKY LATCH FOR CESSNAS



Install it right on the plane. Simply drill out the two rivets holding your old latch system on your door. You will use these two same holes to install the Blue Sky Latch. The latch is made from TPE (thermal plastic rubber), it has excellent weather ability, and stands up to extreme temperatures. Next use a hack saw blade and cut off that point on your door stem. Then use a small hammer and tap the strike on the end. Align your door using the phillips head adjustment on your door stem. You're done. The Thermal plastic rubber acts a bumper as well as a latch. You get all the hardware including structural AN screws and elastic stop nuts in the kit. Step by Step installation guide with photos showing how easy it is to install. C150 & 152.....P/N 05-04563 .....**$39.95**

FLAP ROLLER INSTALL TOOL 970



Makes installation of the aft flap roller, bushing and washers easy. Holds parts in alignment while inserting the bolt. Long handle allows access through the small inspection openings. Cessna 150 thru 210.
P/N 05-04764 .....**$41.50**



CESSNA 182 GROSS WEIGHT INCREASE STC

A Supplemental Type Certificate (STC) that will increase the useful load of a Cessna 182P or 182Q by 150 to 160 pounds, and the ramp weight (in most cases) by 160 pounds. This STC requires no parts, no modifications, and no installation labor costs. ..... P/N 05-04889 .....**$750.00**

Prices Subject to Change Without Notice

REPLACEMENT CESSNA PARTS



CESSNA BEARING ELEVATOR S1003-29A

FAA-PMA Approved.
Please check your Owner's Manual for Eligibility.
P/N 06-02538..... **$2.27**

CESSNA WINDOW LATCH ASSEMBLIES

Cessna 208 Window Latch Aircraft Assembly.
P/N 05-02522..... **$42.50**
Cessna 176 Window Latch Aircraft Assembly.
P/N 05-02523..... **$42.50**



FUEL STRAINER SEAL KIT FOR CESSNA AIRCRAFT

For Cessna models using aluminum Gasket and "O" Rings. Kit contains: Gasket and 3 O- Rings. See our website for application list.
P/N 06-02463..... **$8.75**



WASHER FUEL BOWL FOR CESSNA AIRCRAFT

Washer Fuel Bowl for Cessna Aircraft - MC0756015-1.
P/N 01-01354..... **$18.50**

CESSNA CITATION MAIN GEAR DOOR HINGE PIN



Cessna Citation main gear door hinge pin. Model 550 and 560. PMA.
P/N 05-12492..... **$36.50**



CESSNA O-RING NOSE STRUT

MCS1628-329 Cessna O-Ring Nose Strut. FAA-PMA.
P/N 06-01586..... **$2.20**



S2418-1 CESSNA SCRAPER RING NOSE STRUT

S2418-1 Cessna Scraper, Ring, Nose Strut. FAA-PMA
P/N 06-01588..... **$8.50**

CESSNA BRASS SHIM TORQUE LINK



FAA-PMA APPROVED - Eliminates undampened torque link motion to prevent shimmy.

Part No.	Cessna Part No.	Thickness	Price ea
05-00429	S1450-6B14-010	.010"	$2.76
05-00430	S1450-6B14-007	.007"	$2.73
05-00431	S1450-6B14-005	.005"	$2.79



CESSNA BEARING FIN S1004-42A

FAA-PMA Approved. Please check your Owner's Manual for Eligibility.
P/N 06-02539..... **$17.55**



CESSNA SPACERS

Spacer sleeve: made of aluminum alloy 2024 overall
P/N 06-00639..... **$0.25**

CESSNA STUDS

S115-32 Cessna Stud ..... P/N 06-02841..... **$1.29**
S115-35 Cessna Stud ..... P/N 06-02842..... **$2.15**



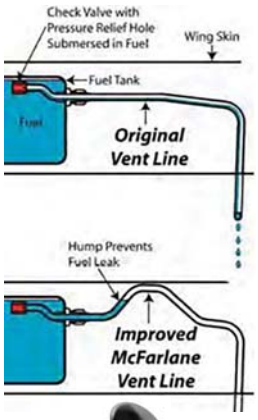
150/152 SEAT RAIL SCREW KIT SR150-SCREW-KIT

This is screw kit specifically for the Cessna 150/152 seat rails. This #10 Structural Screw Kit contains all screws and nuts required to install four seat rails.
Kit Contains: 40 MS27039-1-08 Screw 10-32 x .531, 2 MS27039-1-09 Screw 10-32 x .594, 2 MS27039-1-17 Screw 10-32 x 1.094, 40 MS21044N3 Nut, Nylon Lock
P/N 05-04107..... **$26.90**



CESSNA MOTOR MOUNT BLOCK LOCK WASHER

One side is embossed with a surface texture for improved locking strength and to make sure the washer does not slip while tightening. FAA approved using stronger material than the original, allowing the standard washer to be eliminated. * Designed with six tabs instead of two.* Cessna 180, 182, 185, 188, 205, 206, 207, 210, 310, 320, 411, and 414 model aircraft
P/N 05-01742..... **$6.80**



CESSNA FUEL VENT LINES

We now have the improved fuel vent lines approved for many additional Cessna 150, 172, and 175 series aircraft. Parts ending with a "K" suffix indicate the inclusion of a rubber grommet, p/n MS3548-14, and hose, p/n MCS1495-8.
Features: • Stops environmental and asphalt damage • Fly with known full tanks • Extends useful range • FAA-PMA direct replacement – No STC or 337 for needed

Model	Part No.	Price
MC0523559-6	05-06982	$109.80
MC0523559-6K	05-06983	$114.75
MC0523559-8	05-06984	$72.80
MS0523559-8K	05-06985	$142.75



CESSNA S1878-1 STUD TRIMOUNT

Cessna S1878-1 Stud Trimount.
P/N 06-02839..... **$0.80**



LEFT



RIGHT

CARAVAN SPOILER HINGES

FAA-PMA direct replacement. Eligible for all Cessna Caravan 208,208B. Selective fit components. Cadmium plated stainless pins and anodized aluminum hinges for better corrosion resistance. No looseness in the hinge to start vibration wear

Description	Part No.	Price
MC2622187-R Hinge, Spoiler, RH TAB	05-17644	$97.75
MC2622187-L Hinge, Spoiler, LH TAB	05-17648	$97.75

CARAVAN TORQUE LINKS



Nose gear torque links for Cessna 208/208B Caravan aircraft. These durable and finely machined replacement torque links are designed to meet the rigors of the Alaskan bush.

Description	Part Number	Price
Torque Link Upper	05-12925	$852.00
Torque Link Lower	05-12926	$898.00

ROLLER HOUSINGS FOR CESSNA

McFarlane Part No.	Spruce Part No.	Description	Price	McFarlane Part No.	Spruce Part No.	Description	Price
MC0700645-1	05-15011	Left Seat Roller Housing	$281.95	MC1414104-41	05-14995	Left Seat Roller Housing	$144.75
MC0700645-2	05-15010	Right Seat Roller Housing	$291.95	MC1414104-42	05-14994	Right Seat Roller Housing	$144.75
MC0700645-3	05-15009	Left Seat Roller Housing	$291.95	MC1414104-61	05-15004	Right Seat Roller Housing	$214.95
MC0700645-4	05-15008	Right Seat Roller Housing	$281.95	MC1414104-65	05-15007	Right Seat Roller Housing	$228.95
MC1200603-38	05-15012	Right Seat Roller Housing	$74.99	MC1414104-67	05-14997	Left Seat Roller Housing	$223.95
MC1200603-38	05-15013	Left Seat Roller Housing	$93.75	MC1414104-71	05-14999	Left Seat Roller Housing	$284.95
MC1200603-41	05-15015	Left Seat Roller Housing	$287.95	MC1414104-72	05-15005	Right Seat Roller Housing	$288.95
MC1200603-42	05-15014	Right Seat Roller Housing	$138.75	MC1714000-33	05-15016	Right Seat Roller Housing	$242.95
MC1414104-25	05-15001	Left Seat Roller Housing	$202.95	MC1714000-33	05-15017	Left Seat Roller Housing	$242.95
MC1414104-39	05-15002	Left Seat Roller Housing	$186.75	MC1414104-8	05-15041	Universal Bracket for Cessna Seat Roller Housings	$36.80
MC1414104-40	05-14996	Right Seat Roller Housing	$186.75	*See the website for complete application information.*			

FLAP TRACKS FOR CESSNA CARAVAN



Replace worn-out tracks to prevent dangerous and expensive binding problems!

Description	Part No.	Price
Cessna Caravan Flap Tracks MC2622075-4	05-13089	**$899.00**
Cessna Caravan Flap Tracks MC2622075-5	05-13091	**$715.00**
Cessna Caravan Flap Tracks MC2622075-6	05-13092	**$743.00**

CESSNA CARAVAN CHAINS AND CABLES



Quality standards exceed the applicable military specifications to produce the safest cables possible. Now these quality cables are available as FAA-PMA direct replacements for the Cessna Caravan 208 and 208B. • DOD QML 6117 certified cable manufacturer • Innovative design • Longer service life • Refined ball seat eliminates stress concentration and 17-4 stainless steel increases strength and corrosion resistance. • Added offset link eliminates binding.

Description	Part No.	Price
Cessna Caravan Aileron Trim Chain MCS2295-25-35	05-13098	**$42.99**
Cessna Caravan Aileron Trim Chain MCS2295-25-43	05-13099	**$46.00**
Cessna Caravan Elevator Electric Trim Chain MCS2295-25-101	05-13101	**$96.99**
Cessna Caravan Elevator Trim Chain MCS2295-25-87	05-13102	**$50.99**
Cessna Caravan Pitch Trim Servo Chain MCS2295-25-107	05-13103	**$125.99**
Cessna Caravan Elevator Trim Wheel Chain MCS2295-25-247	05-13104	**$150.99**
Cessna Caravan Elevator Up Aft Cable MC2660001-100	05-13105	**$147.99**
Cessna Caravan Elevator Up Fwd Cable MC2660001-101	05-13106	**$205.95**
Cessna Caravan Elevator Down Aft Cable MCS2660001-102	05-13107	**$101.99**
Cessna Caravan Elevator Down Fwd Cable MCS2660001-103	05-13108	**$262.95**
Cessna Caravan Rudder Right Aft Cable MCS2660001-104	05-13109	**$171.99**
Cessna Caravan Flap Cable MCS2660001-105	05-13110	**$117.99**
Cessna Caravan Rudder Right Fwd Cable MCS2660001-106	05-13111	**$321.00**
Cessna Caravan Rudder Left Aft Cable MCS2660001-107	05-13112	**$148.99**
Cessna Caravan Rudder Left Fwd Cable MCS2660001-108	05-13113	**$312.00**
Cessna Caravan Elvtr Trim Act To Act Cable MCS2660001-109	05-13114	**$204.95**
Cessna Caravan Elevator Trim Up Aft Cable MCS2660001-110	05-13115	**$224.95**
Cessna Caravan Elevator Trim Down Aft Cable MCS2660001-112	05-13116	**$204.95**
Cessna Caravan Aileron To Bellcrank Cable MCS2660001-114	05-13117	**$150.99**
Cessna Caravan Lh Column To Quad Barrel MCS2660001-118	05-13118	**$190.99**
Cessna Caravan Rh Column To Quad Barrel Cable MCS2660001-119	05-13119	**$199.99**
A-700 Control 120" Black Knob	05-13120	**$72.75**
Cessna Caravan Lwr Quadrant Cable MCS2660001-122	05-13121	**$84.99**
Cessna Caravan Cntrl Clmn Intcnct Rh Inbd Cbl MCS2660001-123	05-13122	**$88.99**
Cessna Caravan Cntrl Clmn Intcnct Lh Inbd MCS2660001-124	05-13123	**$84.99**
Cessna Caravan Cntrl Clmn Inrcnct Rh Outbd MCS2660001-125	05-13124	**$95.99**
Cessna Caravan Cntrl Clmn Intrcnct Lh Outbd MCS2660001-126	05-13125	**$120.99**
Cessna Caravan Elevator Down Fwd Cable MCS2660001-147	05-13126	**$178.99**
Cessna Caravan Rudder Right Fwd Cable MCS2660001-148	05-13127	**$201.00**
Cessna Caravan Elevator Trim Up Fwd Cable MCS2660001-149	05-13128	**$199.99**
Cessna Caravan Elevator Trim Down Fwd Cable MCS2660001-150	05-13129	**$350.00**
Cessna Caravan Alrn Lh Clmn Quad To Brrl MCS2660001-151	05-13130	**$182.99**
Cessna Caravan Alrn Rh Clmn Quad To Brrl Cble MC2660001-152	05-13131	**$157.99**
Cessna Caravan Elevator Up Fwd Cable MC2660001-153	05-13134	**$151.99**
Cessna Caravan Rudder Right Fwd Cable MC2660001-154	05-13135	**$201.95**
Cessna Caravan Elevator Trim Down Fwd Cable MC2660001-155	05-13136	**$267.95**
Cessna Caravan Elevator Trim Down Fwd Cable MC2660001-156	05-13137	**$276.95**
Cessna Caravan Aileron Lwr Quadrant Cable MC2660001-157	05-13138	**$297.95**

FLIGHT CONTROL CABLES - AILERON



FAA-PMA approved cables for most 172 series Cessna aircraft. See website for aircraft eligibility.

Model No.	Description	Part No.	Price
MC0510105-360	Aileron Direct To Cabin Control Cable	05-13305	**$137.75**
MC0510105-362	Aileron Direct To Bellcrank Control Cable	05-13306	**$95.75**
MC0510105-364	Aileron Carry Thru LH Control Cable	05-13307	**$99.75**
MC0510105-365	Aileron Carry Thru RH Control Cable	05-13308	**$94.75**

CESSNA NOSE WHEEL STEERING ROD BOOT



Cessna steering rod boots to keep out exhaust gases and prevent smoke and fumes from entering the cockpit in the event of an engine fire while tolerating the constant air pulses caused by the rotating propeller. These steering rod boots are manufactured with a black Kevlar/fiberglass blend fabric. The fatigue resistance of Kevlar is uniquely mated with the fire resistance of fiberglass. This is a super tough, high temperature fabric that will provide many years of outstanding performance.

Description	Part No.	Price
Cessna 172, 175, & 182 Early Series Boot	05-00279	**$87.75**

CESSNA BEARING S16474-1



Cessna Bearing Halves for torque tube / inboard / outboard braking system use. S16474-1 Cessna Bearing Half. Replaces 0411263, 0411263-5, 0411263-6. Sold as each half, quantity (2) halves required for most applications. Refer to your Cessna Manual for proper eligibility.

P/N 06-02547 ..... **$3.35**

CESSNA BEARING S16475-1



Cessna Bearing Halves for torque tube / inboard / outboard braking system use. S16475-1 Cessna Bearing Half. Replaces of 0411264, 0411264-5, 0411264-6. Sold as each half, quantity (2) halves required for most applications. Refer to your Cessna Manual for proper eligibility.

P/N 06-02548 ..... **$3.40**

CESSNA FUEL STRAINER GASKET



Cessna Fuel Strainer Gasket - FAA PMA. MC0756009. See our website for Aircraft Eligibility information.

Each
P/N 05-14676 ..... **$14.75**

Pack of 5
P/N 05-12515 ..... **$60.75**

Prices Subject to Change Without Notice

COWL FLAP CONTROLS EARLY CESSNA 180 SERIES



FAA-PMA approval for cowl flap controls for early Cessna 180 model series aircraft. These new controls are the dual style, push to unlock type, eligible for Cessna 180, 180A, and 180B series aircraft. They feature a hardened stainless steel housing that won't wear and prematurely lose locking strength like the OEM brass housings. The new cowl flap controls offer solid metal construction and Teflon lined conduit, providing precise, positive control even after years of service in the harshest environments. Available with your choice of a black anodized knob or original style chrome knob.

MC0713041-1 Chrome Knob..... P/N 05-06979 .....**$347.00**
MC0713041-1B Black Knob ..... P/N 05-06980 .....**$362.00**

CESSNA PMA'D SEAT TRACK HOUSING



These PMA'D parts are eligible on 172, 180, 185, 205, 206, 207, 210, 336 and 337. These are made of a strong alloy and are thicker at wear points. PMA'd

Model No.	Part No.	Price
1414104-39	06-01961	**$373.00**
1414104-40	06-01962	**$373.00**
1414104-41	06-01963	**$287.95**
1414104-42	06-01964	**$289.95**
1414104-61	06-01965	**$443.00**
1414104-65	06-01967	**$218.95**
1414104-67	06-01968	**$213.95**
1414104-71	06-01969	**$274.95**
1414104-72	06-01970	**$278.95**
1414104-8	06-01971	**$83.80**
1200604-13	06-01972	**$571.00**
1200604-14	06-01973	**$591.00**
1200604-28	06-01974	**$330.00**
1200604-29	06-01975	**$306.00**
0700645-1	06-01976	**$271.95**
0700645-2	06-01977	**$281.95**
0700645-3	06-01978	**$281.95**
0700645-4	06-01979	**$271.95**
1200603-38	06-01980	**$69.99**
1200603-41	06-01981	**$277.95**
1212162-1	06-01982	**$608.00**
1214022-2	06-01983	**$619.00**
1214023-1	06-01984	**$382.00**
1214023-2	06-01985	**$335.00**
1714000-33	06-01987	**$232.95**

STABILIZER JACK SCREW ACTUATOR KIT FOR CESSNA 180, 182 AND 185 AIRCRAFT

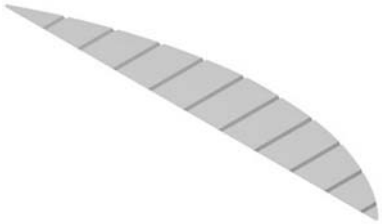


This is a FAA-PMA/STC Stabilizer Jack Screw Actuator Kit for Cessna models 180, 180A-K, 182, 182A-C, 185, 185A-E, and A185E-F aircraft. Directly replaces the original Cessna assembly.

The original low-grade steel components have been replaced with duplex stainless steel for extreme corrosion resistance even in a harsh saltwater environment. This high strength stainless steel was developed by the British for under-sea concrete reinforcing. Saltwater does not have any effect on this steel. Precision bearings are used with precision machining to reduce free play, while using extra-low temperature grease for easy turning in low temperatures. For improved strength and reliability, McFarlane redesigned the sprocket and retaining collar to allow for the use of a 5/32" roll pin for attachment, as opposed to the 3/32" roll pins originally used. This more than doubles the strength of the design. Bushings and a stainless steel chain with connectors are included.

P/N 05-06467 .....**$1,698.00**

ELEVATOR TRIM SKINS CESSNA 170/190/195



Features:
- More precise corrugation spacing and shape
- No pre-drilled holes to misalign
- Precisely formed and CNC cut to shape to match OEM skins
- Plastic coated on both sides for better protection during handling (re move before installation)
- Direct replacement - No STC required

Description	Part Number	Price
Elevator Tab Lower MC0334100-4	05-07174	**$92.75**
Elevator Tab Upper MC0334100-3	05-07176	**$95.75**
Elevator Upper RH MC0334100-5	05-07177	**$205.95**
Elevator Lower RH MC0334100-6	05-07178	**$205.95**
Elevator Upper LH MC0334200-4	05-07179	**$210.95**
Elevator Lower LH MC0334200-3	05-07181	**$212.95**

COWL SAVER BAFFLE SEALS FOR 172R/S CESSNA AIRCRAFT

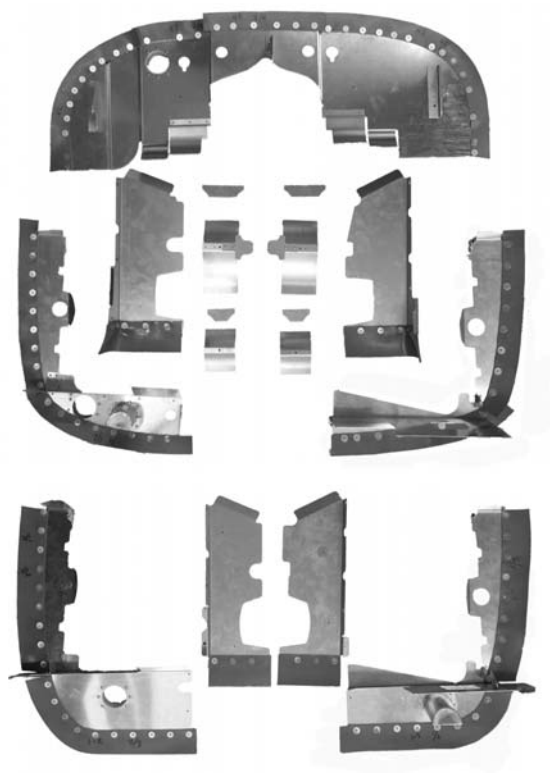


FAA-PMA Approved Baffle Seals for 172R/S Cessna Aircraft.

Features:
- FAA-PMA Approved
- Part Numbers MC0509070-4, MC0509071-2, MC0509072-4, MC0509074-2 are applicable to Cessna 172Q/R/S aircraft
- Cowl SaverTM new low friction laminated material (30x less friction than silicone)
- Precut seals for fast installation
- Addresses issues raised in SB 08-53-01 regarding cracking due to vi bration
- BSC-KT-1 kit includes all required baffle seals, MS20470A4-5 soft rivets and 6036-012 retainer strips for one aircraft

McFarlane Part Number	Description	Our Part Number	Price
BSC-KT-1	Baffle Seal KIT	05-06475	**$314.00**
MC0509069-4	Baffle Seal, RH AFT	05-06476	**$26.90**
MC0509070-4	Baffle Seal, LH AFT	05-06477	**$26.90**
MC0509071-2	Baffle Seal, CYL 1 RH FWD	05-06478	**$24.90**
MC0509072-4	Baffle Seal, CYL 2 LH FWD	05-06479	**$24.90**
MC0509073-6	Baffle Seal, CYL 3 RH AFT	05-06480	**$24.90**
MC0509074-2	Baffle Seal, CYL 4 LH AFT	05-06481	**$24.90**
MC0509079-2	Baffle Seal, Air Intake Heat M	05-06482	**$30.90**
MC0555250-17	Baffle Seal, Fwd RH Lower	05-06483	**$34.50**
MC0555250-18	Baffle Seal, Fwd RH Middle	05-06484	**$30.90**
MC0555250-19	Baffle Seal, Fwd RH Upper	05-06485	**$24.90**
MC0555259-25	Baffle Seal, Fwd LH Lower	05-06486	**$35.55**
MC0555259-26	Baffle Seal, Fwd LH Middle	05-06487	**$30.85**
MC0555259-27	Baffle Seal, Fwd LH Upper	05-06488	**$36.50**
MC2455076-1	Baffle Seal, RH AFT Sub Panel	05-06489	**$21.75**

CESSNA ENGINE BAFFLES



150 BAFFLES

Baffle Number	Part No.	Price
AF0455000-4	05-03078	$38.55
AF0450502-22	05-03079	$38.55
AF0455000-11	05-03080	$38.55
AF0450502-23	05-03081	$38.55
AF0450502-42	05-01482	$466.00
AF0450502-16	05-01483	$232.95
AF0450322-2	05-01484	$44.85
AF0455001-2	05-01485	$233.95
AF0450210	05-01486	$11.55
AF0450209 Seal	05-01487	$10.50
AF0450171	05-01488	$39.65
AF0450502-19	05-01489	$233.95
AF0450322-3	05-01490	$44.80
AF5001-3	05-01491	$233.95

152 BAFFLES

Baffle Number	Part No.	Price
AF0455012-7	05-03099	$27.55
AF0455012-10	05-03101	$31.99
AF0455012-11	05-03102	$40.95
AF0455006-5	05-03103	$27.55
AF0455008-1	05-12664	$27.50
AF0455018-21	05-03106	$220.95
AF0455013-171	05-03107	$89.00
AF0455018-27	05-03108	$134.99
AF0455018-25	05-03109	$134.75
AF0455018-19	05-03110	$88.75
AF0455018-22	05-03111	$254.95
AF0455021-1	05-03112	$48.60
AF0455007-1	05-03113	$31.99
AF0455015-1	05-03114	$53.75
AF0455015-2	05-03115	$56.80
AF0455013-23	05-03116	$31.99
AF0455013-17	05-03117	$139.75
AF0455013-19	05-03118	$40.95
AF0455013-14	05-03119	$149.75
AF0455012-1	05-03120	$115.75
152 Baffle Set	**05-03273**	**$997.00**

170B, 172 EARLY MODEL BAFFLES

Baffle Number	Part No.	Price
AF0550163	05-01492	$418.00
AF0550164-8	05-01493	$117.75
AF0450322-3	05-01494	$39.75
AF0550164-10	05-01495	$24.55

170B, 172 EARLY MODEL Baffles Cont.

AF0450209	05-01496	$10.50
AF0550165-2	05-01505	$123.75
AF0550111-7	05-01506	$128.80
AF0450210	05-01507	$10.50
AF0550164-7	05-01508	$117.75
AF0450322-2	05-01509	$39.75
AF0450171	05-01510	$46.95
AF0550164-11	05-01511	$24.55
AF0550165-6	05-01512	$121.75
AF0550117	05-01508	$117.75
AF0550111-4	05-03062	$7.95
170B, 172 Early Model Baffle Set	**05-03266**	**$1,224.00**

172 I, K, L, & EARLY M BAFFLES

Baffle Number	Part No.	Price
AF0555206-1	05-03082	$271.95
AF0555204-1	05-03083	$116.75
AF0555203-1	05-03084	$117.75
AF0555199-2	05-03085	$273.95
AF0555199-1	05-03087	$273.95
AF0555205-1	05-03088	$116.75
AF0555202-1	05-03089	$115.75
AF0555207-1	05-03090	$271.95
172 I, K, L, 7 Early M Baffle Set	**05-03271**	**$1,082.00**

172M BAFFLES

Baffle Number	Part No.	Price
AF0555206-12	05-03091	$271.95
AF0555204-5	05-03092	$130.75
AF0555211-7	05-03094	$271.95
AF0555216-202	05-03095	$305.00
AF0555212-1	05-03096	$34.60
AF0555217-1	05-03097	$305.00
AF0555213-5	05-03038	$142.80
AF0555214-7	05-03041	$143.75
172M Baffle Set	**05-03272**	**$1,084.00**

172N BAFFLES 1979.5-1980

Baffle Number	Part No.	Price
C-172N Baffle Set	05-11844	$1,149.00
AF055236-1	05-11845	$240.00
AF0555302-13	05-11846	$132.95
AF0555233-1	05-11847	$116.80
AF0555298-3	05-03121	$271.95
AF0555233-1	05-03122	$75.85
AF0555235-1	05-03123	$273.95
AF055524-1	05-03124	$122.75
AF0555259-1	05-03125	$34.70
AF0555213-5	05-03038	$142.80
AF0555250-9	05-03039	$305.00
AF0555214-7	05-03041	$143.75
AF0555259-14	05-03043	$306.00
172N Baffle Set	**05-03274**	**$1,164.00**

172P BAFFLES

Baffle Number	Part No.	Price
AF0555309-1	05-03035	$271.95
AF0555318-1	05-03037	$158.75
AF0555213-5	05-03038	$142.80
AF0555250-9	05-03039	$305.00
AF0555211-9	05-03040	$271.95
AF0555214-7	05-03041	$143.75
AF0555307-1	05-03042	$34.70
AF0555259-14	05-03043	$306.00
AF0555215-4	05-03126	$85.85
172P Baffle Set	**05-03275**	**$1,053.00**

172RG BAFFLES

Baffle Number	Part No.	Price
AF2455019-1	05-13193	$18.50
AF2455028-1	05-13194	$1,448.00
AF2455029-1	05-13195	$140.80
AF2455038-2	05-13197	$638.00
AF2455039-4	05-13198	$198.75
AF2455040-1	05-13199	$178.75
AF2455041-1	05-13201	$175.75
AF2455044-1	05-13202	$181.99
AF2455049-1	05-13203	$181.99
AF2455058-1	05-13204	$272.95
172RG Baffle Set	**05-13155**	**$2,918.00**

All baffles are bare 6061-T6 aluminum unless the powder coating option is chosen. The powder coating finish is a black and grey hammertone. Powder coating option available for an additional 20%. The silicone baffle seal material is available in orange, dark blue, and black. Please ensure applicability for your aircraft by verifying eligible serial numbers and diagrams on our website at www.aircraftspruce.com prior to order.

172RG Baffles Cont.

172RG Baffle Set (Powder Coat)	05-13156	$3,083.00

177 BAFFLES

Baffle Number	Part No.	Price
AF1755004-1	05-03147	$297.95
AF1755007-1	05-03148	$136.90
AF1755009-1	05-03149	$136.90
AF1755005-2	05-03150	$273.95
AF1755010-1	05-03151	$136.90
AF1755005-1	05-03152	$273.95
AF1755008-1	05-03153	$136.90
AF1755003-1	05-03154	$293.95
177 Baffle Set	**05-03279**	**$1,335.00**

177B BAFFLES

Baffle Number	Part No.	Price
AF2055008-1	05-13064	$17.55
AF1752099-1	05-13176	$52.80
AF1755026-17	05-13177	$372.00
AF1755026-20	05-13178	$430.00
AF1755029-8	05-13179	$162.75
AF1755030-1	05-13180	$101.75
AF1755031-5	05-13181	$155.75
AF1755032-5	05-13182	$108.75
AF1755034-7	05-13183	$331.00
AF1755036-7	05-13185	$269.95
AF1755038-8	05-13186	$74.75
AF1755039-9	05-13187	$74.75
177B Baffle Set	**05-13157**	**$1,547.00**
177B Baffle Set (Powder Coat)	**05-13158**	**$1,702.00**

177RG BAFFLES

Baffle Number	Part No.	Price
AF2055003-20	05-13063	$262.95
AF2055008-1	05-13064	$17.55
AF2055014-1	05-13066	$326.00
AF2055013-1	05-13068	$95.99
AF2055005-5	05-13069	$108.75
AF2055015-3	05-13070	$378.00
AF2055015-30	05-13071	$68.80
AF2055015-20	05-13072	$68.80
AF20555015-2	05-13073	$429.00
AF2055004-5	05-13074	$119.99
AF2055006-5	05-13075	$95.99
AF2055015-2	05-13191	$430.00
AF2055015-15	05-13192	$28.65
177RG II Baffle Set	**05-13159**	**$1,440.00**
177RG II Baffle Set (Powder Coat)	**05-13160**	**$1,599.00$1,702.00**

177RG II BAFFLES

Baffle Number	Part No.	Price
AF2055003-20	05-13063	$262.95
AF2055008-1	05-13064	$17.55
AF2055014-1	05-13066	$326.00
AF2055013-1	05-13068	$95.99
AF2055005-5	05-13069	$108.75
AF2055015-3	05-13070	$378.00
AF2055015-30	05-13071	$68.80
AF2055015-20	05-13072	$68.80
AF20555015-2	05-13073	$429.00
AF2055004-5	05-13074	$119.99
AF2055006-5	05-13075	$95.99
AF2055015-2	05-13191	$430.00
AF2055015-15	05-13192	$28.65
177RG Baffle Set	**05-13159**	**$1,440.00**
177RG Baffle Set (Powder Coat)	**05-13160**	**$1,599.00$1,702.00**

180-182 BAFFLES

Baffle Number	Part No.	Price
AF0750128-20	05-01528	$354.00
AF0750128-19	05-01530	$145.75
AF0750128-21	05-01531	$106.75
AF0750128-23	05-01532	$145.75
AF0750128-22	05-01533	$355.00
AF0750117-30	05-01552	$43.16
AF0750135-4	05-01561	$34.60

180-182 Baffles Cont.

AF0750135-1	05-01563	$71.75
AF0851700-96	05-01574	$31.90
AF0750135-3	05-01585	$34.70
180-182 Baffle Set	**05-03278**	**$1,743.00**

180 SERIES OIL COOLER BAFFLES

Baffle Number	Part No.	Price
AF075052-1	05-01541	$233.95
AF0755050-10	05-01542	$233.95
AF0755050-11	05-01543	$232.95
AF0750148-1	05-01544	$55.80
AF0755002-3	05-01546	$54.75
AF0755002-31	05-01547	$54.75
AF0750152-3	05-01554	$29.80
AF0750152-2	05-01556	$25.60

182 LATE MODEL BAFFLES

Baffle Number	Part No.	Price
AF0755001-39	05-03155	$391.00
AF0755004-6	05-03156	$219.95
AF07550404-4	05-03157	$279.95
AF0755040-2	05-03158	$308.00
AF0755004-9	05-03159	$39.65
AF0755004-2	05-03160	$111.80
AF0755004-3	05-03161	$123.80
AF0755040-3	05-03162	$279.95
AF0755007-1	05-03163	$67.75
AF0755040-1	05-03164	$259.95
AF1250961-5	05-03165	$40.55
AF1250961-6	05-03166	$40.55
AF1250961-7	05-03167	$39.65
AF0755005-9	05-03168	$233.95
AF0750135-4	05-01561	$34.60
AF0750135-1	05-01563	$71.75
AF0750135-3	05-01585	$34.70
182 Late Model Baffle Set	**05-03277**	**$2,196.99**

182 LATE MODEL OIL COOLER BAFFLES

Baffle Number	Part No.	Price
AF0755011-1	05-03169	$54.75
AF0755001-30	05-03170	$227.95
AF0755012-2	05-03171	$13.70
AF0750152-1	05-03172	$26.55
AF0755010-1	05-03173	$54.75
AF0755001-24	05-03174	$224.95
AF0755009-1	05-03175	$10.55
AF0750152-2	05-01556	$25.60

182P / F182P BAFFLES

Baffle Number	Part No.	Price
AF0750135-1	05-01536	$71.75
AF0750135-4	05-01561	$34.60
AF0750135-3	05-01585	$34.70
AF0755001-39	05-03155	$391.00
AF0755004-6	05-03156	$219.95
AF0755040-4	05-03157	$279.95
AF0755040-2	05-03158	$308.00
AF0755004-2	05-03160	$111.80
AF0755004-3	05-03161	$123.80
AF0755040-3	05-03162	$279.95
AF0755007-1	05-03163	$67.75
AF0755040-1	05-03164	$259.95
AF1250961-5	05-03165	$40.55
AF1250961-6	05-03166	$40.55
AF1250961-7	05-03167	$39.65
AF0755005-9	05-03168	$233.95
AF0755009-1	05-03175	$10.55
182P/F182P Set Pkg G	**05-13161**	**$2,009.00**
182P/F182P Set Pkg H	**05-13162**	**$2,009.00**
182P/F182P Set Pkg G (Pwdr Ct.)	**05-13163**	**$2,179.00**
182P/F182P Set Pkg H (Pwdr Ct.)	**05-13164**	**$2,179.00**

182Q/182R/F182Q BAFFLES

Baffle Number	Part No.	Price
AF0750135-1	05-01536	$71.75
AF0750135-4	05-01561	$34.60
AF0750135-3	05-01585	$34.70
AF0755001-39	05-03155	$391.00
AF0755004-6	05-03156	$219.95
AF0755040-4	05-03157	$279.95
AF0755040-2	05-03158	$308.00
AF0755004-2	05-03160	$111.80
AF0755004-3	05-03161	$123.80
AF0755040-3	05-03162	$279.95
AF0755007-1	05-03163	$67.75
AF0755040-1	05-03164	$259.95
AF1250961-5	05-03165	$40.55

All baffles are bare 6061-T6 aluminum unless the powder coating option is chosen. The powder coating finish is a black and grey hammertone. Powder coating option available for an additional 20%. The silicone baffle seal material is available in orange, dark blue, and black.
Please ensure applicability for your aircraft by verifying eligible serial numbers and diagrams on our website at www.aircraftspruce.com prior to order.

182Q/182R/F182Q *Baffles Cont.*

AF1250961-6	05-03166	$40.55
AF1250961-7	05-03167	$39.65
AF0755005-9	05-03168	$233.95
AF0755009-1	05-03175	$10.55
182Q/182R/F182Q Set Pkg G	**05-13165**	**$2,009.00**
182Q/182R/F182Q Set Pkg H	**05-13166**	**$2,009.00**
182Q/182R/F182Q Set Pkg G Powder Coat	**05-13167**	**$2,179.00**
182Q/182R/F182Q Set Pkg H Powder Coat	**05-13169**	**$2,179.00**

185 BAFFLES

Baffle Number	Part No.	Price
AF0750128-66	05-01427	$459.00
AF0750128-97	05-01529	$427.00
AF0750128-19	05-01530	$145.75
AF0750128-21	05-01531	$106.75
AF0750128-23	05-01532	$145.75
AF0851700-96	05-01574	$31.90
AF0750117-31	05-01582	$53.80
AF07501282-2	05-01556	$25.60
AF0750135-4	05-01561	$34.60
AF0750135-3	05-03177	$28.42
AF0750117-30	05-01552	$43.16
AF1250134-2	05-03179	$56.75
AF0755050-15	05-03180	$256.95
AF0755002-2	05-03181	$54.75
AF050128-76	05-03182	$189.75
185 Baffle Set	**05-03276**	**$1,646.00**

C-200 EARLY MODEL OIL COOLER BAFFLES

Baffle Number	Part No.	Price
AF0750152-3	05-01554	$29.80
AF0750152-2	05-01556	$25.60

206 EARLY MODEL BAFFLES

Baffle Number	Part No.	Price
AF0750135-4	05-01561	$34.60
AF0750135-1	05-01563	$71.75
AF0750117-31	05-01582	$53.80
AF1250105-1	05-03183	$54.75
AF1250100-18	05-03418	$378.00
AF1250100-8	05-03185	$189.75
AF0851700-96	05-01538	$31.90
AF1250135-3	05-03072	$56.75
AF1250137-1	05-03188	$244.95
AF1250927-1	05-03190	$332.00
AF1250100-15	05-03073	$189.75
AF1250100-41	05-03075	$349.00
AF1250100-12	05-03076	$60.75
AF1250105-2	05-03077	$54.75
206 Early Model Baffle Set	**05-03280**	**$1,988.42**

206 LATE MODEL BAFFLES

Baffle Number	Part No.	Price
AF1255008-22	05-01560	$370.00
AF0750135-4	05-01561	$34.60
AF750135-1	05-01563	$71.75
AF1255032-4	05-01572	$430.00
AF0851700-96	05-01574	$31.90
AF1255032-2	05-01575	$394.00
AF1255025-1	05-01576	$54.75
AF1255010-10	05-01577	$95.85
AF1255028-1	05-01578	$263.95
AF1255011-5	05-01579	$38.55
AF1255008-12	05-01580	$133.75
AF1255008-20	05-01581	$637.00
AF0750117-31	05-01582	$53.80
AF1255032-3	05-01584	$444.00
AF0750135-3	05-01585	$34.70

206 LATE MODEL BAFFLES Cont.

AF1255032-1	05-01587	$296.95
AF1255009-8	05-01588	$130.85
AF1250966-1	05-01589	$94.75
AF0750152-3	05-01554	$29.80
AF1250134-2	05-03234	$56.75
AF1255026-1	05-03235	$26.55
AF1250966-3	05-03236	$22.55
AF1250961-5	05-03237	$40.55
206 Late Model Baffle Set	**05-03285**	**$3,162.00**

207 EARLY MODEL BAFFLES

Baffle Number	Part No.	Price
AF0750135-3	05-01540	$34.70
AF0750135-4	05-01561	$34.60
AF0750135-1	05-01563	$71.75
AF0851700-96	05-01574	$31.90
AF0750117-31	05-01582	$53.80
AF1250105-2	05-03077	$54.75
AF1250100-12	05-03076	$60.75
AF1250100-41	05-03075	$349.00
AF1250100-15	05-03198	$189.75
AF1250927-1	05-03199	$332.00
AF1250137-1	05-03201	$244.95
AF1250135-3	05-03202	$56.75
AF1250100-8	05-03185	$189.75
AF1250100-18	05-03418	$378.00
AF1250105-1	05-03068	$54.75
207 Early Model Baffle Set	**05-03281**	**$1,988.42**

208 BAFFLES

Baffle Number	Part No.	Price
AF2654006-10	05-13313	$622.00

210 EARLY MODEL BAFFLES

Baffle Number	Part No.	Price
AF0750135-4	05-01561	$34.60
AF0750135-1	05-01563	$71.75
AF0851700-96	05-01574	$31.90
AF0750117-31	05-01582	$53.80
AF0750135-3	05-01585	$34.70
AF1250105-1	05-03068	$54.75
AF1250100-23	05-03070	$405.00
AF1250100-8	05-03071	$187.90
AF1250135-3	05-03072	$56.75
AF1250100-15	05-03073	$189.75
AF1250100-41	05-03075	$349.00
AF1250100-12	05-03076	$60.75
AF1250105-2	05-03077	$54.75
210 Early Model Baffle Set	**05-03269**	**$1,972.00**

206, 207, 210 TURBO EARLY MODEL BAFFLES

Baffle Number	Part No.	Price
AF0851700-96	05-01538	$31.90
AF0750152-3	05-01554	$29.80
AF1250105-1	05-03068	$54.75
AF1250135-3	05-03072	$56.75
AF1250829-11	05-03210	$72.00
AF1250105-2	05-03077	$54.75

401 / 402 / 414 BAFFLES

AF0851827-40	05-12666	$269.95
AF0851833-1	05-12667	$90.99
AF0851838-27	05-12671	$334.00
AF0851838-41	05-12672	$269.95
AF0851842-13	05-12674	$197.80
AF0851842-15	05-12675	$107.75
AF0851843-50	05-12676	$242.95
AF0851857-40	05-12678	$118.75
AF5251800-40	05-12680	$215.95
AF5355103-43	05-12681	$234.95
AF5355103-48	05-12682	$234.95
AF5650003-51	05-12683	$334.00
AF0851834-1	05-12668	$46.55
AF0851834-2	05-12669	$46.55
AF0851826-1	05-12665	$54.75
AF0851838-2	05-12670	$36.55
AF0851841-1	05-12673	$46.55
AF0851844-4	05-12677	$71.95

All baffles are bare 6061-T6 aluminum unless the powder coating option is chosen. The powder coating finish is a black and grey hammertone. Powder coating option available for an additional 20%. The silicone baffle seal material is available in orange, dark blue, and black.
Please ensure applicability for your aircraft by verifying eligible serial numbers and diagrams on our website at www.aircraftspruce.com prior to order.

Prices Subject to Change Without Notice

CESSNA INTERCYLINDER BAFFLES/PARTS

INTERCYLINDER BAFFLES FOR TELEDYNE SIX CYLINDER ENGINES

Ref. No.	Replaces Cessna P/N
ASP135-103	750135-3



Model	Serial Number	Qty Per A/C
180,A,B,C,D,E	32151 thru 18051183	2
180F,G,H,J,K,L	18051184 thru 18053203	3
182E	33000 thru 18254423	2
182F,G,H,J,K,L,M,N,P*	18254424 thru 18262465	1
182P*,Q,R	18262466 thru 18268615	2
188,A,B	188-0001 thru 18802348	2
A188,A,B	188-0001 thru 18803968T	2
T188C	T18803297T thru T18803968T	2
205,A	205-0001 thru 205-0577	1
206	206-0001 thru 206-0275	2
U206A,B,C,D,E,F,G	U206-0276 thru U20607020	2
P206,A,B,C,D,E	P206-0001 thru P20600647	2
207,A	20700001 thru 20700788	2
2IO,A,B,C,D,E,F,G,H,J,K,L,M,N,R	57001 thru 21065009	2
3IO,B,C,D,E,F,G,H,I,J,K,L,N	35000 thru 310N0198	2
320,A,B,C	320-0001 thru 320C0073	2

P/N 05-02135 ..... **$63.75**

Ref. No.	Replaces Cessna P/N
ASP135-104	0750135-4, 0750135-8



Model	Serial Number	Qty Per A/C
180*	32151 thru 32661	2
180A,B,C,D,E	32662 thru 18051183	1
18OF,G,H,I,K	18051184 thru 18053203	2
182	33060 thru 33482	2
182A,B,C,D,E,F,G,H,J,K,L,M,N,P*	33483 thru 18262465	1
182P*,Q,R	18262466 thru 18268615	2
188,A,B	188-0001 thru 18802348	2
A188,A,B	188-0001 thru 18803968T	2
T188C	T18803297T thru T18803968T	2
205,A	205-0001 thru 205-0577	2
206	206-0001 thru 206-0275	2
U206,A,B,C,D,E,F,G	U206-0276 thru U20607020	2
P206,A,B,C,D,E	P206-0001 thru P20600647	2
207,A	20700001 thru 20700788	2
210,A,B,C,D,E,F,G,H,J,K,L,M,N,R	57001 thru 21065009	2
310,B,C,D,E,F,G,H,I,J,K,L,N	35000 thru 310N0198	2

P/N 05-02136 ..... **$58.75**

Ref. No.	Replaces Cessna P/N
ASP834-101	0851834-1



Model	Serial Number	Qty Per A/C
310P,Q,R/T310,P,Q,R	310P0001 thru 310R2140	6
320D,E,F	320D0001 thru 320F0045	6
335	335-0001 thru 335-0065	6
340,A	340-0001 thru 340A1817	6
401,A,B	401-0001 thru 401B0300	6
402,A,B,C	402-0001 and On	6
414,A	414-0001 and On	6

P/N 05-02137 ..... **$44.25**

Ref. No.	Replaces Cessna P/N
ASP834-102	0851834-2



Model	Serial Number	Qty Per A/C
310P,Q,R/T310,P,Q,R	310P0001 thru 310R2140	2
320D,E,F	320D0001 thru 320F0045	2
335	335-0001 thru 335-0065	2
340,A	340-0001 thru 340A1817	2
401,A,B	401-0001 thru 401B0300	2
402,A,B,C	402-0001 and On	2
414,A	414-0001 and On	2

P/N 05-02138 ..... **$77.80**

BAFFLE KIT FOR GRUMMAN AA-5A

AF5502006-502 .....05-13205 ..... **$114.75**

AF5502006-503 .....05-13206 ..... **$114.75**

AFF5502007-502 .....05-13207 ..... **$114.75**

AF5502007-504 .....05-13208 ..... **$119.75**

AF5502011-501 .....05-13212 ..... **$283.95**

AF5502011-504 .....05-13213 ..... **$283.95**

AF5502011-505 .....05-13214 ..... **$208.95**

AF5502012-11 .....05-13215 ..... **$46.95**

AF5502012-503 .....05-13216 ..... **$252.95**

AF5502012-504 .....05-13217 ..... **$269.95**

Baffle Set AA-5ABRBK .....05-13151 ..... $1,351.00

Set Powder Coat AA-5APCBK .....05-13152 ..... $1,493.00

BAFFLE KIT FOR GRUMMAN AA-5B

AF5502006-502 .....05-13205 ..... **$114.75**

AF5502006-503 .....05-13206 ..... **$114.75**

AFF5502007-502 .....05-13207 ..... **$114.75**

AF5502007-504 .....05-13208 ..... **$119.75**

AF5502010-501 .....05-13209 ..... **$283.95**

AF5502010-504 .....05-13210 ..... **$283.95**

AF5502010-505 .....05-13211 ..... **$208.95**

AF5502028-502 .....05-13218 ..... **$269.95**

AF5502033-502 .....05-13219 ..... **$252.95**

Baffle Set AA-5BBRBK .....05-13153 ..... $1,393.00

Powdered Coat Set AA-5BPCBK ..05-13154 ..... $1,535.00

CESSNA FIBERGLASS REPLACEMENT PARTS

CESSNA 150/152

What Makes These Composite Parts Such An Excellent Value?

* Stronger than factory originals with no weight increase.
* Easily repaired with locally available fiberglass kits if ever damaged.
* Exact replacements of original equipment means easy installation.
* Money back guarantee if not completely satisfied!

STRUT CUFFS

Here's an unbeatable item for renovating your Cessna; a set of replacement strut cuffs. Order just one cuff to replace a damaged original, or get a set of four for a complete replacement.


PN 05-03703


PN 05-03706


PN 05-12799

Description	Part No.	Price
150/152 Strut Cuff Upper RH (SA-0522150-4)	05-03703	$86.99
150/152 Strut Cuff Upper LH (SA-0522150-3)	05-03702	$86.75
150/152 Strut Cuff Lower RH (SA-0421002-2)	05-03701	$79.80
150/152 Strut Cuff Lower LH (SA-0421002-1)	05-03699	$79.80
150/152 Aerobat Strut Cuff Upper RH (SA-0421002-3)	05-03706	$92.75
150/152 Aerobat Strut Cuff Upper LH (SA-0421002-4)	05-03707	$91.90
Set - 150/152 Aerobat Strut Cuff (SA-0421002-3476)	05-12799	$343.00
150/152 Aerobat Strut Cuff Lower RH (SA-0522150-6)	05-03704	$92.75
150/152 Aerobat Strut Cuff Lower LH (SA-0522150-7)	05-03705	$91.90
150/152 Aerobat Strut Cuff Lower LH (SA-0522150-7)	05-03705	$91.90

ELEVATORS & STABILIZERS

Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from your local automotive parts store.


PN 05-03710


PN 05-03711


PN 05-03709

Description	Part No.	Price
150 Horizontal Stabilizer Tip 1959-'63 (SA-0430004-6)	05-03710	$110.75
150/152 Horizontal Stabilizer Tip 1964&on (SA-0430004-11)	05-03711	$78.80
150/152 Elevator Tips (left/right) 1964&on (SA-0430004-10)	05-03709	$110.75
150/152 Elevator Tips (left/right) 1959-'63 (SA-0430004-5)	05-03708	$110.75

GEAR LEG AND BRAKE FAIRINGS

These are excellent items for replacing worn plastic originals. Your fiberglass replacements will be more durable with an improved finish over the original plastics.


PN 05-03731


PN 05-03732


PN 05-03734

Description	Part No.	Price
150/152 Upper Gear Leg 1971&on RH (SA-0441217-14)	05-03731	$118.75
150/152 Upper Gear Leg 1971&on LH (SA-0441217-15)	05-03732	$118.75
150/152 Right Brake Fairing 1974&on (SA-0441227-2)	05-03734	$139.99
150/152 Left Brake Fairing 1974&on (SA-0441227-1)	05-03733	$139.99

RUDDER & VERTICAL FIN CAPS

These parts are a snap to replace on most planes. Please note, indicate if you have a straight tail or a swept tail. It is also important to let us know if your fin cap needs to accommodate a strobe or beacon, and if so, if the light is front-mounted or center-mounted.


PN 05-03713


PN 05-03714


PN 05-03721

Description	Part No.	Price
150 Vertical Fin Cap 1964-1965 (SA-0430004-9)	05-03713	$118.75
150 Vertical Fin Cap (no beacon) 1966-'74 (SA-0431013-3)	05-03715	$118.75
150 Vertical Fin Cap (small beacon) 1966-'74 (SA-0431017-1)	05-03714	$119.75
150/152 Vertical Fin Cap (small beacon) 1975&on (SA-0430011-1)	05-03716	$119.75
150 Rudder Top 1959-1963 (SA-0430004-2)	05-03717	$111.75
150 Rudder Top 1964-1965 (SA-0430004-8)	05-03718	$110.90
150/152 Rudder Top 1966-1974 (SA-0431013-1)	05-03719	$112.75
150 Rudder Top 1975&on (SA-0430011-2)	05-03720	$110.75
150 Rudder Bottom 1959-1965 (SA-0430004-1)	05-03721	$112.75
150 Rudder Bottom 1966&on (SA-0431005-1)	05-03722	$110.75

WING & DORSAL TIPS


PN 05-12800


PN 05-03725


PN 05-03724

Wing tips are a common victim of hanger and ramp rash. Maybe you thought the plane was going to clear those doors as you wheeled it back into the hanger...the first indication that you were wrong was that grating sound as the wing-tip met metal. Here's the solution: replacement fiberglass wing-tips from Stene Aviation.

Description	Part No.	Price
150D/150E Dorsal Tip (SA-0430004-7)	05-12800	$288.95
150/152 Wing-Tip (small droop) LH (SA-0523565-29)	05-03726	$305.00
150/152 Wing-Tip (small droop) RH (SA-0523565-30)	05-03727	$305.00
150/152 Std. Small Wing Tip (SA-0430008-3)	05-03725	$277.95
150 Dorsal Fin 1959-'65 (SA-0430004-4)	05-03723	$303.00
150/152 Dorsal Tip 1966&on (SA-0431024-1)	05-03724	$34.85
150/152 Wing Tips, Small Droop (Set) (SA-0523565-2930)	05-12805	$575.00
150/152 Set Of Wing Tips For Led Lighting (SA-0523565-2930LED)	05-12806	$600.00
150/152 Wing Tip For Led Lighting LH (SA-0523565-29LED)	05-12807	$309.00

WHEEL PANTS


PN 05-03728


PN 05-03730


PN 05-12812

Replace your original plastic wheel pants with high quality and durable fiberglass replacements. All wheel pants come with a 2" access plug for checking tire pressure. Original hardware is required for mounting.

Description	Part No.	Price
150/152 Wheel Pant 1971-'74 RH (SA-0541223-16)	05-03728	$470.00
150/152 Wheel Pant 1971-'74 LH (SA-0541223-17)	05-03729	$470.00
150/152 Nose Wheel Pant 1975 &on (SA-0543079-3)	05-03730	$470.00
150/152 LH Wheel Pant (SA-0541203-1)	05-12811	$452.00
150/152 RH Wheel Pant (SA-0541203-2)	05-12812	$452.00
150/152 Nose Wheel Pant (SA-0543065-1)	05-12813	$452.00

AP

CESSNA FIBERGLASS REPLACEMENT PARTS

CESSNA 170/172/175

ELEVATORS & STABILIZERS


PN 05-03744


PN 05-04743


PN 05-03740

Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original high impact plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from your local automotive parts store.

Description	Part No.	Price
172 Horizontal Tip 1963 & on (SA-0532001-93)	05-03744	**$91.90**
172/175 Horizontal Tip Straight Tail (SA-0532001-61)	05-03743	**$92.75**
172 Elevator Tip 1963 & on LH (SA-0532001-94)	05-03742	**$131.75**
172 Elevator Tip 1963 & on RH (SA-0532001-100)	05-03741	**$129.75**
172/175 Elevator Tip Straight Tail (SA-0532001-62)	05-03740	**$131.75**

STRUT CUFFS


PN 05-03739


PN 05-03738


PN 05-03736

Here's an unbeatable item for renovating your Cessna; a set of replacement strut cuffs. Order just one cuff to replace a damaged original, or get a set of four for a complete replacement.

Description	Part No.	Price
172 Strut Cuff Upper 1973 & on RH (SA-0523047-2)	05-03739	**$92.75**
172 Strut Cuff Upper 1973 & on LH (SA-0523047-1)	05-03738	**$92.75**
172 Strut Cuff Lower (all models) RH (SA-0522150-2)	05-03736	**$96.95**
172 Strut Cuff Lower (all models) LH (SA-0522150-1)	05-03735	**$86.95**

GEAR LEG AND BRAKE FAIRINGS


PN 05-03767


PN 05-03768


PN 05-12872

These are excellent items for replacing worn plastic originals. Your fiberglass replacements will be more durable with an improved finish over the original plastics.

Description	Part No.	Price
172 Upper Gear Leg 1971&on RH (SA-1741005-240)	05-03767	**$138.75**
172 Upper Gear Leg 1971&on LH (SA-1741005-239)	05-03766	**$138.75**
172 Brake Fairing 1974& on LH (SA-0541224-1)	05-03768	**$144.75**
172 Brake Fairing 1974&on RH (SA-0541224-2)	05-03769	**$144.75**
172 Upper Gear Leg Fairing LH 172R, 172S (SA-1741005-59)	05-12872	**$138.75**
172 Upper Gear Leg Fairing RH 172R, 172S (SA-1741005-60)	05-12873	**$138.75**

WHEEL PANTS


PN 05-03728


PN 05-03730


PN 05-03730

Replace your original plastic wheel pants with high quality and durable fiberglass replacements. All wheel pants come with a 2" access plug for checking tire pressure. Original hardware is required for mounting.

Description	Part No.	Price
172 Wheel Pant 1974&on RH (SA-0541223-16)	05-03728	**$470.00**
172 Wheel Pant 1974&on LH (SA-0541223-17)	05-03729	**$470.00**
172 Nose Wheel Pant 1974 & on (SA-0543079-3)	05-03730	**$470.00**

RUDDER & VERTICAL FIN CAPS


PN 05-03745


PN 05-03752


PN 05-03756

These parts are a snap to replace on most planes. Please note, indicate if you have a straight tail or a swept tail. It is also important to let us know if your fin cap needs to accommodate a strobe or beacon, and if so, if the light is front-mounted or center-mounted.

Description	Part No.	Price
172 Vertical Fin (no beacon) 1956-'59 (SA-0531001-36)	05-03745	**$135.80**
172 Vertical Fin (large beacon) 1956-'59 (SA-0531004-3)	05-03746	**$134.95**
172 Vertical Fin (no beacon) 1960-'68 (SA-0531006-33)	05-03747	**$135.00**
172 Rudder Top 1969-75 (SA-0533009-1)	05-03752	**$134.95**
172 Vertical Fin (small beacon) 1960-'68 (SA-0531009-1)	05-03748	**$135.80**
172 Vertical Fin (small beacon) 1969-'75 (SA-0531013-1)	05-03749	**$134.95**
172 Rudder Top 1976-'85 (SA-0531006-112)	05-03753	**$135.80**
172 Rudder Top 1997&on (SA-0533155-2)	05-03754	**$135.80**
172 Vertical Fin (small beacon) 1976&on (SA-0531003-1)	05-03750	**$135.80**
172 Rudder Top 1960-'68 (SA-0531006-34)	05-03751	**$135.80**
172 Rudder Bottom 1960-'68 (SA-0531006-35)	05-03756	**$124.75**
172/175 Rudder Bottom Straight Tail (SA-0531104)	05-03755	**$124.75**
172 Rudder Bottom 1969-'97 (SA-0531006-80 172 Vertical Fin (small beacon) (SA-0531033-6))	05-03757	**$124.75**
172 Vertical Fin (small beacon) (SA-0531033-6)	05-12809	**$135.00**
172 Rudder Bottom (SA-0533155-1)	05-12810	**$125.75**

WING & DORSAL TIPS


PN 05-03726


PN 05-03759


PN 05-03770

Wing tips are a common victim of hanger and ramp rash. Maybe you thought the plane was going to clear those doors as you wheeled it back into the hanger...the first indication that you were wrong was that grating sound as the wing tip met metal. Here's the solution: replacement fiberglass wing tips from Stene Aviation.

Description	Part No.	Price
172 Wing Tip (small droop) 1968-'72 LH (SA-0523565-29)	05-03726	**$305.00**
172 Wing Tip (small droop) 1968-'72 RH (SA-0523565-30)	05-03727	**$305.00**
172 Wing Tip (small droop) 1973&on LH (SA-0723200-5)	05-03762	**$305.00**
172 Wing Tip (small droop) 1973&on RH (SA-0723200-6)	05-03764	**$305.00**
172 Mid-Dorsal (SA-0531012-2)	05-03759	**$88.75**
172 Dorsal Tip 1972&on (SA-0531020-1)	05-03760	**$36.80**
Cable Covers (SA-0530011-2)	05-03770	**$36.80**

CESSNA FIBERGLASS REPLACEMENT PARTS

CESSNA 177/180/185/188

CESSNA FIBERGLASS REPLACEMENT PARTS FOR 177

What Makes These Composite Parts Such An Excellent Value?

* Stronger than factory originals with no weight increase.
* Easily repaired with locally available fiberglass kits if ever damaged.
* Exact replacements of original equipment means easy installation.
* Money back guarantee if not completely satisfied!

RUDDER & VERTICAL TOPS

Cessna fiberglass replacement parts for 177 rudder and vertical tops



PN 05-03841



PN 05-03840

Description	Part No.	Price
177 Rudder Top (All) (SA-1733009-2)	05-03841	**$135.80**
177 Vertical Top (All) (SA-1731009-4)	05-03840	**$135.80**

GEAR LEG FAIRINGS



PN 05-03846



PN 05-03848



PN 05-03849

Description	Part No.	Price
177 Upper Gear Leg (All) RH (SA-1741005-44)	05-03846	**$138.99**
177 Upper Gear Leg (All) LH (SA-1741005-43)	05-03845	**$138.75**
177 Brake Fairings 1972-'74 RH (SA-0741634-14)	05-03848	**$144.75**
177 Brake Fairings 1972-'74 LH (SA-0741634-13)	05-03847	**$144.75**
177 Brake Fairings 1975&on RH (SA-1741027-2)	05-03849	**$144.75**
177 Brake Fairings 1975&on LH (SA-1741027-1)	05-03850	**$144.75**

CESSNA FIBERGLASS REPLACEMENT PARTS FOR 180/185

ELEVATORS & STABILIZERS



PN 05-03779

Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from your local automotive parts store.

Description	Part No.	Price
LH/RH Horizontal Tip (SA-0732613-1)	05-03779	**$98.99**

180/185 CONT. STRUT CUFFS



PN 05-03774



PN 05-03773



PN 05-03772

Here's an unbeatable item for renovating your Cessna; a set of replacement strut cuffs. Order just one cuff to replace a damaged original, or get a set of four for a complete replacement.

Description	Part No.	Price
180 Strut Cuff Upper RH (SA-0723605-4)	05-03774	**$94.75**
180 Strut Cuff Upper LH (SA-0723605-3)	05-03773	**$94.99**
180 Strut Cuff Lower RH (SA-0723605-2)	05-03772	**$94.75**
180 Strut Cuff Lower LH (SA-0723605-1)	05-03771	**$94.99**

RUDDER & VERTICAL FIN CAPS



PN 05-03781



PN 05-03787



PN 05-03790

These parts are a snap to replace on most planes. Please note, indicate if you have a straight tail or a swept tail. It is also important to let us know if your fin cap needs to accommodate a strobe or beacon, and if so, if the light is front-mounted or center-mounted.

Description	Part No.	Price
180/182/188 Vertical Top No Beacon (SA-0731000-200)	05-03781	**$134.95**
180/182/188 Vertical Top Small Beacon (SA-0731019-1)	05-03782	**$135.80**
180/185 Vertical Top Small Beacon (SA-0731019-2)	05-03787	**$135.80**
185 Vertical Top No Beacon (SA-0742025-1)	05-03788	**$135.80**
180/182 Vertical Top Large Beacon (SA-0700031-2)	05-03789	**$135.80**
185 Vertical Top Large Beacon (SA-0731015-1)	05-03790	**$134.95**

GEAR LEG AND BRAKE FAIRINGS



PN 05-03804



PN 05-03805

These are excellent items for replacing worn plastic originals. Your fiberglass replacements will be more durable with an improved finish over the original plastics.

Description	Part No.	Price
180/185 Brake Fairing RH(SA-0741059-2)	05-03804	**$142.75**
180/185 Brake Fairing LH(SA-0741059-1)	05-03805	**$142.75**

WING & DORSAL TIPS



PN 05-03797



PN 05-03727



PN 05-03764

Wing tips are a common victim of hanger and ramp rash. Maybe you thought the plane was going to clear those doors as you wheeled it back into the hanger...the first indication that you were wrong was that grating sound as the wing tip met metal. Here's the solution: replacement fiberglass wing tips from Stene Aviation.

Description	Part No.	Price
180 Wing Tip (staight tip)- 1955-'67 (SA-0723615-200)	05-03797	**$275.95**
180/185 Wing Tip (small droop) 1969-'72 LH(SA-0523565-29)	05-03726	**$305.00**
180/185 Wing Tip (small droop) 1969-'72 RH(SA-0523565-30)	05-03727	**$305.00**
180/185 Wing Tip (small droop) 1973&on LH(SA-0723200-5)	05-03762	**$305.00**
172 RH Wing Tip (small droop) 1973&on (SA-0723200-6)	05-03764	**$305.00**

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CESSNA 182

What Makes These Composite Parts Such An Excellent Value?

* Stronger than factory originals with no weight increase.
* Easily repaired with locally available fiberglass kits if ever damaged.
* Exact replacements of original equipment means easy installation.
* Money back guarantee if not completely satisfied!

ELEVATORS & STABILIZERS


PN 05-03777


PN 05-03779


PN 05-12827

Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from your local automotive parts store.

Description	Part No.	Price
182 Elevator Tip 1965&on LH (SA-1234608-3)	05-03777	**$124.75**
182 Elevator Tip 1965&on RH (SA-1234608-4)	05-03778	**$124.75**
LH/RH 182 Horizontal Tip 1956-'59 (SA-0732613-1)	05-03779	**$98.99**
LH/RH 182 Horizontal Tip 1965&on (SA-1232604-1)	05-03780	**$98.99**
LH/RH 182 Horizontal Tip (SA-1232604-2)	05-12850	**$93.75**
LH/RH 182 Horizontal Tip (SA-0732613-3)	05-12827	**$93.75**

STRUT CUFFS


PN 05-03774


PN 05-03776


PN 05-03772

Here's an unbeatable item for renovating your Cessna; a set of replacement strut cuffs. Order just one cuff to replace a damaged original, or get a set of four for a complete replacement.

Description	Part No.	Price
182 Strut Cuff Upper RH (SA-0723605-4)	05-03774	**$94.75**
182 Strut Cuff Upper LH (SA-0723605-3)	05-03773	**$94.99**
182 Strut Cuff Lower 1962&on RH (SA-0723612-4)	05-03776	**$94.75**
182 Strut Cuff Lower 1962&on LH (SA-0723612-3)	05-03775	**$94.75**
LH 180 Strut Cuff Lower (SA-0723605-1)	05-03771	**$94.99**
RH 180 Strut Cuff Lower (SA-0723605-2)	05-03772	**$94.75**

RUDDER & VERTICAL FIN CAPS


PN 05-03786


PN 05-12846


PN 05-12848

These parts are a snap to replace on most planes. Please note, indicate if you have a straight tail or a swept tail. It is also important to let us know if your fin cap needs to accommodate a strobe or beacon, and if so, if the light is front-mounted or center-mounted.

Description	Part No.	Price
205/206/207/210 Vertical Fin (small beacon) 1964-(SA-1231064-1)	05-03786	**$135.80**
206/207 Vertical Fin (small beacon) 1967- (SA-0731606-3)	05-03785	**$135.80**
205/206/207/210 Rudder Top 1964- (SA-0731606-9)	05-03793	**$135.80**
206/207 Rudder Top 1967- (SA-0731606-6)	05-03792	**$134.95**
SA-1227402-3456SP	05-12846	**$568.00**
SA-1227402-3456	05-12845	**$129.75**
182 Rudder Top (SA-1231001-2)1976 & on	05-12847	**$129.75**
182 Vertical Top (SA-1231059-1) 182P	05-12848	**$129.75**
182 Vertical Fin (SA-1231064-10)182T, T182T	05-12849	**$129.75**

TAILCONE


PN 05-03794

Replace your wore and cracked tailcone with a stronger than factory original fiberglass tailcone from Stene Aviation.

Description	Part No.	Price
182 TailCone 1962&on (SA-1212010-15)	05-03794	**$355.00**

GEAR LEG AND BRAKE FAIRINGS


PN 05-03799


PN 05-03806


PN 05-12828

These are excellent items for replacing worn plastic originals. Your fiberglass replacements will be more durable with an improved finish over the original plastics.

Description	Part No.	Price
182 Upper Gear Leg 1972-`75 RH (SA-1741005-200)	05-03799	**$138.99**
182 Upper Gear Leg 1972-`75 LH (SA-1741005-201)	05-03801	**$138.99**
182 Upper Gear Leg 1976&on RH (SA-1741052-200)	05-03802	**$138.75**
182 Upper Gear Leg 1976&on LH (SA-1741052-201)	05-03803	**$138.75**
182 Brake Fairing 1972-`74 RH (SA-0741634-18)	05-03806	**$145.75**
182 Brake Fairing 1972-`74 LH (SA-0741634-19)	05-03807	**$146.75**
182 Brake Fairing 1975-`78 RH (SA-0741634-10)	05-03808	**$146.75**
182 Brake Fairing 1975-`78 LH (SA-0741634-11)	05-03809	**$146.99**
182 Upper Gear Leg RH (SA-0741052-12)	05-12829	**$133.75**
182 Upper Gear Leg LH (SA-0741052-11)	05-12828	**$133.75**

WING & DORSAL TIPS


PN 05-03726


PN 05-03762


PN 05-03797

Wing tips are a common victim of hanger and ramp rash. Maybe you thought the plane was going to clear those doors as you wheeled it back into the hanger...the first indication that you were wrong was that grating sound as the wing tip met metal. Here's the solution: replacement fiberglass wing tips from Stene Aviation.

Description	Part No.	Price
182 Wing Tip (small droop) 1969-'72 LH (SA-0523565-29)	05-03726	**$305.00**
182 Wing Tip (small droop) 1969-'72 RH (SA-0523565-30)	05-03727	**$305.00**
182 Wing Tip (small droop) 1973&on LH (SA-0723200-5)	05-03762	**$305.00**
182 Wing Tip (small droop) 1973&on RH (SA-0723200-6)	05-03764	**$305.00**
182 Wing Tip (straight tip)- 1955-'67 (SA-0723615-200)	05-03797	**$275.95**

WHEEL PANTS


PN 05-03728


PN 05-12830


PN 05-12834

Replace your original plastic wheel pants with high quality and durable fiberglass replacements. All wheel pants come with a 2" access plug for checking tire pressure. Original hardware is required for mounting.

Description	Part No.	Price
182 Wheel Pant 1975&on RH (SA-0541223-16)	05-03728	**$470.00**
182 Wheel Pant 1975&on LH (SA-0541223-17)	05-03729	**$470.00**
182 Nose Wheel Pant 1975&on (SA-0543079-3)	05-03730	**$470.00**
180K/A185F LH Wheel Pant (SA-0741070-1)	05-12830	**$452.00**
180K/A185F RH Wheel Pant (SA-0741070-2)	05-12831	**$452.00**
182T/T182T LH Wheel Pant (SA-0741647-1)	05-12832	**$953.00**
182T/T182T RH Wheel Pant (SA-0741647-2)	05-12833	**$953.00**
182T/T182T Nose Wheel Pant (SA-0743050-14)	05-12834	**$627.00**

CESSNA FIBERGLASS REPLACEMENT PARTS

CESSNA 205/206/207/210

What Makes These Composite Parts Such An Excellent Value?

* Stronger than factory originals with no weight increase.
* Easily repaired with locally available fiberglass kits if ever damaged.
* Exact replacements of original equipment means easy installation.
* Money back guarantee if not completely satisfied!

ELEVATORS & STABILIZERS



PN 05-03777 PN 05-03780 PN 05-03779

Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from your local automotive parts store.

Description	Part No.	Price
206/207 Elevator Tips 1965-`67 LH (SA-1234608-3)	05-03777	$124.75
206/207 Elevator Tips 1965-`67 RH (SA-1234608-4)	05-03778	$124.75
206/207 Horizontal Tip 1967 & on (SA-1232012-1)	05-03833	$73.75
206/207 Horizontal Tip 1965-1967 (SA-1232604-1)	05-03780	$98.99
210 (1967 & on) Elevator Tips LH(SA-1234640-1 left hand)	05-03831	$155.75
210 (1967 & on) Elevator Tips RH (SA-1234640-2 right hand)	05-03832	$154.90
210 (1967 & on) Horizontal Tip (SA-1232012-1)	05-03833	$73.75
LH/RH 182 Horizontal Tip (SA-1232604-2)	05-12850	$93.75
LH/RH Horizontal Tips (SA-1232616-1)	05-12851	$70.75
LH/RH Horizontal Tip 1956-'59 (SA-0732613-1)1963 - 64	05-03779	$98.99

STRUT CUFFS



PN 05-03817 PN 05-03829 PN 05-12844

Here's an unbeatable item for renovating your Cessna; a set of replacement strut cuffs. Order just one cuff to replace a damaged original, or get a set of four for a complete replacement.

Description	Part No.	Price
210 Strut Cuff Upper Right 1960-'63(SA-1227002-4)	05-03817	$118.75
210 Strut Cuff Upper Left 1960-'63(SA-1227002-5)	05-03818	$118.75
206/207 Strut Cuff Upper Right 1964-'71 (SA-1227002-10)	05-03821	$118.75
206/207 Strut Cuff Upper Left 1964-'71 (SA-1227002-11)	05-03822	$118.75
206/207 Strut Cuff Upper Right 1972 & on (SA-1227005-6)	05-03826	$178.75
206/207 Strut Cuff Upper Left 1972 & on (SA-1227005-5)	05-03825	$179.75
210 Strut Cuff Lower Right 1960&'61(SA-1227002-2)	05-03815	$118.75
210 Strut Cuff Lower Right 1962&'63(SA-1227402-6)	05-03820	$118.99
210 Strut Cuff Lower Left 1962&'63(SA-1227402-5)	05-03819	$118.75
205 Strut Cuff Lower Right 1963&'64(SA-1227401-4)	05-03829	$118.75
205 Strut Cuff Lower Left 1963&'64(SA-1227401-5)	05-03830	$119.75
206 Strut Cuff Lower Right 1964-'71(SA-1227402-4)	05-03824	$118.99
206 Strut Cuff Lower Left 1964-'71(SA-1227402-3)	05-03823	$118.75
206/207 Strut Cuff Lower Right 1972&on (SA-1227010-2)	05-03828	$178.75
206/207 Strut Cuff Lower Left 1972&on (SA-1227010-1)	05-03827	$178.75
210 Strut Cuff Upper 1960-'63 RH(SA-1227002-4)	05-03817	$118.75
210 Strut Cuff Upper 1960-'63 LH(SA-1227002-5)	05-03818	$118.75
210 Strut Cuff Lower 1960&'61 RH(SA-1227002-2)	05-03815	$118.75
207 LH Upper Strut Cuff (SA-1227011-5) 207, T207, 207A, T207A	05-12838	$171.75
210 LH Strut Cuff Lower 210D, 210E (SA-1227402-1) 210D, 210E	05-12843	$113.75
210 RH Strut Cuff Lower (SA-1227402-2) 210D, 210E	05-12844	$113.75

RUDDER & VERTICAL FIN CAPS



PN 05-03786 PN 05-03792 PN 05-12852

These parts are a snap to replace on most planes. Please note, indicate if you have a straight tail or a swept tail. It is also important to let us know if your fin cap needs to accommodate a strobe or beacon, and if so, if the light is front-mounted or center-mounted.

Description	Part No.	Price
205/206/207 Vertical Fin (small beacon) 1964-'67 and 1976&on (SA-1231064-3)	05-03786	$135.80
206/207 Vertical Fin (small beacon) 1967-'75 (SA-0731606-3)	05-03785	$135.80
206/207 Rudder Top 1967-'75 (SA-0731606-6)	05-03792	$134.95
205/206/207 Rudder Top 1964-'66 and 1976&on (SA-0731606-9)	05-03793	$135.80
206 Rudder Top (SA-1233736-1)	05-12852	$207.95

GEAR LEG AND BRAKE FAIRINGS



PN 05-03813 PN 05-03836 PN 05-12855

These are excellent items for replacing worn plastic originals. Your fiberglass replacements will be more durable with an improved finish over the original plastics.

Description	Part No.	Price
207 Right Upper Gear Leg 1969&on(SA-1241217-2)	05-03813	$144.75
207 Left Upper Gear Leg 1969&on(SA-1241217-1)	05-03812	$144.75
206 Right Brake Fairing (Heavy Duty)(SA-1241232-2)	05-03837	$153.75
206 Left Brake Fairing (Heavy Duty)(SA-1241232-1)	05-03836	$153.75
207 Left Brake Fairing (SA-1241228-1)	05-12854	$146.75
207 Right Brake Fairing (SA-1241228-2)	05-12855	$146.75

WING TIPS



PN 05-03726 PN 05-03764 PN 05-03796

Wing tips are a common victim of hanger and ramp rash. Maybe you thought the plane was going to clear those doors as you wheeled it back into the hanger...the first indication that you were wrong was that grating sound as the wing tip met metal. Here's the solution: replacement fiberglass wing tips from Stene Aviation.

Description	Part No.	Price
206 Wing Tip (small droop) 1969-'72 LH (SA-0523565-29)	05-03726	$305.00
207 Wing Tip (small droop) 1969&on LH (SA-0523565-29)	05-03726	$305.00
206 Wing Tip (small droop) 1973&on LH (SA-0723200-5)	05-03762	$305.00
206 Wing Tip (small droop) 1973&on RH(SA-0723200-6)	05-03764	$305.00
210 Wing Tip 1971&on LH(SA-1221111-203)	05-03835	$567.00
210 Wing Tip 1971&on RH(SA-1221111-202)	05-03834	$567.00
Wing Tip Large Conical Tip LH (SA-1223000-7)	05-03795	$390.00
Wing Tip Large Conical Tip RH (SA-1223000-8)	05-03796	$390.00

WHEEL PANTS



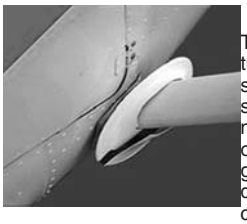
PN 05-03777 PN 05-03780 PN 05-03779

Replace your original plastic wheel pants with high quality and durable fiberglass replacements. All wheel pants come with a 2" access plug for checking tire pressure. Original hardware is required for mounting.

Description	Part No.	Price
206 Wheel Pant 1975&on RH (SA-0541223-16)	05-03728	$470.00
206 Wheel Pant 1975&on LH (SA-0541223-17)	05-03729	$470.00
206 Nose Wheel Pant 1975&on (SA-0543079-3)	05-03730	$470.00
206 Oversize Wheel Pant (SA-1234045-1)	05-12853	$612.00
206 LH Oversize Wheel Pant (SA-1241229-1)	05-12856	$612.00
206 RH Oversize Wheel Pant (SA-1241229-2)	05-12857	$612.00
206 Oversize Wheel Pant (SA-1243045-12)	05-12858	$612.00

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CESSNA LIFT STRUT FAIRINGS



CESSNA LIFT STRUT FAIRINGS

These fairings consist of four wing strut fairings that slip over the lift struts. These fairings are better than those manufactured by Cessna because they are made of fiberglass rather than a royalite type material, that bends and cracks after a short time on the aircraft. Fiberglass has the following advantages over a royalite type material, it is approximately six times stronger and 12 times stiffer, it resists ultra violet light and weathers better, and it keeps its chemical composition intact much longer. With all these advantages these will probably be the last lift strut fairings that will ever have to be installed on the aircraft. And even should these fairings be damaged through some unforeseen circumstances, being made of fiberglass, they will be easily repairable. These fairings are all split so they slip over the lift strut thus eliminating the need to disconnect the lift strut to install the fairing. Cessna manufactured split lift strut fairings for only one model aircraft, and they cost $1,054.00 per ship set. If Cessna manufactured fiberglass split lift strut fairings they would charge at least $1,700.00 per ship set. With the average cost of Aircraft development lift strut fairings, it is the same as getting a 75% discount off equivalent Cessna lift strut fairings. Aircraft Development recommends, as with all plastics, they be painted for better UV protection. These kits have a FAA identicality approval and are manufactured under a FAA PMA authority.**Top Number is Aircraft Spruce Part Number. Second number is the Cessna part number.**

CESSNA MODELS	RH WING	LH WING	RH FUSELAGE	LH FUSELAGE	KIT
150 and 152	05-01557 0522150-4 **$139.00**	05-01558 0522150-3 **$139.00**	05-01564 0421002-2-791 **$139.00**	05-01565 0421002-1-791 **$139.00**	---
170A & B	05-01557 0522150-4 **$139.00**	05-01558 0522150-3 **$139.00**	05-01559 0522150-2 **$139.00**	05-01562 0522150-1 **$139.00**	05-01599 **$556.00**
172 to 172L	05-01557 0522150-4 **$139.00**	05-01558 0522150-3 **$139.00**	05-01559 0522150-2 **$139.00**	05-01562 0522150-1 **$139.00**	05-01599 **$556.00**
172M to 172S & SP P172D, 172RG, R172K (172XP)	05-01583 0523047-2 **$139.00**	05-01586 0523047-1 **$139.00**	05-01559 0522150-2 **$139.00**	05-01562 0522150-1 **$139.00**	05-01601 **$556.00**
175	05-01557 0522150-4 **$139.00**	05-01558 0522150-3 **$139.00**	05-01559 0522150-2 **$139.00**	05-01562 0522150-1 **$139.00**	05-01599 **$556.00**
180	05-01566 0723605-4-791 **$139.00**	05-01567 0723605-3-791 **$139.95**	05-01568 0723605-2-791 **$139.00**	05-02489 0723605-1-791 **$139.00**	---
182 to 182D	05-01566 0723605-4-791 **$139.00**	05-01567 0723605-3-791 **$139.95**	05-01568 0723605-2-791 **$139.00**	05-02489 0723605-1-791 **$139.00**	---
182E to 182S R182, T182, TR182	05-01566 0723605-4-791 **$139.00**	05-01567 0723605-3-791 **$139.95**	---	05-01570 0723612-3-791 **$139.00**	---
205 , 205A	05-01571 1227002-10-791 **$139.00**	05-01573 1227002-11-791 **$139.00**	Not Available	Not Available	Not Available
206, P206, TP206, U206, TU206, all to E	05-01571 1227002-10-791 **$139.00**	05-01573 1227002-11-791 **$139.00**	05-01594 1227402-4-791 **$139.00**	05-01595 1227402-3-791 **$139.00**	---
U206F, TU206F, SN 206-02200 to 1986	Not Available	Not Available	05-01596 1227010-2 **$178.00**	05-01597 1227010-1 **$165.75**	Not Available
U206, TU206, from SN U206-2576 to 1986	05-01591 1227005-6 **$178.00**	05-01593 1227005-5 **$178.00**	05-01596 1227010-2 **$178.00**	05-01597 1227010-1 **$165.75**	05-01605 **$699.75**
207, 207A, T207, T207A, From S/N 207-00255 to 1984	05-01591 1227005-6 **$178.00**	05-01593 1227005-5 **$178.00**	05-01596 1227010-2 **$178.00**	05-01597 1227010-1 **$165.75**	05-01605 **$699.75**
207, 207A, T207, T207A From S/N 207-00001 to 1984	Not Available	Not Available	05-01596 1227010-2 **$178.00**	05-01597 1227010-1 **$165.75**	Not Available
210F to K T210F to K	05-01571 1227002-10-791 **$139.00**	05-01573 1227002-11-791 **$139.00**	05-01594 1227402-4-791 **$139.00**	---	---



LIFT STRUT HARDWARE KIT

This kit 118H has the additional hardware and instructions necessary for a first time installation for any of the lift strut fairings listed above. For those individuals that are not replacing their lift strut fairings, but wish to install the lift strut fairings as an initial installation P/N 05-04582 ..... **$38.75**



CESSNA LANDING GEAR STRUT FAIRINGS

Consist of two landing gear strut fairings that slip over the landing gear struts. These fairings are better than those manufactured by Cessna because they are made of fiberglass rather than a royalite type material, that bends and cracks after a short time on the aircraft. These fairings are all split so they slip over the landing gear strut. It is recommended, as with all plastics, they be painted for better UV protection. These kits are manufactured under a FAA PMA authority. Parts are listed with the Cessna number first, then Aircraft Spruce's part number and price.

Cessna Model	LH Fuselage	RH Fuselage
150L, 150M, A150L, A150M, 152, A152	0441217-215 PN 05-03495 **$139.95**	0441217-214 PN 05-03501 **$139.95**
172L thru 172R, R172K (172XP), 172SP	1741005-239 PN 05-03496 **$139.00**	1741005-240 PN 05-03502 **$130.00**
182P S/N 18260826 to 18263475 AND 182P S/N18263476 to 18264295	1741005-201 PN 05-03497 **$139.00**	244-4-2 PN 05-03503 **$157.95**
182P From S/N18264296, 182Q, 182R, 182S, T182R	0741052-201 PN 05-03499 **$139.00**	244-4-8 PN 05-03505 **$139.00**

AP

CESSNA WING TIPS - EMPENNAGE TIPS

CESSNA WING TIP KITS



These wing tip kits consist of a left and right hand drooped fiberglass wing tip. Made of fiberglass rather than a royalite type material, and the superior epoxy rather than polyester fiberglass. Epoxy fiberglass has the following advantages over a royalite type material, it is approximately six times stronger and 12 times stiffer, it resists ultra violet light and weathers better, and it keeps its chemical composition intact much longer. These kits have a FAA identicality approval and manufactured under a FAA PMA authority. The identically approval allows you to install these modern drooped wing tips, even if your aircraft was not originally manufactured with this newer style. ***Kits includes the left hand wing tip, right hand wing tip, hardware, and the plate lens***

Model	Description	Application	PN	Price
219-100 Series I	Complete Cessna Wing Tip Kit Includes: Both left & right hand wing tip, hardware and plate lens.	150, A150, 152, A152, 170A & B, P172, 175, 205 & L19, 172, 180, 185 (thru 1972), 182, 206 (thru 1971), 207 (1970-up)	05-01526	**$795.00**
219-4-6	Series I Right hand Plate Lens	150, A150, 152, A152, 170A & B, P172, 175, 205 & L19, 172, 180, 185 (thru 1972), 182, 206 (thru 1971), 207 (1970-up)	05-01551	**$48.90**
219-4-5	Series I Left hand Plate Lens	150, A150, 152, A152, 170A & B, P172, 175, 205 & L19, 172, 180, 185 (thru 1972), 182, 206 (thru 1971), 207 (1970-up)	05-01549	**$48.60**
219-200 Series II	Complete Cessna Wing Tip Kit. Includes: Both left & right hand wing tip, hardware and plate lens.	172, R172K (172XP), 172RG, 180, 185 (1973-up), 182, 206 (1972-up)	05-01545	**$809.00**
219-4-4	Series II Right Hand Wing Tip ONLY	172, R172K (172XP), 172RG, 180, 185 (1973-up), 182, 206 (1972-up)	05-03506	**$388.95**
219-4-8	Series II Right hand Plate Lens	172, R172K (172XP), 172RG, 180, 185 (1973-up), 182, 206 (1972-up)	05-01555	**$48.60**
219-4-3	Series II Left Hand Wing Tip ONLY	172, R172K (172XP), 172RG, 180, 185 (1973-up), 182, 206 (1972-up)	05-03507	**$389.00**
219-4-7	Series II Left hand Plate Lens	172, R172K (172XP), 172RG, 180, 185 (1973-up), 182, 206 (1972-up)	05-01553	**$48.60**

EMPENNAGE TIPS



These empennage tips are made of fiberglass rather than the royalite type material that cracks after a short time on the aircraft. Fiberglass has the following advantages over royalite type material, it is approximately six times stronger and 12 times stiffer, it resists ultra violet light and weathers better, and it keeps its chemical composition intact much longer. It is recommended, as with all plastics, they are painted for better UV protection. These kits are manufactured under a FAA PMA authorityTop line is Aircraft Spruce part number, middle line is Cessna part number. Bottom line is price.

Cessna Models	Tip Horizontal Fin L/H	Tip Horizontal Fin R/H	Tip Elev. L/H	Tip Elev. R/H
150D, and up, A150, 152, A152	05-01513 0430004-11-791 **$75.00**	05-01513 0430004-11-791 **$75.00**	05-01514 0430004-10-791 **$115.75**	05-01514 0430004-10-791 **$115.75**
172D and up, P172, R172K (172XP) 172RG	05-01515 0532001-93-791 **$103.75**	05-01515 0532001-93-791 **$103.75**	05-01517 0532001-94-791 **$116.95**	05-01516 0532001-100-791 **$116.95**

Cessna Models	Tip Verticl Fin	Tip Upper Rudder	Tip Lower Rudder
150F and up,A150, 152, A152	---	---	05-01518 0431005-1-791 **$124.80**
150Fto 150L, A150K, A150L No Beacon	05-01519 0431013-3-791 **$81.75**	---	---
150M and up A150M and up, 152, A152	05-01520 0430011-1 **$110.00**	05-01521 0430011-2 **$136.95**	---
172K and up, 172RG, R172K(172XP)	---	---	05-01522 0531006-80-791 **$125.00**
172 1976 and up, 172RG, R172K(172XP)	---	05-01523 0531006-112 **$128.00**	---
172A to 172I No Beacon	05-01524 0531006-33-791 **$135.75**	05-03508 053100634-791 **$137.75**	----

CESSNA FLAP GAP-SPEED KIT

Cessna flap gap speed kit consists of a gap seal on the lower flap gap that is an extension of the lower wing skin from the rear spar to the leading edge of the flap. The seal eliminate a high drag area plus reduce the amount of air leaking from the high pressure underside of the wing to the low pressure top side of the wing. The reduction in air leakage allows the wing to fly at a lower angle of attack for the same amount of lift, thus reducing drag. Please note it is NOT recommended to install a flap gap kit on those aircraft with wet wings because of the difficulty of resealing the wings to a gas leak free condition. This flap gap-kit is FAA STC'd and manufactured under a FAA PMA authority. Also available is a hardware kit 114H containing enough hardware to install the flap gap kit.

Kit No.	Applicable to Cessna Models	Part No.	Price
114-200	150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, A150K, 150L, A150L, 150M, A150M	05-01622	**$450.00**
114-200	152, A152	05-01622	**$450.00**
114-100	170B	05-01620	**$466.00**
114-100	172, 172A, 172B, 172C, 172D, 172E, 172F, (USAF T-41A) 172G, 172H, (USAF T-41A), 172I, 172K, 172L, 172M, 172N, 172P, 172Q	05-01620	**$466.00**
114-100	175, 175A, 175B, 175C, P172D, R172E (USAF T-41B), (USAF T-41C &D), R172F (USAF T-41D), R172G (USAF T-41C or D), R172H (USAF T-41D), R172J, R172K Known as 172XP, 172RG	05-01620	**$466.00**
114-100	180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K	05-01620	**$466.00**
114-100	182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, R182, T182, T182R, TR182	05-01620	**$466.00**
114-100	185, 185A, 185B, 185C, 185D, 185E, A185E, A185F	05-01620	**$466.00**
114-100	210-5 (205), 210-5A (205A)	05-01620	**$466.00**
114-100	210, 210A, 210B, 210C	05-01620	**$466.00**

Hardware kit 114H - To install the Flap Gap-Speed Kits above..... P/N 05-01621..... **$69.85**

CESSNA AILERON GAP-SPEED KIT

Cessna aileron gap kit consists of gap seals on the lower and upper aileron gaps that is an extension of the lower and upper wing skin from the rear spar to the leading edge of the aileron. The seals eliminate a high drag area plus reduce the amount of air leaking from the high pressure underside of the wing to the low pressure top side of the wing. The reduction in air leakage allows the wing to fly at a lower angle of attack for the same amount of lift, thus reducing drag. This aileron gap-speed kit is FAA STC'd and manufactured under a FAA PMA authority. Also available is a hardware kit containing enough rivets to install the aileron gap kit.

Cessna Models	Aileron Gap Kit No.	Price	Hardware Kit	Price
150, A150, 152, A152, 170B, 172, 175, 180, 182, 185, 205 210 through 210C	05-01623	**$198.95**	05-01624	**$32.75**

Prices Subject to Change Without Notice

Piper Throttle Controls

Model	Serial Number	P/N	Our P/N	Price
PA20,PA20S,PA20-115	20-1 thru 20-933	455-139	05-01743	$458.00
PA20S-115,PA20-135	20-934 thru 20-1121	455-139	05-01743	$458.00
PA20S-135	20-934 thru 20-1121	455-139	05-01743	$458.00
PA22 (125hp)	22-1 thru 22-533	455-139	05-01743	$458.00
PA22-135	22-534 thru 22-2377	455-139	05-01743	$458.00
PA22-135	22-2379 thru 22-2424	455-139	05-01743	$458.00
PA22-135,PA22S-135	22-2378, 22-2425 thru 22-3217	12693-04	05-02209	$376.00
PA22-135,PA22S-135	22-3219 thru 22-3386	12693-04	05-02209	$376.00
PA22-150,PA22S-150	22-2378, 22-2425 thru 22-7642	12693-04	05-02209	$376.00
PA22-160,PA22S-160	22-5139, 22-5603 thru 22-7642	12693-04	05-02209	$376.00
PA22-108	22-8000 and On	12693-04	05-02209	$376.00
PA28-140	28-20002 thru 28-24999	12693-04	05-02209	$376.00
PA28-140	28-25000 thru 28-26956	455-353	-	-
PA28-140	28-7125001 thru 28-7725290	455-353	-	-
PA28-150	28-1 thru 28-4377	12693-04	05-02209	$376.00
PA28-151	28-7415001 thru 28-7715314	455-350	05-01745	$149.75
PA28-160	28-1 thru 28-4377	12693-04	05-02209	$376.00
PA28-161	28-7716002 thru 28-8616057	455-350	05-01745	$149.75
PA28-161	2816001 thru 2816110 (Less 2816066)	455-350	05-01745	$149.75
PA28-161 Cadet	2841001 and On	455-350	05-01745	$149.75
PA28-180	28-671 thru 28-4377	12693-04	05-02209	$376.00
PA28-180	28-4378 thru 28-5152	455-333	05-01746	$240.95
PA28-180	28-5153 thru 28-5869	455-350	05-01745	$149.75
PA28-180	28-7105001 thru 28-7505261	455-350	05-01745	$149.75
PA28R-180	28R-30005 thru 28R-30481	455-322	05-01747	$251.95
PA28R-180	28R-30483 thru 28R-31279	455-322	05-01747	$251.95
PA28R-180	28R-7130001 thru 28R-7130019	455-322	05-01747	$251.95
PA28-181	28-7690001 thru 28-8290174	455-350	05-01745	$149.75
PA28-181	28-8390001 and On	455-350	05-01745	$149.75
PA28-201T	28-7921001 thru 28-7921095	455-322	05-01747	$251.95
PA28R-200	28R-30482,28R-35001 thru 28R-35830	455-322	05-01747	$251.95
PA28R-200	28R-7135001 thru 28R-7635545	455-322	05-01747	$251.95
PA28R-201	28R-7737002 thru 28R-7837317	455-322	05-01747	$251.95
PA28R-201	2837001 thru 2837061	455-322	05-01747	$251.95
PA28R-201T	28R-7703002 thru 28R-7803372	455-322	05-01747	$251.95
PA28R-201T	2803001 thru 2803015	455-322	05-01747	$251.95
PA28RT-201	28R-7918001 thru 28R-8018116	455-322	05-01747	$251.95
PA28RT-201	28R-8118001 and On	455-322	05-01747	$251.95
PA28RT-201T	28R-7931001 thru 28R-8031188	455-322	05-01747	$251.95
PA28RT-201T	28R-8131001 and On	455-322	05-01747	$251.95
PA28-235	28-10003 thru 28-11039	12693-04	05-02209	$376.00
PA28-235	28-11040 thru 28-11393	455-333	05-01746	$240.95
PA28-235	28-7110001 thru 28-7210033	455-333	05-01746	$240.95
PA28-235	28-7310001 thru 28-7710089	455-333	05-01746	$240.95
PA28-236	28-7911001 thru 28-8211060	455-333	05-01746	$240.95
PA28-236	28-8311001 and On	455-333	05-01746	$240.95
PA32-260	32-1111 thru 32-1320	455-360	05-01748	$218.95
PA32-260	32-7100001 thru 32-7800008	455-360	05-01748	$218.95
PA32-300	32-40000 thru 32-40565	69530-02	-	-
PA32-300	32-40566 thru 32-41018	455-358	05-01749	$217.95
PA32-300	32-7140001 thru 32-7940282	455-358	05-01749	$217.95
PA32-301	32-8006001 thru 32-8406020	455-358	05-01749	$217.95
PA32-301	32-8506001 and On	455-358	05-01749	$217.95
PA32-301T	32-8024001 thru 32-8424002	455-344	05-01750	$157.75
PA32-301T	32-8524001 and On	455-344	05-01750	$157.75
PA32R-301T	32R-8029001 thru 32R-8229078	455-360	05-01748	$218.95
PA32R-301T	32R-8329001 and On	455-360	05-01748	$218.95
PA32RT-300T	32R-7887001 thru 32R-7987146	455-360	05-01748	$218.95

Piper Mixture Controls

Model	Serial No.	P/N	Our P/N	Price
PA-18,PA-18S,PA-18"105"	All	600-72	05-01254	$188.75
PA18S"105",PA-18A,PA-18"125"	All	600-72	05-01254	$188.75
PA-18S"125",PA-18AS"125"	All	600-72	05-01254	$188.75
PA-18"135", PA-18S"135"	All	600-72	05-01254	$188.75
PA-18A"135", PA-18AS"135"	All	600-72	05-01254	$188.75
L-21A, L-21B, PA-18"150"	All	600-72	05-01254	$188.75
PA-18A"150", PA-18S"150"	All	600-72	05-01254	$188.75
PA-18AS"150"	All	600-72	05-01254	$188.75
PA-19, PA-19S, L-18C	All	600-72	05-01254	$188.75
PA-20, PA-20S, PA-20-115	All	600-72	05-01254	$188.75
PA-20S-115,PA-20-135,PA-20S-135	All	600-72	05-01254	$188.75
PA-22, PA-22-108, PA-22-135	All	600-72	05-01254	$188.75
PA-22S-135,PA-22-150,PA-22S-150	All	600-72	05-01254	$188.75
PA-22-160, PA-22S-160	All	600-72	05-01254	$188.75
PA-24-180	All	600-72	05-01254	$188.75
PA-24-250	All	600-72	05-01254	$188.75
PA-24-260	All with Carbureted Engine	600-72	05-01254	$188.75
PA24-400	26-2 thru 26-148	22633-04	05-01757	$581.00
PA-28-140	28-20002 thru 28-24999	600-72	05-01254	$188.75
PA-28-150, PA-28-160	28-1 thru 28-4377	600-72	05-01254	$188.75
PA-28S-160	28-1 thru 28-1760	600-72	05-01254	$188.75
PA-28-180, PA-28S-180	28-671 thru 28-4377	600-72	05-01254	$188.75
PA-28-235	28-10003 thru 28-11038	600-72	05-01254	$188.75
PA28-140	28-25000 thru 28-26956	455-352	05-01755	$218.95
PA28-140	28-7125001thru28-7725290	455-352	05-01755	$218.95
PA28-151	28-7415001thru28-7715314	455-352	05-01755	$218.95
PA28-161	28-7716002 thru 28-8616057	455-352	05-01755	$218.95
PA28-161	2816001 thru 2816110(Less2816066)	455-352	05-01755	$218.95
PA28-161 Cadet	2841001 and On	455-352	05-01755	$218.95
PA28-180	28-4378 thru 28-5152	455-332	05-02212	$155.75
PA28-180	28-5153 thru 28-5869	455-352	05-01755	$218.95
PA28-180	28-7105001 thru 28-7505261	455-352	05-01755	$218.95
PA28R-180	28R-30005 thru 28R-30481	455-322	05-01747	$251.95
PA28R-180	28R-30483 thru 28R-31279	455-322	05-01755	$218.95
PA28R-180	28R-7130001 thru 28R-7130019	455-322	05-01755	$218.95
PA28-181	28-7690001 thru 28-8290174	455-352	05-01755	$218.95
PA28-181	28-8390001 and On	455-352	05-01755	$218.95
PA28-201T	28-7921001 thru 28-7921095	455-361	05-02213	$163.80
PA28R-200	28R-30482,28R-35001thru28R-35830	455-322	05-01755	$218.95
PA28R-200	28R-7135001 thru 28R-7635545	455-322	05-01755	$218.95
PA28R-201	28R-7737002 thru 28R-7837317	455-322	05-01755	$218.95
PA28R-201	2837001 thru 2837061	455-322	05-01755	$218.95
PA28R-201T	28R-7703002 thru 28R-7803372	455-361	05-02213	$163.80
PA28R-201T	2803001 thru 2803015	455-361	05-02213	$163.80
PA28RT-201	28R-7918001 thru 28R-8018116	455-322	05-01757	$581.00
PA28RT-201	28R-8118001 and On	455-322	05-01757	$581.00
PA28RT-201T	28R-7931001 thru 28R-8031188	455-361	05-02213	$163.80
PA28RT-201T	28R-8131001 and On	455-361	05-02213	$163.80
PA28-235	28-11040 thru 28-11393	455-332	05-02212	$155.75
PA28-235	28-7110001 thru 28-7210033	455-332	05-02212	$155.75
PA28-235	28-7310001 thru 28-7710089	455-332	05-02212	$155.75
PA28-236	28-7911001 thru 28-8211060	455-332	05-02212	$155.75
PA28-236	28-8311001 and On	455-332	05-02212	$155.75
PA32-260	32-1111 thru 32-1320	455-361	05-02213	$163.80
PA32-260	32-7100001 thru 32-7800008	455-361	05-02213	$163.80
PA32-301T	32-8024001 thru 32-8424002	455-344	05-01750	$157.75
PA32-301T	32-8524001 and On	455-344	05-01750	$157.75
PA32R-301T	32R-8029001 thru 32R-8229078	455-360	05-01748	$218.95
PA32R-301T	32R-8329001 and On	455-360	05-01748	$218.95
PA32RT-300T	32R-7887001 thru 32R-7987146	455-360	05-01748	$218.95

Piper Prop Controls

Model	Serial Number	P/N	Our P/N	Price
PA24-250	24-105 thru 24-2174	455-184	05-02214	$253.95
PA24-250	24-2176 thru 24-2298	455-184	05-02214	$253.95
PA24-250	24-2175, 24-2299 thru 24-3687	455-252	05-02215	$376.00
PA24-260	24-3642, 24-4000 thru 24-4782	455-252	05-02215	$376.00
PA24-260	24-4784 thru 24-4803	455-252	05-02215	$376.00
PA28R-180	28R-30005 thru 28R-30481	455-322	05-01747	$251.95
PA28R-180	28R-30483 thru 28R-31279	455-322	05-01747	$251.95
PA28R-180	28R-7130001 thru 28R-7130019	455-322	05-01747	$251.95
PA28-201T	28-7921001 thru 28-7921095	455-322	05-01747	$251.95
PA28R-200	28R-30482	455-322	05-01747	$251.95
PA28R-200	28R-35001 thru 28R-35830	455-322	05-01747	$251.95
PA28R-200	28R-7135001 thru 28R-7635545	455-322	05-01747	$251.95
PA28R-201	28R-7737002 thru 28R-7837317	455-322	05-01747	$251.95
PA28R-201	2837001 thru 2837061	455-322	05-01747	$251.95
PA28R-201T	28R-7703002 thru 28R-7803372	455-322	05-01747	$251.95
PA28R-201T	2803001 thru 2803015	455-322	05-01747	$251.95
PA28RT-201	28R-7918001 thru 28R-8018116	455-322	05-01747	$251.95
PA28RT-201	28R-8118001 and On	455-322	05-01747	$251.95
PA28RT-201T	28R-7931001 thru 28R-8031188	455-322	05-01747	$251.95
PA28RT-201T	28R-8131001 and On	455-322	05-01747	$251.95
PA28-235	28-7310001 thru 28-7710089	455-344	05-01750	$157.75
PA28-236	28-7911001 thru 28-8211060	455-344	05-01750	$157.75
PA28-236	28-8311001 and On	455-344	05-01750	$157.75
PA32-300	32-40000 thru 32-40565	65451-04	05-02216	$378.00

Throttle Controls for Bellanca Viking Aircraft

P/N S191783-18

Model	Serial Number	Our P/N	Price
17-30A	30263 & On, and aircraft w/S/N prefix: "75-"	05-01763	$503.00
17-31A	73-32-128 & On, and aircraft w/ S/N prefix "75-"	05-01763	$503.00
17-31ATC	73-31067 & On, and aircraft w/S/N prefix "75-"	05-01763	$503.00

Throttle Controls for Grumman Aircraft

Model	Serial Number	P/N	Our P/N	Price
AA-1	AA1-0433 and On	507005-1	05-01760	$459.00
AA-1A	AA1A-0001 and On	507005-1	05-01760	$459.00
AA-1B	AA1B-0001 and On	507005-1	05-01760	$459.00
AA-1C	AA1B-0601	507005-1	05-01760	$459.00
AA-1C	AA1C-0001 and On	507005-1	05-01760	$459.00
AA-5	AA5-0001 and On	507005-2	05-01761	$458.00
AA-5A	AA5A-0283 and On	507005-2	05-01761	$458.00
AA-5B	AA5B-0001 and On	507005-3	05-01762	$460.00

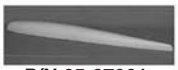
FAA-PMA Approved Throttle Controls for aircraft manufactured by Grumman American, Gulfstream Aerospace Corp. or Tiger Aircraft LLC. McFarlane Aviation has developed a longer conduit terminal that allows extra clearance between the swivel joint and the air filter box at the clamp location.

AP

KNOTS 2U PIPER REPLACEMENT PARTS


P/N 05-07038


P/N 05-07044


P/N 05-07001

Hand laid fiberglass replaces the OEM plastic, from Tail Cone to Nose Fairing we can help you find the right carbon fiber / kevlar FAA/PMA approved replacement aircraft parts for your aircraft.

PA-23

MFR PN	Description	PN	Price
GF16109-00	K2U Piper PA-23Tip Stabilator	05-07001	$179.00
GF32464-00	K2U Piper PA-23 Faring Left Wing Root	05-07037	$185.00
GF32464-01	K2U Piper PA-23 Faring Right Wing Root	05-07038	$185.00
GF32466-00	K2U Piper PA-23 Faring Nacelle Left Inboard	05-07039	$185.00
GF32466-01	K2U Piper PA-23 Faring Nacelle Right Inboard	05-07041	$185.00
GF32471-00	K2U Piper PA-23 Faring Nacelle Left Outboard	05-07042	$185.00
GF32471-01	K2U Piper PA-23 Faring Nacelle Right Outboard	05-07043	$185.00
GF32467-00	K2U Piper PA-23 Left Wing Tip	05-07044	$421.00
GF34267-01	K2U Piper PA-23 Right Wing Tip	05-07045	$421.00
K16792-00	K2U Piper PA-23 Rudder Tip	05-11059	$187.00

PA-24

MFR PN	Description	PN	Price
GF20804-12	Fiberglass Bulkhead Assembly (Tail) Piper PA-24-180 S/N 24-3337 & up. PA-24-250 S/N 24-2844 & up, PA-24-260	05-07016	$141.00
GF21143	Fiberglass Lower Scoop Inlet PA24 (not for use on aircraft with cowl P/Ns 21950-07/-14, 22858-02, 22857-12, 24895-02/-17 or if carburetor air filter kit is installed)	05-07017	$309.00
GF21555-00	Fiberglass Rudder Tip (W/O Antenna Slot) Piper PA-24-180, PA-24-250	05-07018	$141.00
GF21555-02	Fiberglass Rudder Tip (Antenna Slot) Piper PA-24-180, PA-24-250	05-07019	$141.00
GF21556-00	Fiberglass Stabilator Tip Piper PA-24-180, PA-24-250, PA-24-260, PA-30 s/n 30-2 thru 30-1716 and 30-1718 thru 30-1744 inclusive	05-07021	$151.00
GF21557-00	Fiberglass Vertical Fin Tip Piper PA-24-180, PA-24-250	05-07022	$154.00
GF21605-05	Fiberglass Bulkhead Assembly (Tail) Piper PA-24-180 S/N 24-1 thru 24-3336, PA-24-250 S/N 24-105 thru 24-2843, PA-24-400	05-07023	$141.00
GF24846-00	Fiberglass Rudder Cap Piper PA-24-260	05-07032	$181.00
GF24896-00	Fiberglass Vertical Fin Tip Piper PA-24-260	05-07033	$154.00
GF28041-00	Fiberglass Stabilator Tip Piper PA24-250, PA-24-260. (Use if stabilator modification kit 760-747 has been installed.)	05-07036	$171.00
K21947-00	Piper PA-24 Comanche Cowl Scoop Piper PA-24-180 & PA-24-250 S/N 24-1477 thru 24-2843. PA-24-250 S/N 24-103 thru 24-1476 if carburetor air filter kit 754 285 has been installed. PA-24-180 S/N 24-2844 thru 24-3163, PA-24-250 S/N 24-2844 & Up, PA-24-180 & PA-24-260 S/N 24-3164 & Up.	05-11060	$378.38
K23451-00	K2U Piper PA-24 Rudder Tip	05-10861	$168.00

PA-28/32

MFR PN	Description	PN	Price
GF35885-03	K2U Piper PA-28 Lower Rudder Faring	05-07046	$358.72
GF35885-10	K2U Piper PA-28 Lower Rudder Faring W/O Light	05-07047	$347.00
GF35944-15	K2U Piper PA-28 Nose Wheel Faring Assembly 6.00 X 6 W/ Door	05-07049	$923.12
GF67352-00	K2U Piper PA-28 Left Nose Gear Door Assembly	05-07073	$632.00
GF67352-01	K2U Piper PA-28 Right Nose Gear Door Assembly	05-07074	$632.00
GF37925-06	Aft Nose Gear Strut Fairing PA-28-181 S/N 28-7890001 & up.	05-15368	$145.21
GF3A25-07	Forward Nose Gear Strut Fairing Piper Models: PA-28-181 S/N 28-7890001 & up.	05-15280	$141.82
GF78913-00	K2U Piper PA-28/32/44 Forward Dorsal	05-07083	$271.00
GF79890-00	K2U PA-28/32 Faring Left Main Wheel SHELL	05-07084	$1,172.00
GF79890-01	K2U Piper PA-28/32 Faring Right Main Wheel SHELL	05-07086	$1,172.00
GF79890-02	K2U Piper PA-28/32 Faring Left Main Wheel ACCESS PANEL	05-07087	$483.00
GF79890-03	K2U Piper PA-28/32 Faring Right Main Wheel ACCESS PANEL	05-07088	$483.00
GF79892-04	K2U Piper PA-28/32 Faring Assembly Left Upper Forward Main Wheel	05-07089	$247.00

PA-28/32 CONT.

GF79892-05	K2U Piper PA-28/32 Faring Assembly Right Upper Forward Main Wheel	05-07091	$247.00
GF79892-09	K2U Piper PA-28/32 Faring Assembly Main Wheel Right Upper AFT	05-07092	$242.00
GF79892-10	K2U Piper PA-28/32 Faring Assembly, Main Wheel Left Upper AFT	05-07093	$242.00
K2U65300-00	K2U Piper PA-28 Stabilator Tip Extended	05-07111	$321.00
K35512-00	K2U Piper PA-28-151/161 Faring Assembly Nose Wheel 5.00 X 5	05-07112	$634.00
K65203-00	K2U Piper PA-28/32 Faring Assembly-Main Left Wheel	05-07113	$454.00
K65203-01	K2U Piper PA-28/32 Faring Assembly Main Right Wheel	05-07114	$454.00
K65331-00	K2U Piper PA-28/32 Faring Assembly Nose Wheel 6.00 X 6	05-07116	$478.00
GF35944-014	K2U Nose Wheel Pant. No Door 6.00 X 6 Tire Piper PA-28 PA-32	05-11055	$741.93
RD-0094-00	K2U Stabilator Tip Piper PA-28 PA-32 PA-44	05-12491	$228.32

PA-30

MFR PN	Description	PN	Price
GF25066	K2U Piper PA-30 S/N 30-1717 & 30-1745 & UP PA-39 Stabilator Tip	05-07034	$168.00
GF23595-00	K2U Piper PA-30/39 Rudder Tip	05-07031	$189.00

PA-31

MFR PN	Description	PN	Price
GF40364-02	K2U Piper PA-31 Tip Stabilator	05-07050	$182.78
GF42426-00	K2U Piper PA-31Faring Assembly Nacelle Left Outboard	05-07051	$261.00
GF42426-01	K2U Piper PA-31 Faring Assembly Nacelle Right Outboard	05-07052	$261.00
GF42455-00	K2U Piper PA-31 Faring Assembly Nacelle Left Top Inboard	05-07053	$198.00
GF42455-01	K2U Piper PA-31 Faring Assembly Nacelle Right Top Inboard	05-07054	$198.00
GF42455-02	K2U Piper PA-31 Faring Assembly Nacelle Left Forward Inboard	05-07056	$229.00
GF42455-03	K2U Piper PA-31 Faring Assembly Nacelle Right Forward Inboard	05-07057	$229.00
GF42455-04	K2U Piper PA-31 Faring Assembly Nacelle Left Bottom Inboard	05-07058	$143.00
GF42455-05	K2U Piper PA-31 Faring Assembly Nacelle Right Bottom Inboard	05-07059	$143.00
GF43741-00	K2U Piper PA-31 Elevator Left Tip	05-07062	$202.00
GF43741-01	K2U Piper PA-31 Elevator Right Tip	05-07063	$202.00
GF43786-00	K2U Piper PA-31 Elevator Leading EDGE	05-07064	$176.00
GF44943-00	K2U Piper PA-31 Fin Tip	05-07069	$212.00
GF55802-12	K2U Piper PA-31 Left Wing Tip W/ Reco Light	05-07071	$807.00
GF55802-13	K2U Piper PA-31 Right Wing Tip W/Reco Light	05-07072	$807.00
K40363-1	K2U PA-31 Series Rudder Tip	05-10862	$310.00

PA-32

Description	PN	Price
K2U Piper PA-32 Nose Wheel Faring Assembly 6.00 X 6 With door	05-07048	$923.12

PA-34

MFR PN	Description	PN	Price
GF95620-07	K2U Piper PA-34 Stabilator Tip	05-07096	$254.00
GF95907-00	K2U Piper PA-34 Rudder Tip Faring	05-07097	$331.00
GF96338-04	K2U Piper PA-34 Upper Tail Cone	05-07103	$324.00
GF96338-08	K2U Piper PA-34 Lower Tail Cone	05-07104	$293.00

PA-38

MFR PN	Description	PN	Price
GF77328-02	K2U Piper PA-38 Left Main Gear Wing Faring	05-07076	$197.00
GF77328-03	K2U Piper PA-38 Right Main Gear Wing Faring	05-07077	$197.00
GF77606-03	K2U Piper PA-38 Forward Dorsal Fin	05-07078	$229.00
GF77606-08	K2U Piper PA-38 Dorsal Fin AFT	05-07079	$179.00
GF77607-00	K2U Piper PA-38 Faring Dorsal Fin	05-07081	$173.90
GF77613-00	K2U Piper PA-38 Lower Rudder Faring	05-07082	$187.00

Prices Subject to Change Without Notice

KNOTS 2U PIPER/CESSNA/COMMANDER PARTS

PA-44

Description	Part No.	Price
K2U Piper PA-44 Nacelle AFT Tip	05-07094	$254.00

PA-60

MFR PN	Description	PN	Price
GF200038-901	K2U Piper PA-60 Left Long Tip, Short Wing Assembly	05-07011	$642.00
GF200038-902	K2U Piper PA-60 Right Long Tip, Short Wing Assembly	05-07012	$642.00
GF200102-901	K2U Piper PA-60 Left Short Tip, Long Wing Assembly	05-07013	$642.00
GF200102-902	K2U Piper PA-60 Right Short Tip, Long Wing Assembly	05-07014	$642.00
GF220021-505	K2U Piper PA-60 Vertical Fin Tip W/O Beacon	05-07024	$346.00
GF220021-903	K2U Piper PA-60 Horizontal Tip Assembly	05-07026	$346.00
GF220021-913	K2U Piper PA-60 Vertical Tip Assembly With Beacon	05-07027	$404.00

PA28/PA34

MFR PN	Description	PN	Price
GF78022-00	K2U Piper PA-28 / Pa-34 Wing Tip Left 4 Inch Nav Pad	05-14684	$418.00
GF78022-01	K2U Piper PA-28 / Pa-34 Wing Tip Right 4 Inch Nav Pad	05-14685	$418.00
GF78022-02	K2U K2U Piper PA-28 / Pa-34 Wing Tip Left 6 Inch Nav Pad	05-14971	$418.00
GF78022-03	K2U Piper PA-28 / Pa-34 Wing Tip Right 6 Inch Nav Pad	05-14972	$418.00

CESSNA

MFR PN	Description	PN	Price
GF55200-00	K2U Cessna 170/172 Lower Cowl Lip	05-07070	$139.00
K0741648-01	K2U Cessna 182T T182T Left Wheel Fairing Assembly	05-07107	$1,490.00
K0741648-02	K2U Cessna 182T T182T Right Wheel Fairing Assembly	05-07108	$1,490.00
K0743050	K2U Cessna 182T T182T Nose Fairing Assembly	05-07109	$1,016.00
K1234640-1	K2U Cessna 206/207/210 Late Models Tip Elevator LH	05-10858	$172.00
K1234640-2	K2U Cessna 206/207/210 Late Models Tip Elevator RH	05-10859	$172.00
K0531006-34	K2U Cessna 172 Models Rudder Cap	05-11056	$138.00
K0531006-112	K2U Cessna 172 Rudder Cap	05-11057	$138.00
K0531012-2	K2U Cessna 172 Dorsal Fairing	05-11058	$109.00
F0531033-1	Vertical Fin Tip GF0531033-1	05-11975	$148.65
K0421002-1	K2U Cessna 150/152 Strut Faring Lower left	05-11019	$141.00
K0421002-2	K2U Cessna 150/152 Strut Faring Lower Right	05-11020	$141.00
K0522150-4	K2U Cessna 150/172/175 Strut Fairing Upper Left	05-11024	$141.00
K0522150-3	K2U Cessna 150/172/175 Strut Fairing Upper Right	05-11023	$141.00
K0522150-1	K2U Cessna 172/175 Strut Faring Lower Left	05-11021	$147.00
K0522150-2	K2U Cessna 172/175 Strut Faring Lower Right	05-11022	$141.00
K0723605-1	K2U Cessna 180/182 Strut Faring Lower Left	05-11025	$141.00
K072305-2	K2U Cessna 180/182 Strut Faring Lower Right	05-11026	$141.00
GF0532001	Elevator Tip Left 28-09-L	05-11968	$138.00
GF0532001	Elevator Tip Right 28-09-R	05-11969	$138.00
GF 0532001-00	Fiberglass Stabilizer Tip LH or RH. Cessna 172 (1963 & Up)	05-11970	$112.87
GF 0531006-80-791	Fiberglass Rudder Bottom. Cessna 172 1969 thru 85.	05-11971	$132.00

COMMANDER

MFR PN	Description	PN	Price
GF175009-3	K2U Commander 112 Left Wing Tip	05-07008	$408.00
GF175009-8	K2U Commander 112 Right Wing Tip	05-07009	$408.00
GF43367-210	K2U Commander 114 TAIL Stinger	05-07060	$376.00
GF43650-501	K2U Commander 112/114 Dorsal Fairing	05-07061	$621.00
GF44233-11	K2U Rockwell Commander 114 Rudder Cap	05-07066	$181.00
GF44300-3	K2U Rockwell Commander Vertical Fin Cap	05-07067	$187.00
GF44324-400	K2U Commander 112/114 Tip Stabilator	05-07068	$282.00

BEECH

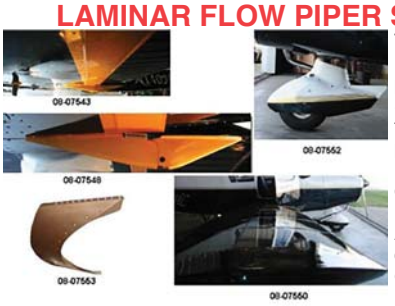
MFR PN	Description	PN	Price
GF105-1010-00	K2U Beech 76 Left Wing Tip	05-06995	$392.00
GF105-1010-01	K2U Beech 76 Right Wing Tip	05-06996	$392.00
GF108-1700-00	K2U Beech 77 Left Wing Tip	05-06997	$392.00
GF108-1700-01	K2U Beech 77 Right Wing Tip	05-06998	$392.00
GF108-4400-17	K2U Beech 77 TAIL CONE	05-06999	$276.00
GF169-1100-00	K2U Beech 23/24 Left Wing Tip	05-07002	$386.00
GF169-1100-01	K2U Beech 19/23/24 Right Wing Tip	05-07003	$386.00
GF169-420028-11	K2U Beech 19/23/24 Fuel Sump Drain Cover	05-07004	$123.00
GF169-440013-11	K2U Beech 19/23/24 Dorsal	05-07006	$365.00
GF169-4411-S	K2U Beech 19/23/24 Tail Conr	05-07007	$391.00
GF96110010-17	K2U Beech 55/56/58 Fairing Engine Nacelle Left Outboard	05-07098	$286.00
GF96110010-19	K2U Beech 55/56/58 Fairing Engine Nacelle Right Outboard	05-07099	$286.00
GF96110010-21	K2U Beech 55/56/58 Fairing Engine Nacelle Left Inboard	05-07101	$286.00
GF96110010-23	K2U Beech 55/56/58 Fairing Engine Nacelle Right Inboard	05-07102	$286.00
GF96-4415-00	K2U Beech 55/58 Dorsal Saddle	05-07106	$478.00
K33-440011-2	K2U Beechcraft 33 & 36 Models Dorsal Fin	05-11061	$361.00
GF169-910013-157	K2U Beech 19 23 24 Faring Lower Cowl	05-11963	$114.00



KNOTS 2 U CIRRUS NOSE WHEEL FAIRING

This nose wheel fairing is made of carbon fiber for a superior weight to strength ratio compared to the OEM part. We have also included a door for checking the tire pressure! K15312-001. Finish - White Primer, ready for paint. Replaces: Cirrus part 12446-105, 12446-106, 15312-002, 15310-001, 15310-002, 15312-001. Aircraft Eligibility: Cirrus Models SR20 S/N 1005 thru 1885, SR22 S/N 0528 thru 2437. FAA-PMA Approved. P/N 05-11986 ..... **$1,074.00**

LAMINAR FLOW PIPER SPEED MODS



The first and still the best! Laminar Flow has been producing high quality Speed Mods for the Piper fleet since 1983. All of their products are time tested, race proven (with the results documented by such well respected publications as Aviation Consumer) and come with a money back guarantee.

LFS under-wing Speed Mods are fabricated from aircraft grade aluminum eliminating the cracking and warping that frequently occur when composite components are fastened to a metal wing.

Aircraft Modification	Aircraft Model	Gains / Installation Time	Part No.	Price
Aileron Gap Seal Square Wing	All PA 28 / 32	3 MPH / 1.5 Hrs	08-07543	$279.00
Aileron Gap Seal Taper Wing	All PA 28 with Taperwing	3 MPH / 2 Hrs	08-07544	$377.00
Flap Gap Seals	PA 34	3 MPH / 2.5 Hrs	08-07546	$235.95
Flap Gap Seals	All PA 28 / 32	3 MPH / 2.5 Hrs	08-07547	$195.00
Flap Hinge Fairings 6 Pairs	All PA 28 / 32	2 MPH / 3.5 Hrs	08-07548	$450.00
Flap Hinge Fairings 8 Pairs	PA 34	2 MPH / 4 Hrs	08-07549	$560.00
Tank Fairings / Smoothing Kit	PA 28 / 32	4-15 MPH / 5-15 Hrs	08-07550	$832.00
Tank Fairings / Smoothing Kit Lance and Seneca	PA 32R / 34	8-15 MPH / 10-15 Hrs	08-07551	$1,560.00
Fixed Nose Fairing	All Fixed Gear PA 28 / 32 to 1978	2-3 MPH / 2 Hrs	08-07552	$287.95
Wheel Well Fairings	PA 28R Only	3 MPH / 4 Hrs	08-07553	$598.00
Wheel Well Fairings	PA 32 / 34	4 MPH / 3 Hrs	08-07554	$598.00

AP

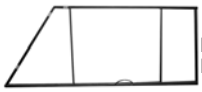
REPLACEMENT PIPER PARTS



J-3 LOWER DOOR

FAA/PMA'D. Uncovered, with pin. Includes handle and plunger. Does not include glass. Replaces Piper P/N 50173-00

P/N 05-05034 .....**$539.00**



UPPER DOOR ASSEMBLY

FAA/PMA'D. Uncovered. Does not include glass. Replaces Piper P/N 51853-00.

P/N 05-05035..... **$418.00**



J-3 BRAKE PEDAL

FAA/PMA'd

LH Replaces Piper 41602-02... P/N 05-04978.. **$144.75 ea.**

RH Replaces Piper 41602-03 .. P/N 05-04979.. **$144.75 ea.**



J-3 RUDDER PEDAL KIT

FAA/PMA'd. Consists of two rear and front pedal assemblies. Replaces Piper P/N 40842-04 & 40842-05 ..... P/N 05-04980.. **$344.00 ea.**



J-3 STEP

FAA/PMA'd. Replaces Piper P/N 81903-02.

P/N 05-05003..... **$106.75**



PIPER FAA / PMA WING TIP FAIRING

Wing Tip Mount, FAA/PMA'd For use in installing lights on PA22, PA22-108, PA22-135, PA22S-135, PA22-150, PA22S-150, PA22-160 and PA22S-160 only.

P/N 05-08094 .....**$71.90**

J-3 EXHAUST COMPONENTS



FAA/PMA'd. J-3 Muffler only (no shroud). Replaces Piper P/N 71053-02.

P/N 05-04981..... **$478.00**



FAA/PMA'd. J-3 Tailpipe (This tailpipe will not fit J-4s) Replaces Piper P/N 74501-00.

P/N 05-04982..... **$218.95**



FAA/PMA'd. J-3 Tailpipe Shroud. Replaces Piper P/N 70912-00

P/N 05-04983..... **$141.95**



FAA/PMA'd. J-3 Muffler Shroud Replaces Piper P/N 70963-00

P/N 05-06460.....**$318.00**



J-3 MUFFLER CLAMP WITH PIN

FAA/PMA'd. J-3, 4, 5, & PA-15, 17, PA-22 Tri-Pacer & Colt Styles, PA-28-140 Cherokee Style. Also suitable for use on Lycoming powered homebuilts 108 hp thru 150 hp. 2 required for full system. Sold as each. Replaces Piper P/N 70591-02..... P/N 05-04985 .....**$35.65**



J-3 TAILPIPE CLAMP

FAA/PMA'd. for full system-J-3, 4, 5, & PA-12, 14, 15, 16, 17, PA-18 Super Cub, PA-22 Tri-Pacer & Colt Styles, PA- 28-140 Cherokee Styles. Also suitable for use on Lycoming powered homebuilts 108 hp thru 150 hp. 1 required. Sold as each. Replaces Piper P/N 72691-00 P/N 05-05253.....**$34.85**

J-3 EXHAUST SUPPORT BRACKET



FAA/PMA'd Replaces Piper P/N 70581-00

P/N 05-04987.....**$35.50**



J-3 REAR WINDOW CHANNEL

FAA/PMA'd. Replaces Piper P/N 10057-00 & 10058-00 ..... P/N 05-05038.....**$48.50**

SLIDING WINDOW GUIDE ASSEMBLY KIT. LH

Consists of front and rear frames and slides. Includes opening stop. 2-3 ft. pieces Replaces Piper P/Ns 21671-00, 10059-00

P/N 05-05075.....**$103.75**



FULL EXHAUST SYSTEM J-3

FAA PMA'd. Includes all component parts listed below plus the PMA'd header stacks. Fits all J-3 and homebuilts using A-65 engines without accessories. Uses treated aluminized mild steel stacks, including clamps.

Complete System .....P/N 05-06461 ..... **$1,231.00**

Replacement system includes:

Muffler	Replaces Piper P/N 71053-02
Tailpipe	Replaces Piper P/N 74501-00
Tailpipe Shroud	Replaces Piper P/N 70912-00
Muffler Shroud	Replaces Piper P/N 70963-00
Muffler Clamps, two	Replaces Piper P/N 70591-02
Tail Pipe Clamp	Replaces Piper P/N 72691-00
Bracket	Replaces Piper P/N 70581-00
Stack, LH	Replaces Piper P/N 71082-00
Stack, RH	Replaces Piper P/N 70671-00

J-3, A-65 HEADER STACKS

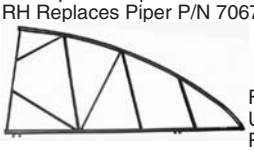


FAA/PMA'd. Exhaust stacks built to exact dimensions of J-3 header pipes of mild steel with long-life hot aluminized finish.

Both Stacks ..... P/N 05-04993..... **$496.00**

LH Replaces Piper P/N 71082-00 .. P/N 05-04994..... **$267.95**

RH Replaces Piper P/N 70671-00.. P/N 05-04995..... **$268.95**



J-3 HORIZONTAL STABILIZER

FAA/PMA'd. Newly manufactured. Uncovered. Replaces Piper P/N 40643-00

P/N 05-05036 ..... **$592.00**

J-3 STABILIZER ATTACH LINK ASSEMBLY



FAA/PMA'd. Replaces Piper P/N43122-00.

P/N 05-05015..... **$145.75**

J-3 RUDER ASSEMBLY *E-456-000*

FAA/PMA'd. Uncovered. Replaces Piper P/N 41313-00

P/N 05-05037 .....**$533.00**





J-3 VERTICAL FIN

FAA/PMA'd. Uncovered. Replaces Piper P/N 40592-00.... P/N 05-04998..... **$335.00**

STABILATOR CABLE KITS FOR PIPERS



McFarlane has complete stock of FAA-PMA stabilator cables for the Piper aircraft affected by AD 2013-02-13 (except PA-44) and Piper Service Bulletin 1245A. McFarlane flight controls cables offer quality that is second to none in the aircraft industry, and a set of four stabilator cables typically costs over $200 less than the equivalent Piper cables. Cables are available individually or as complete airplane kits at 15% savings.

McFarlane also stocks all common turnbuckle barrels and clips. Convenient and money saving kits include all four stabilator cables (two forward and two aft), two MS21251-B5S turnbuckle barrels and ten MS21256-1 locking clips (spares always come in handy).

Description	Part No.	Price
Stabilator Cable Kit For Piper PCKT-STAB-01	05-10727	$378.00
Stabilator Cable Kit For Piper PCKT-STAB-02	05-10728	$288.95
Stabilator Cable Kit For Piper PCKT-STAB-03	05-10729	$297.95
Stabilator Cable Kit For Piper PCKT-STAB-04	05-10730	$382.00
Stabilator Cable Kit For Piper PCKT-STAB-05	05-10731	$349.00
Stabilator Cable Kit For Piper PCKT-STAB-06	05-10732	$401.00
Stabilator Cable Kit For Piper PCKT-STAB-07	05-10733	$357.00
Stabilator Cable Kit For Piper PCKT-STAB-08	05-10734	$569.00
Stabilator Cable Kit For Piper PCKT-STAB-09	05-10735	$419.61
Stabilator Cable Kit For Piper PCKT-STAB-10	05-10736	$465.00
Stabilator Cable Kit For Piper PCKT-STAB-11	05-10737	$400.00
Stabilator Cable Kit For Piper PCKT-STAB-12	05-10739	$344.00

SEE WWW.AIRCRAFTSPRUCE.COM FOR APPLICATION CHART

J-3C-65 COWLING ASSEMBLY STC 'D #SA 158GL



FAA/PMA'd. Nose pieces on cowling are made of high strength fiberglass.
Complete Unit ..... P/N 05-04999.....**$956.00**

Top Half Cowl Replaces Piper P/N 72543-00
P/N 05-06462.....**$582.00**

Bottom Half Cowl Replaces Piper P/N 72473-00
P/N 05-05001.....**$550.00**

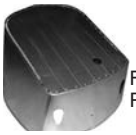
J-3 STYLE ENGINE EYEBROW KIT



J-3 Style Aluminum Engine Eyebrow Kit Hardware included. Copy of original. For continental engines A65 & A-75. Mounting Brackets for this kit are available 05-08089.

Eyebrow Kit.....P/N 05-08088...**$497.00**
Mounting Bracket..P/N 05-08089.....**$44.80**

J-3 BOOT COWL



FAA/PMA'd. Includes fire wall and windshield frame. Replaces Piper P/N 23993-00
P/N 05-05013.....**$535.00**

J-3 WINDSHIELD FRAME



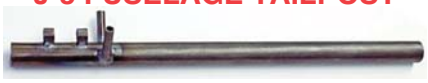
FAA/PMA'd. Replaces Piper P/N 23942-00 & 23952-00
P/N 05-05014 ..... **$78.85**

J-3 BIRDCAGE STRUCTURE



FAA/PMA'd. Used as replacement for damaged original. Fabricated of heavier material and completely heliarc welded for added strength. Replaces Piper P/N 00032-64
P/N 05-05063 ..... **$577.00**

J-3 FUSELAGE TAILPOST



FAA/PMA'd. Replaces Piper P/N 20012... P/N 05-05047.....**$93.80**

J-3 ELEVATOR BELL CRANK MOUNT



Bracket Assembly. FAA/PMA'd.
LH Replaces Piper P/N 21442-02 P/N 05-05045.....**$97.95**
RH Replaces Piper P/N 21442-03P/N 05-05046.....**$87.75**

J-3 WING SPAR-TO-FUSELAGE ATTACH FITTING KIT



FAA/PMA'd. For wood spar wing only. Front and rear. Replaces Piper P/N 12801-00 & 12791-00..... P/N 05-05076.....**$152.95**

J-3 WING STRUT ATTACH FITTING KIT



FAA/PMA'd. Consists of two each front and rear fittings, for one wing. Made of .063 MIL spec 4130 chromoly tubing. Usable on wood spar wings only. Kit is four pieces. Replaces Piper P/Ns 12512-02, 12512-03, 12502-02, 12502-03 ..... P/N 05-05077.....**$125.95**

J-3 PREFORMED AILERON GAPS



FAA/PMA'd. For use with metal ribs only.
Replaces Piper P/N 15572-00 & 15572-01 ..
P/N 05-05079 ..... **$86.75**

J-3 METAL RIB WING REPAIR KIT



FAA/PMA'd for PA11. Kit consists of 6 pcs. of 3', 4 pcs. of 18" and 5pcs. of 20" long material to properly repair main and nose ribs and uprights for Piper style ribs. Replaces Many Piper P/Ns
P/N 05-05043.....**$115.75**

J-3C-40, 50, 50S, 65, 65S WING TRAILING EDGES

FAA/PMA'd.
For metal spar
Replaces Piper P/N 15773-00..... P/N 05-05031.....**$63.80**
For wood spar
Replaces Piper P/N 15593-00..... P/N 05-05032.....**$70.90**
Aileron Trailing Edge Replaces Piper P/Ns 42922-00,42933-00, 40411-00..... P/N05-05033.....**$79.75**

J-3 WING LEADING EDGE



J-3 and Sport Trainer Wing Leading Edge Skin Kit. Kit Includes 4pc of formed leading edge material and it is not a single piece leading edge.
FAA/PMA'dP/N 05-05041.....**$310.00**

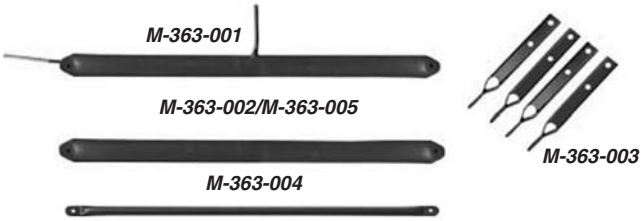
SEALED J-3 LIFT STRUTS WITH CLAMPS



FAA/PMA'd. Includes jury strut clamps, original size 7/16" X 20 thread. J-3 Front and Rear Lift Struts are oiled and sealed and are manufactured to revision levels and installed per AD-93-10-06 are an FAA approved alternate means of compliance and is considered terminating actions for repetitive inspection requirement of AD-99-01-05. For lift struts, forks require a five year inspection per A.D. 93-10-06.
Struts are oiled, sealed and made from high quality 4130 streamline tubing.
Front ..... P/N 05-05016.....**$788.00**
Rear..... P/N 05-05017.....**$611.00**

J-3 JURY STRUTS

FAA/PMA'd. Front with pitot tube



Replaces Piper P/N 12931-00..... P/N 05-05067.....**$141.80**
FAA/PMA'd. Front w/o pitot tube
Replaces Piper P/N 12571-02..... P/N 05-05068.....**$135.75**
FAA/PMA'd. Rear
Replaces Piper P/N 12571-03..... P/N 05-05071.....**$109.75**
FAA/PMA'd. Jury Strut Fittings (Set of 4)
Replaces Piper P/N 12581-00..... P/N 05-05069.....**$84.85**
FAA/PMA'd. Jury Strut Interconnect
Replaces Piper P/N 12591-00..... P/N M-05-05070 .....**$75.95**

J-3 AND PA-11 LANDING GEAR



FAA/PMA'd. Completely fabricated. Ready to install landing gear with 1-1/4" axle.
LH - Replaces Piper P/N 10033-00
P/N 05-05005.....**$567.00**
RH - Replaces Piper P/N 10033-01
P/N 05-05006.....**$573.00**

J-3 BOOT COVERS



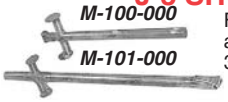
FAA/PMA'd. Sold as a pair. Replaces Piper P/N 31073-00 ..... P/N 05-05008.....**$36.90**

J-3 CABANE VEE ASSEMBLY



FAA/PMA'd. J-3 Series s/n 2315 to s/n 8277 except s/n 2316, 2332 & 2353. Uses 1/4" bolt. Replaces Piper P/N 21-09
P/N 05-05009.....**$237.95**
FAA/PMA'd. J-3 Series s/n 8278 & up, uses 5/16" bolt. Replaces Piper P/N 30602-00 . P/N 05-05010.....**$261.95**

J-3 SHORT SHOCK STRUT



FAA/PMA'd. Fits both J-3 s/n 8278 and up, and L4 series. 15" length. Replaces Piper P/N 31392-00..... P/N 05-05011.....**$225.95**

J-3 LONG SHOCK STRUT

FAA/PMA'd. Fits both J-3 s/n 8278 and up, and L4 series. 25" Length.
Replaces Piper P/N 31382-00..... P/N 05-05012.....**$207.95**

AP

REPLACEMENT PIPER PARTS

AP

J-3 ELEVATOR PUSH-PULL TUBE



FAA/PMA'd. Fits J-3 & PA-11 aircraft. Uses control cable. Replaces Piper P/N 40901-02
P/N 05-05074.....**$300.95**

J-3 PIPER STABILIZER YOKE INSPECTION COVER



FAA/PMA'd Replaces Piper P/N 60571-00 & 60571-01 ..... P/N 05-05078 .....**$44.95**



J-3 CONTROL STICK TORQUE TUBE ASSEMBLIES

FAA/PMA'd. Replace your worn J-3 unit with a newly manufactured unit. Replaces Piper P/N 40223-00..... P/N 05-05004.....**$627.00**

J-3 CONTROL STICK CONNECTOR



FAA/PMA'd. Fits J-3 & PA-11 aircraft. Replaces Piper P/N 40261-00..... P/N 05-05073.....**$142.75**



J-3 THROTTLE COVER PLATE

FAA/PMA'd. Exact reproduction of J-3 throttle plate with imprinted wording. High quality, unpainted. Ideal for most light aircraft. Replaces Piper P/N 41501-00
P/N 05-05081.....**$38.65**

J-3 STICK ASSEMBLY



FAA/PMA'd. Fits J-3 & PA-11 aircraft. Includes socket and removable stick. Replaces Piper P/N 42812-00 ..... P/N 05-05072.....**$241.95**



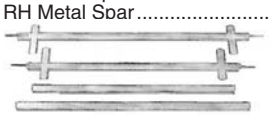
J-3 MAIN TANK

FAA/PMA'd. Exact replacement, aluminum. Ideal for most homebuilts.12 gal. tank, 17-1/2"L x 13"W x14-1/2"H. Uses a CAV-110-H-4 drain valve, not included. Replaces Piper P/N 70723-00
..... P/N 05-04984.....**$579.00**

STC'D J-3 WING TANKS



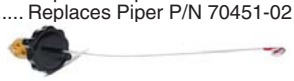
Kit includes mounting brackets, installation instructions and STC paperwork. Requires a gas cap, a 2-way shut-off valve and 3/8" x 1/4" brass fuel strainer which are not included.
11-1/2 Gallon Kit
LH Wood Spar..... P/N 05-04989.....**$669.00**
RH Wood Spar..... P/N 05-04991.....**$668.00**
11-1/2 Gallon Kit
LH Metal Spar..... P/N 05-04990.....**$667.00**
RH Metal Spar..... P/N 05-06839.....**$667.00**



J-3 GAS TANK FUSELAGE STRAP KIT

FAA/PMA'd. For main fuel tank applications. Includes one each listed below and felt padding 180-150 ..... P/N 05-06463.....**$153.75**
Front Upper ..... Replaces Piper P/N 70462-00
Front Lower ..... Replaces Piper P/N 70451-03
Rear Upper..... Replaces Piper P/N 70472-00
Rear Lower..... Replaces Piper P/N 70451-02

J-3, PA-11 GAS CAP & FLOAT



FAA/PMA'd. 15" depth. Replaces Piper P/N 71041-00 ..... P/N 05-05022.....**$84.75**



PIPER FAA / PMA ENGINE MOUNTS

Application	Description	PN	Price
M-525-000 Piper J-3, PA-18, and Sport Trainer Dynafocal Swing-Out Mount. Fits firewall mounting points, 18-3/4"W x 18-3/8"H. For Lycoming 150 thru 180 hp. **Note: This mount does not have FAA/PMA Approval.**	M-525-000 Dynafocal Swing Out Mount	05-08083	**$754.00**
Installation brackets for dynafocal mounts	Install Brackets For Swing Out Mounts	05-08087	**$127.75**
Engine Mounts for Piper PA-15 & 17 use with Continental 65, 75, 85, 90 and 100 hp engines	M-231-000 Piper PA-17 Engine Mount	05-08091	**$555.00**
Engine Mounts for Piper PA-18, 105, 135 & 150hp	M-235-000 Piper PA-18 Engine Mount	05-08092	**$740.00**

J-3 FIREWALL CABIN AIR BOX



FAA/PMA'd. Replaces Piper P/N 70422-00
P/N 05-05002 .....**$86.90**

J-3 NOSE COWL RAM AIR BOX



FAA/PMA'd. Provides a source of ram air for both cabin and carb heat shrouds. 2" diameter. Replaces Piper P/N 72522-00
P/N 05-05044.....**$159.99**



J-3 FRONT SEAT FRAME ASSEMBLY

FAA/PMA'd. Replaces Piper P/N 51013-02
P/N 05-04997.....**$554.00**

J-3 REAR SEAT CROSS TUBE

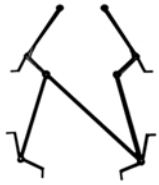


FAA/PMA'd. Replaces Piper P/N 50381-02
P/N 05-05061.....**$95.99**



J-3 ARCTIC HEATER

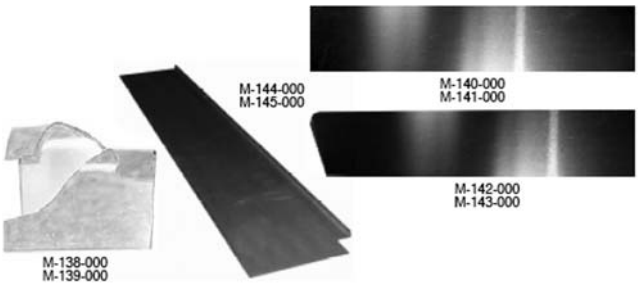
FAA/PMA'd. Exact copy of original J-3. Increase cabin heat by 70%. Now fly comfortably in the dead of winter. Attaches to LH heater manifold. Shipped complete with heater collector shroud, aeroduct tubing, and firewall airbox coupling. PMA'd as modification part. Three pieces.
P/N 05-04988.....**$259.95**



J-3 ENGINE MOUNT

FAA/PMA'd. Use with Cont. engines. Has 7/16" bolt hole and requires our bushings. Replaces Piper P/N 71163-00 P/N 05-05007.....**$660.00**

J-3 FAIRING SETS & FAIRINGS

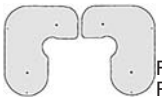


FAA/PMA'd. LH Fairing Set
Includes one each LH Wing Root Fairing, LH Fairing Top, LH Rear Fairing Bottom and LH Front Fairing Bottom. See Replacement Piper P/Ns Below ..... P/N 05-05020.....**$177.75**
FAA/PMA'd. RH Fairing Set
Includes one each RH Wing Root Fairing, RH Fairing Top, RH Rear Fairing Bottom and RH Front Fairing Bottom. See Replacement Piper P/Ns Below ..... P/N 05-05021.....**$177.75**
FAA/PMA'd. Wing Root Fairing
LH Replaces Piper P/N 60803-00 ..... P/N 05-05023.....**$47.50**
RH Replaces Piper P/N 60803-01..... P/N 05-05024.....**$47.50**
FAA/PMA'd. Fairing Top
LH Replaces Piper P/N 60772-00 ..... P/N 05-05025.....**$46.50**
RH Replaces Piper P/N 60702-01..... P/N 05-05026.....**$46.50**
FAA/PMA'd. Rear Fairing Bottom
LH Replaces Piper P/N 60782-00 ..... P/N 05-05027.....**$38.50**
RH Replaces Piper P/N 60782-01..... P/N 05-05028.....**$38.50**
FAA/PMA'd. Front Fairing Bottom
LH Replaces Piper P/N 60792-00 ..... P/N 05-05029.....**$41.55**
RH Replaces Piper P/N 60872-00..... P/N 05-05030.....**$41.55**

Prices Subject to Change Without Notice

PIPER PARTS

ELEVATOR HORN INSPECTION PLATES



FAA/PMA'd Metal, unpainted. Sold as a Set of 2 Replaces Piper P/N 60742-00 & 60742-01. P/N 05-05039 ..... **$66.85**

FLEXIBLE HEAT TUBE ADAPTER



FAA/PMA'd. Replaces Piper P/N 72911-00
P/N 05-05059 **$62.75**

ENGINE FRONT COWLING ATTACH BRACKET



FAA/PMA'd Sold as a set of 2. Replaces Piper P/N 72651-00 & 72571-00
P/N 05-05060.....**$166.75**

PIPER SEATBELT BUCKLE APPLIQUE



Enhance Your Original scratched, dull Seatbelt Buckles with Our Custom Peel 'n Stick Appliques. **Sold in Pairs**
P/N 09-03758.....**$18.95**

PIPER CHEROKEE RAMSHORN YOKE BUTTON APPLIQUE



Put One On Each Side...(sold separately) This is mounted on an .040 lexan backing. Same Size As Original - Installation Instructions Included. P/N 09-03760 .. **$49.95**

PIPER FUSELAGE SIDEPLATE APPLIQUE



Put One On Each Side...(sold separately) Easy to install, Peel 'n Stick. Same Size As Original - Covers The Old Rivet-holes. ..... P/N 09-03765.....**$42.80**

PIPER CHEROKEE BOWTIE YOKE APPLIQUE



Put One On Each Side...(sold separately) This is mounted on an .090 aluminum backing Same Size As Original - Installation Instructions Included ..... P/N 09-03766.....**$24.95**

J-3 BOOT COWL NAMEPLATE

Exact reproduction of the original. Raised metal lettering requires painting. 6-1/8" x 1-1/2". Replaces Piper P/N 480 921..... P/N 05-04996.....**$25.95**

TRIM TAB CONTROL COVER PLATE



Nose Up/Down markings need to be applied to plate. Replaces Piper P/N 41131-00P/N 05-05040.....**$41.70**

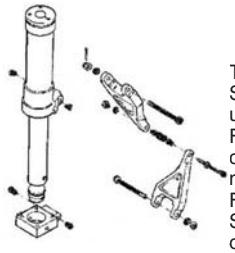
INSTRUMENT PANEL WITH CUT OUTS



FAA/PMA'd. with Cutouts Five holes each of 3-1/8" dia. Replaces Piper P/N 00024-94
P/N 05-05018.....**$68.95**

FAA/PMA'd. Blank instrument panel for Piper. Replaces Piper P/N 54703-00 ..... P/N 05-05019.....**$59.80**

TORQUE LINK REPAIR KITS FOR PIPER AIRCRAFT



Torque Link Repair Kits for Piper Aircraft. Solves many wheel shimmy problems. Save up to 60%.

Features: • Convenient kits replace all common wear torque link components. • Fits most prop driven Piper aircraft. • Contains all FAA approved parts and standard hardware. • Save time and money! No more research and ordering of individual parts.

SEE WWW.AIRCRAFTSPRUCE.COM FOR APPLICATION CHART AND PRICING.

PULLEY BUSHING



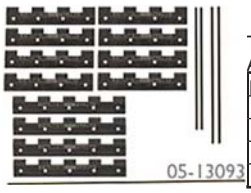
Pulley Bushing for Piper Bushing U80012-003. Applicability: Piper J-3, L-4, NE-1, NE-2, PA-11, PA-18, PA-19, L-18, L-21. Wing aileron pulley bushing. Outer diameter: 1/4 inch. Inner diameter: 3/16 inch. Length: 5/16 inch. FAA/PMA approved. Supercedes part numbers 80012-003, 80012-03, 80012-3, J2-453.
P/N 05-15331.....**$5.90**

CONTROL SURFACE BUSHINGS



Piper Long Bushing U80022-044
P/N 05-15332 .....**$1.24**
Piper Short Bushing U80022-045
P/N 05-15333 .....**$1.58**

PIPER TRIM HINGE KITS



Trim Hinge Kits for Piper Aircraft. FAA-PMA Approved - Fits many popular Piper Aircraft.

Model No.	Description	Part No.	Price
PTH-KT-1	Trim Hinge	05-13093	**$208.95**
PTH-KT-2	Trim Hinge	05-13094	**$218.95**
PTP-KT-1	Trim Pin	05-13095	**$35.99**
PTP-KT-2	Trim Pin	05-13096	**$37.99**

PIPER NOSECONE BAGGAGE DOOR LATCH & PLACARD



SOLD SEPARATELY



Improved FAA-PMA direct replacement lock & placard for Piper aircraft series PA-23, PA-31, PA-42 Door Lock/Latch: Pre-assembled lock and offset cam helps prevent installation mistakes, Includes clear instructions. Placard: Contains both a black and white version to contrast with any paint scheme.

Description	Part No.	Price
Nosecone lock/latch assembly	05-13144	**$49.99**
Nosecone placard	05-13145	**$33.80**

J-3 HARNESS KITS



	Front $191.75	Rear $207.95
Black	13-00913-1	13-00914-1
Navy	13-00913-2	13-00914-2
Brown	13-00913-3	13-00914-3
Royal Blue	13-00913-4	13-00914-4
Red	13-00913-5	13-00914-5
Tan	13-00913-6	13-00914-6
Olive Green	13-00913-7	13-00914-7
Silver Gray	13-00913-8	13-00914-8

PIPER FLIGHT CONTROL CABLE KITS



It is a tedious and time consuming job to research the part manuals for all of the cables required for a complete aircraft. You not only gain tremendous time savings with McFarlane cable kits, you receive substantial price discounts. All components are fully traceable, high quality, and proof tested.

See our website for a detailed list of kit components.

PCKT200-03 Flight Control Cable Kit.....P/N 05-04629 ..... **$1,900.00**
PCKT200-07 Flight Control Cable Kit.....P/N 05-04630 ..... **$1,916.00**
PCKT200-04 Flight Control Cable Kit.....P/N 05-04631 ..... **$1,916.00**
PCKT200-08 Flight Control Cable Kit.....P/N 05-04632 ..... **$1,931.00**
PCKT200T-01 Flight Control Cable Kit.....P/N 05-04633 ..... **$1,974.00**
PCKT200T-02 Flight Control Cable Kit.....P/N 05-04634 ..... **$1,796.00**
PCKT200T-03 Flight Control Cable Kit.....P/N 05-04635 ..... **$1,775.00**
PCKT200T-04 Flight Control Cable Kit.....P/N 05-04636 ..... **$1,795.00**
PCKT220T-01 Flight Control Cable Kit.....P/N 05-04637 ..... **$1,967.00**

FUEL STRAINER SEALS AND KITS FOR PIPER AIRCRAFT



FAA approved improved fuel strainer seals for Piper aircraft. Many of the new seals feature fuel proof fluorocarbon that won't swell or degrade like the original Buna N seals. All seals may be purchased separately, or in convenient kits containing both the upper and lower seal for one fuel strainer.

Model No.	Description	Spruce Part No.	Price
FSP-KT-1	Fuel Gasket Kit	05-06821	**$18.85**
FSP-KT-2	Fuel Gasket Kit	05-06822	**$14.55**
FSP-KT-3	Fuel Gasket Kit	05-06823	**$14.55**
FSP-KT-4	Fuel Gasket Kit	05-06824	**$11.55**
MC751-882	Gasket, Upper Seal	05-06825	**$7.95**
MC753-205	Gasket, Lower Seal	05-06826	**$12.55**
MC757-255	O-Ring, Upper Seal	05-06827	**$7.85**
MC751-898	Gasket, Lower Seal	05-06828	**$9.99**
CA751-871	Gasket, Fuel Strainer	05-06829	**$10.60**
MS29513-008	O-Ring	05-00126	**$0.39**
MS29513-043	O-Ring	05-06830	**$13.50**

PIPER PARTS

(FAA/PMA APPROVED)

AP

PIPER NOSE COWLING
(ALL METAL)



PA 20-22



PA 18

J-3 & PA-11

Description	P/N	Price
PA-11, For cowls using screws	05-07295	$1,417.00
PA-11, For cowls using Lion fasteners	05-07305	$1,139.00
J-3 Eyebrow baffle LH	05-00061	$546.00
J-3 Eyebrow baffle RH	05-00062	$546.00
Front piece for Top cowl	05-00063	$496.00
Top cowl for J-3	05-00064	$693.00
Bottom cowl for Continental powered J-3	05-00065	$844.00
Front piece for bottom cowl	05-00066	$699.00
Fuselage cowl	05-00067	$828.00
Top cowl for PA-11	05-00068	$158.75
Bottom cowl for PA-11	05-00069	$322.00
Side cowl for PA-11LH	05-00071	$363.00
Side cowl for PA-11 RH	05-00072	$363.00

PA-12

Bottom cowl	05-00078	$279.95
Top cowl	05-00079	$165.75
Fuselage cowl	05-00081	$1,007.00
Left side cowl	05-00082	$432.00
Right side cowl	05-00083	$432.00

PA-12 & 14

Nose cowl for all serial numbers	05-07310	$1,540.00

PA-18 (95 HP)

PA-18, For cowls using screws	05-07295	$1,417.00
PA-18, For cowls using Lion fasteners	05-07305	$1,139.00
Left side cowl, used w/shielded ignition lead	05-00073	$352.00
Right side cowl, used w/shielded ignition lead	05-00074	$358.00
Top cowl	05-00075	$154.75
Bottom cowl	05-00076	$349.00
Bottom cowl, installed w/machine screws	05-00077	$302.00

PA-18 - 105, 125, 135, 150 HP

Fuselage cowl, S/N 2168-5938,105,125,135HP	05-00089	$1,365.00
Fuselage cowl, S/N 5939-8019, 135, 150 HP	05-00091	$1,332.00
Fuselage cowl, S/N 8020 and up, 150 HP	05-00092	$1,272.00
PA-18-105 thru 125 HP, no starter hole	05-07315	$1,185.00
PA-18-105 thru 125 HP, with starter hole	05-07320	$1,545.00
PA-18-135 & 150 HP, w/starter hole & oil scoop	05-07325	$1,598.00
PA-18-135 & 150 HP, w/oil scoop, no starter hole	05-07330	$1,443.00
Top cowl, 105 HP	05-00093	$289.95
Top cowl, 125, 135, 150 HP	05-00094	$253.95
Left side cowl, 105 HP	05-00095	$448.00
Right side cowl, 105 HP	05-00096	$448.00
Left side cowl, 125, 135, 150 HP	05-00097	$529.00
Right side cowl, 125, 135, 150 HP	05-00098	$529.00
Lower cowl ass'y, 135 HP, S/N 3014 thru 4617	05-00099	$976.00
Lower cowl ass'y, 150 HP, S/N 3771 thru 6963	05-00101	$915.00
Lower cowl ass'y, 150 HP, S/N 6964 and up	05-00102	$1,181.00

PA-20 & PA-22

PA-22-108, S/N 8000 & up, w/o oil scoop	05-07345	$1,314.00
PA-20 Nose cowl, 115 HP	05-07335	$1,353.00
PA-22 Nose cowl, S/N 1 thru 533	05-07335	$1,353.00
PA-20 Nose cowl, 135 HP	05-07340	$1,649.00
PA-20 Bottom cowl, 125 HP	05-00049	$1,198.00
PA-20 Bottom cowl, 135 HP	05-00051	$997.00
PA-22 Bottom cowl, 125 HP, S/N 1 – 353	05-00052	$1,480.00
PA-22 Bottom cowl, 125 HP, S/N 354 – 533	05-00053	$1,460.00
PA-22 Bottom cowl, 125 HP, S/N 534 – 1759	05-00054	$1,383.00
PA-22 Bottom cowl,135-160HP,S/N 1760–7630	05-00055	$2,993.00
PA-22(Colt) Bottom cowl, 108HP,S/N 8000 &up	05-00056	$3,000.00
PA-22 Left side cowl	05-00057	$484.00
PA-22 Right side cowl	05-00058	$483.00
PA-20/22 Top center cowl	05-00059	$324.00
PA-25 Pawnee Nose cowl, 150 HP	05-07340	$1,649.00

ONE PIECE STAMPED ALUMINUM RIBS
(STC APPROVED)



These durable ribs are direct replacements for the original style "Truss" type ribs originally used by Piper. These ribs are designed for the various modes of Piper including J-3 and PA-18 with metal spars. The ribs listed are the more commonly requested ribs for this series.

Description	Part No.	Replaces	Price
Nose Rib	05-07365	12662-002	$26.50
Nose Rib, Tip L/H	05-07370	16192-000	$28.60
Nose Rib, Tip R/H	05-07375	16192-001	$32.50
Full Rib	05-07380	13052-002	$136.75
Full Butt Rib, L/H	05-07385	10634-000	$192.75
Full Butt Rib, R/H	05-07390	10634-008	$171.75
Full Tank Bay Rib, L/H	05-07395	10653-000	$134.75
Full Tank Bay Rib, R/H	05-07405	10653-006	$136.75
Full I.B. Ail. Bay, L/H	05-07410	13042-000	$132.75
Full I.B. Ail. Bay, R/H	05-07415	13042-001	$148.90
Full O.B. Ail. Bay, L/H	05-07420	12902-000	$164.75
Full O.B. Ail. Bay, R/H	05-07425	12902-001	$106.85
3/4 Rib	05-07430	13022-002	$96.75
3/4 Butt Rib, L/H	05-02396	10634-005	$227.95
3/4 Butt Rib, R/H	05-07440	10634-007	$114.99
3/4 Tank Bay Rib	05-02397	10635-002	$141.75



STABILIZER LINER TUBE

Forward Link Assembly Liner Tube (U86062-080) ..... P/N 05-07450 ..... **$104.75**

Rear Liner Tube (U86062-079) ..... P/N 05-07455 ..... **$66.75**



STABILIZER YOKE & ADJUSTMENT SCREW

Yoke ..... P/N 05-07465 ..... **$246.95**

Adjustment Screw ..... P/N 05-07470 ..... **$98.75**



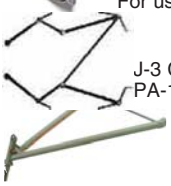
CA452-538 PIPER STABILATOR BEARING

CA452-538 Piper stabilator bearing P/N 05-04626 ..... **$393.00**



WING NAVIGATION LIGHT BRACKET

For use with Grimes Model "E" Type Light or equivalent... P/N 05-07460 ..... **$105.75**



ENGINE MOUNTS

J-3 Continental Mount..... P/N 05-00873..... **888.00**

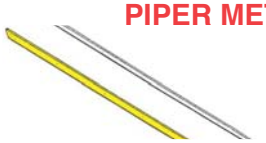
PA-11 Mount..... P/N 05-00874..... **$895.00**

J-3, PA-11, PA-18

Left Gear, uncovered..... P/N 05-07350 ....**$732.00**

Right Gear, uncovered ..... P/N 05-07355 ....**$699.00**

PIPER METAL WING SPARS



Piper Metal Wing Spars. Metal spar. Applicability: Piper J-3, PA-11, PA-18-95. Highlighted part in illustration. FAA/PMA approved.

Description	Part Number	Price
J-3 & Pa-11 Front LH Wing Spar	05-00875	$347.00
J-3 & Pa-11 Front Right Wing Spar	05-12728	$343.00
J-3 & Pa-11 Rear LH Wing Spar	05-06993	$292.95
J-3 & Pa-11 Rear Right Wing Spar	05-12729	$295.95



PIPER HEATER TEMPERATURE CONTROL LOCK

For years Piper PA28 and PA32 owners have been plagued with a Heater Temperature Control that will not stay positioned. This Heater Temperature Control Lock that can be installed in minutes and provides a positive adjustable lock for the Heater Control Lever. P/N 08-04939 ..... **$105.75**



VERTICAL FIN EXP40592-00

Vertical Fin for Piper J-3/PA-11/PA-18. Experimental Only. Duplicate Part. Built to the same specifications as OEM 40592-00. P/N 05-12467 ..... **$315.00**

PIPER PARTS

(FAA/PMA APPROVED)

SPINNER ASSEMBLIES & COMPONENTS



Short Spinner Assembly for Piper
Models PA-12, PA-16, PA-18, PA-20 & PA-22 with O-235 or O-290 engines with AM series Sensenich propellers.
Spinner Dome ..... P/N 05-07670 ..... **$313.00**
Front Plate ..... P/N 05-07675 ..... **$139.75**
Back Plate ..... P/N 05-07680 ..... **$149.90**
Complete Assembly ..... P/N 05-07685 ..... **$538.00**

PA-25 Spinner Components
Assembly for Fixed Pitch Propellers serial numbers 2986-3691
Back Plate ..... P/N 05-07695 ..... **$177.75**
Front Plate ..... P/N 05-07705 ..... **$144.75**
Complete Assembly ..... P/N 05-07710 ..... **$627.00**

Spinner Components for 235 hp. with FA8452 McCauley Propeller.
Dome Only ..... P/N 05-07715 ..... **$461.00**
Back Plate ..... P/N 05-07720 ..... **$242.95**
Front Plate ..... P/N 05-07725 ..... **$199.75**

Spinner Assembly for PA-18/18A, 150 hp.For Dm Series Propellers.
Spinner Dome ..... P/N 05-07730 ..... **$390.00**
Front Plate ..... P/N 05-07735 ..... **$162.75**
Back Plate ..... P/N 05-07740 ..... **$197.75**
Complete Assembly ..... P/N 05-07745 ..... **$589.00**

RIB KITS FOR PIPERS

Description	P/N	Price
J3 RIB KIT (LH)	05-02373	**$1,590.00**
J3 RIB KIT (RH)	05-02374	**$1,504.00**
PA18-150 RIB KIT (LH)	05-02375	**$1,796.00**
PA18-150 RIB KIT (RH)	05-02376	**$1,804.00**

INDIVIDUAL RIBS FOR PIPERS

J-3

Piper#	Our P/N	Description	Price	# Per Wing
10742-002	05-02407	Tip Rib, LH #13	**$160.75**	1
10742-003	05-02394	Tip Rib, RH #13	**$168.75**	1
12662-002	05-02389	Nose Rib	**$27.75**	10
12902-000	05-02387	Outboard Aileron Bay Rib, LH #12	**$166.75**	1
12902-001	05-02393	Outboard Aileron Bay Rib, RH #12	**$178.85**	1
13022-002	05-02386	3/4 Rib, #10 and #11	**$126.75**	2
13022-002	05-02383	3/4 Rib, LH or RH #7	**$114.95**	1
13022-002	05-02384	3/4 Rib, LH or RH #8	**$139.75**	1
13022-005	05-02382	3/4 Rib. LH or RH #6	**$105.75**	1
13022-006	05-02385	3/4 Rib, #9 at strut point	**$183.85**	1
13042-000	05-02381	Inboard Aileron Bay Rib, LH #5	**$130.75**	1
13042-001	05-02392	Inboard Aileron Bay Rib, RH #5	**$129.75**	1
13052-002	05-02379	Full Rib, LH or RH #2	**$140.75**	1
13052-002	05-02380	Full Rib, #3 and #4	**$162.75**	2
13052-004	05-02378	Butt Rib, LH #1	**$156.75**	1
13052-004	05-02391	Butt Rib, RH #1	**$176.85**	1
15712-000	05-02390	Nose Rib at strut point	**$39.65**	1
16192-000	05-02377	Tip Nose Rib, LH	**$31.50**	1
16192-001	05-02395	Tip Nose Rib, RH	**$43.90**	1

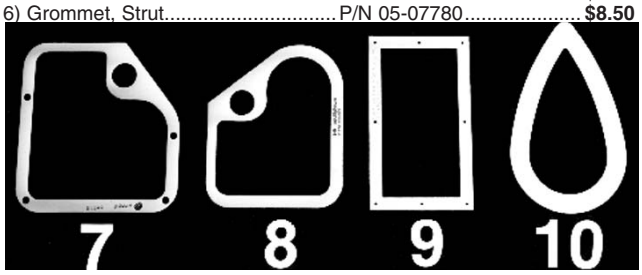
PA-18 150 HP.

Piper#	Our P/N	Description	Price	# Per Wing
10634-005	05-02396	Butt Rib, LH #1	**$227.95**	1
10634-007	05-02404	Butt Rib, RH #1	**$219.95**	1
10635-002	05-02397	Tank Bay Rib, #2 and #3	**$147.75**	2
10653-002	05-02398	3/4 Rib, LH #4	**$147.75**	1
10653-005	05-02405	3/4 Rib, RH #4	**$152.75**	1
10742-002	05-02407	Tip Rib, LH #16	**$160.75**	1
10742-003	05-02394	Tip Rip, RH #16	**$139.75**	1
12662-002	05-02389	Nose Rib	**$27.75**	10
12902-000	05-02387	Outboard Aileron Bay Rib, LH #15	**$166.75**	1
12902-001	05-02393	Outboard Aileron Bay Rib, RH #15	**$114.95**	1
13022-002	05-02386	3/4 Rib, #10, #13 and #14	**$126.75**	3
13022-009	05-02385	3/4 Rib, LH or RH, #11	**$183.85**	1
13022-010	05-02403	3/4 Rib, LH or RH, #8	**$147.85**	1
13022-011	05-02386	3/4 Rib, LH or RH, #9 and #12	**$126.75**	2
13042-002	05-02402	3/4 Rib, LH #7	**$122.75**	1
13042-003	05-04857	3/4 Rib RH #7	**$121.75**	1
13042-003	05-04587	3/4 Rib, RH #7	**$16.55**	1
13052-007	05-02399	3/4 Rib, LH or RH, #5	**$163.75**	1
13052-009	05-02406	3/4 Rib, RH #6	**$180.75**	1
13052-010	05-02401	3/4 Rib, LH #6	**$133.75**	1
15712-000	05-02390	Nose Rib at strut point	**$39.65**	1
16192-000	05-02377	Tip Nose Rib, LH	**$31.50**	1
6192-001	05-02393	Tip Nose Rib, RH	**$178.85**	1

COMMON PIPER GROMMETS



1) Grommet, Tail ..... P/N 05-07750 ..... **$12.90**
2) Grommet ..... P/N 05-07755 ..... **$17.50**
3) Grommet ..... P/N 05-07765 ..... **$4.80**
4) Grommet ..... P/N 05-07770 ..... **$4.85**
5) Grommet, Inspection Plate (original Piper type: 80122-49)
P/N 05-07775 ..... **$8.50**
6) Grommet, Strut ..... P/N 05-07780 ..... **$8.50**



7) Grommet, Tail (used on PA-25 and later PA-18's)
P/N 05-07785 ..... **$31.50**
8) Grommet, Tail ..... P/N 05-07790 ..... **$10.50**
9) Grommet, Cover ..... P/N 05-07795 ..... **$11.85**
10) Grommet, Pulley Cover ..... P/N 05-07800 ..... **$11.50**

PIPER FABRIC REINFORCEMENTS



Model	Dimension	Part No.	Price
U60863-005	2"W x 4-1/2"L	05-07625	**$6.25**
U60863-003	2"W x 4-1/2"L	05-07635	**$2.40**
U60863-002	2"W x 4-1/2"L	05-07630	**$2.75**
U60481-000	2"W x 4-1/2"L	05-07620	**$4.55**
U60863-009	2"W x 2-1/2"L	05-07640	**$5.50**



J-3 FUEL VALVE

This J-3 fuel valve includes a steel handle for use with the original pushpull shut off control. this valve is a significant improvement over the original brass style fuel valve. The new valve has a stainless steel ball seated in an inert composite seat. This improved design eliminates the stiff operation and leaking around the shaft that the original design was prone to. PMA approved. P/N 05-00848 ..... **$162.75**



J-3/PA-11 THROTTLE CONTROL

FAA approved replacement throttle control.
P/N 05-03397 ..... **$440.00**

FLEXIBLE RUBBER BRAKE LINE



From brake master cylinder to copper lines on gear vee.
P/N 05-07530 ..... **$139.75**



OIL PRESSURE HOSE

Flexible oil pressure hose. Applicability: Piper J-3, PA-11, PA-14, PA-16, PA-18, PA-20, PA-22, PA-28. Length: 6-3/4". FAA/PMA approved. Supercedes part numbers 71061-000, 71061-00.
P/N 05-07360 ..... **$119.75**



WING TIP BOWS

Preformed wooden wing tip bows for use in all Piper Aircraft Models J-3 to PA-22. It is recommended to soak the wing tip bows in water before installation to avoid breakage. P/N 02-18500 ..... **$43.90/ea.**
Note: Wing tip bows can be shipped via UPS with an oversized package rate equal to the 30 Lb. rate.

AP

HEAVY DUTY MUFFLER



Heavy Duty Muffler STC/PMA
P/N 05-03475 ..... **$915.00**



PRE-HEAT SHROUD PA-18

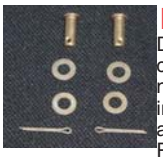
Pre-heat shroud PA-18 STC/PMA
P/N 05-03457..... **$349.00**

HEADER TANKS



Front: 05-03468 Rear: 05-03469 PA-18, PA-19 STC
Heater Tanks - Front .. 05-03468 ... **$357.00**
Heater tanks - Rear .... 05-03469 ... **$372.00**

PIPER DOOR HINGE CLEVIS PINS



Due to normal wear and lack of lube, the door hinge clevis pins should be replaced from time to time to maintain the proper operation of the doors. The set includes 2 clevis pins, 2 thick washers, 2 thin washers, and 2 cotter keys. All the hardware is FAA approved for Piper PA28, PA32, and PA34 aircraft.
P/N 05-03633 ..... **$8.50**

PIPER DOOR HINGE EYEBOLT SET



The eyebolts are probably the most neglected parts on the plane. They hardly ever get lubricated and due to their exposure to the elements, rust in the pivot point can prevent the door from closing properly and should be replaced from time to time as they wear. The set contains two of the proper eyebolts and detailed installation instructions. The hardware is FAA approved for Piper PA28, PA32, and PA34 aircraft.
Rear Door ..... P/N 05-03636 ..... **$29.95**
Front Door ..... P/N 05-03635 ..... **$28.95**

FOLDING JUMP SEATS



Folding Jump Seats - 170, 172, 172S, 175, 180, 180K, 182, 182R, 185, A185F STC/PMA

Description	Part No.	Price
Folding Jump Seats - right hand pair	05-03470	$1,668.00
Folding Jump Seats left & right hand pair	05-03472	$1,668.00

FOLDING FRONT SEAT KIT



Folding Front Seat Kit STC
P/N 05-03474 ..... **$532.00**

PIPER PA-34 EXTERIOR PASSENGER DOOR HANDLE



Piper PA-34 exterior passenger door handle. Cabin Door Handle (Plastic). Dimensions (WxLxH): 1 in. x 3 in. x 0.75 in.
P/N 05-12476..... **$20.50**

BUSHING WITH RETAINING RING FOR PIPER AIRCRAFT



05-04476

05-01764

COWL BUSHING R-RING MC69790-00 - Material that outlasts the original nylon or glass filled teflon materials. Used on most Piper Cherokee models. Includes the retaining ring (snap ring) . P/N 05-01764..... **$18.75**
COWL PLATE ASSEMBLY MC69791-000 - Stainless steel mounting plate with MC69790-00 teflon glass bushing and MC484-840 retaining ring. Upper cowl retaining part for most Piper Cherokee models.
P/N 05-04476..... **$36.50**

PIPER PA-28-181 ENGINE BAFFLES

Model No.	Description	Part No.	Price
AF63605-00	Baffle	05-12684	$27.50
AF85485-002	Baffle	05-12685	$179.75
AF85485-004	Baffle	05-12686	$269.95
AF85485-014	Baffle	05-12687	$179.75
AF85485-015	Baffle	05-12688	$167.75
AF85486-002	Baffle	05-12689	$464.00
AF85486-003	Baffle	05-12690	$464.00
AF85486-009	Baffle	05-12691	$18.80
AF85487-002	Baffle	05-12692	$493.00
AF85487-003	Baffle	05-12693	$360.00

PIPER 31 ENGINE BAFFLE

Model No.	Description	Part No.	Price
AF41606-13	Baffle	05-12679	$709.00

PIPER CABIN DOOR AND OVERHEAD TRIM REPLACEMENT HANDLES



Door Replacement Handles



Overhead Trim Replacement Handles

Piper no longer produces the trim handle, and an estimated 10% of 31,000 Pipers on the registry which utilize their handles. The OEM handles are a very weak link in the entire door assembly. Everything downstream of the handle is pretty secure. Therefore, they have improved the handle and are STC'd and PMA'd for certified aircraft. Please call or visit our website for model eligibility. Each replacement handle is sold as a complete assembly and everything required to complete the installation.
Piper Cabin Door Replacement Handle ..... P/N 05-04550 ..... **$325.00**
Piper overhead Trim Replacement Handle ..... P/N 05-04551 ..... **$326.00**

VENTED FUEL CAPS



Vented Fuel Caps J3 thru PA-22 STC .
P/N 05-03459 ..... **$107.75**

180HP FUEL CAP

180 Fuel Cap PA-12 thru PA-18 with 180HP Engine.
P/N 05-03458 ..... **$104.75**



UNDER SEAT BATTERY RACK



Under Seat Battery Rack PA 18 STC
P/N 05-03460 .... **$492.00**

REFUELING STEP



Refueling Step J3 thru PA-22 STC. Note: Priced and sold each. Image is for reference only. Does not come as a pair.
P/N 05-03462 .... **$143.75**

MAIN LANDING GEAR LONG STEP



Main landing gear Long Step J3 thru PA-19 STC
P/N 05-03461 ..... **$287.95**

WELD ON AIRCRAFT FLOAT FITTINGS



Weld on aircraft float fittings PA-12, -14, PN 05-03476 PA-18 PN 05-03477 STC
Float Fittings PA-12/14
P/N 05-03476..... **$912.00**
Float Fittings PA-18
P/N 05-03477..... **$695.00**

MAIN LANDING GEAR SAFETY CABLES



Main Landing Gear Safety Cables (All STC)

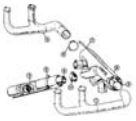
Standard Gear J-3, PA-11, PA-18, PA-19 PN 05-03463..... **$253.95**
3" Extension Gear..... PN 05-03464..... **$246.95**
Standard Gear PA-12, PA-14..... PN 05-03465..... **$252.95**
3" Extended Gear PA-12, PA-14 ..... PN 05-03466..... **$293.95**

AILERON HINGE FOR PIPER



Piper Eligibility PA-28-140,-150, -160, -180, -235; PA-28R-180,-200,-201,-201T; PA-28-181, -236, -201T; PA-28-181,-236, -201T; PA-32-260, -300; PA-32R-300; PA-32-RT-300, -300T; PA-34-200 P/N 05-04197 .... **$102.75 ea.**

PIPER J3 EXHAUST SYSTEM



New Manufactured, FAA/PMA Approved, Stainless Steel Original Design, Exhaust Headers and Muffler with Safety Bail already installed.
1-Left exhaust stack..... P/N 05-07475 .. **$722.00**
2- Right exhaust stack ..... P/N 05-07480 .. **$722.00**
3- Muffler assy, less shroud..... P/N 05-07485 .. **$731.00**
4- Tailpipe..... P/N 05-07490 .. **$273.95**
5- Tailpipe Shroud..... P/N 05-07495 .. **$214.95**
6- Muffler Shroud..... P/N 05-07505 .. **$412.00**
7- Slide Clip..... P/N 05-07510 .... **$53.75**
8- Muffler stack connecting clamp (2 req.) ..... P/N 05-07515 .... **$32.50**
9- Tailpipe brace clamp..... P/N 05-07520 .... **$36.85**
10- Muffler clamp..... P/N 05-07525 .... **$32.50**

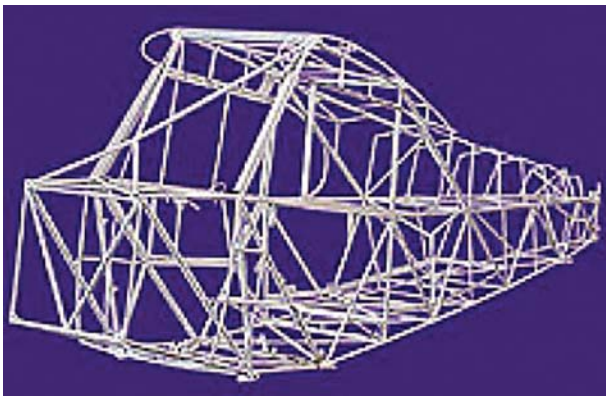
PIPER DOOR LATCH CLEVIS PIN



Restore solid latching of the doors to the fuselage Due to normal wear and lack of lube, the door latch clevis pin should be replaced from time to time to maintain the proper operation of the door. The set includes 1 clevis pin and 1 cotter key. All the hardware is FAA approved for Piper PA28, PA32, and PA34 aircraft. P/N 05-04644..... **$5.95**

Prices Subject to Change Without Notice

PIPER SUPERCUB PARTS



COMPLETE SUPERCUB FUSELAGE

Replacement fuselage for the PA 18 Supercub incorporating the latest improvements and mods. The fuselage tubes and fittings are all 4130 steel and the standard mods are: "X" reinforcement in the top deck, extended baggage with "dog leg" bulkhead reversed, standard baggage area increased to 180 lbs. capacity, removable rear seat bar, reinforcement sleeves under stabilizer attach bracket, modernized tabs and attach brackets. Completely FAA approved under PMA and STC. Excellent workmanship.

P/N 05-00466 ..... **$15,611.00**

Shipped freight collect from factory in Alaska.
Add $500 crate fee.



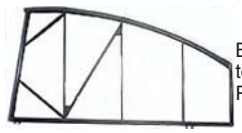
PA18 UPPER DOOR

Constructed using all square tubing. FAA approved.
P/N 05-00459 ..... **$557.00**



PA18 LOWER DOOR

Latching mechanism greatly improved over original. Utilizes push rods instead of wires. Powder coated.
P/N 05-00460 ..... **$590.00**



PA18 STABILIZER

Bushings installed, powder coated and ready to cover. FAA-PMA approved.
P/N 05-00461 ..... **$632.00**



PA18 ELEVATOR

Bushings installed, powder coated and ready to cover. FAA-PMA approved.
P/N 05-00462 ..... **$527.00**



PA18 RUDDER

Bushings installed, powder coated and ready to cover. FAA-PMA approved.
P/N 05-00463 ..... **$640.00**



PA18 VERTICAL FIN

Bushings installed, powder coated and ready to cover. FAA-PMA approved.
P/N 05-00464 ..... **$430.00**

$10 crate charge for all items above



PA18 TAILPOST

Bushings installed, powder coated and ready to cover. FAA-PMA approved.
P/N 05-00465 ..... **$142.75**



FLAP HINGE-OUTBOARD

For fabric wing piper models, powder coated. FAA-PMA approved.
P/N 05-00480 ..... **$91.75**



PA 18 FUSELAGE HANDLE

Oversized lifting handle can be used with winter gloves, 8" long with 2" clearance. Weld on, FAA-PMA approved.
P/N 05-00477 ..... **$37.90**



AILERON HINGE

For fabric wing piper models. Powder coated. FAA-PMA approved.
P/N 05-00478 ..... **$67.75**

PA-18 8.5' SPAR BLANK

P/N 05-03596 ..... **$75.75**

SEALED LIFT STRUTS
WITH HEAVY DUTY FORKS



FAA-PMA - complies with all A.D.'s - high strength struts will not fail under wind or snow loads. $20 CRATE CHARGE FOR LIFT STRUTS

Description	Part Number	Price
PA 18 Front Lift Strut	05-00485	**$543.00**
PA 18 Heavy Duty Rear Lift Strut	05-00486	**$644.00**
PA 12-14 Front Lift Strut	05-00487	**$553.00**
PA 12-14 High Strength Rear Lift Strut	05-00488	**$553.00**
PA18 Rear Lift Strut	05-03868	**$543.00**
J-3 Front Strut	05-04931	**$715.00**
J-3 Rear Strut	05-04932	**$582.00**



PA18 ARCHES FOR FABRIC FORMERS

Complete set of 6 "turtle deck" arches precut to correct size, weld on as is. FAA-PMA
P/N 04-00469 ..... **per set $303.00**



PA 18 WING FITTINGS

Weld on, FAA-PMA approved.
Front left side ..... P/N 05-00470 ..... **$129.75**
Front right side ..... P/N 05-00471 ..... **$129.75**
Rear left side ..... P/N 05-00472 ..... **$36.85**
Rear right side ..... P/N 05-00473 ..... **$37.75**



PA 18 REAR GEAR FITTING

Weld on, FAA-PMA approved.
Left side ..... P/N 05-00474 ..... **$187.75**
Right side ..... P/N 05-00475 ..... **$171.90**



PA 18 FRONT GEAR FITTING

Weld on, FAA-PMA approved. Fits right or left side.
P/N 05-00476 ..... **$181.90**



WELD-ON FLOAT FITTING

Weld-on float fitting for all models Piper Supercub, PA18. FAA approved by STC. Weighs less than similar fittings. $610.00 for a pair.
P/N 05-02529 ..... **$610.00**

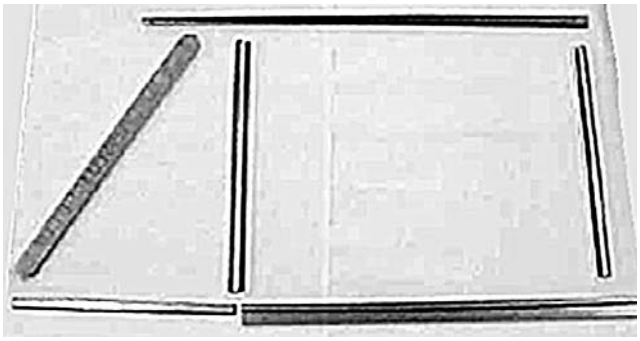
PA-18 125 135 150 EXHAUST SYSTEM



PA-18 Exhaust Systems - FAA/PMA Approved
PA-18 125, 135, 150 hp. Exhaust System

Description	Part No.	Price
Muffler and Shroud Assy. (Pictured)	05-07560	**$1,770.00**
Muffler Clamp, SN 1-3013 (2 Req.)	05-07515	**$32.50**
Muffler Clamp, SN 3014 and up (2 Req.)	05-07570	**$32.50**
Muffler Shroud 150HP.	05-07585	**$421.00**
Front Shroud Assy.	05-07590	**$222.95**
Front Cylinders Stack Assy.	05-07595	**$772.00**
Rear Cylinders Stack Assy.	05-07605	**$802.00**
Clip (for 12436-000/-010)	05-07610	**$40.65**
Clip (for 14239-000)	05-07615	**$47.50**

AP



FRONT LOWER WINDOW CHANNEL
Left Side ..... FAA-PMA..... P/N 05-00491 ..... **$21.50**

AFT LOWER WINDOW CHANNEL
Left Side ..... FAA-PMA..... P/N 05-00492 ..... **$77.95**

FRONT WINDOW CHANNEL
Left Side ..... FAA-PMA..... P/N 05-00493 ..... **$56.75**

UPPER WINDOW FORMER
Left Side ..... FAA-PMA..... P/N 05-00494 ..... **$56.75**

FORWARD VERTICAL WINDOW CHANNEL
Left Side ..... FAA-PMA..... P/N 05-00495 ..... **$30.55**

AFT VERTICAL WINDOW CHANNEL
Left Side ..... FAA-PMA..... P/N 05-00496 ..... **$20.50**

PA-18 FAIRINGS



Description	A/C Model	Part No.	Price
Piper Upper Wing Root Fairing	Piper Pa-14, Pa-15, Pa-16, Pa-17, Pa-18, Pa-20, Pa-22	05-14961	$61.75
Piper Bottom Front Wing Root Fairing - Left	Piper Pa-18	05-07572	$51.75
Piper Bottom Front Wing Root Fairing - Right	Piper Pa-18	05-07573	$51.75
Piper Rear Bottom Fairing - Left	Piper Pa-18	05-07574	$90.75
Piper Rear Bottom Fairing - Right	Piper Pa-18	05-07576	$53.75
Piper Wing Root Fairing - Left	Piper Pa-18	05-07579	$51.75
Piper Wing Root Fairing - Right	Piper Pa-18	05-07581	$51.75
Piper Fairing Attachment Plate - Left	Piper Pa-18	05-07582	$64.75
Piper Fairing Attachment Plate - Right	Piper Pa-18	05-07583	$83.85

ADDITIONAL FAA-PMA PARTS FOR PA18 SUPERCUB

Description	Part No.	Price
Piper hinge - half	05-00510	$12.50
Interior tab	05-00511	$5.95
Pulley bracket	05-00512	$15.95
Pulley bracket	05-00513	$15.95
Forward elevator pulley half	05-00514	$26.50
Flap lever hinge - weld on fuselage or seat	05-00516	$40.95
Shock strut	05-00518	$187.99
Fuel selector bracket	05-00520	$27.55
Tailspring bracket	05-00521	$36.85
Tailspring mount pad - forward	05-00522	$35.55
Aileron pulley bracket	05-00523	$10.80
Floorboard tabs	05-00525	$6.90
Cabane Vee	05-00526	$287.95
Elevator horn	05-00530	$33.85
Rudder horn blank	05-00531	$50.95
RH rudder pedal assy.	05-00532	$137.75
LH rudder pedal assy.	05-00533	$136.75
RH brake pedal assy.	05-00534	$180.75
LH brake pedal assy.	05-00535	$180.75
3/8" U Channel - 6' Lengths	05-04564	$10.80
Exhaust stack rear - PA18 150 hp	05-00543	$997.00
Muffler assy. - PA18 150 hp	05-00544	$846.00



PA18 LANDING GEAR

Specify right or left side.
11/4 axle, heavy duty; FAA-PMA
P/N 05-00489 ..... **$875.00**
11/2 axle, heavy duty; FAA-PMA
LEFT P/N 05-00490 ..... **$889.00**
1-1/2 Axle, Heavy Duty, FAA/PMA
RIGHT ..... P/N 05-11813 ..... **$888.00**
LANDING GEAR AVAILABLE – CALL FOR QUOTE!



REAR TORQUE TUBE SUPPORT & BEARING

Weld on; FAA-PMA ..... P/N 05-00497 ..... **$183.85**



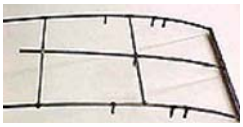
FRONT TORQUE TUBE SUPPORT & BEARING

Weld on; FAA-PMA..... P/N 05-00498 ..... **$235.95**



HEAVY DUTY 5/8 LIFT STRUT FORK

Rolled threads, stainless, heat treated.
P/N 05-00501 ..... **$126.75**



TOP DECK SUPERSTRUCTURE

P/N 05-00502 ..... **$722.00**
Add $30 crate charge



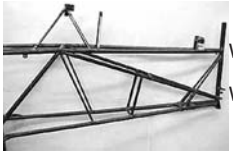
JACK SCREW TOWER

P/N 05-00503 ..... **$244.95**
$20 CRATE FEE



MUFFLER BAIL U452-093

Muffler Bail Welded inside muffler outlet to guard against Flame Tube failure and obstruction of exhaust outlet.
P/N 05-02150 ..... **$41.70**



TAIL REPAIR SECTION - 4'

Without Jack screw tower.
P/N 05-00504 ..... **$2,821.00**
With Jack screw tower
P/N 05-00505 ..... **$1,454.00**
$20 CRATE FEE



FUEL QUANTITY TRANSMITTER FOR PIPER AIRCRAFT

McFarlane fuel quantity transmitters are a direct replacements for originally installed Stewart Warner type fuel quantity transmitters. Eliminates the need for expensive transmitter conversion kits that require replacement of fuel gauges and wiring. These transmitters are engineered to be compatible with the original fuel quantity gauge and wiring which uses time proven technology and reliability.
Each transmitter is manufactured using the new Stewart Warner "thick film ceramic" resistor technology. The benefits are longer life and increased accuracy. All components are thoroughly tested to ensure reliable operation.
NOTE: Does NOT include screw/seal assembly or gasket (see accessories to order separately).

MC68101-02 kit ..... P/N 05-04874 ..... **$340.00**
Accessories - See our website for application information.
Transmitter MC68101-02..... P/N 05-04870 ..... **$309.00**
Gasket MC461-931..... P/N 05-04871 ..... **$13.60**
GA Gasket SKET MC462-021..... P/N 05-04872 ..... **$10.99**
Screw Seal Assy. MC1802..... P/N 05-04873 ..... **$4.70**

Prices Subject to Change Without Notice

PIPER J3 STYLE PARTS

These experimental Piper J3 like style parts will help you achieve the pre or post war appearance you are looking for without taking away from the performance. ***NOT FAA APPROVED.***

Description	Part No.	Price
Landing Gear - Left - 3/8" Bolts	05-12281	**$356.00**
Landing Gear - Right - 3/8" Bolts	05-12282	**$356.00**
Hub Caps - Sold as Pair	05-12283	**$29.75**
Tail Spring 1-1/4"	05-12284	**$95.75**
Shock Cord Install Tool	05-12285	**$119.75**
Cabane Vee Assembly - 5/16" Bolts	05-12286	**$166.75**
Cabane Vee Assembly - 1/4" Bolts	05-12287	**$155.75**
Axle Nut 1-1/4"	05-12288	**$13.50**
Step	05-12289	**$79.85**
Shock Strut Assembly - 1-Long & 1-Short	05-12290	**$298.50**
Rudder	05-12291	**$330.00**
Trim Crank	05-12293	**$22.75**
Escutcheon	05-12294	**$12.85**
Escutcheon Spring	05-12295	**$7.50**
Bellcrank Assembly with Tube	05-12296	**$240.95**
Rudder Pedal Kit - 4 pieces	05-12297	**$232.95**
Rudder Return Spring - 1 Spring	05-12298	**$8.50**
Rudder Pedal Floor Plate - 1 Plate	05-12299	**$2.75**
Rudder Pedal Clamp - 1 Clamp	05-12300	**$5.95**
Torque Tube	05-12301	**$416.00**
Control Stick Connector	05-12302	**$99.00**
Stick Assembly with Socket	05-12303	**$158.85**
Throttle Handle Set with Interconnect	05-12304	**$89.75**

Description	Part No.	Price
Throttle - 1 Throttle	05-12305	**$32.50**
Throttle Interconnect - 1 Interconnect	05-12306	**$46.50**
Throttle Knob - 1 Knob	05-12307	**$8.90**
Fuel On/Off Well	05-12308	**$31.50**
Carb Heat On/Off Well	05-12309	**$31.50**
Trim Cover Plate	05-12310	**$31.50**
Cabin Heat Air Box	05-12311	**$68.75**
Floorboards - Pair	05-12312	**$99.65**
Rear Seat Cross Tube	05-12313	**$69.75**
Front Seat Frame - Standard	05-12314	**$353.00**
Front Seat Frame - Heavy Duty	05-12315	**$375.00**
Brake Pedal Kit - 2 pieces	05-12316	**$181.75**
Rudder Pedal Floor Plate - 1 Plate	05-12299	**$2.75**
Rudder Pedal Clamp - 1 Clamp	05-12300	**$5.95**
Exhaust Stack - Left	05-12317	**$232.95**
Exhaust Stack - Right	05-12318	**$232.95**
A-65 to C-85 Engine Mount	05-12319	**$389.00**
Nose Cowl Ram Air Box	05-12321	**$109.85**
C-75 - O-200 Generator Cover Plate	05-12322	**$36.00**
C-75 - O-200 Starter Cover Plate	05-12323	**$36.00**
Fiberglass Nose Bowl Set	05-12324	**$208.95**
Continental Lifting Eye	05-12325	**$12.85**

(FAA/PMA APPROVED)

LUSCOMBE 8E & 8F EXHAUST STACKS



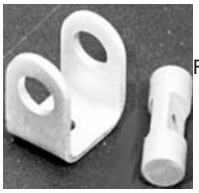
Left Hand Exhaust Stack
P/N 05-07805 ..... **$643.00**
Right Hand Exhaust Stack
P/N 05-07810 ..... **$652.00**

LUSCOMBE CABIN HEAT SHROUD



8E & 8F AND 8A-2pc Stacks
P/N 05-07820..... **$341.00**

CARBURETOR & CABIN HEAT SHROUD



For Luscombe 8A..... P/N 05-08115..... **$392.00**

RUDDER & ELEVATOR HINGE PIN & BRACKET

Hinge Pin.....P/N 05-07825 ..... **$30.50**
Hinge Pin Bracket.....P/N 05-07830 ..... **$25.50**

GAS CAP & LANDING LIGHT LENS



Luscombe Gas Cap ..... P/N 05-07835 .... **$163.75**
Landing Light Lens..... P/N 05-07840 ..... **$62.75**
Landing Light Lens..... P/N 05-07845 ..... **$62.75**

VERTICAL FIN FRONT ATTACH



Fitting.....P/N 05-07985 ..... **$257.95**

Note: This fitting is welded 4130 steel and complies with all provisions of A.D. 79-25-05. This fitting is required only on those Luscombes with the "round tip" vertical stabilizer.

TAILWHEEL LEAF SPRINGS



Complete Assembly
P/N 06-14600.. **$225.95**
Main Leaf Only
P/N 06-14700.... **$56.75**



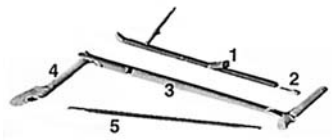
ALL-ALUMINUM LANDING GEAR FAIRING
FOR STANDARD GEAR

Left ..... P/N 05-07865..... **$190.75**
Right..... P/N 05-07870..... **$190.75**

FOR SILFLEX GEAR

Left ..... P/N 05-07875..... **$266.95**
Right..... P/N 05-07880..... **$266.95**

FAA/PMA LANDING GEAR PARTS
(FOR STANDARD GEARS)



Left Hand Jack Strut (1)
P/N 05-07885 ..... **$623.00**
Right Hand Jack Strut (1)
P/N 05-07890 ..... **$618.00**
Fork End (S-9) (2)
P/N 05-07895 ..... **$72.80**
Left Hand Lower Leg (3)
P/N 05-07900 ..... **$959.00**
Right Hand Lower Leg (3)..... P/N 05-07905 ..... **$959.00**
Left Hand Upper Arm (4)..... P/N 05-07910 ..... **$1,240.00**
Right Hand Upper Arm (4) ..... P/N 05-07915 ..... **$1,383.00**
Tie Rod without fittings, 361/4" long (5) P/N 05-07920 ..... **$347.00**
Left Hand Jack Strut (Silflex)..... P/N 05-07930 ..... **$595.00**

FAA/PMA WING PARTS

Left hand aileron..... P/N 05-00452 ..... **$3,131.00**
Right hand aileron ..... P/N 05-00453 ..... **$3,129.00**
Left hand lift strut (metal wing)..... P/N 05-00454 ..... **$1,944.00**
Right hand lift strut (metal wing) ..... P/N 05-00455 ..... **$1,944.00**
Carry-thru spar (front or rear)..... P/N 05-00456 ..... **$436.00**

FAA/PMA TAIL SECTION PARTS

Fin, square tip..... P/N 05-07940 ..... **$2,271.00**
Rudder, square tip..... P/N 05-07945 ..... **$1,475.00**
Rudder Horn for square tip rudder..... P/N 05-07950 ..... **$107.75**
Tailwheel Leaf Spring Assembly ..... P/N 06-14600 ..... **$225.95**
Main Leaf only..... P/N 06-14700 ..... **$56.75**
Rudder & Elevator Hinge Pin ..... P/N 05-07970 ..... **$31.50**
Rudder & Elevator Hinge Pin Bracket P/N 05-07975 ..... **$22.75**

LUSCOMBE PARTS

(FAA/PMA APPROVED)

AP

ALL ALUMINUM COWLING



Nose Cowl ..... P/N 05-07990 ..... **$1,257.00**
Bottom Cowl ..... P/N 05-07995 ..... **$773.00**
Top Cowl ..... P/N 05-08000 ..... **$389.00**
L/H Cowl ..... P/N 05-08005 ..... **$176.75**
R/H Cowl ..... P/N 05-08010 ..... **$176.75**

Note: Cowling is trimmed oversize requiring a finish trim for each individual airplane.

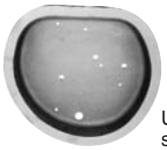
REPLICA CLASSIC LUSCOMBE WHEEL PANTS



These fiberglass wheel fairings are a copy of the classic metal fairings used on many classic Luscombe and other Aircraft. The streamline ridges on each side of the fairing make these more stylish than the rest! Not FAA approved. No cut out, or mounting hardware included. Length: 30". Width: 10-1/2". Height: 13-3/4". Wheel Cut Out Dimensions: 19" X 8-1/2". Weight: 3.75 Lbs.

P/N 05-11834 ..... **$375.00**

FIREWALL DISHPAN



Used on Luscombe with an electrical system.

P/N 05-08015 ..... **$505.00**

FIREWALL TO ENGINE MOUNT RUBBER BUSHING



6 ea. required per aircraft.

P/N 05-08020 ..... **$39.70**

LUSCOMBE ENGINE MOUNT



For all Continental powered Luscombe, A-65 thru C-90

P/N 05-08025 ..... **$1,471.00**

MANUALS



8A Owner's Manual
P/N 13-00230 ..... **$5.55**
8E Owner's Manual
P/N 13-00235 ..... **$5.70**
8 Series Master Parts List, illustrated
P/N 13-00240 ..... **$21.55**
Service Manual, early fabric wings
P/N 13-00245 ..... **$12.90**

BLANK INSTRUMENT PANEL



P/N 05-08030 ..... **$487.00**

CONTROL CABLES
(GALVANIZED)



Brake Cable Assembly ..... P/N 05-08035 ..... **$88.75**
Elevator Cable, SN 1-4199 ..... P/N 05-08040 ..... **$133.75**
Elevator Cable, SN 4200 and up ..... P/N 05-08045 ..... **$141.75**
Left Hand Rudder Cable ..... P/N 05-08050 ..... **$123.75**
Right Hand Rudder Cable ..... P/N 05-08055 ..... **$123.75**
Stick to Aileron Cable ..... P/N 05-08065 ..... **$144.80**
Left Hand or Right Hand Aileron Balance Cable.
16 ft., 7/8 in. ..... P/N 05-08070 ..... **$128.75**
Left Hand or Right Hand Aileron Balance Cable.
15 ft., 10-3/4 in. ..... P/N 05-08075 ..... **$114.95**
Forward Trim Cable ..... P/N 05-08080 ..... **$133.75**
Aft Trim Cable Assembly (2 req'd) ..... P/N 05-08085 ..... **$128.75**

8A EXHAUST COMPONENTS
FITS ALL A-65 CONTINENTAL ENGINES



Rear Crossover ..... P/N 05-08090 ..... **$340.00**
Left Hand Stack ..... P/N 05-08095 ..... **$376.00**
Right Hand Stack ..... P/N 05-08100 ..... **$339.00**
Exhaust Clamp ..... P/N 05-08105 ..... **$51.75**
Complete Assembly (includes 2 exhaust clamps)
P/N 05-08110 ..... **$1,023.00**

LUSCOMBE 8A CARBURETOR &



CABIN HEAT SHROUD

Fits on U8627-5 Stack ..... P/N 05-08115 ..... **$392.00**

Prices Subject to Change Without Notice

STINSON PARTS

(TYPE CERTIFICATE APPROVED)

EXHAUST SYSTEM



Muffler

SN 1-3109 ..... P/N 05-08120 ..... **$858.00**
SN 3110 and up ..... P/N 05-08125 ..... **$822.00**

Perforated Tube

SN 1-3109 ..... P/N 05-08130 ..... **$210.95**

Perforated Tube

SN 3110 and up ..... P/N 05-08135 ..... **$204.95**

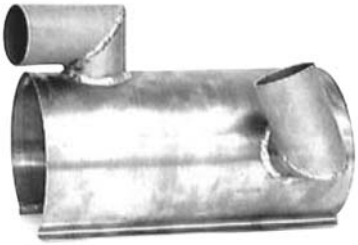
Tailpipe, Left Hand

SN 112-3109 ..... P/N 05-08140 ..... **$277.95**
SN 3110 and up ..... P/N 05-08145 ..... **$325.00**

Tailpipe, Right Hand

SN 112-3109 ..... P/N 05-08150 ..... **$294.95**
SN 3110 and up ..... P/N 05-08155 ..... **$257.95**

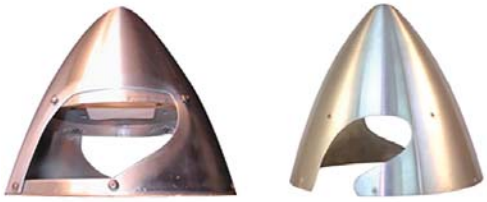
HEAT SHROUDS



Carb. Heat Shroud ..... P/N 05-08165 ... **$396.00**
Cabin Heat Shroud, For SN 744 & up ..... P/N 05-08170 ... **$269.95**
Shroud Clip ..... P/N 05-08175 ..... **$53.85**

COMPLETE SPINNER ASSEMBLIES

READY FOR INSTALLATION FOR STINSON WITH WOOD OR METAL PROPELLERS.



Wood Propeller Spinner Assembly ..... P/N 05-08180 ..... **$698.00**
Metal Propeller Spinner Assembly ..... P/N 05-08185 ..... **$731.00**

CUFF AIR INDUCT

For 108, 108-1, 108-2, 150 hp. (SN 1-2249)
P/N 05-08190 ..... **$139.75**
For 108-2, 108-3, 165 hp. (SN 1-2249)
P/N 05-08195 ..... **$135.75**

FUEL GAUGE & SENDER

DIRECT REPLACEMENT FOR ORIGINAL AC GAUGE AND SENDER



Gauge ..... P/N 05-08200 ..... **$190.75**
Sender .. P/N 05-08205 ..... **$327.00**



RUDDER ARM

P/N 05-08210 ..... **$121.75**



CARBURETOR AIR FILTER

For Franklin 150-165 hp. Stinson 108 Series ..... P/N 05-08215 ..... **$82.75**

Leading Edge Slat for all 108 Series ..... P/N 05-08220 ..... **$360.00**
Leading Light Lens ..... P/N 05-08225 ..... **$59.75**

STINSON MANUALS



108 Series Parts Catalog ..... P/N 05-08230 ..... **$24.50**
General Service Manual ..... P/N 05-08235 ..... **$44.95**
Service Bulletins and Letters ..... P/N 05-08240 ..... **$26.50**
Stinson Specs, ADs and STCs ..... P/N 05-08245 ..... **$11.50**
108 CAA Operating Limits ..... P/N 05-08250 ..... **$6.50**
108-1 CAA Operating Limits ..... P/N 05-08255 ..... **$8.99**
108-2 CAA Operating Limits ..... P/N 05-08265 ..... **$5.50**
108-3 CAA Operating Limits ..... P/N 05-08270 ..... **$6.90**
108-1 Owner's Manual ..... P/N 05-08275 ..... **$14.95**
108-2 Owner's Manual ..... P/N 05-08280 ..... **$15.95**
108-3 Owner's Manual ..... P/N 05-08285 ..... **$14.50**
108-1 Seaplane Operating Limits ..... P/N 05-08290 ..... **$9.50**
108-2 Seaplane Operating Limits ..... P/N 05-08295 ..... **$6.90**
108-3 Seaplane Operating Limits ..... P/N 05-08300 ..... **$7.95**
108 Ski-Plane Supplement ..... P/N 05-08305 ..... **$2.02**
108-1 Ski-Plane Supplement ..... P/N 05-08310 ..... **$2.00**
Appendix A Supplement ..... P/N 05-08315 ..... **$1.80**
Stinson Story of Aircraft Progress ..... P/N 05-08320 ..... **$21.50**
Stinson Time-Speed-Distance Computer ..... P/N 05-08325 ..... **$13.50**
Stinson Computer Instructions ..... P/N 05-08330 ..... **$7.95**

AP

(TYPE CERTIFICATE APPROVED)

ALUMINUM NOSE COWL



Applicable to 108 through 108-3 series Stinsons.

Nose Cowl	P/N 05-08335	**$1,027.00**
Bottom Cowl	P/N 05-00086	**$1,672.00**
Left side Cowl	P/N 05-00087	**$754.00**
Right side Cowl	P/N 05-00088	**$755.00**



LANDING GEAR FAIRINGS

Left Fairing	P/N 05-08340	**$293.95**
Right Fairing	P/N 05-08345	**$293.95**



FUSELAGE TO LANDING GEAR FILLETS

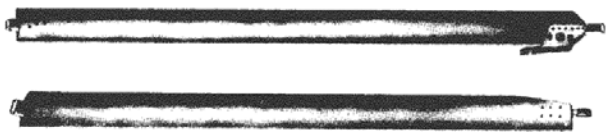
Left	P/N 05-08350	**$411.00**
Right	P/N 05-08355	**$411.00**

ENGINE COWL LEVER ASSEMBLY



Cowl Fastener Assembly	P/N 05-08365	**$81.90**
Cowl Fastener Pin	P/N 05-08370	**$1.15**
Cowl Fastener Receptacle	P/N 05-08375	**$3.70**
Receptacle Cup	P/N 05-08380	**$25.50**

WING LIFT STRUTS



Front Strut	P/N 05-08385	**$1,527.00**
Rear Strut	P/N 05-08390	**$1,226.00**



LANDING LIGHT LENS

P/N 05-08225 ..... **$59.75**

PITOT TUBE



P/N 05-08395 ..... **$242.95**



CONTROL SURFACE BEARING

P/N 05-08400 ..... **$33.60**

CONTROL CABLES

Description	*No. Req'd*	*P/N*	*Price*
Aileron Idler Cable	2	P/N 05-08405	**$106.80**
Aileron Control Cable	2	P/N 05-08410	**$94.75**
Flap Control Cable	2	P/N 05-08415	**$96.75**
Rudder Cable—1946, 1947	2	P/N 05-08420	**$107.75**
Rudder Cable, 1948	2	P/N 05-08425	**$124.75**
Aileron Idler Cable (in fuselage)	1	P/N 05-08430	**$52.90**
Control Column Cable, Left Half	1	P/N 05-08435	**$137.75**
Control Column Cable, Right Half	1	P/N 05-08440	**$136.75**
"Up" Elevator Cable	1	P/N 05-08445	**$78.75**
"Down" Elevator Cable	1	P/N 05-08450	**$78.75**
Upper Flap Control Cable (in fuselage)	1	P/N 05-08455	**$73.75**
Elevator Tab Control Cable, SN 1 thru 2249	1	P/N 05-08465	**$74.75**
Elevator Tab Control Cable, SN 2250 and up	1	P/N 05-08470	**$85.75**
Rudder Trim Cable, SN 2250 and up	2	P/N 05-08475	**$47.70**
Rudder Trim Driver Cable, SN 2250 and up	1	P/N 05-08480	**$67.75**



STRUT FILLETS

Rear Lift Strut Upper Fillet
- Left P/N 05-08485 ..... **$145.85 ea.**
- Right P/N 05-08490 ..... **$168.75 ea.**

Forward Lift Strut Upper Fillet
- Left P/N 05-08495 ..... **$168.75 ea.**
- Right P/N 05-08500 ..... **$79.00 ea.**

Lift Strut, Lower Fillet, left.
- P/N 05-08505 ..... **$171.00 ea.**

Lift Strut, Lower Fillet, right
- P/N 05-08510 ..... **$171.00 ea.**

RIBS

FAA/PMA'd



Description	Models	OEM P/Ns	Part No.	Price
Main Wing Rib	Most 7 &11 Series	5-142	05-06069	**$133.90**
Main Wing Rib	8GCBC	5-376	05-06123	**$105.95**
Main Wing Rib	8kcab	5-357L (left)	05-06118	**$80.75**
		5-357R (right)	05-06117	**$49.90**
Wing Tip Rib	Most 7 &11 Series	5-143	05-06070	**$105.75**
Aileron Bay Rib	Most 7 &11 Series	5-181	05-06097	**$129.75**
Aileron Bay Rib	8KCAB	2-1978L (left)	05-06253	**$27.95**
		2-1978R (right)	05-05254	**$538.00**
Aileron Rib Inboard	8GCBC	5-377R (right)	05-06255	**$152.75**
Aileron Bay Rib	8GCBC	5-374	05-06122	**$129.95**
		5-375	05-06256	**$68.99**
Aileron Flap Rib - Inside	Most 7, 8 & 11 Series	3-445	05-06257	**$19.50**
Aileron Flap Rib - End	Most 7, 8 & 11 Series	3-446	05-06258	**$34.50**
Flap Bay Rib	8GCBC	5-373	05-06259	**$68.99**
Flap Bay Support Rib	8GCBC	5-378 (left)	05-06260	**$78.99**
		5-378 (right)	05-06261	**$78.99**
Nose Rib, Tank Area	7ECA, 7GCBC, 7GCAA, 7KCAB, 8GCBC	3-1516	05-05802	**$41.00**
Wing Tip Ribs w/Strip	7EC thru 7KCAB	4-1030 (left)	05-05876	**$240.95**
		4-1030 (right)	05-05877	**$280.95**
Aileron and Flap Rib	Most 7, 8 & 11 Series	3-445	05-06257	**$19.50**
Rib - Trailing Tank Area	8KCAB	4-1527	05-06262	**$26.55**
Butt Rib	8KCAB	5-365 (left)	05-06119	**$188.75**
		5-365 (right)	05-06120	**$219.95**
Butt Rib	Most 7 & 11 Series	7-445L (left)	05-06169	**$126.90**
		7-445R (right)	05-06170	**$135.90**
Rib Assy. Butt Rib (wing with wing tank)	Most 7 & 11 Series	7-791L (left)	05-06220	**$237.95**
		7-791R (right)	05-06221	**$237.95**
Rib Replacement Sections for 5-142				
Rear Section	Most 7 &11 Series	5-185-1	05-06098	**$37.75**
Nose Section	Most 7 &11 Series	5-185-2	05-06099	**$48.95**
Rear Section, w/support, same as 5-185-1, includes 1-8875 support	Most 7 &11 Series	5-185-5	05-06101	**$86.75**

Other Aeronca ribs are available. Please call for availability and price for your specific needs!



RIB COMPONENTS

FAA/PMA'd

Description	Models	OEM P/Ns	Part No.	Price
Rib Reinforcement - Flap Bay	7GCB, 7GCBA, 7GCBC	2-1590 (left)	05-06263	**$21.50**
		2-1590 (right)	05-06264	**$21.50**
		2-1591 (left)	05-06265	**$21.50**
		2-1591 (right)	05-06266	**$21.50**
Rib Reinforcement - Flap Inboard Forward	7GCB, 7GCBA, 7GCBC	2-1598	05-06267	**$16.90**
Rib Reinforcement - Flap Inboard Aft	7GCB, 7GCBA, 7GCBC	2-1599	05-06268	**$15.50**
Rib Stiffener	Most 7 & 11 Series	2-699	05-05691	**$33.70**

WING TIPS

FAA/PMA'd

Description	Models	OEM P/Ns	Part No.	Price
Wing Tips - Fiberglass	7EC, 7GC, 7GCA, 7FC, 7HC,7JC, 7GCB, 7GCBC, 7KC, 7ECA, 7GCAA	5-267L (left)	05-06270	**$279.95**
Wing Tips - Fiberglass	8GCBC	7-1480L (left)	05-06271	**$268.95**
		7-1480R (right)	05-06164	**$268.95**
Wing Tip Bow - Metal	7AC, 7BCM, 7CCM, 7DC, 7EC, 7FC, 11AC, 11B, 11C	7-440L (left)	05-06166	**$250.95**
		7-440R (right)	05-06167	**$286.95**



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AERONCA/BELLANCA REPLACEMENT PARTS

WOOD WING SPARS, FITTINGS & COMPONENTS ALL FAA/PMA'D

For wood spar A.D. inspection use our 18" or 36" ProVision Fiber Optic Scopes.

Description	Models	OEM P/Ns	Part No.	Price
Front Spar L/R Rear Spar L/R	7AC, 7B, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7ACA, 11AC, 11B, 11C (Spars are used with metal wingtip bow only)	5-146L (left front)	05-06071	**$948.00**
		5-146R (right front)	05-06072	**$959.00**
		5-147L (left rear)	05-06073	**$844.00**
		5-147R (right rear)	05-06074	**$844.00**
		5-262R (right front)	05-06106	**$992.00**
		5-263R (right rear)	05-06108	**$993.00**
Rear Spar L/R Front Spar L/R	7HC, 7GCB, 7GCBC	5-270L (left rear)	05-06111	**$993.00**
		5-270R (right rear)	05-06112	**$745.00**
		5-271L (left front)	05-06113	**$994.00**
		5-271R (right front)	05-06114	**$993.00**
Front Spar Attach Fitting	8KCAB	2-1969	05-06272	**$44.95**
Front Spar Root Fitting	8KCAB	1-9878	05-06273	**$17.70**
Rear Spar Root Fitting	All Models	2-703	05-05695	**$98.50**
Wing Root Drag Wire Lug	Most 7, 8, & 11 Series	1-2299	05-05389	**$16.95**
Wood Spar Nails	All Models	114	05-06274	**$0.06 /lb.**

**** Pricing and availability of spars is highly dependent upon price and availability of Sitka Spruce. Please call for current prices and delivery lead time.***

P/N 05-06128

LIFT STRUTS AND FITTINGS FAA/PMA'D

P/N 05-06109

Lift Struts are sealed and made of high quality 4130N Streamline Tubing, not mild steel.

Lift Struts	7A, 7ACA, 7B, 7BCM, 7CCM, 7DC, 7EC, 7ECA, 7FC, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7GCBC, 7HC, 7JC, 7KC, 7KCAB	5-392 (front)	05-06128	**$746.00**
		5-268 (rear)	05-06109	**$556.00**
Lift Struts	11A, 11B, 11C	5-162 (front)	05-06083	**$849.00**
		5-160 (rear)	05-06082	**$603.00**
Strut Fork	All Models	1-2543	05-06275	**$79.75**
Rear Strut Upper Fitting	All Models Except 8KCAB	1-2335-1	05-05402	**$18.95**
Strut Attach Fitting	8KCAB	2-1976	05-06276	**$338.00**

JURY STRUTS & COMPONENTS FAA/PMA'D

Jury Strut Spreader	All 7 Series	1-2286 (spreader)	05-05386	**$52.50**
Jury Strut Spreader	8GCBC	1-10359 (spreader)	05-06277	**$32.60**
Jury Strut Spreader	8KCAB	1-10106 (spreader)	05-06278	**$43.50**
		1-10358 (rear)	05-06280	**$43.90**
Jury Strut Spreader	11A, 11AC	1-2461 (spreader)	05-05449	**$31.00**
Jam Nut (Code 5)		AN316-8R	AN316-8R	**$0.44**

LEADING EDGES ALL FAA/PMA'D

Leading Edges *P/N 05-05984*	7AC, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7GCAA, 7GCBC, 7ECA, 7GCAA, 7KCAB, 8GCBC, 7ACA, 7KC, 11AC, 11B, 11C	4-548-1 (inside)	05-05974	**$48.50**
		4-548-2 (inside middle)	05-05975	**$48.50**
		4-548-3 (outside middle)	05-05976	**$42.00**
		4-548-4 (outside)	05-05977	**$34.00**
		7-556L (tip)	05-06212	**$66.75**
		7-556R (tip)	05-06213	**$68.75**
Leading Edge Skin - Wing	7GCBC S/N 899-76 & UP, 8GCBC S/N 191-76 & UP	4-548-17R	05-05984	**$52.80**
Leading Edge Stiffener	7AC, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCA, 7GCBC, 7HC, 7KC	1-10000-2	05-05334	**$34.50**
		4-1678-2	05-06281	**$23.99**
		4-1678-3	05-06282	**$32.50**
Leading Edge Stiffener	8KCAB	4-1519-1	05-06283	**$18.75**
		4-1519-2	05-06284	**$24.50**
Leading Edge Skin - Stall Warning	7GCBC 7ECA, 7GCAA, 7KCAB 8GCBC	4-1679-1	05-06285	**$54.50**
		4-1679-2	05-06286	**$39.65**
Leading Edge Skin - Tip	7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7GCBA	4-1123L	05-05882	**$42.75**
		4-1123R	05-05883	**$42.55**
Leading Edge - Inboard	8KCAB	4-1737L (left)	05-05968	**$49.50**
		4-1737R (right)	05-05969	**$49.50**

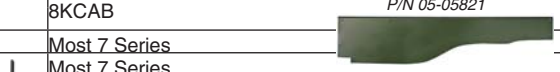
TRAILING EDGES ALL FAA/PMA'D

Wing Trailing Edge	8KCAB	2-1977	05-06287	**$21.85**
Wing Trailing Edge	7ACA, 7BCM, 7CCM, 7DC, 7EC, 7FC 7GC, 7HC, 7GCBA, 7ECA, 7GCAA	3-515	05-05836	**$47.00**
Wing Trailing Edge	7AC, 11AC	3-515-1	05-05837	**$47.00**
Flap Bay - Trailing Edge	7GCB, 7GCBA, 7GCBC, 8GCBC	4-1092 (right)	05-06288	**$142.99**
		4-1092 (left)	05-06289	**$142.99**
Aileron Trailing Edge	All Models	3-542	05-05851	**$38.80**
Channel Aileron Bay Trailing Edge	8KCAB	2-1979	05-06290	**$17.75**
Aileron Bay Trailing Edge	All Models Except 8KCAB	5-175R (right)	05-06093	**$112.75**
		5-175L (left)	05-06092	**$112.75**
Trailing Edge Flap Bay Cover	7GCB, 7GCBA, 7GCBC (41-1/8")	2-1594-1 (right)	05-05625	**$57.75**
		2-1594-1 (left)	05-05626	**$57.75**
Trailing Edge Flap Bay Cover	7GCB, 7GCBA, 7GCBC (41.88")	2-1594-2 (right)	05-05627	**$63.75**
		2-1594-2 (left)	05-05628	**$63.75**
1" Trailing Edge Material(longest length available is 7 feet)		1870	05-06291	**$4.50 / ft.**

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OTHER WING COMPONENTS - ALL FAA/PMA'D

Description	Models	OEM P/Ns	Part No.	Price
Drag Wire	Most 7, 8 and 11 Series	1-2527-1	05-05459	$29.95
Drag Wire	Most 7, 8 and 11 Series	1-2527-2	05-06292	$25.50
Drag Wire	Most 7, 8 and 11 Series	1-2595-1	05-05480	$69.70
Drag Wire	Most 7, 8 and 11 Series	1-2595-2	05-05481	$72.40
Wing Root Drag Wire Lug	Most 7, 8 and 11 Series	1-2299	05-05389	$16.95
Flap Hinge Inboard-Left	7GCB, 7GCBA, 7GCBC, 8GCBC	1-9015L (left)	05-06293	$130.75
Flap Hinge Inboard-Right	7GCB, 7GCBA, 7GCBC, 8GCBC	1-9015R (right)	05-06294	$130.75
Flap Fairing-Lower	7GCBC, 8GCBC	1-9803	05-06295	$14.25
Gap Cover	8KCAB	3-1448R (right)	05-05798	$70.75
		3-1448L (left)	05-05797	$70.75
Gap Cover	8KCAB	4-1553R (right)	05-05945	$66.75
		4-1553L (left)	05-05944	$66.75
Front Wing Gap Cover	Most 7 Series	3-451L (left)	05-05820	$40.99
Front Wing Gap Cover	Most 7 Series	3-451R (right)	05-05821	$38.90
Top Rear Wing Gap Cover	Most 7 Series	3-453L (left)	05-05823	$32.50
Top Rear Wing Gap Cover	Most 7 Series	3-453 R (right)	05-05824	$31.50
Top Center Wing Gap Cover	Most 7 Series	3-452	05-05822	$21.50
Bottom Rear Wing Gap Cover	Most 7 Series	3-454L (left)	05-05825	$26.65
Bottom Rear Wing Gap Cover	Most 7 Series	3-454R (right)	05-05826	$23.55
Bottom Center Wing Gap Cover	Most 7 Series	3-455	05-05827	$18.80
Inspection Cover Assy.	Most 7, 8 & 11Series	3-639	05-05868	$36.85
Airspeed Pitot Head	Most 7 & 11 Series	3-535	05-05845	$199.95
Spacer Aileron Sector and Hinge	7A, 7ACA, 7B, 7BCM, 7CCM, 7DC, 7EC, 7ECA, 7FC, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7GCBC, 7HC, 7KC, 7KCAB, 8KCAB, 8GCBC, 11A, 11B, 11C	1-2576	05-05470	$10.50
Aileron Spar	Most 7 Series	5-157	05-06079	$64.85
Aileron Control and Balance Cable	7AC, 7EC, 7FC, 7GC, 7GCA, 7GCB, 7HC, 7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	1-2339	05-05404	$65.00
Aileron Balance	Most 7, 8 & 11 Series	5-179R (right)	05-06096	$103.75
		5-179L (left)	05-06095	$103.75
Fairlead-Aileron Balance Cable	All Models	1-2396	05-05427	$24.95
Pulley - Aileron Control	7ACA, 7ECA, 7GCAA, 7GCBC, 7KCAB	1-10309	05-05348	$48.00
Spacer - Aileron Sector & Hinge Bracket	Most 7, 8, & 11 Series	1-2576	05-05470	$10.50


P/N 05-05820
P/N 05-05821


P/N 05-05868


P/N 05-05348


P/N 05-05845

INSTRUMENT PANELS - ALL FAA/PMA'D


P/N 05-05914


P/N 05-06007


P/N 05-06075


P/N 05-06127

Description	Models	OEM P/Ns	Part No.	Price
Instrument Panel blank no holes	7AC, 7BCM, 7CCM, 7DC	5-150	05-06075	$99.75
Instrument Panel	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC	4-1428	05-05914	$87.50
Instrument Panel	7ECA, 7GCAA, 7GCBC, 8KCAB, 8GCBC	5-390	05-06127	$114.95
Lower Instrument Control Panel	7ECA, 7GCAA, 7GCBC, 8KCAB, 8GCBC	4-1734	05-05967	$66.00
Radio Panel	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC	2-1919-1	05-05652	$60.00
Electrical Panel Blank	7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	4-1363	05-05885	$44.55

DOOR COMPONENTS - ALL FAA/PMA'D

Description	Models	OEM P/Ns	Part No.	Price
Fiberglass Door Frame	7EC, 7FC, 7GC, 7HC, 7GCA, 7GCB, 7GCBA, 7KC	710841	05-06298	$621.00
Fiberglass Door	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB	71265	05-06144	$552.00
Upper Door or Window Handle Assy. *Meets AN, MS, NAS, or MIL-Spec	7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC, 8KCAB,	H-863-000	05-06299	$62.75
Photo Door Frame	8GCBC	714571 (window)	05-06157	$292.95
		714572 (lower)	05-06158	$320.00
Door Hinge	7A, 7BCM, 7CCM, 7DC, 7EC	12423	05-05439	$26.70
Cabin Door Latch	7AC, 7BCM, 7CCM, 7DC, 7EC, 15AC	12594	05-05479	$73.90
Cabin Door Stop Assy.	All models except 8KCAB	13514	05-05529	$35.50
Tube	All models except 8KCAB	135142	05-05531	$10.70
Brace Assembly Door Latch	All 7 Series & 8KCAB	21451	05-05615	$26.80
Wood Spacer	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB	712656	05-06145	$9.75




P/N 05-06144


P/N 05-06157

P/N 05-06158

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WINDOWS, WINDOW SETS & SKYLIGHTS - ALL FAA/PMA'D

FAA/PMA'd. Factory fresh, free from distortion. Manufacturer guarantees their windows and skylights to be optically perfect and free from defects. Please specify year, model and serial number of your aircraft when ordering. Many out-of-date aircraft have been modified and measurements included with the order will help alleviate any problems if your aircraft is not standard. Check or charge card number must accompany order. Orders are noncancellable and nonreturnable. All windows and skylights available in green or grey tint at additional 20% charge. Windows and skylights requiring a Certificate of Authenticity for export have an additional $80.00 charge. Windows and skylights. Shipped FOB factory. Prepayment required.

Description	Models	LP Aero P/N	OEM P/Ns	Cat. No.	Price
Left Front Sliding Window Forward (clear)	Most 7 Series	231	3-572 (replaces 3-469, window only)	05-02783	$45.75
Left Front Sliding Window Rearward (clear)	Most 7 Series	232	3-573 (replaces 3-470, window only)	05-02784	$42.50
Rear Window (Left or Right) (clear)	Most 7 Series	233	7-463	05-02785	$61.90
Right Front Door Window (clear)	Most 7 Series	234	7-538	05-06406	$55.75
Right Door Window Bubbled	7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC	291	4-1446	05-02821 (clear)	$125.75
				05-06409 (green)	$150.75
Left Rear Bubbled Window	7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC	290	7-1256-L	05-06411 (clear)	$132.75
Right Rear Bubbled Window	7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC	289	7-1256-R	05-02820 (clear)	$132.75
Left Front Swinging Bubbled Window	7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC	297	4-1487	05-06438 (clear)	$123.75
				05-06439 (green)	$148.75
				05-06440 (gray)	$148.75
Left or Right Door - Front Sliding Window (clear)	11AC, 11BC, 11CC, S11AC, S11BA, S11CC	225	4-715	05-06441	$45.00
Left or Right Door - Rear Sliding Window (clear)	11AC, 11BC, 11CC, S11AC, S11BA, S11CC	226	4-714	05-06444	$42.50
Left or Right Rear Window (clear)	11AC, 11BC, 11CC, S11AC, S11BA, S11CC	227	4-594	05-06447	$47.75
Left Front Pilot Window (clear)	14-19-3A, 17-30, 17-30A, 17-31A, 17-31ATC (Viking)	816	196940-1	05-06450	$191.75

SKYLIGHT

Skylight	7ACA, 7GCBC, 7ECA, 7GCAA, 7KCAB, 8GCBC, 8KCAB	288	7-1286	05-02818 (clear)	$164.75
				05-02819 (green)	$165.75

WINDOW SETS

Window Set - Includes one each right and left rear bubble windows, right door bubble window, left front swinging bubble window	289, 290, 291 & 297	05-06464	$476.95
Window Set - Includes one each left front sliding window fwd., left front sliding window rwd. right and left rear bubble window and right door bubble	231, 232, 289, 290 & 291	05-06465	$602.00

WINDOW & WINDSHIELD FRAMES & COMPONENTS

Rear Window Frame	7AC, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCB, 7HC	7-461 (right)	05-06176	$234.95
		7-461 (left)	05-06177	$240.95
Rear Window Sill Strip (wood)	7AC, 7DC, 7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB	2-786	05-05723	$20.80
Retainer - Left Side Windshield	7AC, 7BCM, 7CCM, 7DC, 7EC, 7ECA, 7FC, 7GCAA, 7GCBA, 7GCBC, 7KCAB	3-473	05-05831	$29.00
Retainer - Right Side Windshield	7AC, 7BCM, 7CCM, 7DC, 7EC, 7ECA, 7FC, 7GCAA, 7GCBA, 7GCBC, 7KCAB	3-474R (right)	05-05832	$28.50
Retainer - Right Side Windshield	7GCAA, 7GCBC	3-474-1R (right)	05-06301	$11.50
Retainer Windshield - Top	7AC, 7DC, 7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7GCBA	3-549	05-05854	$14.95
Retainer Windshield -Pair - Windshield to Wraparound	7AC, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCA, 7GCB, 7GCBA, 7HC	7-487	05-06194	$94.75/pr.
Rear Window Channel - Bottom	7ACA, 7ECA, 7GCAA, 7GCBA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	2-1875R (right)	05-05635	$53.75
		2-1875L (left)	05-05634	$53.75
Rear Window Channel - Top	7ACA, 7ECA, 7GCAA, 7GCBA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	2-1876R (right)	05-05637	$49.65
		2-1876L (left)	05-05636	$49.65
Rear Window Channel - Aft	7ACA, 7ECA, 7GCAA, 7GCBA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	1-9919R (right)	05-06302	$19.50
		1-9919L (left)	05-06303	$19.50
Moulding - Rear Window Upper	7ACA, 7ECA, 7GCAA, 7GCBA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	2-1877R (right)	05-06304	$37.50
		2-1877L (left)	05-06305	$37.50
		2-1877-1R (right)	05-06306	$25.99
		2-1877-1L (left)	05-06307	$25.99
Retainer Windshield -Side - Windshield to Wraparound	7ECA, 7GCAC, 7GCAA, 8KCAB	3-474-2R	05-06308	$26.55
		3-474-2L	05-06309	$26.50
Retainer - Right Side Windshield to Wraparound (bottom)	7ACA, 7GCBC, 7ECA, 7GCAA, 7KCAB, 8KCAB, 8GCBC	4-1369R (right)	05-05887	$79.75
		4-1369L (left)	05-05886	$79.75
Left Front Window Frame	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC	7-1318	05-06310	$269.95
Top Window Support Assy.	7BCM, 7CCM, 7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7GCBA	3-585	05-05859	$192.75
U Rubber Channel	Meets AN, MS, NAS, or MIL-Spec	CH-35	05-02200	$1.35
Hinge for Left Side Window	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC	1-9872	05-05595	$23.80
Sliding Window Center Stiffener	Most 7 & 11 Series	1-2417-1	05-05436	$24.75
End Stiffener Left Rear Sliding Window	Most 7 Series	1-2418-1	05-05437	$24.75
End Stiffener Left Front Sliding Window	Most 7 Series	1-2418-2	05-05438	$24.75
Sliding Window Track Moulding Upper (31.37")	Most 7 Series	2-853-1	05-05736	$46.50
Sliding Window Track Moulding Lower (37.43")	Most 7 Series	2-853-2	05-05737	$46.50









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Prices Subject to Change Without Notice

BRAKE COMPONENTS & TOE BRAKE KITS - ALL FAA/PMA'D

Description	Models	OEM P/Ns	Part No.	Price
Toe Brake Kit -Gerdes System. Wheels & brakes not included.	7AC, 7ACA, 7BCM, 7CCM, 7EC, 7ECA, 7FC, 7GCBC, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7KCAB	4-1624K	05-06311	**$2,561.00**
Toe Brake Conversion Kit - Converts VanSickle or Goodyear brakes systems to Cleveland wheels and brakes for aircraft with oleo gear only! Includes parts list, three installation drawings and two brake line drawings and two STCs (SA34CH &5A507CH)	7AC, 7BCM, 7CCM, 7EC, 7ECA, 7FC, 7GCBC, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7HC, 7KCAB	4-1624OG	05-06312	**$6,039.00**
Toe Brake Conversion Kit - Converts Gerdes brake system to Cleveland wheels and brakes for aircraft with spring steel gear only! Includes parts list three installation drawing and one STC (SA334CH)	7ACA, 7ECA, 7GCBC, 7GCAA, 7KCAB, 8KCAB, 8GCBC	4-1624SG	05-06313	**$8,648.00**
Brake Sys. Cleveland Conv. Kit. Converts mechanical brakes to hydraulic heel brakes with oleo gear only. Includes parts list and installation drawing.	7ACA, 7GCBC, 7ECA, 7GCAA, 7KCAB, 8GCBC, 8KCAB	4-1557K	05-06314	**$5,256.00**
Heel Brake Conversion Kit - Converts existing hydraulic heel brakes to hydraulic toe brakes. Does not include new wheels, brake discs, calipers or spacers. Can be used on aircraft with spring steel gear	7ACA, 7ECA, 7GCBC, 7GCAA, 7KCAB 8KCAB, 8GCBC	4-1624K	05-06311	**$2,561.00**
Rudder Pedals, Toe Brake *P/N 05-05809* 	7ECA, 7GCAA, 7GCBC, 7KCAB, 7ACA, 8KCAB	3-1537-1 (front)	05-05809	**$75.50**
		3-1537-2L (left rear)	05-05810	**$89.75**
		3-1537-2R (right rear)	05-05811	**$89.95**
Brake Torque Plate  *P/N 05-05409*	7AC, 7BCM, 7CCM, 7EC, 7FC, 7GC, 7HC, 11A, 11BC	1-2258	05-06315	**$19.99**
Brake Cable	7AC, 7BCM, 7DC, 7EC	1-2358-2	05-05409	**$32.75**
Eyebolt Brake Cable	11AC	1-2499	05-05457	**$29.50**
Brake Rod	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB	1-9850	05-06316	**$27.85**
Cable Brake Assembly, LH	11A, 11B, 11C	2-7762	05-06317	**$52.75**
Cable Brake Assembly, RH	11A, 11B, 11C	2-7763	05-06318	**$52.75**
Tube, Parking Brake Beam	7Ac, 7BCM, 7CCM, 7DC	2-796-1	05-05727	**$10.25**
Parking Brake Lever Release Plate	All 7 & 11 Series Models	1-2325	05-05396	**$20.50**
Parking Brake Lever Spring	All 7 & 11 Series Models	1-2519	05-05458	**$14.75**
Hydraulic Brake Line Assembly	7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7GCBA, 7ECA, 7GCBC, 7GCAA, 7KCAB, 7KC	1-8966	05-05579	**$29.50**
		1-2613R	05-06320 (right)	**$33.75**
Toe Brake Rudder Pedal  *P/N 05-05807* *P/N 05-05806*	7ACA, 7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	3-1534	05-05803	**$94.50**
Bracket Toe Brake Master Cylinder	All 7 & 8 Series Models	3-1536 (right)	05-05807	**$80.75**
		3-1536 (left)	05-05806	**$80.75**

OLEO STRUT & COMPONENTS - FAA/PMA'D

Description	Models	OEM P/Ns	Part No.	Price
Repair, Oleo Strut Assembly (standard) One year Warranty. Allow four to six weeks turnaround.	7AC, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7ECA	3-433	05-06322	**$461.00**
Oleo Strut Frame	Most 7 & 11 Series	7-1004	05-06133	**$567.00**
Landing Gear Oleo Fairing	7DC, 7EC, 7FC, 7GC, 7GCA, 7HC, 7GCBC, 7GCBA,	4-701L	05-06027	**$45.50**
 *P/N 05-05872*	7GCBC, 7ECA, 7GCAA, 7KCAB, 7KC, 11A, 11B & 11C	4-701R	05-06028	**$52.75**
Landing Gear Frame Tube	Most 7 & 11 Series *P/N 05-06027 & 05-06028* 	7-1004-1	05-06134	**$53.50**
Oleo Bushing, Shock Strut	Most 7 & 11 Series	1-2565	05-06323	**$43.75**
Piston Rod Assembly	7AC, 7BCM, 7CCM, 7DC, 11A, 11B, 11C	1-2255	05-05375	**$104.50**
Piston Rod  *P/N 05-05376*	7AC, 7BCM, 7CCM, 7DC, 11A, 11B, 11C	1-2255-1	05-05376	**$55.75**
Piston Rod Assembly	Most 7 & 11 Series	2-952	05-05758	**$236.95**
Oleo Spring for no bounce oleo assembly	7AC,7BCM, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7GCAA, 7GCBC, 7ECA, 7GCAA, 7GCAB, 7KC	3-666	05-06324	**$37.50**
Landing Gear Oleo Strut, Lower Tube	7AC, 7BCM, 7CCM, 7DC, 11AC, 11B, 11C	1-2253	05-05374	**$104.50**
Oleo Spring	7AC, 7BCM, 7CCM, 7DC, 11AC, 11B, 11C	1-2256	05-05378	**$53.85**
Aeronca Tube - Cylinder Assembly	Most 7 & 11 Series *P/N 05-05378* 	3-668	05-05870	**$352.95**
Taxi Spring	Most 7 & 11 Series	2-953	05-05760	**$71.90**
Oleo Packing 12"	Most 7 & 11 Series (need one per strut)	1-2119	05-05373	**$21.75**
Retainer Oleo Shock Strut Spring	7AC-7DC & 11 Series	1-316	05-06325	**$38.85**

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AERONCA/BELLANCA REPLACEMENT PARTS

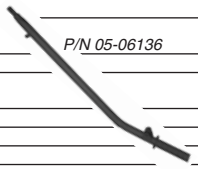
FIBERGLASS WHEEL FENDERS & BRACKETS ALL FAA/PMA'D


P/N 05-06141


P/N 05-06327

Description	Model	LH	RH	LH	RH	Price
Fender, LH/RH	7EC, 7ECA, 7FC, 7GC, 7GCA, 7GCB, 7GCAA, 7GCBC,7HC, 7KCAB	7-1141LH	7-1141RH	-	05-06141	**$561.00**
Plate Cover for 7-1141 LH/RH		2-1640LH	2-1640RH	-	05-06142	**$561.00**
Fender, LH/RH	7GCBC, 7ECA, 7GCAA, 7KCAB, 8KCAB	7-1301LH	7-1301RH	05-06326	05-06327	**$220.95**
Wheel Pant Cover for 7-1301 LH/RH		2-1945LH	2-1945RH	05-05654	05-05655	**$43.80**

LANDING GEAR, FAIRINGS & COMPONENTS ALL FAA/PMA'D


P/N 05-06136


P/N 05-05555


P/N 05-05556


P/N 05-05536


P/N 05-06340

Description	Models	OEM #	Part No.	Price
Landing Gear Axle Strut	7AC, 7BCM, 7DC, 11A, 11C	7-807	05-06222	**$567.00**
Scout Axle	8GCBC	3-1549	05-06328	**$156.75**
Spring Gear Axle	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB	3-1600	05-06330	**$319.00**
Landing Gear Axle Fitting	Most 7 & 11 Series	1-2260	05-05379	**$23.75**
Axle Upper End Fitting (4" long)	7AC, 7BCM, 7CCM, 7DC, 7EC, 7ECA, 7GC, 7GCA, 7GCB, 7GCAA, 7GCBA, 7GCBC, 7HC, 7KC, 7KCAB	1-9997-1	05-06331	**$39.95**
Axle Upper End Fitting (6-1/4" long)	7AC, 7BCM, 7CCM, 7DC, 7EC, 7ECA, 7GC, 7GCA, 7GCB, 7GCAA, 7GCBA, 7GCBC, 7HC, 7KC, 7KCAB	1-9997-2	05-06332	**$39.95**
Landing Gear Axle Strut	7EC w/Mechanical Brakes	7-1062	05-06136	**$730.00**
Landing Gear Axle Strut	7EC w/Hydraulic Brakes, also 7FC, 7GC, 7GCA, 7GCB, 7GCBA, 7KC	7-1080	05-06139	**$744.00**
Landing Gear Yoke Plate	Most 7 Series	1-2326	05-06333	**$38.70**
Landing Gear Wheel Retaining Nut	Most 7, 8 & 11 Series	1-706	05-06334	**$35.50**
Landing Gear Axle Spring	7ECA, 7GCAA, 7GGCBC, 7KCAB, 8KCAB	2-1917	05-06335	**$181.75**
Axle Tube	7ECA, 7GCAA, 7GGCBC, 7KCAB, 8KCAB	2-1917-1	05-06336	**$121.75**
Axle Strut Tube	7EC, 7ECA, 7GCAA, 7GCBC, 7HC, 7KCAB	4-1138	05-06337	**$429.00**
Wheel Pant Axle Nuts	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB	2-2145	05-06338	**$52.75**
Tail Wheel Spring	7ACA, 7EC, 7GC, 7GCA, 7GCB, 7GCBA, 7GCBC, 7ECA, 7GCAA, 7KC, 7KCAB, 8KCAB, 8GCBC	2-1525	05-06339	**$22.80**
Fitting Assembly	7ACA, 7EC, 7FC, 7GCA, 7GCB, 7GCBA, 7GCBC, 7GC, 7HC, 7KC, 7ECA, 7GCAA, 7KCAB, 8KCAB	18854	05-05555	**$65.75**
Stud Tail Leaf Spring	7ACA, 7EC, 7FC, 7GC, 7GCA, 7GCA, 7HC, 7GCB, 7GBA, 7GCBC, 7ECA, 7GCAA, 7KC, 7KCAB, 8KCAB	18854-1	05-05556	**$7.95**
Fitting	7A, 7ACA, 7B, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7GCBA, 7GCBC, 7ECA, 7GCAA, 7KC, 7KCAB, 8KCAB, 11A, 11B, 11C	1555-1	05-05536	**$14.90**
Fairing Clip (narrow)	Most 7, 8, & 11 Series	1-2273	05-05381	**$6.90**
Oleo Packing		1-2119	05-05373	**$21.75**
Landing Gear Wheel Retaining Nut	7ECA, 7GCBC, 7GCAA, 7KCAB, 8KCAB, 8GCBC	1-10538	05-06340	**$35.80**
Landing Gear Oleo Strut Piston	7AC, 7BCM, 7CCM, 7DC, 11AC, 11BC	1-318	05-06341	**$30.00**
Spring Retainer		1-316	05-06342	**$19.70**

STRINGERS ALL FAA/PMA'D



Mushroom Stringers

P/N 05-05414 • P/N 05-05416
P/N 05-05421 • P/N 05-05422
P/N 05-05486 • P/N 05-05489
P/N 05-05608 • P/N 05-05720
P/N 05-09841



Bull Nose Stringers

P/N 05-05415 • P/N 05-05416
P/N 05-05417 • P/N 05-05418
P/N 05-05719

Requirements for the 7AC Models	# per Aircraft	Style	Length in Inches	OEM P/Ns	Part No.	Price
Stringer	1	Mushroom	84-11/16"	1-2376-1	05-05421	**$39.75**
Stringer	1	Mushroom	92-3/16"	1-2376-2	05-05422	**$39.75**
Stringer	3	Bull Nose	80"	1-2367-1	05-05415	**$24.50**
Stringer	2	Bull Nose	101"	1-2367-2	05-05416	**$24.50**
Stringer	2	Mushroom	103"	1-2366	05-05414	**$36.50**
Stringer	2	Mushroom	144-1/2"	1-2679-1	05-05486	**$30.00**
Requirements for the 7EC - 7FC Models						
Stringer	1	Mushroom	84-11/16"	1-2376-1	05-05421	**$39.75**
Stringer	1	Mushroom	92-3/16"	1-2376-2	05-05422	**$39.75**
Stringer	3	Bull Nose	80"	1-2367-1	05-05415	**$24.50**
Stringer	2	Bull Nose	101"	1-2367-2	05-05416	**$24.50**
Stringer	2	Mushroom	103-1/8"	1-2366	05-05414	**$36.50**
Stringer	2	Mushroom	125"	1-2679-6	05-05489	**$23.50**
Requirements for the 7GC, 7GCA, 7GCB, 7HC Models						
Stringer	1	Mushroom	84-11/16"	1-2376-1	05-05421	**$39.75**
Stringer	1	Mushroom	92-3/16"	1-2376-2	05-05422	**$39.75**
Stringer	3	Bull Nose	80"	1-2367-1	05-05415	**$24.50**
Stringer	2	Mushroom	103-1/8"	1-2366	05-05414	**$36.50**
Stringer	2	Mushroom	125"	1-2679-6	05-05489	**$23.50**
Requirements for the 7ECA, 7GCBC, 7GCAA, 7KCAB Models						
Stringer	3	Bull Nose	80"	1-2367-1	05-05415	**$24.50**
Stringer	2	Bull Nose	101"	1-2367-2	05-05416	**$24.50**
Stringer	1	Mushroom	84-11/16"	1-2376-1	05-05421	**$39.75**
Stringer	1	Mushroom	92-3/16"	1-2376-2	05-05422	**$39.75**
Stringer	2	Mushroom	144-1/2"	1-2679-1	05-05486	**$30.00**
Stringer	2	Mushroom	103-1/8"	1-2366	05-05414	**$36.50**
Requirements for the 8GCBC Model						
Stringer	2	Mushroom	103-1/8"	1-2366	05-05414	**$36.50**
Stringer	2	Bull Nose	80"	1-2367-1	05-05415	**$24.50**
Stringer	2	Bull Nose	101"	1-2367-2	05-05416	**$24.50**
Stringer	2	Mushroom	144-1/2"	1-2679-1	05-05486	**$30.00**
Add if greenhouse is used	2	Mushroom	114"	1-9992	05-05608	**$34.50**
Requirements for the 8KCAB Model						
Stringer	2	Mushroom	114"	1-9992	05-05608	**$34.50**
Stringer	2	Mushroom	103-1/8"	1-2366	05-05414	**$36.50**
Stringer	3	Bull Nose	80"	1-2367-1	05-05415	**$24.50**
Stringer	2	Bull Nose	101"	1-2367-2	05-05416	**$24.50**
Stringer	1	Mushroom	84-11/16"	1-2376-1	05-05421	**$39.75**
Stringer	1	Mushroom	92-3/16"	1-2376-2	05-05422	**$39.75**
Requirements for the 11AC Model						
Stringer	2	Mushroom	120"	1-2679-2	05-09841	**$30.00**
Stringer	1	Bull Nose	132"	1-2367-6	05-05418	**$24.45**
Stringer	4	Bull Nose	117-1/2"	1-2367-3	05-05417	**$24.50**
Stringer	2	Bull Nose	103"	2-771	05-05719	**$20.85**
Stringer	2	Mushroom	113-1/2"	2-772	05-05720	**$42.85**

NOTE: Some parts on this page are primed or varnished in accordance to FAA Approved Drawings.

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BULKHEADS ALL FAA/PMA'D

Requirements for the 7AC Models	# per Aircraft	OEM P/Ns	Part No.	Price
Bulkhead	2	4-555	05-05986	**$41.00**
Bulkhead	2	4-556	05-05987	**$29.75**
Bulkhead	2	4-557	05-05988	**$29.75**
Bulkhead	2	7-455	05-06175	**$54.75**
Requirements for the 7EC & 7FC Models				
Bulkhead	2	4-555	05-05986	**$41.00**
Bulkhead	2	4-556	05-05987	**$29.75**
Bulkhead	2	4-557	05-05988	**$29.75**
Bulkhead	2	7-455	05-06175	**$54.75**
Bulkhead	2	5-393	05-06130	**$49.50**
Requirements for the 7GC, 7GCA, 7GCB, 7HC Models				
Bulkhead	2	4-556	05-05987	**$29.75**
Bulkhead	2	4-555	05-05986	**$41.00**
Bulkhead	2	5-393	05-06130	**$49.50**
Bulkhead	2	7-455	05-06175	**$54.75**
Bulkhead	2	4-557	05-05988	**$29.75**
Requirements for the 7ECA, 7GCAA, 7GCBC, 7KCAB Models				
Bulkhead	2	7-1259	05-06143	**$55.75**
Bulkhead	2	5-393	05-06130	**$49.50**
Bulkhead	2	4-555	05-05986	**$41.00**
Bulkhead	2	4-556	05-05987	**$29.75**
Bulkhead	2	4-557	05-05988	**$29.75**
Bulkhead	1	2-2046	05-05665	**$27.50**
Requirements for the 8GCBC Models				
Bulkhead	2	7-1259	05-06143	**$55.75**
Bulkhead	2	5-393	05-06130	**$49.50**
Bulkhead	2	4-555	05-05986	**$41.00**
Bulkhead	2	4-556	05-05987	**$29.75**
Bulkhead	2	4-1541	05-06342	**$19.70**
Bulkhead	1	2-2046	05-05665	**$27.50**
Requirements for the 8KCAB Models				
Bulkhead	2	7-1259	05-06143	**$55.75**
Bulkhead	2	5-10000	05-06066	**$41.50**
Bulkhead	2	4-555	05-05986	**$41.00**
Bulkhead	2	4-556	05-05987	**$29.75**
Bulkhead	2	4-1541	05-06342	**$19.70**
Bulkhead	1	2-2046	05-05665	**$27.50**
Requirements for the 11AC Models				
Bulkhead	2	4-586	05-05999	**$45.25**
Bulkhead	2	4-587	05-06001	**$29.50**
Bulkhead	2	4-589	05-06002	**$34.50**
Bulkhead	2	7-510	05-06209	**$41.50**
Bulkhead	2	7-512	05-06210	**$55.75**


P/N 05-05986


P/N 05-06175


P/N 05-06209


P/N 05-05988


P/N 05-06066


P/N 05-06210


P/N 05-05665

AP

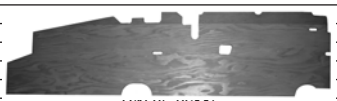
FLOORBOARDS ALL FAA/PMA'D

Requirements for the 7AC Models	# per Aircraft	OEM P/Ns	Part No.	Price
Floorboard	1	5-158L	05-06080	**$98.75**
Floorboard	1	5-158R	05-06081	**$98.75**
Floorboard	1	3-484	05-05833	**$64.75**
Requirements for the 7EC Models				
Floorboard	1	5-158L	05-06080	**$98.75**
Floorboard	1	5-158R	05-06081	**$98.75**
Floorboard	1	4-878	05-06343	**$92.75**
Requirements for the 7FC Models				
Floorboard	1	5-261L	05-06344	**$123.75**
Floorboard	1	5-261R	05-06345	**$123.75**
Floorboard	1	3-484	05-05833	**$64.75**
Requirements for the 7GC, 7GCA, 7GCB, 7HC Models				
Floorboard, All models	1	4-1032	05-05878	**$56.75**
Floorboard, 7GC, 7GCA, 7GCB only	1	5-158L	05-06080	**$98.75**
Floorboard, 7HC only	1	5-261R	05-06345	**$123.75**
Floorboard, 7GC, 7GCA, 7GCB only	1	5-158R	05-06081	**$98.75**
Floorboard, 7HC only	1	5-261L	05-06344	**$123.75**
Requirements for the 7ECa Models				
Floorboard	1	5-296L	05-06115	**$84.75**
Floorboard	1	5-296R	05-06116	**$84.75**
Floorboard	1	4-1032	05-05878	**$56.75**
Floorboard	1	4-1378	05-05891	**$78.85**
Requirements for the 8GCBC & 8KCAB Models				
Floorboard	1	5-296L	05-06115	**$84.75**
Floorboard	1	5-296R	05-06116	**$84.75**
Floorboard	1	4-1032	05-05878	**$56.75**
Floorboard	1	4-1378	05-05891	**$78.85**
Floorboard	1	4-1600	05-05946	**$63.75**
Requirements for the 11AC Models				
Floorboard	1	3-510	05-05835	**$59.75**
Floorboard	1	3-511	05-06346	**$69.85**
Floorboard Clamp for all Models EXCEPT 11 Series	-	1-2575	05-05469	**$8.75**


P/N 05-06080

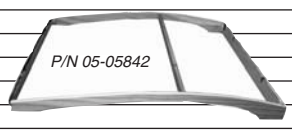

P/N 05-06081


P/N 05-06116


P/N 05-06115

TOP CABIN ASSEMBLY & COMPONENTS ALL FAA/PMA'D

Requirements for the 7AC, 7ACA, 7EC, 7FC, 7GC, 7GCA, 7GCB, 7GCBC, 7ECA, 7GCAA, 7HC, 7KC, 7KCAB, 8GCBC Models	OEM P/Ns	Part No.	Price
Top Cabin Assembly	3-525	05-05842	**$189.99**
Requirements for the 7BCM & 7CCM			
Top Window Support Assembly	3-585	05-05859	**$192.75**
Requirements for the 11AC Models			
Top Cabin Components, Sides	5-170	05-06090	**$66.75**
Top Cabin Components, Front	5-171	05-06091	**$68.75**
Top Cabin Components, Rear	5-163	05-06084	**$49.75**
Top Cabin Components, Middle	5-178	05-06094	**$29.50**
Requirements for the 8KCAB Models			
Top Cabin Assembly	3-1439	05-06347	**$110.75**


P/N 05-05842


P/N 05-05859

AERONCA/BELLANCA REPLACEMENT PARTS

FUEL TANKS & COMPONENTS ALL FAA/PMA'D



P/N 05-06131
P/N 05-06132



P/N 05-06215

Description	Models	Strap Length	OEM P/Ns	Part No.	Price
13 Gallon Wing Tank Kit LH/RH	7AC, 7BCM, 7CCM, 7DC, 7EC, 7ECA, 7KC		7-10001K (includes 2 tanks, hardware and plumbing)	05-06348	**$2,999.00**
			7-10001L (left tank only)	05-06131	**$1,034.00**
			7-10001R (right tank only)	05-06132	**$1,034.00**
			7-1449R	05-06155	**$925.00**
6 Gallon Aux. Fuel Kit LH/RH	7BCM		7-1001LK	05-06350	**$1,029.00**
			7-1001RK	05-06351	**$1,029.00**
Fuel Tank Strap (inboard & outboard) for tank 7-10001	7ECA, 7GCAA, 7GCBC, 7KCAB		2-942-8	05-05854	**$14.95**
20 Gallon Fuel Tank LH/RH	8KCAB		7-1403L	05-06151	**$1,205.00**
			7-1403R	05-06153	**$927.00**
		23.38"	2-761-10	05-06352	**$17.50**
		9.68"	2-761-1	05-05709	**$31.70**
6 Gallon Fuel Tank LH/RH	7CCM, 7DC, 7EC		7-772L	05-06215	**$583.00**
			7-772R	05-06216	**$680.00**
Fuel Tank Strap (outboard) for tank 7-772	7CCM, 7DC, 7EC	27.75"	2-942-5	05-05758	**$236.95**
Fuel Tank Strap for tank 7-511	11AC	77.875"	2-761-1	05-05709	**$31.70**
		39.50"	2-761-2	05-05710	**$31.00**
		11.00"	2-761-3	05-05711	**$23.25**
Fuel Tank Strap for tank 7-460	7AC, 7CCM, 7DC, 7E	67.50"	2-761-5	05-05712	**$26.25**
Fuel Tank Strap for tank 7-460	7AC	45.50"	2-761-6	05-05713	**$26.25**
Fuel Tank Strap	7KCAB	21.00"	2-761-7	05-06560	**$29.60**
Fuel Tank Strap	7ECA, 7GCAA, 7GCBC, 7KCAB	29.63"	2-761-8	05-06561	**$28.75**
Fuel Tank Channel Support	8KCAB		4-1496	05-06353	**$39.95**
Wing Tank Channel Support	7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC		4-1498	05-06354	**$45.50**
Fuel Manifold, front	7EC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7GCBC, 7HC, 7KC		1-8880-1	05-06355	**$49.50**
Fuel Manifold, front	7EC, 7ECA, 7FC, 7JC		1-8880-2	05-05567	**$43.50**
Fuel Manifold, rear	7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7GCBA, 7GCBC, 7ECA, 7GCAA, 7KC, 7KCAB, 8GCBC, 8KCAB		1-10037	05-06356	**$61.75**
Fuel Manifold Assembly, rear	7EC, 7ECA, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7GCBC, 7JC, 7KC, 7KCAB, 8GCBC, 8KCAB		2-1577-2	05-05623	**$87.40**
Fuel Shut Off Tube	7A, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCA, 7GCB, 7GCBA, 7HC		1-2456-1	05-05445	**$32.00**
Non-Vented Fuel Cap	Most 7 & 11 Series		1-2593-2	05-05478	**$16.85**
Vented Fuel Cap	Most 7 & 11 Series		1-2593-1	05-06357	**$8.90**
Fuel Tank Vent Fitting	8GCBC		1-10522	05-06358	**$18.50**
Fuel Shut Off Universal Joint	Most 7 Series		1-2458	05-05448	**$32.90**



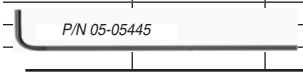
P/N 05-05623



P/N 05-05478



P/N 05-05448



P/N 05-05445

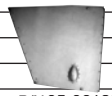
AERONCA WING TANK KIT - For models 7AC, 7BCM, 7CCM, 7EC, 11AC, 11BC. Simple installation. Kit comes complete with left and right hand tanks, fittings, fuel line, mounting brackets, installation instructions and drawings. Fuel capacity is 5 gallons for each tank. Includes two Cat. No. E-482-000 fuel caps. FAA/PMA'd.

P/N 05-06359..... **$1,122.00 / set**



COWLING PARTS ALL FAA/PMA'D

Description	Models	OEM P/Ns	Part No.	Price
Top Cowl	7AC & 11AC	7-473	05-06185	**$395.95**
Bottom Cowl	7AC, 7B, 7BCM, 7CCM, 7DC, 11AC, 11B	7-472	05-06184	**$322.00**
Windshield Retainer	Most 7 Series	7-487	05-06194	**$94.75**
Lower Cowling	7ECA, 7GCAA, 7GCBC, 7KCAB, 1965 to Early 1973	7-1282-2	05-06147	**$494.95**
Fiberglass Upper Cowling w/o Doors	7ECA, 7GCAA, 7GCBC, 7KCAB, 1965 to Early 1973	7-1282-1	05-06146	**$335.00**
Angle Support Cowl Upper	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB	2-1890-1	05-06361	**$6.50**
Cowling	7ECA, 7GCAA, 7GCBC, 7KCAB 1973, 8KCAB w/150 hp	7-1455-1 (upper)	05-06156	**$566.00**
		7-1455-2 (lower)	05-06362	**$406.00**
Lower Engine Cowl Deflector	7AC, 7B, 7BCM, 7CCM, 7DC, 11AC, 11B, 11C	4730	05-08623	**$52.50**
Cowling	8KCAB w/180 hp, 1973	7-1455-3 (lower)	05-06363	**$399.00**
Cowling	7ECA, 7GCAA, 7GCBC, 7KCAB, 1974 to 1980, 8KCAB w/150 hp only	7-1469-1 (upper)	05-06364	**$378.00**
Cowling	8KCAB w/180 hp, 1973	7-1482-1 (upper)	05-06365	**$296.95**
		7-1482-2 (lower)	05-06366	**$539.00**
Bracket Landing Light		2-1912	05-05648	**$34.50**
Nose Bowl Fiberglass	7AC, 7BCM, 7CCM, 7DC, 7EC, 7FC, 11AC	4-576	05-06367	**$370.00**
Nose Bowl Fiberglass	7EC, 7FC	7-1081	05-06140	**$322.00**



P/N 05-06185



P/N 05-06364



P/N 05-06159



P/N 05-06140

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AERONCA/BELLANCA REPLACEMENT PARTS

FIREWALLS ALL FAA/PMA'D


P/N 05-06043


P/N 05-06368


P/N 05-05950

Description	Models	OEM P/Ns	Part No.	Price
Firewall (no large holes)	7AC, 7BC, 7CC, 7EC, 7FC, 7GC, 7GCB, 7HC, 7JC, 7KC, 7GCA, 7GCBA, 7GCAA, 7GCBC, 7KCAB, 7ECA, 8KCAB, 11AC, 11BC, 11CC	4-860-2	05-06043	**$231.95**
Firewall (2 large holes)	Same as 4-860-2 (but two holes like 4-1640)	4-860-1	05-06368	**$203.95**
Firewall (2 large holes, w/bottom cut out, Scout)	7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC, 8KCAB. w/cutout	4-1640	05-05950	**$64.50**
Service Kit - Frame Reinforcement Kit	7AC, 7BCM	(Required for 85 hp Conversion)	05-06375	**$147.75**
Fitting, Belly Skin	7GCAA, 7ECA, 7GCBC, 7KCAB, 8GCBC 	1-10246	05-06369	**$7.55**

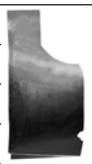
ELEVATORS & COMPONENTS ALL FAA/PMA'D

Description	Models	OEM P/Ns	Cat. No.	Price
Elevators	8KCAB	4-1701 (left)	05-06370	**$731.00**
		4-1703 (right)	05-06371	**$602.00**
Elevators  P/N 05-06045  P/N 05-06046	7AC, 7ACA,7BCM, 7CCM, 7DC, 7EC, 7ECA, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7GCBA, 7JC, 11AC, 11BC, 11CC  P/N 05-05929 *4-864 replaces 4-544 per service bulletin #19 *4-865 replaces 4-543 per service bulletin #19	4-544 (left)*	05-06045	**$637.00**
		4-543 (right)*	05-06046	**$624.00**
Elevators	7ECA, 7GCAA, 7KCAB, 7GCBC	4-1699 (left)		**$527.15**
		4-1669 (right)	05-05960	**$399.50**
Elevator Frame Assembly, RH	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB	4-1479	05-05929	**$566.00**
Guard Tab Cable Pulley	7A, 7ACA, 7BCM, 7CCM, 7DC, 7EC, 7ECA, 7FC, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7GCBC, 7HC, 7KC, 7KCAB, 8KCAB, 11A, 11B, 11C  P/N 05-05990	1-2399	05-05430	**$7.75**
Elevator Trim Tab	All Models	4-562	05-05990	**$42.50**
Elevator Trim Cable	7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	2-1905	05-05646	**$69.50**
Elevator Trim Control Cable	7AC, 7EC, 7FC, 7GC, 7GCA, 7HC	2-698	05-05690	**$76.50**
Up Elevator Control Cable	7A, 7B, 7BCM, 7CCM, 7DC, 7EC, 7FC	3-471	05-05830	**$128.00**
Up Elevator Cable	7ECA, 7GC, 7GCA, 7HC, 7KC, 8KCAB, 8GCBC	3-1072	05-05764	**$179.50**
Down Elevator Cable	7ECA, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBC, 7HC, 7KC, 7KCAB, 8GCBC, 8KCAB	2-1534	05-05619	**$99.25**
Elevator Stop Bolt 	7AC, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCA, 7GCB, 7GCBA, 7KC, 11AC, 11BC, 11C	1-2540	05-05461	**$19.50**

STABILIZER FRAME & COMPONENTS ALL

Description	Models	OEM P/Ns	Cat. No.	Price
Stabilizer Drag Wire Assy., Lower	7ECA, 7GCAA, 7KCAB, 8KCAB, 8GCBC	3-1107-2	05-05766	**$119.50**
Stabilizer Drag Wire Assy., Upper	7ECA, 7GCAA, 7KCAB, 8KCAB, 8GCBC	2-1746-4	05-05632	**$89.50**
Stabilizer Brace Wire	Most 7, 8, and 11 Series	1-2340	05-05405	**$48.75**
Stabilizer Brace Wire Lug	Most 7, 8, and 11 Series	1-2357	05-05408	**$8.95**

WRAPAROUNDS ALL FAA/PMA'D

Description	Models	OEM P/Ns	Part No.	Price
Wraparounds (includes LH & RH)	7AC, 7BCM 	7-509	*05-06202*	**$991.00**
Wraparounds (includes LH & RH)	7ECA, 7GCAA, 7GCBC (1965-1966)	7-509-6	05-06205	**$848.00**
Wraparounds (includes LH & RH)	7ECA, 7GCAA, 7GCBC, 7KCAB, (1967-1973) P/N 05-06374	7-509-7	05-06208	**$552.00**
Wraparounds (includes LH & RH)	7GCBC, 7ECAA, 7GCAA, 7KCAB, 8KCAB, 8GCBC	7-1472	05-06374	**$445.00**

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AERONCA LOGO HAT

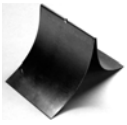
Go back with us to a bi-gone era and wear the symbols of these vintage aircraft. These hats are chino washed unconstructed cotton twill. They have velcro closures and pre-curved bills. They are putty with navy sandwich bills.

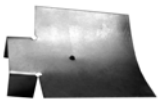
P/N 14-00176 ..... **$9.85**

AP

AERONCA/BELLANCA REPLACEMENT PARTS

ENGINE BAFFLE ASSEMBLY & COMPONENTS ALL FAA/PMA'D


P/N 05-05371


P/N 05-05544


P/N 05-06376


P/N 05-06180


P/N 05-06186


P/N 05-05955


P/N 05-05814
P/N 05-05816


P/N 05-06059

Description	Models	OEM P/Ns	Part No.	Price
Inter-Cylinder Baffle - Cylinder Head	7AC, 7BC, 7CC, 7DC, 7EC, 7FC, 7JC, 11AC, 11B, 11C	1-1737	05-05371	**$17.75**
Inter-Cylinder Baffle	7AC, 7BC, 7CC, 7DC, 7EC, 7FC, 11AC, 11B, 11C	1-873	05-05544	**$9.50**
Cylinder Head Baffle Spring Rod	7AC, 7BC, 7BCM, 7CCM, 7dc7ec, 7fc, 11a, 11b, 11c	1-2424	05-05440	**$5.75**
Cylinder Head Baffle Spring	7AC, 7BC, 7BCM, 7CCM, 7dc7ec, 7fc, 11a, 11b, 11c	1-1776	05-06376	**$15.50**
Baffle, Crankcase	7AC, 11AC	7-470 (right)	05-06180	**$115.75**
		7-469 (left)	05-06178	**$106.75**
		7-471 (upper)	05-06182	**$68.75**
Cylinder Baffles	7AC, 11AC	7-475 (right rear)	05-06186	**$88.80**
		7-477 (right front)	05-06190	**$198.50**
Bracket Front Cylinder Baffle (Component to 7-477 & 7-478)	7AC, 7CCM, 7DC, 11AC	1-2414R	05-05434	**$13.90**
		1-2414L	05-05433	**$13.90**
Engine Baffle Assembly	7GCBC, 7KCAB, 7GCAA, 8KCAB w/150 hp only	3-1395R (right side)	05-05785	**$118.75**
		3-1395L (left side)	05-05783	**$117.85**
Engine Baffle Assembly	7GCAA, 7GCBC, 7KCAB, 8KCAB	4-1421 (left front)	05-05908	**$95.50**
		4-1422 (right front)	05-05910	**$124.50**
		4-1427 (right rear)	05-05912	**$149.50**
Engine Baffle Assembly	8GCBC, 8KCAB	3-1563R (right side)	05-05816	**$47.90**
		3-1563L (left side)	05-05814	**$47.50**
		4-1654 (right front)	05-05955	**$125.50**
		4-1653 (left front)	05-05954	**$141.50**
		4-1656 (right rear)	05-05957	**$87.50**
		4-1658 (left rear)	05-05959	**$134.50**
		4-741 (lower left)	05-06039	**$79.75**
		4-742 (lower right)	05-06041	**$73.75**
Engine Baffle Assembly	7EC, 7FC	4-879 (left front)	05-06057	**$132.95**
		4-880 (right front)	05-06059	**$144.95**
		4-881 (left rear)	05-06061	**$106.95**
		4-882 (right rear)	05-06063	**$157.65**
Flange Air Heater Inlet	7A, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7JC, 7KC, 11AC, 11BC, 11CC	1-2442	05-05442	**$36.00**
Engine Baffle w/1" holes	8GCBC	4-1657	05-05958	**$73.50**
Engine Baffle Seal Material *Meets AN, MS, or Mil-Spec	**Sold per square foot.**	T8071-1	05-06377	**$31.50**

If the baffle you need is not listed, please call and inquire. We have many more Aeronca, Bellanca and Champion baffles. Too many to list here.

TAIL FEATHER COMPONENTS & HARDWARE ALL FAA/PMA'D

Description	Models	OEM P/Ns	Part No.	Price
Rudder	7AC, 7B, 7BCM, 7CCM, 7DC, 11A, 11B, 11C * 4-866 replaces 4-545 by Service Bulletin #19	4-545*	05-06047	***$464.00***
Rudder	7AC, 7ACA, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCA, 7GCB, 7GCBA,7HC, 7KC, 11CC, 11BC	4-866	05-06047	***$464.00***
Guard - Rudder Cable Pulley	Most 7 and 11 Series	1-2398-1 (painted)	05-05429	***$9.95***
		1-2398-2 (unpainted)	05-06379	***$4.95***
Hinge Bushing	Most 7EC and up Series, 8GCBC & 8KCAB (.25 ream)	1-3737	05-06380	***$5.60***
Hinge Bushing	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC	1-3737-1	05-06381	***$6.50***
Bolt (Code 5)	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC	AN23-40	AN23-40	***$1.18***
Pin (Code 5)	7, 8 & 11 Series	AN394-71	05-06382	***$0.99***
Rudder Pedal Control Bearing Block	11B, 11C	1-2892-2	05-06383	***$50.70***
Cable - Front to rear rudder pedal	7AC, 7BCM, 7CCM, 7DC, 7EC, 7GC, 7GCBC, 7CCA, 7GCBA, 7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC	1-2280	05-05384	***$67.50***
Rudder Control Cables, Left & Right	11AC, 11B , 11C	1-2496-2 (left)	05-05455	***$49.00***
		1-2496-3 (right)	05-05456	***$49.00***
Rear Rudder Pedal Spring	Most 7 Series	1-2568	05-06384	***$14.50***
Rudder Pedal Spring	Most 7 Series	1-769	05-06385	***$13.95***

P/N 05-06384




P/N 05-06385

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CARB AIR SCOOP AND HEATER BOX ASSEMBLIES FAA/PMA'D

Description	Models	OEM P/Ns	Part No.	Price
Carb Air Box Assy.(LYC 0-235)	7ECA	4-1435	05-05918	**$468.00**
Carb Air Box Assy. with filter	7EC, 7FC, 7JC	4-877-3	05-06056	**$680.00**
Carb Air Scoop Bearing Plate Assy.	Most 7 & 11 Series	1-2563	05-05465	**$29.50**
Carb Air Scoop Valve Shaft Arm	Most 7 Series	1-8950	05-05573	**$68.75**
Carb Air Scoop Valve Assy.	7GCBC, 7ECA, 7GCAA, 7KCAB	2-2141	05-05670	**$33.50**
Carb Air Scoop Valve Assy.	8KCAB	2-2142	05-06386	**$41.50**
Carb Air Scoop Box Housing only	7ECA, 7GCAA, 7GCBC, 7KCAB	3-1385	05-05778	**$72.00**
Air Box Outer Housing	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB	3-1546	05-05812	**$174.50**
Carb Air Scoop Flange	7GCBC, 7ECA, 7GCAA, 7KCAB, 8KCAB, 8GCBC	2-2083	05-05667	**$74.50**
Flange - Carb Heat Inlet	7AC, 7BCM, 7CCM, 11AC	1-2492	05-05454	**$20.50**
Air Filter	7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB	CA121pl	05-06387	**$23.85**
NAPA Air Filter - Direct replacement of FRAM	7GCA, 7GCB, 7GC, 7HC ***EXPERIMENTAL ONLY***	CA161pl	05-06388	**$19.50**



P/N 05-05465

AP

HARDWARE PARTS ALL FAA/PMA'D

Description	Models	OEM P/Ns	Part No.	Price
Aileron Control Sector Bushing	7GCBC, 7ECA, 7GCAA, 7KCAB, 8GCBC	1-10369	05-06389	**$31.50**
Socket-Control Stick Bushing	Most 7 & 8 Series	1-2550	05-06390	**$16.65**
Oleo Shock Strut Bushing	Most 7 & 11 Series	1-2565	05-06323	**$43.75**
Fairlead Pulley Bushing	Most Models. Except 8GCBC	1-2636	05-06391	**$5.75**
Oleo Strut Bushing	Most 7 & 11 Series. Except 7AC, 11AC	1-2788	05-05505	**$16.50**
Hinge Bushing	Most 7EC and up Series, 8GCBC & 8KCAB (.25 ream)	1-3737	05-06380	**$5.60**
Hinge Bushing	Most 7EC and up Series, 8GCBC & 8KCAB (.187 ream)	1-3737-1	05-06381	**$6.50**
Cable - Front to rear rudder pedal	7AC, 7BCM, 7CCM, 7DC, 7EC, 7GC, 7GCBC, 77CCA, 7GCBA,7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC.	1-2280	05-05384	**$67.50**
Stabilizer Cable Wire Brace	Most 7, 8, & 11 Series	1-2340	05-05405	**$48.75**
Rudder Control Cables, Left & Right	11AC, 11B , 11C	1-2496-2 (left) 1-2496-3 (right)	05-05455 05-05456	**$49.00** **$49.00**
Air Duct Flange	Most 7EC-7KCAB, 8 Series	1-3670	05-06392	**$9.65**
Rectangular Gasket	Most 7 & 8 Series	1-10019	05-06393	**$6.50**
Large Light Bracket Retainer	7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7GCBA, 7KC	1-8745	05-06394	**$16.85**
Cleveland O-Ring*		101-50353	05-06395	**$11.50**
Cushioned Clamps - Loop-type, Cushioned, line support clamps, made of aluminum alloy. Cushion is non-fuel resistant.				
5/8" Clamp*		MS21919-DG10	MS21919-DG10	**$0.36**
1/8" Clamp*		MS21919-DG2	MS21919-DG2	**$0.52**
3/16" Clamp*		MS21919-DG3	MS21919-DG3	**$0.41**
1/4" Clamp AN742-4*		MS21919-DG4	MS21919-DG4	**$0.25**
7/16" Clamp*		MS21919-DG7	MS21919-DG7	**$0.52**
Pulley - Aileron Control	7ACA, 7ECA, 7GCAA, 7GCBC, 7KCAB	1-10309	05-05348	**$48.00**
Pulley - Fairlead (aluminum)	Most 7, 8 & 11 Series	1-2395	05-06397	**$14.85**
Pulley Guard (rudder cable)	Most 7, 8 & 11 Series	1-2398-1	05-05429	**$9.95**
Pulley*		(AN210) MS24566-4B	MS24566-4B	**$26.50**
Anti Friction Bearing Pulley (Non-Metallic)*	MS24566-3B	MS24566-3B	MS24566-3B	**$20.65**
Pulley - Aileron Control Cable	7GCBC, 7ECA, 7GCAA, 7KCAB, 8GCBC	1-10365	05-06398	**$45.50**
Cylinder Head Baffle Spring	Most 7AC-7FC, & 11Series	1-1776	05-06376	**$15.50**
Rear Rudder Pedal Spring	Most 7 & 8 Series	1-2568	05-06384	**$14.50**
Rudder Pedal Spring	Most 7 & 8 Series	1-769	05-06385	**$13.95**
Torque Tube Bearing Block (phenolic)	Most 7 Series and 8KCAB	1-2599	05-06399	**$77.75**
Torque Tube Bearing Block (aluminum)	7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	1-10370	05-06400	**$59.95**
Fabric Hold Down Washer	Most 7 & 11 Series	1-2331	05-06401	**$0.27**
Clamp Assembly 1-1/2" Diameter Tube	7CCM, 7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB, 7ECA, 7GCAA, 7KCAB, 7KC	1-2941	05-05516	**$29.95**
Bowden Cables - (solid wire ends). Spiral wound galvanized wire casing. Used for push-pull controls of any length. I.D. .078 and O.D. 7/32" dia.				
Bowden Cable Casing, 38-1/8" long	7ECA	1-2578-11	05-06402	**$21.50**
Bowden Cable Casing, 56" long	7ECA	1-2578-12	05-06403	**$26.80**
Bowden Cable Casing, 56" long	7AC, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCB, 7JC	1-2578-3	05-05472	**$33.75**
Bowden Cable Casing, 24-3/4" long	7EC, 7BCM, 11AC, 11B	1-2578-4	05-05473	**$33.75**
Bowden Cable Casing, 16" long	11AC, 11B	1-2578-5	05-06404	**$10.00**
Bowden Cable Casing, 21" long	11AC, 11B	1-2578-6	05-05474	**$37.00**
Bowden Cable Casing, 23" long	11AC, 11B	1-2578-7	05-05475	**$37.00**
Bowden Cable Casing, 52-3/4"" long	7GCBA	1-2578-8	05-06405	**$23.99**

**** Meets AN, MS, or Mil-Spec***

Note on Model Eligibility: We have made every effort possible to detail installation eligibility for Aeronca parts based upon the best information we have available. If you are uncertain as to whether a specific OEM part number may be installed on your aircraft, you must consult either your aircraft owner or service manuals, or check with your mechanic. We do not warrant that models listed in the catalog are accurate in all instances. Please call us if you have questions about specific part numbers and model eligibility and we can research your question prior to your order.

(FAA/PMA APPROVED)

WING LIFT STRUTS



New, Improved Steel Struts—Sealed and Oiled to prevent Internal Corrosion. (Except Decathlon aluminum front struts)

7AC Front Strut ..... P/N 05-08515..... **$599.00**
7AC Rear Strut ..... P/N 05-08520..... **$478.00**
Citabria Front Strut ..... P/N 05-08535..... **$627.00**
Decathlon Front Strut, Left ..... P/N 05-08545..... **$906.00**
Decathlon Front Strut, Right ..... P/N 05-08550..... **$912.00**
Decathlon Rear Strut ..... P/N 05-08555..... **$465.00**
Scout Front Strut ..... P/N 05-08565..... **$548.00**
Scout Rear Strut ..... P/N 05-08570..... **$513.00**

Heavy Duty Wing Lift Struts - Wall tube: .049" & complies with ad 77-22-05 for: Aeronca: 7AC, Champion: 7EC, Citabria: 7ECA. Visit our website for complete application info.

11AC Front Strut ..... P/N 05-08525..... **$644.00**
11AC Rear Strut ..... P/N 05-08530..... **$489.00**

WING LIFT STRUT FORK



P/N 05-08575..... **$75.95**

7AC CONTROL CABLES (GALVANIZED STEEL)



Short Aileron Cable (2 req'd)
P/N 05-08580..... **$41.50**
Rudder Cable, Long (2 req'd)
P/N 05-08585..... **$104.75**
Rudder Cable, Short (2 req'd) ..... P/N 05-08590..... **$96.75**
Aileron Control Cable (4 req'd)..... P/N 05-08595..... **$83.75**
Brake Cable and Housing Assembly (2 req'd), (PMA App.)
..... P/N 05-08600..... **$105.75**
Brake Cable Only (2 req'd)..... P/N 05-08605..... **$46.80**
Down Elevator Cable (1 req'd) ..... P/N 05-08610..... **$130.75**
Down Elevator Cable..... P/N 05-08615..... **$158.75**
Trim Cable (2 req'd) ..... P/N 05-08620..... **$81.75**
Up Elevator Cable (1 req'd)..... P/N 05-08625..... **$316.00**

AERONCA WING TANK KIT



Comes complete with left and right hand tanks, fittings, fuel line, mounting brackets, installation instructions and drawings. Fuel capacity is 5 gallons for each tank. Includes two Cat. No.05-06359 fuel caps.....P/N 05-06359 ..... **$1,122.00**

CITABRIA AIR INDUCTION TUBE



P/N 05-08630 ..... **$24.50**

CITABRIA FUEL GAUGE COVER



P/N 05-08635..... **$97.75**

TAILBRACE WIRE LUG

P/N 05-08640 ..... **$16.50**

EXHAUST SYSTEM FOR 7AC / 11AC



LH Stack..... P/N 05-08705..... **$349.00**
RH Stack..... P/N 05-08710..... **$349.00**
Heat Muff ..... P/N 05-08715..... **$264.95**

CITABRIA FUEL VENT DEFLECTOR



P/N 05-08655 ..... **$71.75**

AERONCA 7AC STYLE HUB CAPS



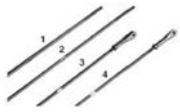
These experimental Aeronca 7AC like style Caps will help you achieve the pre or post war appearance you are looking for without taking away from the performance. Sold as a pair.
P/N 05-12326 ..... **$96.75**

AERONCA 7AC STYLE CONTROL STICK WOOD KNOBS



These experimental Aeronca 7AC like style Control Stick Wood Knobs will help you achieve the pre or post war appearance you are looking for without taking away from the performance. Sold as a pair.
P/N 05-01237 ..... **$23.95**

STAINLESS STEEL TAILBRACE WIRE



7AC, 7EC, 7FC—UPPER & LOWER

Citabria, Decathlon, Scout—Lower
1. Wire Only..... P/N 05-08665..... **$48.50**
3. Assembly ..... P/N 05-08670..... **$120.75**

Citabria, Decathlon, Scout—Upper
2. Wire Only..... P/N 05-08675..... **$47.50**
4. Assembly ..... P/N 05-08680..... **$108.75**

ALL ALUMINUM COWLING



Nose Cowl ..... P/N 05-08685 **$1,498.00**
Fuselage Cowl (7AC only)
P/N 05-08690... **$773.00**
Top Cowl..... P/N 05-08695... **$406.00**
Bottom Cowl ..... P/N 05-08700... **$322.00**

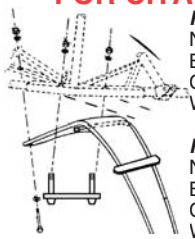
LANDING GEAR U-BOLTS



Citabria/Decathlon. ..... P/N 05-08645... **$182.85**
Scout (new style) ..... P/N 05-08650... **$151.75**

(Hardware required—see below)

LANDING GEAR ATTACH HARDWARE FOR CITABRIA, DECATHLON, SCOUT



For Citabria and Decathlon
Nut (6 required)..... P/N 05-08720 ... **$21.85**
Bolt (2 required)..... P/N 05-08725 ... **$29.50**
Cupped Washer (2 req.)... P/N 05-08730 ..... **$0.21**
Washer (6 required)..... P/N 05-08735 ..... **$0.47**

For Scout
Nut (6 required)..... P/N 05-08720 ... **$21.85**
Bolt (2 required)..... P/N 05-08745 ... **$34.65**
Cupped Washer (2 req.)... P/N 05-08730 ..... **$0.21**
Washer (6 required)..... P/N 05-08735 ..... **$0.47**

OLEO SHOCK STRUT



Fits 7ECA, 7GCAA and 7GCBC:
with High Energy Taxi Spring... P/N 05-08740..... **$1,020.00**
with Standard Spring..... P/N 05-08750..... **$846.00**
Fits 7AC and 11AC ..... P/N 05-08755..... **$959.00**
7AC and 11AC Spring Only ..... P/N 05-08760..... **$73.80**

LANDING GEAR OLEO CASE FRAME



Oleo Case Frame (Uncovered)
7AC & 11AC Series.. P/N 05-08765..... **$809.00**
Early Citabria ..... P/N 05-08770..... **$749.00**

TAILWHEEL LEAF SPRINGS – COMPLETE SETS



Citabria/Decathlon (short)
P/N 05-08780..... **$173.75**
Scout (long) .....P/N 05-08785..... **$195.75**

LANDING GEAR AXLE ASS'Y. FOR AERONCA & CITABRIA



Early Citabria Axle Strut..... P/N 05-08790.... **$797.00**
Aeronca Axle Strut ..... P/N 05-08795.... **$864.00**

AERONCA HINGE BUSHING



P/N 05-06380..... **$5.60**

AERONCA REAR RUDDER PEDAL SPRING

P/N 05-08063..... **$13.95**

AERONCA RUDDER PEDAL SPRING

P/N 05-06385..... **$13.95**

AERONCA TAILSPRING U BOLT



P/N 05-08066..... **$34.50**

AERONCA WING SPIN SUPPORT BLOCK

P/N 05-08069..... **$6.85**

Prices Subject to Change Without Notice

(TYPE CERTIFICATE APPROVED)

SIDE COWL ASSEMBLIES

DZUS Fasteners..... P/N 05-08810.....**$869.00**
CAMLOC Fasteners ..... P/N 05-08815.....**$521.00**

BOTTOM COWLS

P/N 05-08820.....**$597.00**

SPARK PLUG FAIRINGS



Mooney Fairing (top in photo, approx. 17 inches long)
P/N 05-08825.....**$100.75**
Ercoupe Fairing (bottom in photo, approx. 14-3/4 inches long).....
P/N 05-08830.....**$109.75**



ERCOUPE ENGINE MOUNT

P/N 05-08835.....**$2,069.00**



FILLER NECK GROMMET

P/N 05-08840.....**$23.50**



NOSE GEAR STEERING BALL

This is the original type steering ball as used on Ercoupe, Forney and Alon.
P/N 05-08845.....**$12.50**

IMPROVED STEERING JOINT BALL KIT



This kit consists of rod-end bearing and all necessary hardware. It is FAA approved for all Ercoupe, Forney, Alon and M-10. For use with the part number 52035 push-rod that has the male threaded stud. (Steering Collar not included)
P/N 05-08905 ..... **$142.75**
Push Rod....P/N 05-08910 ..... **$159.99**

EXHAUST SYSTEM FOR ERCOUPE 415 SERIES & EARLY FORNEY



Left Hand Stack (stainless)
P/N 05-08920 .....**$610.00**
Right Hand Stack (Stainless)
P/N 05-08930 .....**$624.00**
Muffler.....P/N 05-08935...**$785.00**
Carburetor Heat Shroud
P/N 05-08940 .....**$150.95**



ERCOUPE WINDOW WELTS

Ercoupe Window Welt 53169
(2 are required per plane, sold each)
P/N 05-08950.....**$50.50**



LANDING GEAR SHOCK PADS

This material has superior weathering qualities. This unaffected by hydraulic fluid and has greater resistance to static load.
Pads (8 required per plane)
P/N 05-08850.....**$9.80**

Washer (SN 813 and up) (14 required per plane)
P/N 05-08855.....**$18.50**

6 GALLON FUSELAGE TANKS



For Ercoupe, welded alum., SN 2623 &up
P/N 05-08865.....**$1,953.00**

For Forney, Alon.....P/N 05-08870.....**$1,670.00**

For M-10.....P/N 05-08875.....**$1,642.00**

WELDED 9-GALLON WING TANK



For Forney, Alon and M-10 Models with gauge in left hand tank.

Left Hand Tank (48147)
P/N 05-08885 ..... **$2,552.00**

Right Hand Tank
P/N 05-08890 ..... **$2,096.00**

BLANK INSTRUMENT PANEL



Lay out your instrument and radio arrangement using this blank Ercoupe Panel which has locating holes only for the two control columns. FAA field approval required.....P/N 05-08900.....**$394.00**



ERCOUPE FRONT BULKHEAD A40665-8

This part may be used on Ercoupe, Forney, Alon or Mooney with this bulkhead. However, you must select the proper assembly for your particular propeller and crankshaft combination.....P/N 05-04839.....**$109.80**

AP

NAVION – TAYLORCRAFT PARTS

(FAA/PMA APPROVED)

NAVION PARTS










Aircraft Spruce is a factory authorized distributor for these Navion parts manufactured under FAA/PMA approval. These parts are eligible for installation on all Navion models unless otherwise noted.

Description	Navion P/N	Part No.	Price
Fuel Selector Valve Main-off	147-30013-201	05-04271	**$980.00**
Fuel Selector Valve Main-Auxoff	147-30013-202	05-04272	**$1,150.00**
Fuel Selector Valve Left-Main-RGT-O	147-30013-203	05-04273	**$1,033.00**
Digital fuel qty gauge Main	147-40002-1001	05-04274	**$687.00**
Digital fuel qty gauge MN/AUX	147-40002-1002	05-04275	**$693.00**
Digital fuel qty gauge L/R	147-40002-1003	05-04276	**$692.00**
Fuel level Transmitter 5 hole	173-70010-20	05-04277	**$291.95**
Fuel level Transmitter 6 hole	173-70010-10	05-04278	**$298.00**
Fuel level Transmitter AUX TNK	145-51071-4	05-04279	**$306.00**
Fuel level Transmitter TIP TNK	161.30015.67	05-04280	**$320.00**
Flush Fuel Cap	147-30012-150	05-04281	**$738.00**
Gear Switches Main - Nose	147-40002-10	05-04282	**$79.50**
Mixture Cable-Vernier	205-30001-1002	05-04283	**$438.00**
Propeller Cable-Vernier	205-30001-1003	05-04284	**$462.00**
Baggage Door	--	05-04285	**$2,877.00**
Overhead Panel	147-40002-136-1	05-04286	**$358.00**
Cable Roller Assembly Set of 4	145-52301-3	05-04287	**$78.00**
Primary Monitor - CHT, EGT, and more	147-40002-1007	05-04288	**$2,099.00**
Pilot & Co-Pilot Shoulder Restraints	173-53001	05-04289	**$400.00**
Nose Gear Seal Kits	145-S145-34102-900	05-04290	**$121.95**
Main Gear Seal Kit	145S33102-900	05-04291	**$26.50**
Aft. Equipment rack	147-40005	05-04292	**$1,566.00**
Texas Patch LH	161-31023-1	05-04293	**$92.00**
Texas Patch RH	161-31023-2	05-04294	**$92.00**
Canopy Felt with Inst Letter 28	--	05-04295	**$69.00**
Heated Pitot Tube Mast	161-51002-11	05-04296	**$567.00**
Sloped Windshield	162-31801	05-04297	**$1,455.00**

AP

(FAA/PMA APPROVED)



TAYLORCRAFT ENGINE MOUNT

For 65 hp. Continental ..... P/N 05-08955..... **$1,043.00**
For 85 hp. Continental ..... P/N 05-08960..... **$1,121.00**



TAYLORCRAFT EXHAUST SYSTEM

For all 65 hp. Continental engines in B series through BC 12 series.
P/N 05-08965.....**$1,903.00**

TAYLORCRAFT B, BC, & LIFT STRUTS
(OILED AND SEALED)



Taylorcraft Front Lift Strut ..... P/N 05-08970..... **$596.00**
Taylorcraft Rear strut..... P/N 05-08975..... **$575.00**
Note: all post WWII will not work on a Taylor A/C F/L2M

TAYLORCRAFT LEADING EDGE SKINS



Outboard Leading Edge (54 1/4") ..... P/N 05-08980..... **$97.75**
Center Leading Edge (57 1/4")..... P/N 05-08985..... **$108.80**
Inboard Leading Edge (64") ..... P/N 05-08990..... **$120.75**
Note: all post WWII will not work on a Taylor A/C F/L2M



TAYLORCRAFT HEAT SHROUD

P/N 05-08995 .....**$1,032.00**



TAYLORCRAFT ALUMINUM NOSE COWL

Applicable to B series and BC12D Continental powered Taylorcraft (cowl grills not included)
P/N 05-09005.....**$914.00**



TAYLORCRAFT NOSE COWL GRILLS

Stamped aluminum grills with natural aluminum finish. For all standard Taylorcraft nose cowls.

Left Grill ..... P/N 05-09010..... **$70.75**
Right Grill..... P/N 05-09015..... **$70.75**



TAYLORCRAFT WHEEL FENDER

FAA approved Taylorcraft Fiberglass Wheel Fender Fits 6.00 x 6-6ply tires and other classic models. Code 4.
P/N 05-07231 .....**$253.95**



TAYLORCRAFT AILERON BALL STUD

P/N 05-07229.....**$35.75**



TAYLORCRAFT TAIL SURFACE HINGE BUSHING

Taylorcraft Controls Bushing - graphite SAE 841 Bronze Sleeve bearing, for 1/4" Shaft Diameter, 5/16" OD, 3/4 " Length. ..... P/N 05-11459.....**$5.85**

TAYLORCRAFT HINGE PIN



Pin - Tail Surface Hinge Taylorcraft.
P/N 05-11460.....**$5.95**

SEALED TAYLORCRAFT LIFT STRUT ASSEMBLIES





Front Clamp







Rear Clamp

Aero Fabricators, the manufacturing division of The Wag-Aero Group, now has FAA approval to manufacture. New struts, oiled, sealed, and made from high quality 4130 streamline tubing. Sealed lift strut assemblies as well as approval to REPAIR and seal existing lift strut assemblies (as long as there is no corrosion) for Taylorcraft Models a, bc, bcs, bc-65, bcs-65, bc12-65, bcs12-65, bc12-d, bcs12-d, bc12-d1, bcs12-d1, bc12d-85, bcs12d-85, bc12d-85, bcs12d-4-85, bf, bfs, bf-60, bfs-60, bf-65, bf12-65, bl, bls, bl-65, bls-65, bl12-65, bls12-65, fa-iii, 19, f19, f21, f21a, f21b, f22, f22a, f22b, f22a. These sealed lift struts satisfy the requirements of AD 2007-16-14. All FAA/PMA'D.

Description	Major	Minor	Wall Thickness	Cat. No.	Price ea.
Rear Lift Strut w/clamp	1.78	1.06	.049	05-05172	**$818.00**
Rear Jury Strut clamp only				05-05173	**$17.50**
Front Lift Strut w/clamp	2.76	1.44	.049	05-05174	**$976.00**
Front Jury Strut clamp only				05-05175	**$16.50**
Remanufactured Front Sealed Lift Strut with out clamp				05-06243	**$418.00**

TAYLORCRAFT PARTS



P/N 05-05176



P/N 05-05178

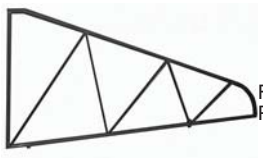


P/N 05-05177



P/N 05-05179

Description	OEM Part No.	Part No.	Price
Taylorcraft Trim Tab Frame For L24A, B and M models. Made of wood. FAA/PMA'D	D-4026	05-05176	**$82.75**
Taylorcraft Trim Tab For L2, L2A and TG6. FAA/PMA'D	B-410	05-05177	**$18.90**
Taylorcraft Bungee Tool	M-942-000	05-05178	**$202.95**
Taylorcraft Rudder For BC12D. Direct replacement for OEM P/ND-A410. FAA/PMA'D	DA410	05-05179	**$567.00**



TAYLORCRAFT STABILIZER

For BC12D. Direct replacemnt for OEM P/ND-A419. FAA/PMA'd

P/N 05-05180 ..... **$666.00**





P/N 05-05185
P/N 05-05186

TAYLORCRAFT WING FUEL TANKS

6 gallon Wing Fuel Tanks, For Models B, B12, BC, BC12D, BCS, BCS12D, 19, F19, F21. OEM P/N 1546. FAA/PMA'd

P/N 05-05187

LH ..... P/N 05-05185 ..... **$598.00**

RH ..... P/N 05-05186 ..... **$598.00**

TAYLORCRAFT FUSELAGE FUEL TANK

12 gallon Fuselage Fuel Tanks, For Models B12, BC12D, 19, F19. OEM P/N 0797. FAA/PMA'd ..... P/N 05-05187 ..... **$715.00**



TAYLORCRAFT ELEVATOR, RH

For BC12D. Direct replacement for OEM P/ND-A420. FAA/PMA'd

P/N 05-05181 ..... **$567.00**

TAYLORCRAFT TAIL FLYING WIRES - Stainless Steel, FAA/PMA'd

Size	OEM Part No.	Part No.	Price ea.
38-1/2"	A-460	05-05188	**$32.70**
40-5/8"	A-461	05-05189	**$39.65**
36-1/2"	A-4029	05-05190	**$39.95**
44"'	D-40	05-08392	**$39.85**

Set of Four Taylorcraft Flying Wires. Includes 2 each A461, D-40 wires, 8 each nipples A-986, end insert A4002 and 8/36" hex nut; two each fuselage straps A4001, fin straps A4008; four each stabilizer straps A4009 . P/N 05-10540 ..... **$398.00**

TAYLORCRAFT DRAG WIRES - Made from 304 Stainless Steel, 1

Description	PN	Price
Inboard, 42-1/4"	05-08056	**$12.95**
Outboard, 64"	05-08057	**$14.85**
Lift Strut Fitting, 33-1/32"	05-08058	**$14.50**
Drag Wire Nipple	05-08059	**$7.95**

TIE RODS AND ACCESSORIES

Description	OEM Part No.	Part No.	Price ea.
Nipple for #8-36 tie rods. FAA/PMA'd	A-986	05-05193	**$8.75**
Tie Rod End Insert. FAA/PMA'd	A-4002	05-05194	**$16.50**
Tie Rod Fuselage Strap. FAA/PMA'd	A-4001	05-05195	**$24.50**
Tie Rod Fin Strap. FAA/PMA'd	A-4008	05-05196	**$26.70**
Tie Rod Stabilizer Strap. FAA/PMA'd	A-4009	05-05197	**$24.85**

TIE RODS AND ACCESSORIES

Description	OEM Part No.	Part No.	Price ea.
8/36"	---	05-05192	**$0.22**
8/36", MS35650-384	---	05-08061	**$1.62**



TAYLORCRAFT VERTICAL FIN

For BC12-D aircraft and it is a direct replacement for OEM P/N D-A40. Fabricated to current aviation material standards using new rigid fixturing to maintain drawing specifications. These are manufactured uncovered. FAA/PMA'd

P/N 05-08378 ..... **$552.00**



CLEVELAND WHEELS & BRAKES FOR HOMEBUILTS

Wheels with matching hydraulic disc brakes are made from magnesium alloy castings to give a lightweight, durable unit. Wheels complete with bearings and wheel covers. Brake assembly has linings installed. Sold in pairs only.

500 x 5, Wt. 5.75 Lbs. Each (Wheel P/N 40-78B, Brake P/N 30-9)
Kit P/N 199-102 (Std. Disc)..... **$1,875.00 /Pr**
Kit P/N 199-102C (Chrome Disc)..... **$2,442.00 /Pr**
Use Lining P/N 66-106. Fits 1-1/4" dia. axles.

600 x 6, Wt. 7-3/4 Lbs. Each (Wheel P/N 40-59A, Brake P/N 30-59A)
Kit P/N 199-104 (Std. Disc)..... **$2,995.00 /Pr**
Kit P/N 199-104C (Chrome Disc)..... **$3,126.00 /Pr**
Use Lining P/N 66-112. Fits 1-1/2" dia. axles.

600 x 6, with Master Cylinders for Defiant
Special set consists of (2) P/N 40-75B wheels, (2) P/N 30-52 brake assemblies and (2) P/N 10-34 master cylinders.
P/N 199-133X **$5,017.00**

500 x 5 NOSE WHEEL - Magnesium, with bearings.
For 1-1/4" dia. axle..... P/N 40-77C **$894.00**

600 x 6 NOSE WHEEL - Anodized aluminum, with bearings.
For 1-1/2" dia. axle..... P/N 40-56..... **$1,706.00**

LG



HEAVY-DUTY CLEVELAND WHEELS & BRAKES FOR HOMEBUILTS

The heavier-duty brake discs, linings and hardware in these kits will increase braking capacity for the heavier, faster-landing aircraft now being designed & built.

#199-93 UPGRADE KIT - For #199-102 standard wheels and brakes. Upgrades current 40-78B/ 30-9 to new 40-230/30-181 specs. Consists of #66-106 linings, discs, shims, bolts, rivets and nameplates for 2 wheels & brakes. P/N 199-93 ..... **$745.00**

#199-156 KIT (AIRCRAFT TO 1500 LBS) - Kit consists of two 40-230 wheel assemblies and two 30-181 brake assemblies. Uses #66-106 linings. Fits 1-1/4" dia. axles. Used on Vari-eze.
P/N 199-156 ..... **$1,843.00**

#199-152 KIT FOR LONG-EZ & COZY (AIRCRAFT TO 2200 LBS) - Kit contains two 40-151 wheel assemblies and two 30-133 brake assemblies. Uses #66-55 linings. Fits 1-1/4" dia. axles.
P/N 199-152 ..... **$2,493.00**



CLEVELAND WHEELS & BRAKES FOR AMPHIBIANS

Although magnesium wheels and brakes are considerably lighter, magnesium is subject to corrosion and should not be used for amphibious operation. Only organic linings should be used on all brakes. All parts of the 500 x 5 size wheels and brakes for amphibians are constructed of anodized aluminum for water resistance. Although a special 40-74 series of 600 x 6 wheels and brakes are manufactured for amphibious use, with chrome plated bearings and brake disc and water drainage holes, they are too costly for use on homebuilt aircraft.

The use of standard Cleveland aluminum wheels with standard bearings on amphibian aircraft is suggested. If bearings are kept well greased, reasonable service can be expected, but earlier bearing replacement should be anticipated.

500 x 5 (Anodized Aluminum)
Kit P/N 199-103 (Std. Disc) ..... **$2,464.00 Pr**
Kit P/N 199-103C (Chrome Disc) ..... **$2,765.00 Pr**

600 x 6 (Anodized Aluminum)
Kit P/N 199-105 (Std. Disc) ..... **$2,050.00 Pr**
Kit P/N 199-105C (Chrome Disc) ..... **$2,888.00 Pr**

500 X 5 ALUMINUM NOSE WHEEL, P/N 40-87C **$1,081.00**

AEROSHELL GREASE FOR WHEEL BEARINGS

Aeroshell #22 grease is recommended for lubrication of Cleveland wheel bearings and is also applicable to other similar wheel bearings. Meets Mil-G-81322. 14 oz. tube .....P/N 08-05490 .....**$12.65**

CLEVELAND HOMEBUILDERS SPECIAL WHEEL & BRAKE SET PACKAGES



PACKAGE NO. 1 -
Includes 2 Cleveland 5.00-5 magnesium wheels & brakes plus (2) 6 ply tires & tubes. (Wt. approx. 28 lbs.)

A w/STA Air Trac Tires & Tubes
P/N 06-00100 ..... **$2,156.00**
B w/Goodyear Flight Custom II Tires (Goodyear's latest design)
P/N 06-00200 ..... **$2,403.00**
C w/Lamb Tires & Tubes (11.400 x 5)
P/N 06-00300 ..... **$1,947.00**

PACKAGE NO. 2 -
Package No. 1 plus 2 Cleveland #10-35 master cylinders. (Wt. approx. 30 lbs.)
A w/STA Air Trac Tires & Tubes
P/N 06-00400 ..... **$3,580.00**
B w/G.Year Flight CustomII Tires & Tubes
P/N 06-00500 ..... **$3,827.00**
C w/Lamb Tires & Tubes (11.400x5)
P/N 06-00600 ..... **$3,371.00**

PACKAGE NO. 3 -
Includes 2 Cleveland 6.00-6 magnesium wheels and brakes plus two 4 ply tires and tubes. (Wt. approx. 32 lbs.)
A w/STA Air Trac Tires & Tubes
P/N 06-00700 ..... **$3,277.00**
B w/G.Year Flight CustomII Tires & Tubes
P/N 06-00800 ..... **$3,549.00**

PACKAGE NO. 4 -
Package No. 3 plus 2 Cleveland #10-35 master cylinders. (Wt. approx. 34 lbs.)
A w/STA Air Trac Tires & Tubes
P/N 06-00900 ..... **$4,959.00**
B w/G.Year Flight Custom II Tires & Tubes
P/N 06-01000 ..... **$4,973.00**

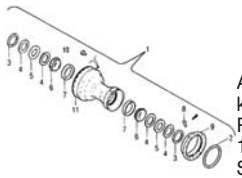
PACKAGE NO. 5 -
Includes 2 Cleveland 6.00-6 magnesium wheels & brakes plus two low-profile lightweight 6-ply 15x6.00-6 tires & tubes. (Wt. approx. 32 lbs.)
A w/STA Air Trac Tires & Tubes
P/N 06-01100 ..... **$3,349.00**
B w/G.Year Flight Custom II Tires & Tubes
P/N 06-01200 ..... **$3,504.00**

PACKAGE NO. 6 - Package No. 5 plus 2 Cleveland #10-35 master cylinders. (Wt. approx. 34 lbs.)
A w/STA Air Trac Tires & Tubes
P/N 06-01300 ..... **$5,031.00**
B w/G.Year Flight Custom II Tires & Tubes
P/N 06-01400 ..... **$4,928.00**

PACKAGE NO. 7 FOR DEFIANT -
Includes 2 Cleveland 6.00-6 magnesium wheels & brakes (P/N 199-133X) plus (2) 6.00-6 STA 6 ply tires & tubes plus 2 master cylinders.
P/N 06-01500 ..... **$5,297.00**

Prices Subject to Change Without Notice

CLEVELAND WHEEL & BRAKE CONVERSION KITS



REPLACE 800 x 4 WHEELS ON PIPER AIRCRAFT

A bolt-on 600 x 6 wheel and brake conversion kit for Piper models: J3, J5C, PA11, PA12, PA14, PA15, PA16, PA17, PA18 & PA20 PA18-150 & PA18A-150 with Form 337. The 199-71-STC kit comes complete with STC paperwork. Accommodates tire sizes 600 x 6, 700 x 6, 800 x 6. No landing gear modifications required. Minor modification of hydraulic line required. Uses double puck brakes. Fits 1-1/4" diameter axle size only. Fits Piper J4/J5 but STC does not cover these aircraft.

Magnesium Model for general use

P/N 199-71 ..... **$2,413.00**
P/N 199-71-STC (w/full STC paperwork) **$2,549.00**

Aluminum Model for "AG" Service

P/N 199-71A **$2,875.00**

Part No.	Description	Qty
O40-09804	Wheel Assy.	2
030-06602	Brake Assy.	2
067-02900	Spacer	2
0 67-03200	Spacer	2
040-07602	Nose Wheel Assy.	1
067-03100	Spacer	2
157-01000	Dust Shield	2
102-00600	Screws	6
095-15100	Washers	6
207-00300	Hydraulic Line	2
50-29	Installation Drawing NLG	1
50-30	Installation Drawing MLG	1
	Supplemental type cert.	1

#199-52 NAVION CONVERSION KIT

Complete kit for conversion to Cleveland 700 x 8 main gear and 600 x 6 nose wheel on Navion Models – A, B, C, D, E, F, G & H.
P/N 199-52 ..... **$5,497.00**

#199-52A NAVION CONVERSION KIT

Kit for conversion of maingear only.
P/N 199-52A..... **$5,190.00**

REQUEST QUOTATION ON UNLISTED MODELS

PIPER AZTEC – BRAKE



Important Note: Image is for reference only. Individual components may vary by kit.

P/N 199-63 ..... **$5,248.00**

Description	Part No.	Qty.
Brake Assembly	30-96	2
Brake Disc	164-57	2
Nameplate	166-74	2
Installation Instructions	E.S.B. 7000-4	1

CESSNA – WHEEL & BRAKE

P/N 199-46 ..... **$1,798.00**

(6.00x6) FOR CESSNA MODELS: 120, 140, (SN 8004 thru 13399), 140A (SN 13400 and up), 170, 170A, 170B, 172, 172A thru 172E, 175, 175A, 175B, 175C, P172D, 180, 180A thru 180E, 182, 182A thru 182G.

Description	Part Number	Qty.
Wheel Assy.	040-09701	2
Brake Assy.	030-06301	2
Bushing	145-02200	8
Bushing	145-01000	4
W & B Assembly Dwg.	20-134	1
Installation Instructions	50-24	1
Installation Instructions	50-25	1
Installation Instructions	50-26	1
Supplemental Type Certificate		1

GLOBE SWIFT

P/N 199-48 ..... **$3,736.00**
P/N 199-48C (Chrome) **$3,071.00**

Wheel and Brake Conversion Kit (6 00 X 6) for Globe Swift Models GC-IA, GC-IB.

NOTE: It will be necessary to change master cylinders and obtain the necessary axle hardware for conversion, Ref. dwg. 50-28. These parts can be obtained through Beech aircraft.

Description	Part Number	Qty.
Brake Assembly	030-07902	2
Wheel Assembly	040-11303	2
Spacer	067-02400	2
W & B Assembly Dwg.	20-130	1
Installation Drawing	50-23	1
Supplemental Type Certificate		1

BEECH – WHEEL & BRAKE

P/N 199-49 ..... **$2,863.00**
P/N 199-49C (Chrome) **$4,080.00**

(6.00x6) FOR BEECH AIRCRAFT MODELS: 35, A35 thru G35, 35R 35-33, 35-A33. 35-B33, 35-C33, 35-C33A, E33, E33A E33C, F33, F33A, F33C, G33, H35, J35, K35, M35, N35, P35, S35, V35, V35A, V35B, 36, A36.

Description	Part Number	Qty.
Brake Assembly	030-05400	2
Wheel Assembly	040-08300	2
Spacer	067-02600	2
W & B Assembly Dwg.	20-69	1
Installation Drawing	50-28	1
Supplemental Type Certificate		1

BEECH – WHEEL & BRAKE

P/N 199-50 ..... **$3,854.00**

(7,00x8) FOR BEECH AIRCRAFT MODELS: 35, A35 thru G35, 35R, H35, J35, K35, M35, N35, P35, S35, D55, D55A, E55, E55A 95, B95, B95A, D95A, E95, 95-55, 95-A55, 95-B55A, 95-B55B, 95-C55, 95-C55A.

Description	Part Number	Qty.
Brake Assembly	030-06600	2
Wheel Assembly	040-09800	2
Spacer	067-02500	2
Spacer	067-02700	2
W & B Assembly Dwg.	20-135	1
Installation Drawing	50-27	1
Supplemental Type Certificate		1

***NOTE:** It will be necessary to change master cylinders and obtain the necessary axle hardware for conversion, Ref. dwg. 50-27. These parts can be obtained through Beech aircraft.*

CESSNA – WHEEL & BRAKE

P/N 199-60 ..... **$2,091.00**

(6.00x6) FOR CESSNA MODELS: 180, 180A, B, C, D, E, F, H, J. 185, 185A, B, A185E, A185F, 206E, 206F, TU206E, TU206F, 210, 210A, B, C. 210K, L, T210K, T210L.

Description	Part Number	Qty.
Wheel Assembly	040-07502	2
Brake Assembly	030-05200	2
Installation Drawing (210 series)	50-34	1
Installation Drawing (180,185,206 Series)	50-35	1
Supplemental Type Certificate (210 series)		1
Supplemental Type Certificate (180,185,206 Series)	20-64	1

NOTE: Kit to be used only on aircraft with 6.00 x 6 tires.

CESSNA – WHEEL & BRAKE

P/N 199-62 ..... **$2,015.00**
P/N 199-62C (Chrome) **$2,095.00**

(8.00x6) FOR CESSNA MODELS: 180, 180A, B, C, D, E, F, H & J. 185, 185A, B, A185E, A185E, A185F, 206E, F, TU206E, TU206F.

Description	Part Number	Qty.
Wheel Assembly	040-07504	2
Brake Assembly	030-05213	2
Installation Drawing	50-36	1
Supplemental Type Certificate		1

NOTE: Kit to be used only on aircraft with 6.00 x 6 tires.

CESSNA – WHEEL & BRAKE

P/N 199-84 ..... **$2,126.00**
P/N 199-84C (Chrome) **$2,802.00**

CESSNA APPROVED RETROFIT FOR THE FOLLOWING AIRCRAFT: 150, F150, A150, FA150, 152, A152, F152, FA152, 177, 177RG, F177RG, 182, A182, F182

Description	Part Number	Qty.
Wheel Assembly	030-07500(1)	2
Brake Assembly	040-11300(2)	2
Installation Drawing	50-36	1

NOTE CESSNA CROSS REFERENCE NUMBERS
(1) C-163030-113(LH) C-163030-114(RH) (2) C-163001-0104

CESSNA – WHEEL & BRAKE

P/N 199-84A **$2,120.00**
P/N 199-84AC (chrome) **$2,127.00**

CESSNA APPROVED RETROFIT FOR THE FOLLOWING AIRCRAFT: 172, F172, R172, FR172

Description	Part Number	Qty.
Wheel Assembly	030-07501(1)	2
Brake Assembly	040-11300(2)	2
Installation Drawing	50-37	1

NOTE CESSNA CROSS REFERENCE NUMBERS
(1) C-163030-011(LH) C-163030-112(RH) (2) C-163001-0104

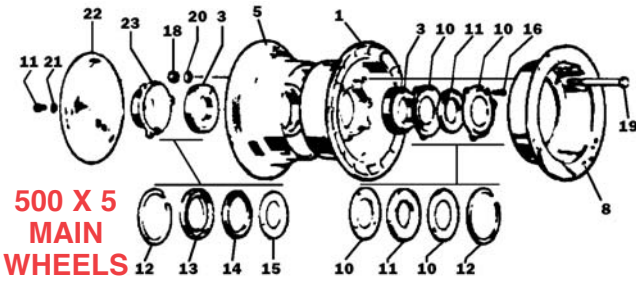
WE CARRY ALL CLEVELAND CONVERSION KITS

Cessna 190, 195, 195A, 195B - 199-61.. P/N 06-00199-61 ..... **$5,137.00**
Cessna P210N ..... P/N 199-60A..... **$2,267.00**
Cessna 310, 320 ..... P/N 199-64 ..... **$5,299.00**
Cessna 421, 340, 401, 402, 414 ..... P/N 199-76 ..... **$5,180.00**
Ercoupe ..... P/N 199-69 ..... **$2,498.00**
Beech Duke..... P/N 199-73 ..... **$4,614.00**
Beech Musketeer ..... P/N 199-124 ..... **$2,895.00**
Beech 1900C, 1900D Nose Wheel Conversion
P/N 199-256 ..... **$6,746.00**
Luscombe(8 Series) Kit with STC ..... P/N 06-02951..... **$2,965.00**
Stinson..... P/N 199-87..... **$2,552.00**
Hawker D18C, D18S, E18S, etc. (See website) P/N 199-129..... **$1,577.00**
Raytheon ..... P/N 199-123..... **$11,065.00**
Raytheon ..... P/N 199-124C..... **$2,967.00**
Raytheon ..... P/N 199-90..... **$10,032.00**
Twin Otter DHC6-1, -100, -200, -300..... P/N 199-92..... **$15,350.00**
Pilatus PC-7 MK-1..... P/N 05-21695..... **$9,125.00**

SEE OUR WEBSITE FOR COMPLETE CONVERSION KIT LISTING

LG

FAA-APPROVED CLEVELAND WHEELS & BRAKES

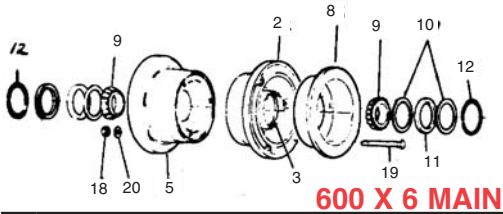


500 X 5 MAIN WHEELS

FIG	Cleveland P/N	Part No.	Description	Assembly Number	Qty. Per Assembly 40-12	40-12A	40-12B	40-19	40-19A	40-19B	40-78	40-78A	Price Each
1	161-5	161-00500	Inner Wheel Half Assy.		1	1	1						$756.00
	161-03100	161-03100	Inner Wheel Half Assy.								1		$431.00
	161-04100	161-04100	Inner Wheel Half Assy.									1	$564.00
3	08231	214-00300	Cup-Bearing		1	1	1	1	1	1	1	1	$31.65
5	162-00500	162-00500	Outer Wheel Half Assy.		1	1	1						$844.00
	162-02800	162-02800	Outer Wheel Half Assy.								1		$480.00
	162-03900	162-03900	Outer Wheel Half Assy.									1	$638.00
3	08231	214-00300	Cup-Bearing		1	1	1	1	1	1	1	1	$31.65
*	217-00100	217-00100	Grommet								1	1	$8.50
*	101-07200	101-07200	"O" Ring		1	1	1						$234.95
8	164-00400	164-00400	Brake Disc Assy.		1	1	1	1	1	1			$229.95
	164-17	164-01700	Brake Disc Assy.								1	1	$182.75
*	08125	214-00400	Cone-Bearing		2	2	2	2	2	2	2	2	$57.90
19	AN4-31A	103-10800	Bolt		3	3	3	3	3	3			$0.70
	AN4-22A	103-10500	Bolt								3	3	$0.39
20	AN960-416	095-10400	Washer			6	6	6	6	6	3	3	$0.03
18	AN365-428A	094-10300	Nut		3	3	3	3	3	3	3	3	$0.13
10	153-00800	153-00800	Ring-Grease Seal		2	2	4	2	2	4	4	4	$16.50
12	155-00200	155-00200	Ring-Snap		2	2	2	2	2	2	2	2	$19.60
11	154-00600	154-00600	Felt-Grease Seal		1	1	2	1	1	2	2	2	$11.50
23	158-00500	158-00500	Cap-Hub		1	1		1	1				$318.00
17	102-25100	102-25100	Screw		1	1		1	1				$14.85
21	095-15400	095-15400	Washer-Lock		1	1		1	1				$7.95
22	157-00500	157-00500	Shield-Dust		1			1					$107.75

MODEL NO. 40-78 wheel with brake disc and 1-1/4" dia. bearings as used on Cessna 150. P/N 40-78.....**$1,417.00**

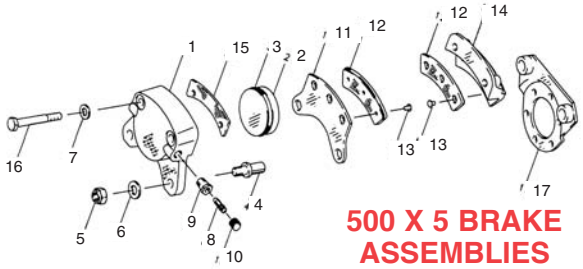
MODEL NO. 40-78B.....P/N 40-78B **$1,420.00**



600 X 6 MAIN WHEELS

FIG	Cleveland P/N	Part Number	Description	Assembly Number	Qty. Per Assembly 40-97	40-97A	40-97B	40-97C	40-97D	40-99	Price Ea.
2	161-03000	161-03000	Inner Wheel Half Assy.		1	1	1	1	1	1	$411.00
	161-02100	161-02100	Inner Wheel Half Assy.							1	$783.00
3	13836	214-00100	Cup-Bearing		1	1	1	1	1	1	$35.60
5	162-02700	162-02700	Outer Wheel Half Assy.		1	1	1	1	1		$403.00
	162-01900	162-01900	Outer Wheel Half Assy.							1	$931.00
	13836	214-00100	Cup-Bearing		1	1	1	1	1	1	$35.60
8	164-26A	164-02601	Brake Disc Assy.		1	1	1	1	1	1	$149.90
	164-02800	164-02800	Brake Disc Assy.							1	$202.95
9	214-00200	214-00200	Cone-Bearing		2	2	2	2	2	2	$52.80
19	AN5-35A	103-20400	Bolt		3	3	3	3	3		$1.38
	AN4-37A	103-11200	Bolt							6	$1.16
20	AN960-516	095-10500	Washer		3	3	3	3	3		$0.04
	AN960-416L	095-10200	Washer							6	$0.02
18	AN365-524A	094-10400	Nut		3	3	3	3	3		$0.16
	AN365-428A	094-10300	Nut							6	$0.13
10	153-00400	153-00400	Ring-Grease Seal		2	2		2	2	2	$16.50
	153-00300	153-00300	Ring-Grease Seal		1	1	2	1	1		$15.50
	153-01500	153-01500	Ring-Grease Seal		1	1	2	1	1		$20.50
	158-00300	158-00300	Cap-Hub							1	$73.75
11	154-00300	154-00300	Felt-Grease Seal		1	1		1	1	1	$9.99
	154-01300	154-01300	Felt-Grease Seal		1	1	2	1	1		$10.50
12	155-00100	155-00100	Ring Snap		2	2	2	2	2	2	$11.50
	154-12400	06-01778	Molded Grease Seal			1					$27.85
	154-12000	06-01782	Molded Grease Seal			1					$32.50

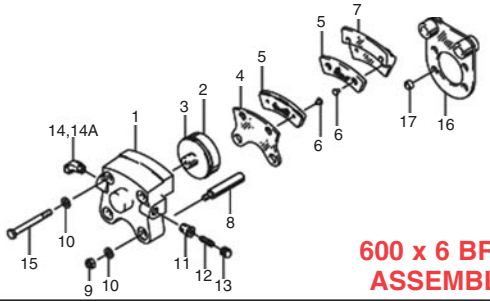
MODEL NO. 40-97A wheel with brake disc and 1.5" dia. bearings fits Cessna 172, 182 P/N 40-97A **$970.00**



500 X 5 BRAKE ASSEMBLIES

FIG	Cleveland P/N	Part No.	Description	Assembly Number	Qty. Per Assembly 30-9	30-9A(2)	30-9C	30-9D	30181A	Price Each
	91-00702	06-01203	Cylinder Assy.		1			1		$531.00
	91-04800	06-01204	Cylinder Assy.			1	1			$838.00
	91-17401	06-01205	Cylinder Assy.						1	$616.00
1	61-00601	061-00601	Cylinder		1			1	1	$483.00
	61-03901	061-03901	Cylinder			1	1			----
	92-00200	06-01206	Piston		1	1	1	1	1	$96.75
2	79-00300	062-00300	Piston		1	1	1	1	1	$98.75
3	101-02300	AN6227B-23	O-ring (MS28775-218)		1	1	1	1	1	$0.49
4		069-00400	Anchor bolt		2	2	2	2	2	$32.50
5	94-10300	AN365-428A	Nut (MS21044-N4)		2	2	2	2	2	$0.13
6	95-10400	095-10400	Washer (AN960-4-16)		2	2	2	2	2	$0.04
7	95-10200	095-10200	Washer (AN960-416L)		2	2	2	2	2	$0.02
8	079-00300	079-00300	Screw-Bleeder		1	1	1	1	1	$14.50
9	081-00100	081-00100	Seat-Bleeder		1	1	1	1	1	$24.70
10	183-00100	183-00100	Cap-Bleeder		1	1	1	1	1	$4.60
	073-00300	073-00300	Pressure Plate Assy.		1	1	1	1	1	$169.85
11	063-00500	063-00500	Pressure Plate		1	1	1	1	1	$133.75
12	066-10600	066-10600	Lining		1	1	1	1	1	$12.75
13	15-00200	105-00200	Rivet		3	3	3	3	3	----
	074-00200	074-00200	Back Plate Assy.		1	1	1	1	1	$195.75
14	064-00500	064-00500	Back Plate		1	1	1	1	1	$117.75
12	66-106	066-10600	Lining		1	1	1	1	1	$12.75
13	15-00200	105-00200	Rivet		3	3	3	3	3	----
15	68-00401	06-01196	Shim						1	$259.95
16	06-00011	103-12100	Bolt		2	2	2	2		$0.75
		103-11500	Bolt						2	----
17	075-00800	075-00800	Torque Plate Assy.		1	1	1		1	$270.95
	75-19300	06-01201	Torque Plate Assy.					1		$495.00

MODEL NO. 30-9 used with wheel 40-78..... P/N 30-9 .....**$661.00**



600 x 6 BRAKE ASSEMBLIES

FIG	Part No.	Cleveland No.	Description	Assembly No. & qty. per assembly 30-56	30-56A	30-63	30-63A	30-63D	Price
	091-02200	091-02200	Cylinder Assy.	--	--	1	1	1	$674.00
1	061-01900	061-01900	Cylinder	1	1	1	1	1	$311.00
2	062-01600	062-01600	Piston	1	1	1	1	1	$86.90
3	101-05200	101-05200	"O" Ring	1	1	1	1	1	----
	073-01100	073-01100	Press. Plate Assy.	1	1	1	1	1	$119.00
4	063-01200	063-01200	Plate-Press.	1	1	1	1	1	$89.95
5	66-105	66-155	Lining	1	1	1	1	1	$12.75
6	105-00200	105-00200	Rivet - Cleveland 9/32" Long	2	2	2	2	2	$0.58
	074-01000	074-01000	Back Plate Assy.	1	1	1	1	1	$156.75
7	064-01500	064-01500	Plate-Back	1	1	1	1	1	$115.75
8	069-00400	069-00400	Bolt-Anchor	2	2	2	2	2	$32.50
9	AN365-428A	094-10300	Nut	2	2	2	2	2	$0.13
10	AN960-416L	095-10200	Washer	4	4	4	4	4	$0.02
11	081-00100	081-00100	Seat-Bleeder	1	1	1	1	1	$24.70
12	079-00300	079-00300	Screw Bleeder	1	1	1	1	1	$14.50
13	183-00100	183-00100	Cap-Bleeder	1	1	1	1	1	$4.60
14	AN823-4D	104-00500	Fitting Tube	1	1	--	--	--	$9.60
15	LP4-17AM	103-11600	Bolt-Lock	2	2	2	2	2	$0.97
16	075-03700	075-03700	Torque Plate Assy.	--	1	1	1	1	$268.95
17	145-01000	145-01000	Bushing	2	--	2	2	2	$25.90

MODEL No. 30-63A used with wheel 40-97A.....P/N 30-63A.....**$682.00**
MODEL No. 30-52 Brake Assy.....P/N 30-52 .....**$939.00**
MODEL No. 30-52N Brake Assy .....P/N 06-00106 ....**$1,081.00**

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NOSE WHEELS

MATCO NOSE WHEELS

Matco Part No.	Our Part No.	Dia. (in.)	Bearing Axle dia.	Bearing Type Sealed	Width	Static Capacity (lbs.)	Load Limit (lbs.)	Weight (lbs.)	Price
MATERIAL: SPUN ALUMINUM									
MH6N	06-00537	6	0.625	Ball	5.325	660	2000	2.6	**$92.75**
MH6N-S	06-00539	6	0.625	Ball	5.325	660	2000	2.6	**$92.75**
MH6N.75	06-00538	6	0.75	Ball	5.325	660	2000	2.6	**$94.75**
MH6N-S.75	06-00540	6	0.75	Ball	5.325	60	2000	2.6	**$92.75**
MATERIAL: CNC CAST ALUMINUM									
NW40B	06-00541	4	6.25	Ball	3	660	2000	2.25	**$96.75**
NW40B.75	06-00542	4	0.75	Ball	3	660	2000	2.25	**$94.90**
NW40R	06-00543	4	0.75	Taper/Roll	3	1185	3560	2.25	**$131.75**
NW50	06-00544	5	0.75	Taper/Roll	3.88	1185	3560	3.24	**$158.75**
NW51	06-00545	5	0.75	Taper/Roll	3.88	1185	3560	3.24	**$158.75**
NW501.25	06-00546	5	1.25	Taper/Roll	3.88	1420	4260	3.24	**$152.75**
NW511.25	06-00547	5	1.25	Taper/Roll	3.88	1420	4260	3.6	**$157.75**
NW60	06-00548	6	1.25	Taper/Roll	3.5	1420	4260	3.24	**$131.75**
NW600	06-00549	6	1.25	Taper/Roll	4.5	1420	4260	3.24	**$182.75**
MATERIAL: DIE CAST ALUMINUM									
NW40EE	06-00550	4	0.625	Ball	3.25	660	2000	1.8	**$54.75**
NW50CC	06-00551	5	0.625	Ball	4.38	660	2000	2.7	**$93.75**
NW50CC.75	06-00552	5	0.75	Ball	4.38	660	2000	2.7	**$92.75**
NW51CC	06-00553	5	0.625	Ball	4.38	660	2000	2.7	**$91.75**
NW51CC.75	06-00554	5	0.75	Ball	4.38	660	2000	2.7	**$88.75**
NW50CC.75R	06-00555	5	0.75	Taper/Roll	4.38	1185	3560	2.8	**$131.85**
NW51CC75R	06-00556	5	0.75	Taper/Roll	4.38	1185	3560	2.8	**$147.75**
NW60CC	06-00557	6	0.625	Ball	4.38	660	2000	3.22	**$98.95**
NW60CC.75	06-00558	6	0.75	Ball	4.38	660	2000	3.22	**$98.95**
NW60CC.75R	06-00559	6	0.75	Taper/Roll	4.38	1185	3560	3.52	**$136.75**
NW600CC	06-00560	6	0.625	Ball	5.38	660	2000	3.47	**$104.75**
NW600CC.75	06-00561	6	0.75	Ball	5.38	660	2000	3.47	**$98.95**
NW600CC.75R	06-00562	6	0.75	Taper/Roll	5.38	1185	3560	3.52	**$160.75**
NW80CC-Z	06-00563	8	0.625	Ball	3	660	2000	5.02	**$105.75**



MATCO 6 INCH PNEUMATIC NOSE WHEEL ASSEMBLY

MATCO mfg produces the WHLTW35 inch nosewheel for use with aircraft requiring less than 660 pounds nosewheel load. Dimensions: The WHLTW35 uses 0.625 inch Sealed Ball bearings. It is 1.78 wide and weighs approximately 0.91 lbs. Performance: The WHLTW35 is designed for the following standards: • Static Capacity: 660 • Load Limit: 1980 • Also used in WHLT-6P Tailwheel • This wheel uses the TIRT6X2ASY tire & tube assembly. The wheel is rated at 660 lbs static but the tire is only rated at 250 lbs static. This is the lightest weight 6 inch pneumatic wheel available! P/N 06-01658 ..... **$78.90**



MATCO NOSEWHEEL

MATCO mfg produces the WHLTW40R nosewheel for use with aircraft requiring less than 1185 pounds nosewheel load. Dimensions: The WHLTW40R uses .75 inch tapered roller bearings. It is 2.6 wide and weighs approximately 2.1 lbs. Static Capacity: 1185. Load Limit: 3555. Tapered Roller Bearings: .75 inch. Wheel Assembly Width: 2.6. Weighs: appr. 2.1 lbs. P/N 06-02571 ..... **$143.75**



GROVE 4" NOSE WHEEL

Direct replacement for Brock and Gerdes 4" nose wheel. Use with 2.80-4 8" diameter tire on VE, LE, Cozy, etc. or with 4.10-4 10" diameter tire on Cozy Mark IV • Genuine Timkin • Felt Seals • CNC precision Machined to exact tolerances • Weight 1.87 lbs. • Corrosion resistant finish • Static Load Rating 900 pounds. Model 49-3A ..... P/N 06-00842.. **$248.95**

TIRE: Uses 2.80/2.50; 4 ply tire..... PN 06-08000..... **$49.75**



GROVE 400X4 NOSE WHEEL

The perfect nose wheel for light sport aircraft such as the KR and Soneri. • Static Load Rating 900lbs • Genuine Timkin Bearings • Uses 3/4" Axle • Felt Seals • Weight 1.98 lbs Model 49-1A

P/N 06-00843..... **$253.95**

TIRE: Uses 400 x 8 ply tire

PN 06-00844 ..... **$66.75**

Uses 4.10 x 3.50 x 4 ply tire .. PN 06-08102 ..... **$27.50**



GO-CART WHEELS

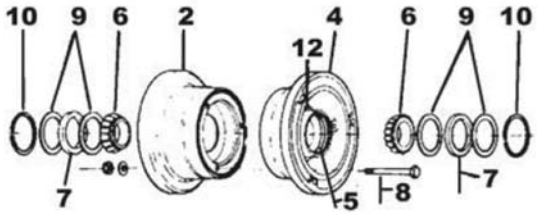
Cast aluminum wheels with 4" hub, for homebuilts and sailplanes. Used on Tri-Q conversion as nosewheel. 3-1/4" wide. Complete with 5/8" dia. ball bearings. Wt. 1-1/2 Lbs. P/N 06-00550..... **$54.75 Ea.**



HEGAR 6" NOSE WHEEL

The 6" Spun Aluminum nose wheel with 5/8 bearings. Comes centered when using the MX o-ring standard wheel hub but can also be purchased with the MX offset hub (no o-ring with offset hub. Requires the use of a tube. .Comes complete with nuts, bolts, washers, valve stem, o-rings if required and the MX hub. May also be used as main wheels. P/N 06-01274 ..... **$89.80**

CLEVELAND NOSE WHEELS 500X5



#	Old Part No.	Part No.	Description	Qty Per Assy. 40-77	40-77A	40-85	40-87	40-87A	Price Each
2	162-28 162-36 08231	162-02800 162-03600 214-00300	Outer Wheel Outer Wheel Cup Bearing	1 - 1	1 - 1	- - 1	1 - 1	- 1 1	**$480.00** **$519.00** **$31.65**
12	217-1	217-00100	Grommet	1	1	1	1	1	**$8.50**
4	161-31 161-38	161-03100 161-03800	Inner Wheel Half Assy. Inner Wheel Half Assy.	1 -	1 -	- -	1 -	- 1	**$431.00** **$595.00**
5	08231	214-00300	Inner Cup Bearing	1	1	1	1	1	**$31.65**
8	103-1050	AN4-22A	Bolt	3	3	3	3	3	**$0.39**
* *	095-10400 094-10300	AN960-416 AN365-428A	Washer Nut	6 3	6 3	6 3	6 3	6 3	**$0.03** **$0.13**
9	153-8 21-104	153-00800 153-00200	Ring-Grease Seal Ring-Grease Seal	4 -	4 -	- 4	- -	- -	**$16.50** **$18.50**
10	155-2	155-00200	Ring-Snap	2	2	2	2	2	**$19.60**
7	154-6	154-00600	Felt-Grease Seal	2	2	-	-	-	**$11.50**
6	08125	214-00400	Cone-Bearing	2	2	2	2	2	**$57.90**

500 X 5 NOSE WHEEL dimensions: 6.625 in. x 6.625 in. x 7 in.
P/N 40-77 ..... **$773.00**

500 X 5 NOSE WHEEL with 1-1/4" dia. bearings. Used on some models of Cessna 150, is typical of nose wheels used on general aviation aircraft. FAA-approved. P/N 40-77A..... **$760.00**

500 X 5NOSE WHEELS 1-1/2" Dia. Bearings used on Mooney
Model 40-77B..... P/N 05-11661 ..... **$734.00**
Model 40-87 ..... P/N 06-00417..... **$905.00**
Model 40-87C..... P/N 06-00962 ..... **$1,081.00**

600 X 6 NOSE WHEEL with 1-1/2" dia. bearings. (not illustrated) is used on some models of Cessna 172 and 182. FAA approved.
P/N 40-76A **$763.00**
600X6 Nose Wheel 40-76B..... P/N 05-13057 ..... **$815.00**

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CLEVELAND WHEEL & BRAKE PARTS

CLEVELAND WHEEL ASSEMBLIES

Assembly No.	Part No.	Price
40-166	05-11658	$3,960.00
40-60	05-11660	$1,402.00
40-77B	05-11661	$734.00
40-90	05-11662	$1,224.00
161-05500	05-11630	$565.00
40-75D	06-00105	$936.00
40-140C	06-02822	$2,157.00
40-56B	05-13441	$1,150.00
040-07702	05-11661	$734.00
040-0860	05-13470	$969.00
40-87A	05-13472	$1,030.00
40-97D	05-13480	$1,148.00
40-97E	05-13481	$1,346.00
40-98	05-13483	$1,953.00
40-98A	05-13484	$2,132.00
40-98G	05-13485	$2,308.00
40-99	05-13486	$2,650.00
40-102	05-13488	$3,100.00

CLEVELAND BRAKE ASSEMBLIES

Assembly No.	Part No.	Price
30-52N	06-00106	$1,081.00
30-83A	05-13391	$1,172.00
30-164	05-14982	$1,029.00
30-182A	05-13419	$2,246.00
30-65	06-03065	$1,049.00
30-63E	05-13370	$760.00

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CLEVELAND INSULATORS

Description	Part No.	Price
088-03500 Insulator Pin	06-02557	$118.75
088-00100 Insulators	10-00091	$23.65
088-00200 Insulators	05-13903	$35.50
088-01400 Insulators	05-13906	$149.95

CLEVELAND BOLTS

Description	Part No.	Price
103-22600 Bolt/ Ms21250-05016	05-11597	$116.75
103-31500 Bolt/ Nas6606-56	05-11598	$79.75
103-11800 Bolt	06-01307	$6.85
103-19000	05-14152	$17.50

CLEVELAND BRAKE CYLINDERS

Description	Part No.	Price
061-01800 Brake Cylinder 61-18	05-11556	$448.00
061-01801 Brake Cylinder	05-11557	$804.00
061-02400 Clev Cylinder	06-01207	$498.00
061-02500 Brake Cylinder	05-11558	$497.00
061-07000 Brake Cylinder	05-11559	$1,521.00
061-07001 Brake Cylinder	05-11560	$1,536.00
061-11800 Brake Cylinder	05-13606	$703.00

CLEVELAND BRAKE PISTONS

Description	Part No.	Price
062-03100 Brake Piston	05-11561	$186.85
062-10800 Brake Piston	06-02554	$88.99
092-02100 Brake Piston Assembly	05-11586	$272.95
062-04100 Piston	05-13633	$162.75
062-05600 Piston	05-13638	$137.75
062-05700 Piston	05-13639	$189.00
062-10800 Piston	06-02554	$88.99
092-02000 Brake Piston Assembly	05-13960	$88.99
092-03300 Brake Piston Assembly	05-13965	$185.85
092-06700 Brake Piston Assembly	05-13977	$204.95
139-20000 Piston Boot	05-14249	$11.50

CLEVELAND PRESSURE PLATES

Description	Part No.	Price
063-00600 Pressure Plate	05-11562	$122.75
063-01400 Pressure Plate	05-11563	$174.75
063-01500 Pressure Plate	05-11564	$193.99
063-03500 Pressure Plate	05-11565	$302.00
063-30025 Pressure Plate	05-11566	$139.75
073-01300 Pressure Plate Assembly 73-13	05-11581	$174.75
073-02700 Pressure Plate	05-11582	$422.00
063-01100 Pressure Plate	06-01208	$70.75
063-08200 Pressure Plate	06-02555	$901.00
073-07100 Pressure Plate Assy	06-02556	$1,271.00
063-01300 Pressure Plate	05-13657	$183.75
063-03500 Pressure Plate	05-11565	$302.00
063-08200 Pressure Plate	06-02555	$901.00
073-08500 Pressure Plate Assembly	05-13766	$181.75
073-09800 Pressure Plate Assembly	05-13769	$1,307.00

CLEVELAND BACK PLATES

Description	Part No.	Price
064-01600 Back Plate	05-11567	$149.95
064-03200 Back Plate	05-11568	$288.95
064-04300 Back Plate	05-11569	$2,433.00
074-03400 Back Plate Assembly 74-34	05-11583	$270.95
074-01000 Back Plate	074-01000	$156.75
074-02300 Back Plate Assembly	05-13780	$225.95
074-02900 Back Plate Assembly	05-13783	$215.95
074-04800 Back Plate Assembly	05-13789	$394.00
074-06600 Back Plate Assembly	05-13794	$162.75
069-01900 Anchor Bolt	05-13722	$63.90

CLEVELAND SHIMS

Description	Part No.	Price
068-02700 Shim 68-27	05-11574	$88.99
068-02800 Shim 68-28	05-11575	$97.75
068-03000 Shim	05-11576	$94.75
068-03100 Shim	05-11577	$130.99
068-03300 Shim 68-33	05-11578	$93.75
068-04000 Shim 68-40	05-11579	$190.85
068-04100 Shim 68-41	05-11580	$72.75
068-01600 Shim	06-01198	$83.75
068-01700 Shim	06-01199	$77.75
068-05300 Shim	06-80530	$149.90
068-04600 Shim	05-13716	$90.75

CLEVELAND RIVETS

Description	Part No.	Price
105-00100 Rivet	05-11599	$5.65
105-00900 Rivet	05-11600	$2.02
105-00901 Rivet	05-11601	$3.35
105-01100 Rivet	05-11602	$2.15
105-01200 Rivet	05-11603	$4.35
105-01300 Rivet	05-11604	$2.15
105-06700 Rivet	05-11605	$1.00
Oval Head Rivet - Tubular	105-02401	$7.90
Rivet 105-08700	105-08700	$9.99
105-06800	05-14203	$2.03

CLEVELAND BLEEDER SEATS

Description	Part No.	Price
081-00200 Bleeder Seat 81-2	05-11584	$31.50
081-30169 Bleeder Seat	05-11585	$123.75

CLEVELAND SPACERS

Description	Part No.	Price
067-04100 Spacer 67-41	05-11572	$324.00
067-06200 Spacer	05-11573	$38.80
Spacer 067-30076	06-01195	$80.75

CLEVELAND PREFORMED PACKING

Description	Part No.	Price
101-61900 Preformed Packing	06-02559	$13.50
101-60800 Packing	05-11595	$22.75
101-62700 Packing	05-14110	$40.50
101-60800 Packing	05-11595	$22.75

CLEVELAND BRAKE ASSEMBLY 30-59A

MFR Part No.	QTY Rqd	Description	Part No.	Price/Ea.
30-59A / 030-05901	-	Complete Cleveland 30-59A Assy	30-59A	$1,384.00
091-09600	1	091-09600 Cylinder Assy	06-01952	$979.00
061-07500	1	061-07500 Cylinder	06-01953	$474.00
092-04000	1	092-04000 Piston Assy	06-01954	$130.99
062-03900	1	062-03900 Piston	06-01955	$109.99
069-00400	2	069-00400 Bolt Anchor	069-00400	$32.50
094-10300	2	094-10300 Nut (MS21044-N4)	094-10300	$0.13
095-10200	4	095-10200 Washer AN960-416L	095-10200	$0.02
079-00300	1	Bleeder Screw 079-00300	079-00300	$14.50
081-00100	1	Bleeder Seat #081-00100	081-00100	$24.70
183-00100	1	Bleeder Cap 183-00100	183-00100	$4.60
073-04600	1	073-04600 Pressure Plate Assy	06-01956	$163.75
063-03400	1	063-03400 Pressure Plate	06-01957	$143.75
066-11200	2	Brake Lining # 66-112	066-11200	$23.25
105-00200	4	#105-2 4X4 Brake Lining Kit	105-00200	$0.58
074-03600	1	074-03600 Back Plate Assy	06-01958	$191.90
064-02900	1	064-02900 Back Plate	06-01959	$184.75
103-11700	2	Bolt 103-11700	103-11700	$9.50
075-03700	1	Torque Plate Assy	075-03700	$268.95
145-01000	2	Bushing # 145-01000	145-01000	$25.90

CLEVELAND WHEEL & BRAKE PARTS

CLEVELAND GREASE SEALS

Description	Part No.	Price
153-04200 Grease Seal Ring	05-11612	$48.85
154-00800 Grease Seal Felt	05-11613	$19.55
154-00900 Grease Seal Felt	05-11614	$36.65
154-01200 Grease Seal Felt	05-11615	$46.95
154-02600 Grease Seal Felt	05-11616	$33.50
154-02800 Grease Seal Felt	05-11617	$20.50
154-03200 Grease Seal	05-11618	$139.75
154-03500 Grease Seal	05-11619	$134.75
154-03600 Grease Seal	05-11620	$134.75
154-07500 Grease Seal	05-11621	$212.95
154-30010 Grease Seal Felt	05-11622	$11.50
Clev Felt Seal 154-00400	154-00400	$15.60
Clev Felt Seal # 154-01400	154-01400	$11.50
154-00500 Clev Felt Seal	06-01193	$15.65
Clev Grease Ring 153-00500	153-00500	$21.55
Clev Grease Ring 153-00900	06-01192	$20.55
Cleveland 154-13100 Grease Seal, Molded	05-12775	$29.50
Molded Grease Seal 40-77, 40-77A, 40-77B	154-13000	$44.90
199-507 Seal Repair Kit	05-14563	$32.95
199-516 Seal Repair Kit	05-14567	$28.50
199-53500 Seal Repair Kit	05-14571	$43.60
199-53801 Seal Repair Kit	05-14572	$288.95

CLEVELAND O-RINGS

Description	Part No.	Price
101-50353 O-Ring	05-06395	$11.50
101-27900 O Ring	05-11591	$12.50
101-28000 O Ring	05-11592	$14.50
101-60001 O-Ring	05-11593	$18.50
101-60100 O-Ring	05-11594	$4.35
101-61800 O-Ring	05-11596	$15.65
101-61800 O-Ring	05-11596	$15.65
101-60100 O-Ring	05-11594	$4.35
101-60001 O-Ring	05-11593	$18.50
101-24900 O-Ring	05-14076	$7.95
101-24600 O-Ring	05-14075	$7.95
101-24200 O-Ring	05-14073	$11.50

CLEVELAND SNAP RINGS

Description	Part No.	Price
155-00600 Cleveland Snap Ring 155-6	05-11623	$32.50
155-02900 Snap Ring	05-11624	$32.50
155-04400 Snap Ring	05-11625	$32.50
155-04800 Cleveland Snap Ring T5304-15	06-02562	$13.50
155-14300 Snap Ring	05-14375	$57.75

CLEVELAND BEARING CONE/CUPS

Description	Part No.	Price
214-00200 Bearing Cone	05-14605	$122.75
214-00300 Bearing Cup	05-14606	$50.95
214-00400 Bearing Cone	05-14607	$88.99
214-01000 Bearing Cone	05-14612	$113.75
214-03300 Bearing Cone	05-11639	$119.65
214-03400 Bearing Cup	05-14625	$62.75
214-13200 Bearing Cone	05-14642	$121.75

CLEVELAND WEAR PADS

Description	Part No.	Price
109-00100 Wear Pad	05-11607	$20.60
109-00200 Wear Pad	05-11608	$25.95
109-02800 Cleveland Wear Pad	06-02561	$94.75
Cleveland Wear Pad 109-03000	109-03000	$23.95
109-01500 Wear Pad	06-02795	$32.50
109-00100 Wear Pad	05-11607	$20.60
109-00201 Wear Pad	05-14214	$16.50

CLEVELAND STATORS

Description	Part No.	Price
232-00300 Cleveland Stator	06-02564	$1,241.00
232-00400 Cleveland Stator	06-02565	$935.00

CLEVELAND DRIVE KEY

Description	Part No.	Price
205-00700 Drive Key	05-14581	$42.75
205-04400 Drive Key	05-14585	$62.75
205-05000 Drive Key	05-14586	$36.50
205-05201 Drive Key	05-14587	$163.75
205-00600 Key Liner	05-14580	$72.75

CLEVELAND HOSE ASSEMBLIES

Description	Part No.	Price
207-00600 Hose Assembly	05-14589	$402.00
207-01600 Hose Assembly	05-14595	$309.00

CLEVELAND WHEEL AND BRAKE PARTS

Description	Part No.	Price
065-01000. Torque Plate Assembly	05-11570	$1,676.00
30-182. Brake Assembly	06-02566	$2,702.00
30-54C Brake Assembly	05-11654	$1,481.00
091-11900 Brake Cylinder Assembly	06-02820	$863.00
162-00600 Outer Wheel Half	06-00015	$806.00
162-02100 Outer Wheel Half	06-02100	$874.00
161-044700 Inner Wheel Half	05-14419	$378.00
162-04500 Outer Wheel Half	05-14476	$435.00
162-04700 Outer Wheel Half	06-00114	$599.00
075-17100 Torque Plate Assembly	05-13855	$978.00
075-20301 Tube, Torque, Assembly	05-13860	$3,176.00
103-11700 Anchor Bolt	06-00078	$9.50
069-00200 Anchor Bolt	069-00200	$43.95
177-00300 Pin	07-00003	$19.50
068-01100 Insulating Shim	06-01197	$61.95
199-516 O-Ring Kit	08-00353	$26.80
214-01300 Bearing Cup	05-11637	$86.90
095-01100 Washer	095-01100	$17.99
111-08200 Adjuster Assembly	05-11610	$195.75
107-03700 Wiper	107-03700	$47.99
107-00500 Wiper Ring	05-11606	$26.80
107-03100 Wiper Ring	05-14213	$61.75
MS35266-61 Screw for 102-07100	06-02560	$11.50
095-02600 Seal for Master Cylinder	05-11587	$6.85
110-15300 Bumper Heat Shield	05-14218	$3.55
095-03000 Washer	05-11588	$12.50
094-10401 MS21045-5S Nut	06-02558	$7.99
158-01300 Hubcap	05-11626	$111.75
158-00300 Hubcap	158-00300	$73.75
159-02700 Hubcap	05-11626	$111.75
177-00400 Pin	06-01194	$24.85
177-01600 Pin	05-11632	$20.50
160-01100 Valve Stem	05-14404	$190.99
160-01200 Valve Assembly	05-14405	$178.75
106-01900 Inflation Valve	05-11629	$194.75
082-02000 Spring	05-13887	$12.50
102-33300 Screw	05-14119	$5.80
102-00600 Screw 8-32X.250 Zinc	05-14113	$6.85
094-91500 Nut MS21045-6S	05-14006	$9.65
094-13800 Nut	05-13996	$32.50
094-13200 Nut 42FLW-524	05-13995	$36.50
1J2-2 Airborne Filter	05-11636	$270.95
700-8 Dustshield Size	157-01000	$221.95
106-02000 Inflation Valve Assembly	160-02000	$120.75
199-52 Repair Kit	06-00834	$33.50
ID Plate	166-21600	$6.50
Clev 082-02000 Spring	05-13887	$6.50
Clev 082-05300 Spring	05-13890	$6.50

ALASKAN BUSHWHEEL CONVERSION KITS



ABI-199-71 *ABI-199-62*

ABI-199-71 - Wheel and Brake kit for Piper Aircraft J3, J5C, PA-11, PA-12, PA-14, PA-15, PA-16, PA-17, PA-18 "150", PA-18A "150", and PA-20. FAA-PMA Approved. Approved for Aviat Husky per Aviat Type Certificate P/N 06-02831 .....**$2,019.00**

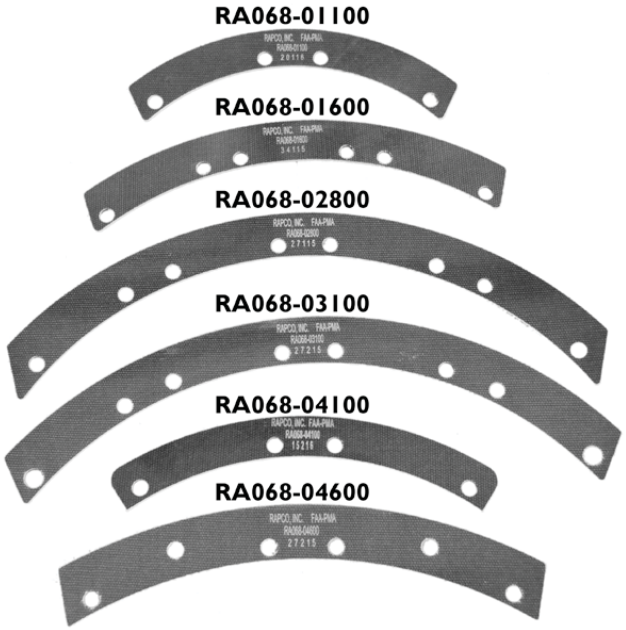
ABI-199-62/62A - Wheel and Brake kit for Cessna Aircraft Aeries: 180, 185, 206. Also approved for Cessna Aircraft Series 170 and 172 and on Piper Aircraft Series: J-3, J3C, PA-11, PA-12, PA-14, PA-16 and PA-18 with F. Atlee Dodge STC SA02231AK available separately. Please inquire with your order if needed. FAA-PMA Approved. American Champion 7GCBC, 7GCAA, 7ECA and 8GCBC. Maule M-4 , M-5, M-6, M-7 and M-9 ABI-199-62(3 bolt).....P/N 06-02830.....**$1,665.00**
ABI-199-62A(6 bolt) .....P/N 06-02829.....**$2,066.00**

LG

ABI WHEEL AND BRAKE PARTS

Description	Part No.	Price
Bearing Cone ABI-08125	06-02859	**$45.50**
Bearing Race ABI-08231	06-02860	**$24.50**
Bearing Race ABI-13836	06-02861	**$15.50**
Torque Plate Bushing Reducer 3/8 To 5/16 Bolt	06-02864	**$6.85**
Seal Ring ABI-153-00200	06-02865	**$11.50**
Seal Ring ABI-153-00300	06-02866	**$13.50**
Seal Ring ABI-153-00400	06-02867	**$11.50**
Seal Cup ABI-153-01500	06-02868	**$15.50**
Outer Felt Grease Seal AABE-154-00200	06-02869	**$5.40**
Felt Grease Seal ABI-154-00300	06-02870	**$7.65**
Felt Grease Seal ABI-154-01300	06-02871	**$8.65**
Inner Felt Grease Seal ABI-154-02800	06-02872	**$5.95**
Retaining Snap Ring ABE-155-00100	06-02873	**$9.50**
Retaining Ring ABI-155-00200	06-02874	**$8.55**
Brake Piston ABI-62-00500	06-02875	**$23.50**
Brake Pressure Plate ABE-63-00600	06-02876	**$52.75**
Brake Pressure Plate ABE-63-01100	06-02877	**$35.50**
Brake Anchor Bolt ABI-69-01900	06-02878	**$32.50**
Brake Anchor Bolt ABI-69-02600	06-02879	**$71.75**
Brake Bleeder Seat ABI-81-00100	06-02880	**$13.50**
Brake Piston ABI-92-00600	06-02881	**$18.99**
Brake Pad Rivet APS-105-00200	06-02882	**$0.75**
Inner Wheel Half ABI-161-03000	06-02883	**$325.00**
Inner Wheel Half ABI-161-07000	06-02884	**$353.00**
Inner Wheel Half ABI-161-08700	06-02885	**$448.00**
Outer Wheel Half ABI-162-02700	06-02886	**$326.00**
Outer Wheel Half ABI-162-06500	06-02887	**$354.00**
Outer Wheel Half ABI-162-08100	06-02888	**$466.00**
Brake Assy 1.5" ABI-30-52n	06-02889	**$603.00**
Brake Caliper 1.5" Only ABI-30-52nbc	06-02890	**$499.00**
Brake Caliper 1.25" Only ABI-30-60a	06-02891	**$636.00**
Brake Caliper 1.25" Only ABI-30-60abc	06-02892	**$475.00**
Wheel Assy 1.25" Axle, 6 Bolt ABI-40-60	06-02893	**$637.00**
Wheel Assy 1.5" Axle, 3 Bolt ABI-40-75-d	06-02894	**$625.00**
Wheel Assy 1.5" Axle, 6 Bolt ABI-40-75t	06-02895	**$731.00**
Brake Cylinder ABI-61-01800	06-02896	**$212.95**
Brake Cylinder ABI-61-06701	06-02897	**$277.95**
Brake Backing Plate ABI-64-00500	06-02898	**$65.85**
Brake Backing Plate ABI-64-01500	06-02899	**$64.95**
Brake Anchor Plate ABI-75-12500	06-02901	**$146.75**
Brake Anchor Plate ABI-75-13600	06-02902	**$235.95**
Brake Bleeder Screw ABI-79-00300	06-02903	**$13.50**

RAPCO SHIM INSULATORS



Model No.	Description	Part No.	Price
RA068-01100	RA068-01100 Replaces: Cleveland PN. 068-01100	06-02845	**$40.50**
RA068-01600	RA068-01600 Replaces: Cleveland PN. 068-01600	06-02846	**$52.75**
RA068-02800	RA068-02800 Replaces: Cleveland PN. 068-02800	06-02847	**$60.75**
RA068-03100	RA068-03100 Replaces: Cleveland PN. 068-03100	06-02848	**$98.75**
RA068-04100	RA068-04100 Replaces: Cleveland PN. 068-04100	06-02957	**$41.50**
RA068-04600	RA068-04600 Replaces: Cleveland PN. 068-04600	06 -02849	**$49.90**

RAPCO PRESSURE PLATES

Description	Part No.	Price
Rapco Pressure Plate RA063-01100	06-02850	**$39.60**
Rapco Pressure Plate RA063-01200	06-02851	**$50.00**
Rapco Pressure Plate RA063-01300	06-02852	**$114.75**
Rapco Pressure Plate RA063-30025	06-02853	**$79.75**

RAPCO PMA BRAKE PARTS

RAPCO Part No.	Our Part No.	Description	OEM Part No.	Price
RA063-02500	06-03072	Pressure Plate	063-02500	**$219.65**
RA068-01700	06-03073	Shim Insulator	068-01700	**$59.85**
RA068-02700	06-03074	Shim Insulator	068-02700	**$66.75**
RA068-02900	06-03075	Shim Insulator	068-02900	**$156.75**
RA073-08500	06-03076	Pressure Plate Assembly	073-08500	**$156.75**
RA088-01800	06-03077	Insulator	088-01800	**$88.75**
RA109-00200	06-03078	Wear Pad	109-00200	**$19.75**
RA109-00201	06-03079	Wear Pad	109-00201	**$11.85**
RA109-01500	06-03080	Wear Pad	109-01500	**$23.50**
RA154-03000	06-03081	Molded Grease Seal	154-03000	**$39.65**
RA205-02900	06-03082	Key Drive	205-02900	**$158.75**

Prices Subject to Change Without Notice

NOTE: Our prices include 2 wheels and 2 brakes (set), unless noted.

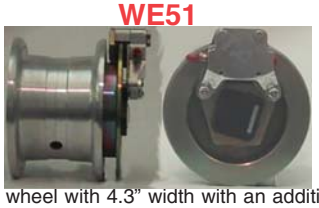
W51LT/LXT



The W51LT/LXT is a 5" wheel with a 4.775" width with an additional 1.23 inch caliper spacing. Bearing spacing is 3.084" and axle spacing is 1.00". The total weight of this wheel and brake assembly is 9.2 Lbs. The bearing axle diameter is 1.25". Torque rating is 4266 in-lb for the W51LT and is 6143 in-lb for the W51LXT. W51LT is recommended for Cozy Mark IV and the W51LXT is used on the Glasair.

W51LT ..... P/N 06-00079 ..... **$656.00**
W51LT w/axles ..... P/N 06-00568 ..... **$832.00**
W51LXT ..... P/N 06-00412 ..... **$721.00**
W51LXT w/axles ..... P/N 06-00569 ..... **$897.00**

WE51



The WE51 is a 5" wheel with 4.3" width with an additional 1.39" caliper spacing. Bearing spacing is 3.27" and axle spacing is 0.945". The total weight of this wheel and brake assembly is 7.5 lbs. The bearing axle diameter is 1.25". Torque Rating (@450 PSI): 2085 inlb. Any 500X5 tire and tube combination can be used with this tire.

WE51 ..... P/N 06-00445 ..... **$580.00**
WE51 w/axles ..... P/N 06-00570 ..... **$756.00**

W51L



MATCO mfg produces a superior 5" wheel and brake assembly for use with aircraft requiring less than 1420 lbs per wheel. This model uses 1.25" TAPER/ROLL bearings. The W51L is a 5" wheel with 4.6" width with an additional 1.23" caliper spacing. Bearing spacing is 3.084" and axle spacing is 1.285". The total weight of this wheel and brake assembly is 6.6 lbs. The bearing axle diameter is 1.25".

W51L..... P/N 06-01710 ..... **$512.00**

W50CC



The W50CC is a 5" wheel with a 3.7" width with an additional 1.75" caliper spacing. Bearing Spacing is 3.0" and axle spacing is 2.5". The total weight of this wheel and brake assembly is 4.5 lbs. excluding the axle assembly. This wheel uses a "Lamb" type tire which is 11x400x5 and requires a tube with a 90 degree valve stem. Torque Rating (@450 PSI): 1540 in-lb.

W50CC ..... P/N 06-00470 ..... **$517.00**



W60CC .625

Matco mfg produces a superior inch wheel and brake assembly for use with aircraft requiring less than lbs per wheel. This model uses inch bearings.

This is a W60CCD .625 is a 6" inch wheel. The bearing axle diameter is .625 inches.

P/N 06-00938 ..... **$259.95**

MMHE6B



The MHE6B E SERIES is a 6" wheel with 5.375" width with an additional 1.39 inch caliper spacing. Bearing spacing is 2.71" and axle spacing is 0.68". The total weight of this wheel and brake assembly is 5.8 lbs. The bearing axle diameter is 1.25". Use on various light support aircraft. Torque Rating (@450 PSI): 2085 in-lb. Order axles separately.

MHE6B..... P/N 06-00444 ..... **$629.00**
MHE6BSC..... P/N 06-00443 ..... **$631.00**

W600XT



The W600XT is a 6" wheel with 6.3125" width with an additional 1.37" caliper spacing. Bearing spacing is 3.42" and axle spacing is 1.78". The total weight of this wheel and brake assembly is 11.9 lbs. The bearing axle diameter is 1.50". Torque Rating (@450 PSI): 6441 inlb. Static Capacity: 1860 lbs. Load Limit: 5580 lbs. Order axles separately.

W600XT ..... P/N 06-00413 ..... **$780.00**

MH6B



The MH6B is a 6" wheel with 5.375" width with an additional 1.24" caliper spacing. Bearing spacing is 2" and axle spacing is 2". The total weight of this wheel and brake assembly is 4.4 lbs. The bearing axle diameter is 0.625". The NEW MH6B is now produced as a CNC spun wheel with a Tenzalloy hub center and a NEW higher torque caliper. Torque Rating (@450 PSI):1540 in-lb. StaticCapacity:660 lbs.

MH6B ..... P/N 06-16810 ..... **$542.00**
MH6B-S ..... P/N 06-00447 ..... **$518.00**

W60



MATCO mfg produces a superior 6" wheel and brake assembly for use with aircraft requiring less than 1420 lbs per wheel. This model uses 1.25" TAPER/ROLL bearings. The W60 is a 6" wheel with 4.375" width with an additional 1.23" caliper spacing. Bearing spacing is 2.5" and axle spacing is 1.25". The total weight of this wheel and brake assembly is 7.1 lbs. The bearing axle diameter is 1.25".

W60..... P/N 06-02160 ..... **$523.00**

W60CC .75



Matco mfg produces a superior 6" inch wheel and brake assembly for use with aircraft requiring less than 660 lbs per wheel. This model uses 0.75 inch BALL bearings. (Check the product comparison table for other bearing and caliper configurations). The W60CCD.75 is a 6" inch wheel with 4.38 inch width with an additional 1.75 inch caliper spacing. Bearing spacing is 3 inches and axle spacing is 1 inches. The total weight of this wheel and brake assembly is 5.55 pounds. The bearing axle diameter is 0.75 inches. This is a set of one wheel and one brake.

P/N 06-00939 ..... **$244.95**

LG

MATCO WHEELS & BRAKES



P/N 06-00448



P/N 06-00456



P/N 06-00462



P/N 06-01660

NOTE: Our prices include 2 wheels and 2 brakes (set)

Matco Part No	Aircraft Spruce	Bearing Axle Dia. BB=Ball TRB=Taper Roll	Load Limit (lbs.)	Static Capacity (lbs.)	Brake Reline Kit	Weight (lbs.)	Tire Size	Tire Type	Price
CNC SPUN WHEELS: INTERNAL CALIPER									
MH6B	06-16810	0.625BB	2000	660	BRL-2	4.4	6”	any 6”	**$542.00**
MH6B-S	06-00447	0.625BB	2000	660	BRL-2	4.4	6”	any 6”	**$518.00**
MH6B.62D	06-00448	0.625BB	2000	660	BRL-3	4.65	6”	any 6”	**$595.00**
MH6B.62D-S	06-00449	0.625BB	2000	660	BRL-3	4.65	6”	any 6”	**$595.00**
MH6B.75	06-00450	0.75BB	2000	660	BRL-2	4.4	6”	any 6”	**$512.00**
MH6B.75-S	06-00453	0.75BB	2000	660	BRL-2	4.4	6”	any 6”	**$513.00**
MH6B.75D	06-00451	0.75BB	2000	660	BRL-3	4.65	6”	any 6”	**$595.00**
MH6B.75D-S	06-00452	0.75BB	2000	660	BRL-3	4.65	6”	any 6”	**$565.00**
MH6BD.62	06-00454	0.625BB	2000	660	2BRL-2	5.18	6”	any 6”	**$700.00**
MH6BD.62-S	06-00455	0.625BB	2000	660	2BRL-2	5.18	6”	any 6”	**$655.00**
MH6BD.75	06-00456	0.75BB	2000	660	2BRL-2	5.18	6”	any 6”	**$664.00**
MH6BD.75-S	06-00457	0.75BB	2000	660	2BRL-2	5.18	6”	any 6”	**$658.00**
CNC SPUN WHEELS: EXTERNAL CALIPER									
MHE6B1.25	06-00444	1.25TRB	2700	900	BRL-1	5.8	6”	up to 6.00-6	**$629.00**
MHE6B1.25-C	06-00443	1.25TRB	2700	900	BRL-1	5.8	6”	up to 6.00-6	**$631.00**
CENTRIFUGALLY CAST WHEELS: INTERNAL CALIPER									
W40B	06-00458	0.625BB	2000	660	BRL-2	4.05	4”	any 4”	**$506.00**
W40-BDXT	06-00459	0.75BB	3560	1185	BRL-2	3.8	4”	2.80/2.50x4	**$521.00**
W40R	06-02210	0.75BB	3560	1185	BRL-2	4.05	4”	any 4”	**$534.00**
W50L	06-01860	0.625BB	2000	660	BRL-1	6.6	5”	11.0x4.05	**$548.00**
W50L.75	06-00833	0.75BB	2000	660	BRL-1	6.6	5”	11.0x4.05	**$506.00**
W50LD	06-00411	1.25BB	4260	1420	2BRL-1	8.9	5”	11.0x4.05	**$643.00**
W50LT	06-00461	1.25BB	4260	1420	BRL-6	9.2	5”	11.0x4.05	**$652.00**
W50LXT	06-00462	1.25BB	1420	4260	BRL-6	9.2	5”	11.0x4.05	**$743.00**
W50S1.25	06-01660	1.25BB	4260	1420	BRL-1	6.6	5”	11.0x4.05	**$539.00**
W50S.75	06-00463	0.75BB	4260	1185	BRL-1	6.6	5”	11.0x4.05	**$533.00**
W51L	06-01710	1.25BB	4260	1420	BRL-1	6.6	5”	5.00x5	**$512.00**
W51LD	06-00464	1.25BB	4260	1420	2BRL-1	8.9	5”	5.00x5	**$579.00**
W51LT	06-00079	1.25BB	4260	1420	BRL-6	9.2	5”	5.00x5	**$656.00**
W51LXT	06-00412	1.25BB	4260	1420	BRL-6	9.2	5’	5.00x5	**$721.00**
W51S1.25	06-01960	1.25BB	4260	1420	BRL-1	6.6	5”	5.00x5	**$539.00**
W62	06-02110	0.75BB	3560	1185	BRL-1	7	6”	any 6”	**$526.00**
F602	06-00465	0.75BB	3560	1185	BRL-1	7.8	6”	any 6”	**$648.00**
W60	06-02160	1.25BB	4260	1420	BRL-1	7.1	6”	any 6”	**$523.00**
F600	06-00466	1.25BB	4260	1420	BRL-1	7.8	6”	any 6”	**$623.00**
W600	06-00467	1.5TRB	5580	1860	BRL-6	11.9	6”	any 6”	**$698.00**
W600XT	06-00413	1.5TRB	5580	1860	BRL-6	11.9	6”	any 6”	**$780.00**
W600XLT	06-00468	1.5TRB	5580	1860	BRL-6	10.2	6”	any 6”	**$780.00**
W323A	06-00469	1.5TRB	5580	1860	BRL-323	13.75	6”	any 6”	**$1,529.00**
CENTRIFUGALLY CAST WEELS: EXTERNAL CALIPER									
WE51	06-00445	1.25TRB	4260	1420	BRL-1	7.5	6”	5.00x5	**$580.00**

MATCO DIECAST WHEELS

NOTE: Our prices include 2 wheels and 2 brakes (set); Bearing Axle: BB=Ball TRB=Taper Roll



P/N 06-00471 *P/N 06-00485* *P/N 06-00486* *P/N 06-00489*

Matco P/N	Our P/N	Bearing Axle Dia.	Load Limit (lbs.)	Static Cap.(lbs.)	Brake Reline Kit	Weight (lbs.)	Tire Size	Tire Type	Price
W50CC	06-00470	0.625BB	2000	660	BRL-2	4.57	5”	11.0 x 4.05	**$517.00**
W50CC.62D	06-00471	0.625BB	2000	660	BRL-3	4.82	5”	11.0 x 4.05	**$565.00**
W50CC.75	06-00472	0.75BB	2000	660	BRL-2	4.57	5”	11.0 x 4.05	**$537.00**
W50CC.75D	06-00473	0.75BB	2000	660	BRL-3	4.82	5”	11.0 x 4.05	**$594.00**
W50CCD.75	06-00474	0.75BB	2000	660	2 BRL-2	5.35	5”	11.0 x 4.05	**$624.00**
W50DCC.62	06-00475	0.625BB	2000	660	2 BRL-2	5.35	5”	11.0 x 4.05	**$666.00**
W51CC	06-00476	0.625BB	2000	660	BRL-2	4.57	5”	5.00-5	**$555.00**
W51CC.62D	06-00477	0.625BB	2000	660	2 BRL-3	4.82	5”	5.00-5	**$565.00**
W51CC.75	06-00478	0.75BB	2000	660	2 BRL-2	4.57	5”	5.00-5	**$518.00**
W51CC.75D	06-00479	0.75BB	2000	660	2 BRL-3	4.82	5”	5.00-5	**$624.00**
W51CCD.75	06-00480	0.75BB	2000	660	2 BRL-2	5.35	5”	5.00-5	**$624.00**
W51DCC.62	06-00481	0.625BB	2000	660	2 BRL-2	5.35	5”	5.00-5	**$624.00**
W60CC	06-00482	0.625BB	2000	660	BRL-2	5.55	6”	up to 6.00-6	**$492.00**
W60CC.75	06-00483	0.75BB	2000	660	BRL-2	5.55	6”	up to 6.00-6	**$530.00**
W600CC	06-00484	0.625BB	2000	660	BRL-2	5.85	6”	any 6 “	**$512.00**
W600CC.75	06-00485	0.75BB	2000	660	BRL-2	5.85	6”	any 6 “	**$487.00**
W60CCD.62	06-00486	0.625BB	2000	660	2 BRL-2	5.55	6”	up to 6.00-6	**$645.00**
W60CCD.75	06-00487	0.75BB	2000	660	2 BRL-2	5.55	6”	up to 6.00-6	**$645.00**
W600CCD.62	06-00488	0.625BB	2000	660	2 BRL-2	5.85	6”	any 6 “	**$644.00**
W600CCD.75	06-00489	0.75BB	2000	660	2 BRL-2	5.85	6”	any 6 “	**$644.00**
W60CC.75R	06-00490	0.75TRB	2000	1185	BRL-2	5.85	6”	up to 6.00-6	**$514.00**
W600CC.75R	06-00491	0.75TRB	2000	1185	BRL-2	6.15	6”	any 6 “	**$622.00**
W60CCD.75R	06-00492	0.75TRB	2000	1185	2 BRL-2	6.25	6”	up to 6.00-6	**$645.00**
W600CCD.75R	06-00493	0.75TRB	2000	1185	2 BRL-2	6.55	6”	any 6 “	**$665.00**
W80CC-Z	06-00494	0.625BB	2000	660	BRL-1	8.75	6”	4.80-8	**$535.00**

MATCO AXLE CHART

Matco P/N	Aircraft Spruce P/N	Dia. (In.)	Used on Models	Axle Assy	Comment	Axle Price	Assy Price
A1	06-00495	1.25	W50, W51, WE51L	AXLE1	AL Flange Mount	**$67.75**	**87.90**
A1A	06-00496	1.25	W50LD,W51LD,W50LT, W50LXT,W51LT,W51LXT	AXLE1A	AL Flange Mount	**$69.75**	**$88.75**
A1B	06-00497	1.25	WE51	AXLE1B	AL Flange Mount	**$65.75**	**$88.75**
A2	06-00498	1.25	W50S,W51S	AXLE2	AL Flange Mount	**$64.75**	**$88.75**
A3	06-00499	1.25	W60, WI60, WI60L	AXLE3	AL Flange Mount	**$65.75**	**$86.75**
A3A	06-00501	1.25	MHE51, MHE6B, MHE8B, MHE10B, MHE12B	AXLE3A	AL Flange Mount 5” Cessna bolt pattern	**$73.75**	**$83.75**
A3C	06-00502	1.25	MHE51-SC, MHE6B-SC, MHE8B-SC, MHE10B-SC, MHE12B-SC	AXLE3C	AL Flange Mount 6” Cessna bolt pattern	**$74.75**	**$87.75**
A4	06-16830	0.625	MHE6B,W50CC,W60CC,W40B	AXLE4	Steel Tube	**$52.75**	**$55.75**
A5	06-00503	0.75	W40BD	AXLE5	AL Flange Mount	**$67.80**	**$78.90**
A5G	06-00504	20mm	W40M	AXLE5G	Steel Flange Mount	**$70.75**	**$75.75**
A6	06-00505	1.5	W600,W600XT,WW600XLT	AXLE6	AL Flange Mount	**$90.75**	**$105.75**
A6M	06-00506	1.5	W600,W600XT,WW600XLT	AXLE6M	A6 Alternate Mount Ver.	**$81.75**	**$98.95**
A7	06-00507	0.75	MH6B,W50CC,W60CC,W40B	AXLE7	Steel Tube Mount	**$57.80**	**$76.75**
A8	06-00508	0.75	W62,MH6B.75,W50CC.7 MH6B5,260CC.75	AXLE8	Steel Tube	**$55.75**	**$67.75**
A13	06-00509	0.625	W80CC-Z	AXLE13	Steel Tube for Fork Mount	**$60.95**	**$67.75**
A15	06-00510	1.5	W323A	AXLE15	For W323A Compound W&B	**$84.75**	**$104.75**
A15M	06-00511	1.5	W323SA	AXLE15M	For W3238A Compound W&B	**$109.75**	**$132.90**
A16	06-00512	0.75	F602	AXLE16	Steel Tube for W62 w/F602 Spacer	**$55.75**	**$62.75**
A17	06-00513	0.75	W600CC.75	AXLE17	Steel Tube	**$61.99**	**$67.75**
A19	06-00514	0.75	W50CC.75, W51CC.75, W51CC.75R ONLY	AXLE19	Steel Tube	**$59.99**	**$70.75**
A20	06-00515	0.75	NW50.75R,NW51.75R	AXLE20	Steel Tube w/Spacers for Zenith 601	**$51.75**	**$54.75**



HEGAR WHEEL KITS

Spun aluminum wheel kit includes aluminum wheel halves, hubs,5/8 bearings, valve, tubeless kit and all necessary hardware, Compatible with Hegar brakes.
Note: Order tires separately.
4X6 Symmetrical(Quicksilver®)
P/N 06-00319 .. **$89.75**
6X6 Offset rim ..... P/N 06-00322 .. **$90.80**
6X6 Symmetrical (Quicksilver®)..... P/N 06-00323 .. **$96.75**
The following Hegar wheels are designed to fit Quicksilver® nose gear allowing clearance for the steering fork.
3.5X5 MX(L) Nose Wheel ..... P/N 06-00324 **$111.95**

HEGAR SPUN AND BILLET ALUMINUM WHEELS WITH BRAKES

6" SPUN ALUMINUM WHEEL - Includes. 2 - 6" spun aluminum wheels. 2 - 5" calipers and 4-1/2" rotors. all lines and fittings. axles included 5/8" or 3/4". 5/8" precision ball bearings are 800 GVW. 3/4" precision ball bearings are 1100 GVW. Note: To be run tubeless, but tubes may be used. 3-3/4 lbs. per side wheel and brake.



6S X 5 - 5" Wide Wheel X 6" Diameter..... P/N 06-01269..... **$632.00**
6S X 6 - 6" Wide Wheel X 6" Diameter..... P/N 06-01270..... **$699.00**

HEGAR BRAKE ACCESSORIES

Order the type of master cylinder(s) & actuator best suited to your aircraft. Standard keyed axles for all aircraft, except Quicksilver®.

Description	Part No.	Price
Heel-Operated Master Cylinder	06-00328	**$94.85**
Joystick-Mounted Master Cylinder	06-00329	**$204.95**
Foot Linkage	06-00330	**$99.95**
Hand Linkage	06-00331	**$90.25**
Axles, 5/8" Standard, Set Of 2	06-00332	**$36.85**
Axles, 5/8" Quicksilver® Set Of 2	06-00333	**$63.25**
Axles, 3/4" Standard, Set Of 2	06-00334	**$36.50**
Master Cylinder 5" Complete Single Lever 1/2" Bore	06-01277	**$94.75**
Master Cylinder 5" Complete Single Lever 5/8" Bore	06-01671	**$89.75**
Master Cylinder 5" Complete Dual T-Lever 1/2" Bore	06-01278	**$177.75**
Master Cylinder 5" Complete Dual T-Lever 3/4" Bore	06-01612	**$175.75**
Master Cylinder 5" Complete Dual T-Lever 5/8" Bore	06-01611	**$175.75**
Master Cylinder 7" Complete Dual T-Lever 1/2" Bore	06-01280	**$177.75**
Master Cylinder 7" Complete Dual T-Lever 5/8" Bore	06-02812	**$177.50**
Master Cylinder Complete 1/2" Bore MCT Motor Cycle	06-00329	**$204.95**
Master Cylinder Complete 3/4" Bore MCT Motor Cycle	15-05690	**$138.75**
Master Cylinder Only Rod End Type 1/2" Bore	15-04621	**$68.75**
Master Cylinder Only Motor Cycle Type 3/4" Bore	15-06337	**$68.75**
Master Cylinder Complete Heel Type 1/2 Bore	06-00328	**$94.85**
Master Cylinder 7" Complete Single T-Lever 1/2" Bore	06-01279	**$89.75**
Master Cylinder 7" Complete Single T-Lever 5/8" Bore	06-01775	**$96.75**

LG

TRUE-LOCK FASTENER SYSTEMS



True-Lock aviation fastener systems reduce premature wear on your wheel-end assembly parts (brakes, bearings, axles, including tires and wheels). The True-Lock system eliminates the conventional axle nut system's inherent inferior torque setting characteristics imposed by the castle nut and cotter pin (end-play).
True-Lock is the only patented aviation wheel fastener system in the world that has been awarded an STC (Supplemental Type Certificate) by the FAA for axle nut technology. True-Lock LLC holds over 1,000 FAA certifications for aviation fastener design. All True-Lock fastener systems are guaranteed for the life of your aircraft and pay for themselves over time by reducing downtime and fewer replacement parts. So, If you want a wheel fastener system for your aircraft that sets the industry standard for vibration mitigation and cost reduction, then True-Lock is what you need.

The True-Lock fastener system is the next generation of fastener technology:

- FAA Certification on over 1,000 aircrafts.
- Significantly increases safety and reliability.
- Reusable & cost effective.
- Maintenance Free - requires no cotter pins or safety wire!

SEE WWW.AIRCRAFTSPRUCE.COM FOR COMPLETE PRICE LIST OF TRUE-LOCK FASTENER SYSTEMS.

6S X 6 SPUN ALUMINUM WHEEL WITH BRAKE KIT



6" Spun Aluminum Wheel kit includes, 2 – 6" spun aluminum wheels, 2 – 6" calipers and 4-1/2" rotors, all lines and fittings, axles included 5/8" or 3/4". 5/8" precision ball bearings are 800 GVW, 3/4 precision ball bearings are 1100 GVW. To be run tubeless, but tubes may be used. Total weight per caliper, wheel, rotor and hub combined 3-3/4 lbs. Overall wheel width: 6.00 x 6" (3.5 rim w/stem & 2.5" no stem)
5/8 Bearing ..... P/N 06-01270 ..... **$699.00**

HEGAR 6 INCH BRAKE ASSEMBLY KIT WITHOUT WHEELS



Kit comes complete with two sets of hubs, 4.5" rotors, calipers, brake pads as shown along with two 8" axles with hardware, 15 feet of high pressure brake line and one bleeder kit. 5/8" or 3/4" bearing options.

5/8 Bearing ..... P/N 15-05703 ..... **$468.00**
3/4 Bearing ..... P/N 15-08293 ..... **$586.00**

Prices Subject to Change Without Notice

MATCO HUB CAP KIT
FOR MH SERIES WHEELS



Responding to customer inquiries for a kit to allow installation of the current WHLWC wheel cover on MH series wheels, MATCO mfg has introduced the MHWC hub cap kit. The kit includes wheel covers and mounting hardware for 2 wheels. The WHLWC wheel covers are made from durable ABS polymer. The wheel covers can be painted to match customer requirements. Installation can be accomplished without removing the wheel. Installation on MH wheels using the CNC spun wheel halves (introduced in early 2001) can be accomplished in about 10 minutes, On earlier MH series wheels using stamped wheel halves, some trimming of the wheel cover may be required and installation may require about 30 minutes. Furnished unpainted. 2 wheel kit.

For 5" Wheels .....P/N 06-02913 .....**$19.90**
For 6" Wheels .....P/N 06-00446 .....**$34.70**

MATCO BRAKE RELINE KITS



Matco Part No.	Our Part No.	Lining Model Used	Price each
BRL-1*	06-00571	4 of M66-106	**$33.50**
BRL-2*	06-00572	4 of M66-103	**$34.50**
BRL-3*	06-00573	4 of M66-1052	**$39.90**
BRL-6*	06-00574	4 of M66-1052	**$71.75**
BRL-323	06-00575	4 of DR323	**$255.95**

*Reline kits include linings and rivets for 2 calipers.

MATCO TUBING & FITTINGS

Matco Part No.	Our Part No.	Description	Price
MSCNNR4/035	06-01133	Nylon II Tube .25	**$1.42**
MSC261P	06-01134	Ferrule and Nut	**$2.25**
MSC262P	06-01135	Union, Brass Fitting	**$3.95**
MSC264P	06-01136	T-Fitting, 1/4" Compression	**$7.50**
MSC268P	06-01137	Straight fitting, 1/8" NPT - 1/4" Compression	**$2.64**
MSC268P-04X01	06-01138	Straight Fitting 1/16"	**$10.50**
MSC269P	06-01139	Brass Elbow, 90° 1/8" NPT - 1/4" Compression	**$2.96**
MSCNNR2/026	06-01140	Nylon II Tube, .125	**$0.78**
MSC164P	06-01142	T-Fitting, 1/8" NPT - 1/8" Compression	**$13.50**
MSC168P	06-01143	Straight Fitting, 1/8" NPT - 1/8" Compression	**$4.95**
MSC169P	06-01144	Brass Elbow, 90°, 1/8" NPT - 1/8" Compression	**$5.95**

GROVE CONVERSION KITS FOR PIPERS



Conversion kits are STC approved for Piper models listed below with 1-1/4" axles. No landing gear modifications required. The existing Scott master cylinders provide adequate pressure and volume for this conversion kit and need not be replaced. Comes complete with STC paperwork, 2 wheel and brake assemblies, mounting hardware, brake line extensions and fittings. Approved tire sizes include 6.00-6, 7.00-6, 8.00-6, 8.50-6 and 26x10.5-6. Brake caliper body is aluminum, wheels are available in either aluminum or lighter weight magnesium.

Model No.	Piper Models:	Description	Part No.	Price
28-4001	PA-12, PA-14, PA-16,PA-18, PA-19, PA-20	Magnesium Wheels	06-02906	**$1,689.00**
28-4001A	PA-12, PA-14, PA-16,PA-18, PA-19, PA-20	Aluminum Wheels	06-02907	**$1,689.00**
28-4002	J-3, J-4, J-5, PA-11,PA-15, PA-17	Magnesium Wheels	06-02904	**$1,689.00**
28-4002A	J-3, J-4, J-5, PA-11,PA-15, PA-17	Aluminum Wheels	06-02905	**$1,689.00**



MATCO 6" WHEELS & BRAKES FOR ULTRALIGHTS

This top quality wheel and brake set is excellent for use on high-performance ultralights. Set incl.: 2 aluminum wheels & brakes with 5/8" bearings, 2 axles, 2 spacers, 2 brake bleeder seats & valves, 4 brake line fittings, 12 ft. of 1/4" dia. x .035 wall brake line & 1 vertical master cylinder.

P/N 06-16800 .....**$705.00**

Same as set #06-16800 except with 2 vertical master cylinders
P/N 06-16840 .....**$822.00**

Same as set #06-16800 except with 1 laydown style master cylinder
P/N 06-16850 .....**$722.00**

Same as set #06-16800 except with 2 laydown style master cylinders
P/N 06-16860 .....**$823.00**

AVAILABLE SEPARATELY:

6" Wheel & Brake .....P/N 06-16810 .....**$542.00**
5" Nose wheel with 5/8" Bearings .....P/N 06-16820 .....**$94.75**
A-4 Axle, 9.75" Long, 5/8" Dia.....P/N 06-16830 .....**$52.75**

AZUSA LITE NYLON WHEELS
4, 5 AND 6 INCH MODELS



Azusalite wheels are made from engineering grade Nylon which combines high tensile and compressive strengths and good impact resistance. Excellent for many homebuilt and ultralight aircraft applications since they weigh 60-70% less than aluminum wheels. Azusalite wheels are offered in 4", 5" and 6" models. Replacement parts and unlisted accessories available on request.

AZUSALITE 5" WHEEL – Used as the main wheels on the Mohawk ultralight, this 5" wheel features 5/8" I.D. sealed ball bearings. Uses 4.10 / 3.50 x 5 or 5.00 x 5 tire & tube. Max Load: 475 lbs, or the load rating of the tire. Whichever is lower..... P/N 06-02500 ..... **$27.50**

AZUSALITE 4" WHEEL – A 4 inch Azusalite wheel featuring 5/8" sealed ball bearings. Uses a 4.10 / 3.50 x 4 tire and tube. Max Load: 440 lbs, or the load rating of the tire. Whichever is lower.
P/N 06-02600 ..... **$21.50**

AZUSALITE 6" WHEEL – A 6" Azusalite wheel; comes complete w/ 5/8" sealed ball bearings.Uses 4.10 / 3.50-6 or a 6.00-6 tire & tube. Max Load: 565 lbs, or the load rating of the tire. Whichever is lower.
P/N 06-02700 ..... **$30.65**



AZUSA TIRES & TUBES (SAWTOOTH TREAD)

4 .10 / 3.50 x 4 Tire & Tube
P/N 06-02800 .....**$21.00 Ea**
4 .10 / 3.50 x 5 Tire & Tube
P/N 06-02900 .....**$23.75 Ea**
4.10 / 3.50 x 6 Tire & Tube
P/N 06-03000 .....**$26.00 Ea**

AZUSA RIBBED TIRE ROUND PROFILE RIBBED ROUND PROFILE
4.80 x 4.00 x 8 Tire & Tube ..... P/N 06-03010 .....**$26.50 Ea**



AZUSA ALUMINUM WHEELS

5" AZUSA ALUMINUM WHEEL – Complete with 5/8" I.D. sealed bearing.....P/N 1144 .....**$26.50**

5" AZUSA ALUMINUM WHEEL & BRAKE KIT – Kit consists of (2) #1144 wheels with 5/8" sealed bearings, (2) #2270 aluminum Azusa brakes, (2) #2211 brake drums (2) 11.400-5, 6-ply Lamb tires and Azusa #7131 (2) 340/300 x 5 tubes. P/N 06-03100 ..... **$218.95**

5" AZUSA ALUMINUM WHEEL – Complete with 3/4" bearing.
P/N 06-00376 ..... **$34.50**

6" AZUSA ALUMINUM WHEEL – Complete with 5/8" I.D. sealed bearings. Wt. 3.9 lbs. P/N 06-03200 ..... **$42.50**

6" AZUSA ALUMINUM WHEEL – Complete with 5/8" I.D. Timken bearings. Wt. 4.1 lbs. P/N 06-03300 ..... **$59.50**

6" AZUSA ALUMINUM WHEEL – Complete with 3/4" I.D. Timken bearings. Wt. 4.2 lbs. P/N 06-03400 ..... **$48.50**

8" AZUSA ALUMINUM WHEEL & BRAKE KIT – Kit consists of (2) #1175 wheels, (2)#2530 brakes, (2)#2542 drums, (2)4.80 x 4.00 tires and tubes, & hardware. P/N 06-03410 ..... **$260.95**

AZUSA BRAKES FOR AZUSA 5" & 6" WHEELS

These 4.5" brakes have a long actuating arm, 5/8" mounting hole, and bonded lining. Available in anchor style w/ built-in anchor & 2 cable mounting ears, or round style which features a round aluminum backing plate. Platform required w/ 5" Azusalite.

P/N	Description	Price
06-03415	Anchor Style Brake #2208	**$39.90**
06-03420	Round Style Brake #2270A	**$34.95**
01-00169	Brake Assy. 2272A (Right)	**$38.75**
01-00306	Brake Assy. 2272A (Left)	**$37.65**
06-03425	Brake Arm #2263	**$1.28**
06-03430	Spring #2264	**$0.74**
06-03435	Cam #8235	**$4.65**
06-03440	Platform #2259A	**$6.50**
06-03445	Lined Shoes (1/side) #2260	**$19.50**

AZUSA BRAKES FOR AZUSA 8" WHEELS

These 5" brakes are used on Azusa #1175 wheels only. Features a round aluminum backing plate and actuating arm which allows for 8 positions.

P/N	Description	Price
06-03450	Round Style Brake #2530	**$37.75**
06-03455	Brake Arm #2537	**$4.75**
06-03460	Spring #2539	**$0.75**
06-03465	Cam #2533	**$7.95**
06-03470	Lined Shoes (1/side) #2538	**$18.65**

AZUSA MINI AXLES



5/8-18 x 2" threads both ends, 3/16" keyway (full length of axles) black oxide plate x 8" Long.
P/N 06-01776 .....**$9.99**

5/8-18 x 2" threads both ends, 3/16" keyway (full length of axles) black oxide plate x 10" Long.
P/N 06-01777 .....**$9.60**

LG

GROVE WHEEL & BRAKES

4 INCH WHEELS & BRAKES



P/N 40-101 Shown

Manufactured from aerospace grade aluminum

These 4" wheels are manufactured to the same exacting standards as the Grove 5" & 6" wheels.

They feature genuine Timken tapered roller bearings with felt grease seals.

40-1 wheel has 2-3/4" tire bead width.

40-3 wheel has 2-1/4" tire bead width.

GROVE WHEELS & BRAKES FEATURE:

- Aerospace grade materials
- Precision CNC machined
- Timken tapered roller bearings
- Felt grease seals
- Tubeless Option

From the chart below, select the proper static load rating, kinetic energy rating and brake torque for your aircraft.



Choose from Aluminum or Magnesium — Magnesium wheels weigh less than aluminum, but aluminum is more corrosion resistant. Both metals have similar strengths.

5 INCH WHEELS & BRAKES



P/N 57-124 Shown

Available in Aluminum or Magnesium

50 SERIES — Grove's basic 5" wheel.

51 SERIES — Lighter weight version of the 50 series.

55, 56 & 57 SERIES — Same wheel as the 50 series, but with heavier discs for greater kinetic energy and larger calipers for greater braking torque

6 INCH WHEELS & BRAKES



P/N 66-152 Shown

Available in Aluminum or Magnesium

60 SERIES — Grove's basic 6" wheel for 1-1/2" axles.

61 SERIES — Lighter weight version of the 60 series.

65 SERIES — Same as the 61 series, but for use with 1-1/4" axles.

66 SERIES — Same as the 60 series but with heavier discs for greater kinetic energy and larger calipers for greater braking torque.

GROVE KIT NO.	OUR PART NO.	WHEEL NO.	STATIC LOAD RATING POUNDS	KINETIC ENERGY FT-LBS.	DISC THICK-NESS (INCHES)	BRAKING TORQUE INCH-LBS.	CALIPER NO.	PISTON DIA. (INCHES)	BRAKE PAD NO.	AXLE DIA. (INCHES)	WEIGHT LBS. (SEE REF. 1)	PRICE/ SET (SEE REF. 2)
FOUR INCH WHEELS AND BRAKES												
40-101	06-00858	40-3A	700	72,000	0.160	1,384	39-1A	1x1.250	66-106	0.75	4.05	**$689.00**
40-102	06-00859	40-1A	700	72,000	0.160	1,832	39-2A	1x1.438	66-106	0.75	4.16	**$689.00**
FIVE INCH WHEELS AND BRAKES												
50-101	06-00094	50-1A	1,285	120,149	0.190	2,364	30-1A	1x1.500	66-106	1.25	7.10	**$945.00**
50-201	06-00860	50-1M	1,285	120,149	0.190	2,364	30-1M	1x1.500	66-106	1.25	6.10	**$969.00**
51-101	06-00589	51-1A	800	120,149	0.190	2,364	30-1A	1x1.500	66-106	1.25	6.60	**$948.00**
51-201	06-00862	51-1M	800	120,149	0.190	2,364	30-1M	1x1.500	66-106	1.25	5.60	**$969.00**
55-112	06-00863	55-1A	1,285	162,315	0.250	3,283	31-2A	2x1.250	66-111	1.25	7.60	**$1,029.00**
55-212	06-00864	55-1M	1,285	162,315	0.250	3,283	31-2M	2x1.250	66-111	1.25	6.45	**$1,011.00**
56-113	06-00095	56-1A	1,285	205,146	0.313	3,283	31-3A	2x1.250	66-111	1.25	7.90	**$1,034.00**
56-213	06-00867	56-1M	1,285	205,146	0.313	3,283	31-3M	2x1.250	66-111	1.25	6.80	**$1,095.00**
57-124	06-00096	57-1A	1,285	246,175	0.375	4,345	32-4A	2x1.438	66-111	1.25	8.30	**$1,126.00**
57-224	06-00870	57-1M	1,285	246,175	0.375	4,345	32-4M	2x1.438	66-111	1.25	7.20	**$1,197.00**
SIX INCH WHEELS AND BRAKES												
60-162	06-00101	60-1A	1,750	206,406	0.250	5,052	36-2A	1x2.000	66-105	1.50	10.50	**$1,253.00**
60-262	06-00798	60-1M	1,750	206,406	0.250	5,052	36-2M	1x2.000	66-105	1.50	9.20	**$1,542.00**
61-111	06-00590	61-1A	1,200	170-149	0.190	3,947	31-1A	2x1.250	66-111	1.50	9.20	**$1,226.00**
61-211	06-00799	61-1M	1,200	170-149	0.190	3,947	31-1M	2x1.250	66-111	1.50	8.10	**$1,372.00**
65-203	06-01805	65-1M	1.250	170-149	0.190	3,868	30-3M	1X1.750	066-106	1.25	7.40	**$1,232.00**
65-207	06-00879	65-1M	1,250	170-149	0.190	3,868	30-7M	1x1.750	66-106	1.25	7.43	**$1,245.00**
65-211	06-00881	65-1M	1,250	170-149	0.190	3,947	31-5M	2x1.250	66-111	1.25	7.64	**$1,237.00**
65-222	06-00883	65-5M	1,250	206,406	0.250	5,219	32-6M	2x1.438	66-111	1.25	7.90	**$1,236.00**
66-152	06-00885	60-1A	1,750	206,406	0.250	7,735	35-6A	2x1.750	66-106	1.50	11.15	**$1,365.00**
66-154	06-00886	60-5A	1,750	280,188	0.375	7,735	35-4A	2x1.750	66-106	1.50	11.82	**$1,437.00**
66-252	06-00888	60-1M	1,750	206,406	0.250	7,735	35-6M	2x1.750	66-106	1.50	9.90	**$1,425.00**
66-254	06-00890	60-5M	1,750	280,188	0.375	7,735	35-4A	2x1.750	66-106	1.50	11.82	**$1,464.00**
67-174	06-00892	67-1A	2,500	280,188	0.375	7,735	37-8A	2x1.750	66-105	1.50	14.25	**$2,011.00**
67-274	06-00894	67-1M	2,500	280,188	0.375	7,735	37-4M	2x1.750	66-105	1.50	12.25	**$2,382.00**

NOTE: Braking torque calculated at 600 psi brake line pressure. Ref 1: Weight for one wheel, disc and caliper assy. Ref 2: Set includes two wheel assys. "A" in wheel No. = Aluminum "M" in wheel No.= Magnesium

GROVE WHEELS & BRAKES

NOSE WHEELS

Genuine Aircraft Quality!

- Cast from aerospace grade materials
- Precision CNC Machined
- Timken Tapered Roller Bearings
- Felt Grease Seals



"GROVE P/N"	"OUR P/N"	WHEEL SIZE	STATIC LOAD RATING	AXLE DIA.	WEIGHT	PRICE
49-1A	06-00843	4 Inch	1,000 lbs	0.75"	1.98 lbs	**$253.95**
49-3A	06-00842	4 Inch	1,000 lbs	0.75"	1.87 lbs	**$248.95**
59-1A	06-00102	5 Inch	1,285 lbs	1.25"	3.90 lbs	**$412.00**
59-1M	06-00911	5 Inch	1,285 lbs	1.25"	2.90 lbs	**$403.00**
59-2A	06-00912	5 Inch	800 lbs	1.25"	3.40 lbs	**$362.00**
59-2M	06-00913	5 Inch	800 lbs	1.25"	2.40 lbs	**$428.00**
69-1A	06-00103	6 Inch	1,750 lbs	1.50"	6.00 lbs	**$423.00**
69-1M	06-00915	6 Inch	1,750 lbs	1.50"	4.80 lbs	**$479.00**

GROVE BRAKE LININGS



All Grove Brake Pads are components of FAA-TSO brake assemblies. Grove Brake Pads are FAA-PMA for many popular certificated aircraft.
Individual pads do not include rivets. Pad kits include 4 pads and all necessary rivets

Description	Part No.	Price
Brake Lining Rivet	06-02966	**$0.19**
Brake Lining 066-105	06-02968	**$8.95**
Brake Lining 066-106	06-02969	**$9.35**
Brake Lining 066-108	06-02970	**$14.50**
Brake Lining 066-111	06-02971	**$14.50**
Brake Pad Kit 066-105K	06-03022	**$34.00**
Brake Pad Kit 066-106K	06-03023	**$36.85**
Brake Pad Kit 066-108K	06-03024	**$55.00**
Brake Pad Kit 066-111K	06-03025	**$55.00**

800X4 DISC BRAKE CONVERSION





CLOSEUP VIEW



CLOSEUP V

STC Approved FAA-PMAAPPROVED MODELS INCLUDE:
J-3, J-4, J-5, PA-11, PA-12 PA-14, PA-15 PA-16, PA-17PA-18, PA-19 PA-20
Good news for owners of early Piper aircraft. Say good-bye to brake expander tube problems forever!

- No more soft brake pedal
- Easy Installation
- Improved braking and ground handling

Maintain the classic cub look by installing modern disc brakes on your existing 800x4 wheels and tires. Use your existing wheels, tires, tubes, master cylinders and brake lines.

STC Kit comes complete with all parts, special tools and STC documentation. Installation requires only standard hand and rivet tools. No modifications are required to be made on the gear leg, or any other part of the aircraft.
P/N 06-00837 ..... **$922.00**

LG

AXLE SHIMS

Reduce Tire Wear
Improve Ground Handling



TOE-IN/OUT REALIGNMENT SHIMS

Install these axle shims between your landing gear and axles to insure that your tires track true. Correct any misalignment of toe-in or out in 1/4° increments. Precision machined from 6061-T6 aluminum.

Price $23.50 each.

Correction	500X5	600X6
1/4°	06-00925	06-00928
1/2°	06-00926	06-00929
3/4°	06-00927	06-00930

CAMBER ADJUSTMENT SHIMS

Adjust the vertical alignment of your wheels with these camber adjustment shims. Precision machined from 6061-T6 aluminum.

Price: $23.50 each.

Correction	500X5	600X6
1/2°	06-00931	06-00934
1°	06-00932	06-00935
2°	06-00933	06-00936

500X5 STANDARD AXLE



Precision CNC machined from 2024-T3 aluminum with clear anodized protective finish Weight 0.92 lbs. 1.25" diameter Static Load Rating 1,285 lbs.

Use with Grove 50, 51, 52, 55, 56, 57, & 58 and Cleveland 500x5 P/N 06-00917 .... **$62.75**

500X5 STANDARD AXLE WITH WHEEL PANT STUB



Same as the 500x5 standard axle but with 1" extension to attach wheel pant. End tapped for 1/4-28 screw Weight 0.95lb.

Use with all Grove 5" wheels with 1-1/4" bearings

P/N 06-00601 ..... **$71.75**

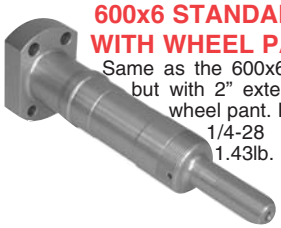
600X6 STANDARD AXLE



Precision CNC machined from 2024-T3 aluminum with clear anodized protective finish Weight 1.28 lbs. 1.50" diameter Static Load Rating 1,750lbs

Use with Grove 60, 61, & 66 and Cleveland 600x6 wheels
P/N 06-00919 ..... **$88.75**

600x6 STANDARD AXLE WITH WHEEL PANT STUB



Same as the 600x6 standard axle but with 2" extension to attach wheel pant. End tapped for 1/4-28 screw Weight 1.43lb.

Use with Grove 60, 61, & 66, and Cleveland 600x6 wheels. P/N 06-00602 ..... **$96.85**

400X4 AXLES



Use with Grove 40-1A Wheel Weight 0.37 lbs.
P/N 06-00921 ..... **$62.75**
Use with Grove 40-3A Wheel Weight 0.38lbs
P/N 06-00922 ..... **$62.75**

Solid 7075-T6 aluminum with clear anodized finish. Diameter 0.75" Static Load Rating 700 lbs.

1-1/4" DIAMETER 600X6 AXLES



Same construction as the above axles, but with 1.25" diameter Use with Grove 65 Series Wheels.

With wheel pant stub.... P/N 06-00923 .. **$91.75**
Without stub ..... P/N 06-00924 .. **$91.75**

GROVE MASTER BRAKE CYLINDERS



Clevis End—3/16" hole, 1/4" wide slot

These master cylinders are the perfect choice for all Grove brake systems as well as use with other major brands that require a high pressure master cylinder. Consider the following when selecting the proper master cylinder for your aircraft:



Eye Bolt End—3/16" hole, 1/2" head diameter

1.The style (with or without integral reservoir, etc.)

2.The pin-to-pin length—this is the length between the upper and lower attach holes.



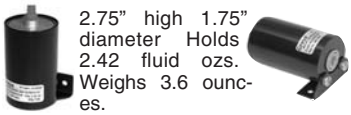
Eye Bolt End - 3/16" hole, 3/8" head diameter

3.The attach type for the upper end (clevis, or eye bolt)

4.The attach type for the lower end (cross drilled, slotted, etc.)

REMOTE BRAKE FLUID RESERVOIRS

Quality machined from 6061 billet. Top is retained by snap ring with O-ring seal. Supplied with vented 1/8" NPT cap plug. Anodized for corrosion resistance.



2.75" high 1.75" diameter Holds 2.42 fluid ozs. Weighs 3.6 ounces.

Designed to attach to firewall or other remote location. Adequate capacity to serve both master cylinders. Outlet has 1/8" female NPT thread at bottom of reservoir.

067-054 ..... P/N 06-00819..... **$54.75**



Normal installation requires two (one for each master cylinder.) Supplied with 1/8" NPT fitting. Attaches directly to your master cylinder. 1.98" high; 1.38" diameter Holds 1.10 fluid ounces Weighs 1.5 ounces.

067-050 P/N 06-00818 ....**$44.95**



Cross Drilled - 3/16" holes inline with fitting and also 90° to fitting

Grove P/N	Our P/N	Pin-to-Pin Length	Upper Attachment	Lower Attachment	Weight	Price
670-1	06-00594	7.5"	Clevis	Inline	5.9 oz.	**$238.95**
670-2	06-00866	8.0"	Clevis	Inline	6.2 oz.	**$238.95**
670-3	06-00104	7.5"	Clevis	90° Offset	5.9 oz.	**$238.95**
670-4	06-00869	8.0"	Clevis	90° Offset	6.2 oz.	**$238.95**
670-8	06-01286	7.25"	Clevis	90° Offset	5.9 oz.	**$238.95**
670-13	06-00871	8.0"	3/8" Eye Bolt	90° Offset	6.2 oz.	**$238.95**
670-14	06-00872	8.0"	3/8" Eye Bolt	Inline	6.2 oz.	**$238.95**
670-15	06-00596	8.0"	1/2" Eye Bolt	90° Offset	6.2 oz.	**$238.95**
670-16	06-00873	7.5"	1/2" Eye Bolt	90° Offset	5.9 oz.	**$238.95**
670-17	06-00597	8.0"	1/2" Eye Bolt	Inline	6.2 oz.	**$238.95**
670-18	06-00875	7.5"	1/2" Eye Bolt	Inline	5.9 oz.	**$238.95**
670-19	06-00877	7.5"	3/8" Eye Bolt	90° Offset	5.9 oz.	**$238.95**
670-20	06-00878	7.5"	3/8" Eye Bolt	Inline	5.9 oz.	**$238.95**

Displacement = 0.429 cu-in Stroke = 1.4"



P/N 670-1



90° Offset - 3/16" hole drilled 90° to fitting. Tab is inline with fitting.

Grove P/N	Our P/N	Pin-to-Pin Length	Upper Attachment	Lower Attachment	Weight	Price
671-20	06-00880	7.5"	1/2" Eye Bolt	Cross Drilled	5.9 oz.	**$238.95**
671-21	06-00882	7.5"	3/8" Eye Bolt	Cross Drilled	5.9 oz.	**$249.75**
671-22	06-00884	8.0"	1/2" Eye Bolt	Cross Drilled	6.2 oz.	**$238.95**
671-23	06-00887	8.0"	3/8" Eye Bolt	Cross Drilled	6.2 oz.	**$238.95**

Displacement = 0.429 cu-in Stroke = 1.4"



P/N 671-21



Inline -3/16" hole drilled inline with fitting Tab is offset 90° to fitting

Grove P/N	P/N	Pin-to-Pin Length	Upper Attachment	Lower Attachment	Weight	Price
672-1	06-00889	5.0"	Clevis	Cross Drilled	4.0 oz.	**$238.95**
672-2	06-00891	5.5"	Clevis	Cross Drilled	4.2 oz.	**$238.95**
672-3	06-00893	6.0"	Clevis	Cross Drilled	4.5 oz.	**$238.95**

Displacement = 0.236 cu-in Stroke = .77"



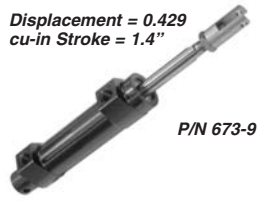
P/N 672-1



Slotted -0.090" slot inline with fitting. 3/16" hole drilled 90° to fitting.

Grove P/N	Our P/N	Pin-to-Pin Length	Upper Attachment	Lower Attachment	Weight	Price
673-9	06-00895	7.5"	Clevis	Cross Drilled	5.9 oz.	**$238.95**
673-10	06-00896	8.0"	Clevis	Cross Drilled	6.2 oz.	**$238.95**
673-11	06-00897	7.5"	1/2" Eye Bolt	Left Offset	5.9 oz.	**$238.95**
673-12	06-00898	7.5"	1/2" Eye Bolt	Right Offset	5.9 oz.	**$238.95**
673-13	06-00899	7.5"	1/2" Eye Bolt	Slotted 90°	5.9 oz.	**$238.95**
673-14	06-00901	7.5"	1/2" Eye Bolt	Slotted Inline	5.9 oz.	**$238.95**

Displacement = 0.429 cu-in Stroke = 1.4"



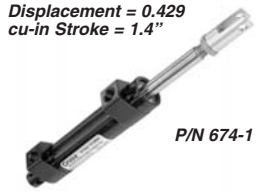
P/N 673-9



Right Offset Tab 3/16" hole drilled 90° to fitting

Grove P/N	Our P/N	Pin-to-Pin Length	Upper Attachment	Lower Attachment	Weight	Price
674-1	06-00902	7.5"	Clevis	Cross Drilled	5.0 oz.	**$239.95**
674-2	06-00903	8.0"	Clevis	Cross Drilled	5.0 oz.	**$238.95**
674-3	06-00904	7.0"	Clevis	Cross Drilled	5.0 oz.	**$238.95**

Displacement = 0.429 cu-in Stroke = 1.4"



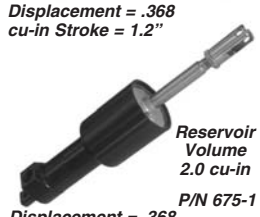
P/N 674-1



Left Offset Tab 3/16" hole drilled 90° to fitting

Grove P/N	Our P/N	Pin-to-Pin Length	Upper Attachment	Lower Attachment	Weight	Price
675-1	06-00097	8.0"	Clevis	Inline	8.1 oz.	**$287.95**
675-2	06-00905	7.5"	Clevis	Inline	7.9 oz.	**$287.95**
675-3	06-00593	8.0"	Clevis	90° Offset	8.1 oz.	**$287.95**
675-4	06-00906	7.5"	Clevis	90° Offset	7.9 oz.	**$287.95**

Displacement = .368 cu-in Stroke = 1.2"

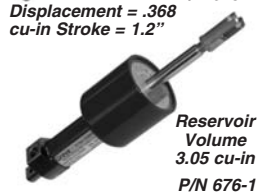


Reservoir Volume 2.0 cu-in

P/N 675-1

Grove P/N	Our P/N	Pin-to-Pin Length	Upper Attachment	Lower Attachment	Weight	Price
676-1	06-00907	8.0"	Clevis	Inline	9.3 oz.	**$299.85**
676-2	06-00908	7.5"	Clevis	Inline	9.0 oz.	**$287.95**
676-3	06-00909	8.0"	Clevis	90° Offset	9.3 oz.	**$287.95**
676-4	06-00910	7.5"	Clevis	90° Offset	9.0 oz.	**$287.95**

Displacement = .368 cu-in Stroke = 1.2"



Reservoir Volume 3.05 cu-in

P/N 676-1

All master cylinders have a 5/8" bore, 1/8" NPT outlets, are rated at 1,000 psi for use with MIL-H-5606 hydraulic fluid.

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

BERINGER WHEEL & BRAKE KITS

Upgrade your aircraft and save up to 9 lbs with high performance BERINGER® wheels and brakes. Complete main wheel and brake sets are designed to mount directly, replacing original equipment. Wheels are aluminum red anodized, fully CNC machined, with O-rings for Tubeless mounting.
Brake calipers use sintered metallic pads and stainless steel discs for increased lifetime.
The kit includes: 2 main wheels with brakes and stainless steel discs, tubeless tires (mounted and pressure tested), bolt-on axles, master cylinders, fluid reservoirs, hydraulic anti-skid, stainless steel brake lines and fittings and detailed installation manual.
If your aircraft is not listed below, please ask for a special quotation, we can equip 99% of the existing aircraft.



COMPLETE WHEEL AND BRAKE KITS

Beringer Part No.	Our Part No.	Aircraft Type	Wheel Assembly	Standard Tire (Other Size and Quality Available)	Price
FOR EXPERIMENTAL AIRCRAFT					
SLC02	06-01093	Lancair 320/360 (retractable LG)	5.00-5	TL 11x4.00-5" 8 PLY Aero Classic	**$2,796.00**
SLC01	06-01094	Lancair Legacy (retractable LG)	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$2,930.00**
SGL02	06-01622	Glasair III (retractable LG)	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$2,893.00**
SFA01	06-01623	Falco	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$2,852.00**
SLE01	06-02026	Long'Ez	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$2,935.00**
SLE02	06-03052	Vari'Ez	4.00-5	TL 11x4.00-5" 8 PLY Aero Classic	**$2,600.00**
SLC05	06-02027	Cozy	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$2,930.00**
SJU01	06-03084	Jabiru J400/430	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$2,644.00**
FOR ULTRALIGHT AIRCRAFT AND LSA					
SSJ01	06-03086	JUST Aircraft SuperStol + Dual brake	6.00-6	w/o tires	**$3,617.00**
SRA02	06-01626	RANS Coyote (axle bolted with screws)	6.00-6	w/o tires	**$2,400.00**
SRA01	06-01627	RANS Coyote (axle bolted with flange)	6.00-6	w/o tires	**$2,698.00**
SPP01	06-01628	Pipistrel Sinus, Virus	4.00-6	4.00-6" 6 PLY Sava	**$2,516.00**
SSK01	06-01629	Skyranger - Nynja	4.00-6	4.00-6" 6 PLY Sava	**$2,121.00**
SSA01	06-01097	Zlin Savage (tire < 29 ")	6.00-6	w/o tires	**$2,376.00**
SSA02	06-01759	Zlin Savage (tire > 29 ") + Dual brake	6.00-6	w/o tires	**$2,750.00**
SEU01	06-01761	Evektor Eurostar/Sportstar	4.00-6	4.00-6" 6 PLY Sava	**$2,307.00**
SBR01	06-01762	Breezer	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$2,499.00**
SFD01	06-01763	Flight Design CTSW	4.00-6	TL 15x6.00-6" 6 PLY Sava	**$2,087.00**
STP01	06-01764	Tecnam P92	4.00-6	4.00-6" 6 PLY Sava	**$2,114.00**
STP02	06-01765	Tecnam P2008	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$2,868.00**
SZH05	06-01766	Zenair (all type)	6.00-6	TL 15x6.00-6" 6 PLY Sava	**$2,299.00**
SSC01	06-02025	TL Sting Carbon	4.00-5	TL 11x4.00-5" 8 PLY Aero Classic	**$2,310.00**
SJU03	06-03087	Jabiru J170	4.00-6	4.00-6" 6 PLY Sava	**$2,006.00**
FOR VAN'S AIRCRAFT					
SRVFU01	06-01767	Fuselage kit-RV6,7,8,9,10,14-Basic set	–	–	**$914.00**
SRVFU02	06-01768	Fuselage kit-RV6,7,8,9,10,14-Basic set + copilot brakes	–	–	**$1,538.00**
SRVFU03	06-01769	Fuselage kit-RV6,7,8,9,10,14-Basic set + parking brake	–	–	**$1,239.00**
SRVFU04	06-01770	Fuselage kit-RV6,7,8,9,10,14-Basic set + parking brake + copilot brakes	–	–	**$1,935.00**
SRVFI02	06-01772	Finishing kit-RV6,7,8,9-Main wheels	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$1,989.00**
SRVFI03	06-01773	Finishing kit-RV8 Grove LG-Main wheels	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$2,707.00**
SRVFI04	06-03088	Finishing kit-RV14-Main wheels	5.00-5	TL 5.00-5"10 PLY Michelin Aviator	**$2,295.00**
SRVFI05	06-03139	Finishing kit-RV10-Main wheels	6.00-6	TL 15x6.00-6" 6 PLY Aero Classic	**$3,336.00**
SRVCO03	06-03089	Complete Wheel And Brake Kit-RV3	5.00-5	TL 11x4.00-5" 8 PLY Aero Classic	**$2,742.00**

OPTIONS - CAN BE ORDERED SEPARATELY

Beringer Part No.	Our Part No.	Option	Description	Price
PKG01N	06-02012	Parking brake valve kit	Provided with extra hose and fittings	**$349.00**
COP01	06-03090	Copilot brakes	Provided with extra hose and fittings	**$558.00**
BCH-002	06-03091	Wheel cap	Available in different size	**$33.00**
INOBE	06-03092	Amphibian use	Stainless steel ball bearing for one wheel	**$177.00**

FRONT WHEEL / TAIL WHEEL KITS – SPECIAL AXLE FOR EACH AIRCRAFT

Beringer Part No.	Our Part No.	Description	Wheel Assy.	Standard Tire (Other Size and Quality Available)	Weight (lbs.)	Price
SST02	06-02014	Front wheel 4.00-5"	4.00-5	TL 11x4.00-5" 8 PLY Aero Classic	**6.36**	**$501.00**
SST03	06-02016	Front wheel 5.00-5"	5.00-5	TL 5.00-5" 10 PLY Michelin Aviator	**8.78**	**$685.00**
SST04	06-02017	Front wheel 4.00-6"	4.00-6	TL 13x5.00-6" 8 PLY Sava	**6.23**	**$504.00**
SST05	06-01633	Front wheel 3.50-4"	3.50-4	4.00-4" 4PLY Kenda	**3.7**	**$335.00**
SST10	06-02018	Tailwheel for replacement on Matco fork	3.50-4	2.80/2.50-4" 4 PLY Kenda	**2.53**	**$294.95**
SST11	06-02019	Tailwheel for replacement on Scott fork	3.50-4	2.80/2.50-4" 4 PLY Kenda	**2.53**	**$302.00**
JC-01	06-00957	Tailwheel for Pipistrel Sinus/Taurus	200x50	200x50 with tube	**1.83**	**$213.95**

SUPPLEMENTAL TYPE CERTIFICATE – DELIVERED WITH AN EASA FORM1

Beringer Part No.	Our Part No.	Description	Price
STC-013	06-03093	Complete wheel and brake kit for Diamond DA42	**$7,738.00**
STC-012.1	06-03094	Complete wheel and brake kit for Extra 300/330 – Single seater	**$3,399.00**
STC-012.2	06-03095	Complete wheel and brake kit for Extra 300/330 – Two seater	**$3,890.00**
STC-003	06-02020	Complete wheel and brake kit for Centrair Pegasus	**$1,389.00**
STC-005	06-02022	Complete wheel and brake kit for Schleicher ASW20	**$1,296.00**
STC-007	06-02023	Complete wheel and brake kit for Schempp-Hirth Ventus/Discus 2	**$1,311.00**

BERINGER MASTER BRAKE CYLINDERS

The seals inside the brake master cylinders are specific for each type of brake fluid.

- It is not possible to put DOT4 brake fluid in a master cylinder with seals for MINERAL (MIL) fluid and it is not possible to put MINERAL brake fluid in a master cylinder with seals for DOT4 brake fluid.

To Order use "Base Part No." followed by the dash number of desired brake fluid below.

- E is for DOT4 brake fluid (Example: 06-03098-E)
- N means for MINERAL (MIL) brake fluid (Example: 06-03098-N)

RUDDER MASTER CYLINDER ASSEMBLY

Beringer Part No.	Our Part No.	Attachments	Pin-to-Pin Length Min		Pin-to-Pin Length Max		Bore		Weight		Price
			Inch	mm	Inch	mm	Inch	mm	oz	g	
MP-001	06-03098	CHP-001	7.441	189	8.189	208	3/16	14.5	5.89	167	**$245.70**
MP-001.1	06-03099	CHP-001 - PGT-001	8.189	208	8.937	227	3/16	14.5	6.38	181	**$283.00**
MP-001.2	06-03100	CHP-007	7.441	189	8.189	208	3/16	14.5	5.82	165	**$263.00**
MP-001.3	06-03101	CHP-007	7.441	189	8.189	208	3/16	14.5	5.78	164	**$263.00**
MP-001.4	06-03102	CHP-009	7.402	188	8.189	208	3/16	14.5	5.89	167	**$265.00**
MP-001.5	06-03103	CHP-010	6.890	175	7.874	200	3/16	14.5	5.18	147	**$307.00**
MP-002	06-03104	- -	-	-	-	-	1/2	12.2	3.53	100	**$195.00**
MP-002.1	06-03105	ZM-001	5.433	138	5.630	143	1/2	12.2	4.15	118	**$215.00**
MP-002.2	06-03106	CHP-003	5.512	140	5.669	144	1/2	12.2	3.96	112	**$212.00**
MP-002.3	06-03107	CHP-003 - ZM-001	6.457	164	6.929	176	1/2	12.2	4.81	136	**$230.00**
MP-002.4	06-03108	CHP-003 - CHP-003	6.654	169	6.929	176	1/2	12.2	4.62	131	**$228.00**
MP-002.5	06-03109	ZM-001 - ZM-001	6.496	165	6.969	177	1/2	12.2	5.00	142	**$234.00**
MP-002.6	06-03125	PGT-002+ZM-001 - ZM-001	6.535	166	6.929	176	1/2	12.2	4.81	136	**$252.00**
MP-002.7	06-03126	CHP-006	5.118	130	5.433	138	1/2	12.2	3.72	105	**$256.00**
MP-002.8	06-03127	CHP-003	5.512	140	5.669	144	1/2	12.2	3.76	107	**$212.00**
MP-003	06-03128	CHP-002	7.32	186	7.56	192	1/2	12.2	4.30	122	**$282.00**
MP-003.1	06-03129	CHP-002	8.07	205	8.31	211	1/2	12.2	4.80	136	**$282.00**
MP-003.2	06-03130	CHP-005	7.32	186	7.56	192	1/2	12.2	4.41	125	**$263.00**
MP-003.3	06-03131	CHP-002	7.32	186	7.56	192	1/2	12.2	4.27	121	**$263.00**
MP-003.4	06-03132	CHP-008	6.93	176	7.20	183	1/2	12.2	4.30	122	**$263.00**
MP-003.5	06-03133	CHP-005.1	7.52	191	7.76	197	1/2	12.2	4.44	126	**$280.00**
MP-003.6	06-03134	CHP-011	7.40	188	7.64	194	1/2	12.2	4.34	123	**$263.00**

LEVER KIT FOR MP-XXX BRAKE MASTER CYLINDER

Beringer Part No.	Our Part No.	Brake master cylinder (not included)	Weight Oz.	Price
MP-004.1	06-01754	MP-002.3	8.77	**$79.75**
MP-004.2	06-01755	MP-002.3	16.06	**$151.80**
MP-004.3	06-01756	MP-002.8	9.30	**$96.75**
MP-004.4	06-01757	MP-002.8	17.11	**$174.80**
MP-004.5	06-03117	MP-002.8	9.58	**$83.00**
MP-004.6	06-03118	MP-002.8	10.33	**$153.00**
MP-004.7	06-03119	MP-002.8	8.48	**$83.00**



ATTACHMENTS

Beringer Part No.	Our Part No.	Description	Weight Oz.	Price
CHP-001	06-03135	Clevis	0.83	**$19.11**
CHP-002	06-01748	Clevis	0.23	**$20.50**
CHP-003	06-01749	Clevis	0.40	**$20.50**
CHP-004	06-01750	Clevis	0.39	**$20.50**
CHP-005	06-01751	Clevis	0.32	**$15.00**
CHP-005.1	06-03136	Clevis	0.37	**$32.76**
CHP-006	06-03138	Clevis	0.43	**$61.43**
CHP-007	06-03137	Clevis	0.79	**$16.38**
CHP-008	06-03110	Clevis	0.27	**$16.38**
CHP-009	06-03112	Clevis	0.80	**$19.11**
CHP-010	06-03113	Clevis	0.77	**$61.43**
CHP-011	06-03114	Clevis	0.27	**$16.38**
ZM-001	06-01747	Clevis	0.792	**$21.90**
BGE-011	06-01752	Clevis	0.159	**$6.50**

INTEGRAL BRAKE FLUID RESERVOIR

- Vertical or horizontal mounting
- Available for DOT4 or MIL Fluid
- CNC machined from aluminum billet
- Incorporates tight bellows
- Attached directly to the master cylinder
- 100% tight, no leak, perfect for aerobatic use



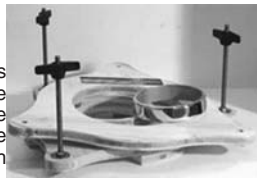
Beringer P/N	Our P/N	Weight (oz)	Price
HFA02N	06-01644	1.94	**$78.90**
HFA03N	06-01643	1.59	**$69.00**
HFA04N	06-02010	1.27	**$78.90**

BERINGER REPLACEMENT VALVE STEM



Beringer Replacement Valve Stem A-001 for the Nose Wheel Assembly 4.00-6 SL. .....P/N 06-03039 .....**$16.85**

BERINGER TIRE CHANGING TOOL



Specific tire change tool for Beringer wheels with conical aluminum spacer to insert tire on wheel half. Plywood flanges maintain tire while positioning second wheel half with the O-ring. Includes: Plywood flanges, bolts with butterfly nut and conical aluminum spacer
Beringer 5" wheels.... P/N 06-01109.....**$135.75**
Beringer 6" wheels.... P/N 06-01110 .....**$153.75**



BERINGER SPARE CLIPS

Stainless steel clips between wheel rim and disc. Includes: 10 left and 10 right (set for 1 wheel), procedure.
Set of 20. .... P/N 06-01111.....**$33.80**

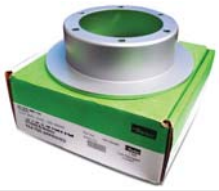
BERINGER WHEEL O-RINGS



These O-rings need to be replaced at each tire changing. Includes: 2 large O-rings and 1 small O-ring.
For Beringer 5" wheel..... P/N 06-01112.....**$14.60**
For Beringer 6" wheel..... P/N 06-01113 .....**$14.60**

Prices Subject to Change Without Notice

CLEVELAND BRAKE DISCS



CLEVELAND BRAKE DISCS

If your aircraft is flown a lot (more than 200 hours a year) and is not exposed to exceptionally corrosive atmospheres, Cleveland Standard discs are the ideal replacement when normal brake wear requires it.

Cleveland Chrome brake discs are the answer for owners of aircraft that are exposed to the elements (moisture, salt, industrial chemicals) and are not flown frequently enough to rub off corrosion. If you fly less than 200 hours a year, your aircraft spends more than 8,500 idle hours exposed to the elements. Standard and Chrome Cleveland brake discs are fully FAA approved as replacements on virtually all popular single engine aircraft.

Aircraft Model	Main Wheel Ass'y	Standard Disc	Price Each	Chrome Disc	Price Each
Homebuilts	500x5 40-78B	164-17	**$182.75**	164-117	**$366.00**
Homebuilts	600x6 40-59A	164-75	**$203.95**	164-175	**$793.00**
General (High Energy)	40-151A	164-08500	**$207.95**	---	**---**
General (Increased Energy)	40-230	164-09900	**$184.75**	---	**---**
Aerotek (Pitts) S-1 Series, S-2A	500x5 40-78B	164-17	**$182.75**	164-117	**$366.00**
Bonanza F33A, F33C, A36, A36TC, B36TC	600x6 40-83A, 40-83B	164-02505	**$192.95**	164-125B	**$894.00**
Bellanca Citabria,Decathlon	600x6 40-28D	164-5	**$166.80**	164-105	**$575.00**
Bellanca Champ	600x6 40-78B	164-17	**$182.75**	164-117	**$366.00**
Viking 300A	600x6 40-75E	164-15A	**$196.75**	164-115A	**$315.00**
Cessna 150C	600x6 40-57	164-5	**$166.80**	164-105	**$575.00**
Cessna 150D,E	500x5 40-78	164-17	**$182.75**	164-117	**$366.00**
Cessna 150F,G,H,J	600x6 40-97A	164-26A	**$149.90**	164-126A	**$242.95**
Cessna 150K	600x6 40-97A	164-26A	**$149.90**	164-126A	**$242.95**
Cessna A150K, F150, FA150	600x6 40-113	164-40	**$165.75**	164-140	**$299.95**
Cessna 152, F152, FA152	600x6 40-113	164-40	**$165.75**	164-140	**$299.95**
Cessna 172	600x6 40-97A	164-26A	**$149.90**	164-126A	**$242.95**
	600x6 40-113	164-40	**$149.90**	164-140	**$299.95**
Cessna 177,177RG, F177RG	600x6 40-113	164-40	**$165.75**	164-140	**$299.95**
Cessna 177A, B	600x6 40-97A	164-26A	**$149.90**	164-126A	**$242.95**
Cessna 180	600x6 40-75B	164-15A	**$196.75**	164-115A	**$315.00**
	600x6 40-75D	164-63	---	164-163	---
	600x6 40-66	164-7	**$216.95**	164-107	**$416.00**
Cessna 182H, J, K, L, M, N	600x6 40-97A	164-26A	**$149.90**	164-126A	**$242.95**
Cessna 182N	600x6 40-113	164-40	**$165.75**	164-140	**$299.95**
Cessna 182J, K, L, N,	600x6 40-97A	164-26A	**$149.90**	164-126A	**$242.95**
Cessna 185, A, B	600x6 40-32	164-7	**$216.95**	164-107	**$416.00**
	600x6 40-66	164-7	**$216.95**	164-107	**$416.00**
Cessna 185C, D, E	600x6 40-75B	164-15A	**$196.75**	164-115A	**$315.00**
Cessna A185E 1966 & Up	600x6 40-75B	164-15A	**$196.75**	164-115A	**$315.00**
1969 & Up	600x6 40-75D	164-36	**$218.95**	164-136	**$370.00**
1967, 1968	600x6 40-66	164-7	**$216.95**	164-107	**$416.00**
Cessna 188, A188	600x6 40-75B	164-15A	**$196.75**	164-115A	**$315.00**
Cessna 205, 205A	600x6 40-67	164-7	**$216.95**	164-107	**$416.00**
	600x6 40-75B	164-15A	**$196.75**	164-115A	**$315.00**
Cessna 206, U206A, TU206A & Turbo	600x6 40-75	164-15A	**$196.75**	164-115A	**$315.00**
Cessna U206D, D & Turbo	600x6 40-75D	164-36	**$218.95**	164-136	**$370.00**
Cessna P206, A, TP206A	600x6 40-75	164-15A	**$196.75**	164-115A	**$315.00**
Cessna P206, A,B,C,D,& Turbo	600x6 40-75B	164-15A	**$196.75**	164-115A	**$315.00**
Cessna P206D,E,Turbo & Super Skylane	600x6 40-75D	164-36	**$218.95**	164-136	**$370.00**
Cessna 207, T207	660x6 40-75B	164-15A	**$196.75**	164-115A	**$315.00**
	600x6 40-75D	164-36	**$218.95**	164-136	**$370.00**

Aircraft Model	Main Wheel Ass'y	Standard Disc	Price Each	Chrome Disc	Price Each
Cessna Caravan 1, & 208B	40-179	164-22201	**$296.95**	---	**---**
Cessna 210C	600x6 40-21	164-9	**$199.75**	164-109	**$354.00**
Cessna 210 series P210, T210	600x6 40-75B	164-15A	**$196.75**	164-115A	**$315.00**
Cessna 210N, P210N	600x6 40-75B	164-15A	**$196.75**	164-115A	**$315.00**
Cessna 336 Series	600x6 40-67	164-7	**$216.95**	164-107	**$416.00**
1963-1965	600x6 40-75B	164-15A	**$196.75**	164-115A	**$315.00**
Gulfstream AA-1, A, B, AA-5,	600x6 40-86A	164-20	**$145.75**	164-120	**$250.95**
Gulfstream AA-1,A,B,AA-5, AA-5B, TR2	600x6 40-88C	164-20	**$145.75**	164-120	**$250.95**
Helio H-295, 395,	600x6 40-75E	164-15A	**$196.75**	164-115A	**$315.00**
391	600x6 40-75D	164-36	**$218.95**	164-136	**$370.00**
Maule M4, M5 Series	600x6 40-97D	164-26A	**$149.90**	164-126A	**$242.95**
Mooney M20A, M20B	600x6 40-24	164-9	**$199.75**	164-109	**$354.00**
Mooney 20C	600x6 40-86	164-20	**$145.75**	164-120	**$250.95**
Mooney 20D, E	600x6 40-24	164-9	**$199.75**	164-109	**$354.00**
Mooney 20D, F,G,J,K	600x6 40-86	164-20	**$145.75**	164-120	**$250.95**
Piper PA22-108	600x6 40-28	164-5	**$166.80**	164-105	**$575.00**
Piper PA24-180,250	600x6 40-58	164-9	**$199.75**	164-109	**$354.00**
Piper PA24-260	600x6 40-84	164-19	**$171.95**	164-119	**$489.00**
Piper PA-24, 30, 32, 34, 39	600x6 40-90	164-22A	**$182.75**	---	**---**
Piper PA25	600x6 40-84A	164-33	**$237.95**	164-133	**$1,097.00**
Piper PA28 Series Cherokee/Warrior	600x6 40-28	164-20	**$145.75**	164-120	**$52.90**
Piper PA32 Series	600x6 40-120C (1)	164-21600	**$184.65**	---	**---**
(1) Heavy duty	600x6 40-120(1)	164-21600	**$184.65**	---	**---**
Archer	600x6 40-86	164-20	**$145.75**	164-120	**$250.95**
Pathfinder	600x6 40-86B	164-20	**$145.75**	164-120	**$250.95**
Cherokee	600x6 40-58	164-9	**$199.75**	164-109	**$354.00**
Cherokee/Arrow	600x6 40-84	164-19	**$171.95**	164-119	**$489.00**
Dakota	600x6 40-86	164-20	**$145.75**	164-120	**$250.95**
	600x6 40-86B	164-20	**$145.75**	164-120	**$250.95**
Piper PA32 Series	600x6 40-90A	164-23	**$188.85**	164-123	**$492.00**
Piper P34 Series	600x6 40-90A	164-23	**$188.85**	164-123	**$492.00**
Piper PA38-112	500x5 40-78B	164-17	**$182.75**	164-117	**$366.00**
Piper PA44	600x6 40-90A	164-23	**$188.85**	164-123	**$492.00**
Rockwell Int. 112, 112A, B	600x6 40-113A	164-43	**$197.75**	164-143	**$806.00**
112B, TC, TCA114	600x6 40-75H	164-15A	**$196.75**	164-115A	**$315.00**
Schweizer SGS1-34	500x5 40-78B	164-17	**$182.75**	164-117	**$366.00**
Socata TBM 700/850	8" Int. Brake	159-02700	**$1,151.00**	---	**---**
Spencer Amph. S12E	600x6 40-74	164-7	**$216.95**	164-107	**$416.00**
Taylorcraft F-19	600x6 40-86	164-20	**$145.75**	164-120	**$250.95**
Varga 2150A	600x6 40-97E	164-26A	**$149.90**	164-126A	**$242.95**
Waco	600x6 40-97A	164-26A	**$149.90**	164-126A	**$242.95**
Wing Derringer	600x6 40-84	164-19	**$171.95**	164-119	**$489.00**

LG

REPLACEMENT DISCS & LININGS FOR CESSNA/MCCAULEY WHEELS & BRAKES

Cessna Aircraft Model	Cessna/McCauley Wheel Assembly	Cessna/McCauley Brake Disc Assy.	Cleveland Brake Disc Assy.	Price
150, 150A	C163004-0104	B-30440	164-09200	**$166.75**
	C163003-0101			
	or C163001-0102	B-30195	164-09300	**$158.75**
	C163002-0101	B-30007	164-09400	**---------**
152, A152, F152, FA152	C163005-0101	---------	---------	**---------**
	or C163006-0101	C30615-1	164-08800	**$141.75**
172, F172, R172, FR172	C163004-0104	B-30440	164-09200	**$166.75**
	C163003-0101	---------	---------	**---------**
	or C163003-0102	B-30195	164-09300	**$158.75**
	or C163004-0104	---------	---------	**---------**
	C163002-0101	B-30007	164-09400	**---------**
172, F172, 172RG	C163006-0101	C30615-1	164-08800	**$141.75**
177	C163005-0101	C30615-1	164-08800	**$141.75**
177RG	C163005-0101	---------	---------	**---------**
	or C163006-0101	C30615-1	164-08800	**$141.75**
180, 185	C163004-0103	---------	---------	**---------**
	C163004-0101	C30388	164-09700	**$174.75**
	C163006-0103 Std.	C30615-3	164-9	**$199.75**
	C163006-0102 HD	C30615-2	164-08900	**$184.75**
182, F182	C163006-0101	---------	---------	**---------**
	or C163006-0103	C30615-1	164-08800	**$141.75**
R182, FR182, TR 182	C163006-0103	C30615-3	164-9	**$199.75**
U206-TU206	C163004-0102	C30398	164-09600	**$156.75**
	C163004-0101	C30388	164-09700	**$174.75**
	C163006-0103 Std.	C30615-3	164-9	**$199.75**
	C163006-0102 HD	C30615-2	164-08900	**$184.75**
210, T210, P210	C163006-0103	C30398	164-09600	**$156.75**
	C163006-0103	C30615-3	164-9	**$199.75**

CLEVELAND BRAKE DISCS

Model No.	Part No.	Price	Model No.	Part No.	Price
159-01200	06-02563	**$974.00**	159-02700	06-02796	**$1,151.00**
159-03500	05-11628	**$934.00**	159-02900	05-14401	**$986.00**
159-07100	159-07100	**$1,595.00**	164-02201	164-22A	**$182.75**
164-20900	06-01843	**$417.00**	164-22201	06-01146	**$296.95**
164-22400	06-01850	**$611.00**			

RAPCO BRAKE DISCS



RAPCO FAA-PMA approved replacement brake disc for Cleveland and McCauley brake assemblies offer premium quality in a direct replacement disc. All discs are one piece forged for optimum strength and resistance to cracking, then heat treated to a specific hardness for a long service life. They are precision CNC machined, laser etched with permanent identification markings and then nickel plated for corrosion resistance. A final machining on the wear surface assures trueness and offers an optimum absorption of kinetic energy for performance braking. When installing new brake discs always use new linings. ***For application guide, cross reference or product guide photos, please visit our web site at www.aircraftspruce.com.***

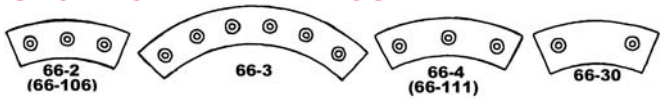
RAPCO P/N	OEM P/N	Superseded	Our P/N	Price Ea.
Cleveland Style Brake Disc				
RA164-00206	164-00206	164-2F	06-00610	**$186.75**
RA164-00300	164-00300	164-3	06-01682	**$93.75**
RA164-00400	164-00400	164-4	06-00118	**$90.99**
RA164-00500	164-00500	164-5	06-00612	**$95.75**
RA164-00700	164-00700	164-7	06-00613	**$104.75**
RA164-00806	164-00806	164-8F	06-01520	**$178.75**
RA164-00900	164-00900	164-9	06-00614	**$98.75**
RA164-01000	164-01000	164-10	06-00615	**$107.75**
RA164-01300	164-01300	164-13	06-01683	**$103.90**
RA164-01406	164-01406	164-14F	06-01685	**$173.75**
RA164-01501	164-01501	164-15A	06-00616	**$94.85**
RA164-01506	164-01506	164-15F	06-01686	**$92.75**
RA164-01600	164-01600	164-16	06-00617	**$88.75**
RA164-01700	164-01700	164-17	06-00618	**$88.75**
RA164-01900	164-01900	164-19	06-00619	**$87.75**
RA164-02000	164-02000	164-20	06-00620	**$86.75**
RA164-02201	164-02201	164-22A	06-00621	**$86.75**
RA164-02300	164-02300	164-23	10-03107	**$91.75**
RA164-02504	164-02504	164-25A	06-00622	**$89.75**
RA164-02505	164-02505	164-25C	10-03106	**$91.75**
RA164-02601	164-02601	164-26A	06-00623	**$86.75**
RA164-02706	164-02706	164-27F	06-01496	**$135.75**
RA164-02707	164-02707	164-27G	06-01687	**$137.75**
RA164-02800	164-02800	164-28	06-00624	**$114.75**
RA164-03006	164-03006	164-30F	06-00414	**$189.75**
RA164-03106	164-03106	164-31F	06-01129	**$242.95**
RA164-03206	164-03206	164-32F	06-00625	**$171.75**
RA164-03300	164-03300	164-33	06-00626	**$89.75**
RA164-03506	164-03506	164-35F	06-01688	**$175.75**
RA164-03601	164-03601	164-36A	06-00627	**$92.80**
RA164-03906	164-03906	164-39F	06-01689	**$278.95**
RA164-04000	164-04000	164-40	06-00628	**$89.75**
RA164-04300	164-04300	164-43	06-00629	**$89.95**
RA164-04406	164-04406	164-44F	06-01691	**$182.80**
RA164-04800	164-04800	164-48	06-01692	**$225.95**
RA164-05006	164-05006	164-50F	06-01693	**$235.95**
RA164-05500	164-05500	164-55	06-01694	**$255.95**
RA164-05700	164-05700	164-57	06-00630	**$193.90**
RA164-05806	164-05806	164-58F	06-01128	**$194.75**
RA164-06106	164-06106	164-61F	06-01695	**$195.75**
RA164-06306	164-06306	164-63F	06-01696	**$284.95**
RA164-06406	164-06406	164-64F	06-01697	**$284.95**
RA164-06506	164-06506	164-65F	06-01698	**$212.95**
RA164-06700	164-06700	164-67	06-01699	**$113.75**
RA164-06900	164-06900	164-69	06-00631	**$113.75**
RA164-07200	164-07200	164-72	06-01701	**$274.95**
RA164-07400	164-07400	164-74	06-01703	**$271.95**
RA164-07500	164-07500	164-75	06-00632	**$121.80**
RA164-07700	164-07700	164-77	06-01704	**$246.95**
RA164-07800	164-07800	164-78	06-00633	**$118.75**
RA164-07906	164-07906	164-79F	06-01705	**$246.95**
RA164-08100	164-08100	164-81	06-01706	**$152.75**
RA164-08200	164-08200	164-82	06-01707	**$125.75**
RA164-08300	164-08300	164-83	06-01708	**$106.75**
RA164-08406	164-08406	164-84F	06-01709	**$157.75**
RA164-08500	164-08500	164-85	06-01711	**$94.75**
RA164-09100	164-09100	164-91	06-01712	**$252.95**
RA164-09900	164-09900	164-99	06-01311	**$103.75**
RA164-20206	164-20206	164-202F	06-01713	**$239.95**
RA164-20306	164-20306	164-203F	06-01714	**$241.95**
RA164-20500	164-20500	164-205	06-01715	**$132.75**
RA164-20600	164-20600	164-206	06-01716	**$262.95**
RA164-20700	164-20700	164-207	06-01717	**$263.95**
RA164-20806	164-20806	164-208F	06-01718	**$213.95**
RA164-20900	164-20900	164-209	06-01719	**$246.95**
RA164-21000	164-21000	164-210	06-01720	**$182.80**
RA164-21100	164-21100	164-211	06-01721	**$224.95**
RA164-21200	164-21200	164-212	06-01722	**$131.75**
RA164-21600	164-21600	164-216	06-02798	**$107.75**
RA164-21900	164-21900	164-219	06-01723	**$268.95**
RA164-22000	164-22000	164-220	06-01724	**$296.95**
RA164-22201	164-22201	164-222A	06-01725	**$210.95**
RA164-22202	164-22202	164-222B	06-01566	**$305.00**
RA164-22400	164-22400	164-224	06-01726	**$392.00**
RA164-22900	164-22900	164-229	06-01727	**$297.95**
RA164-23000	164-23000	164-230	06-01728	**$425.00**
RA164-23001	164-23001	---	06-01852	**$961.00**
RA164-23002	164-23002	---	06-01853	**$1,068.00**
RA164-24200	164-24200	---	06-01595	**$96.75**
RA164-24400	164-24400	---	06-01594	**$99.85**
RAPCO P/N	**OEM P/N**	**Superseded**	**Our P/N**	**Price Ea.**
McCauley Style Brake Disc				
RA164-30195	164-30195	B-30195	06-00579	**$94.85**
RA164-30388	164-30388	C-30388	06-00584	**$95.75**
RA164-30398	164-30398	C-30398	06-00588	**$95.75**
RA164-30414	164-30414	C-30414	06-01732	**$95.75**
RA164-30440	164-30440	B-30440	06-00578	**$92.75**
RA164-30615-1	164-30615-1	C30615-1	06-00580	**$89.75**
RA164-30615-2	164-30615-2	C30615-2	06-00586	**$94.85**
RA164-30615-3	164-30615-3	C30615-3	06-00585	**$95.85**

CLEVELAND BRAKE LININGS

CLEVELAND STANDARD ORGANIC BRAKE LININGS

Order by NEW Cleveland part number.
All Linings Include Rivets

Aircraft Make & Model	Old Cleveland P/N	# Req.	New Cleveland P/N	Price
AEROTEK - Pitts S-1, S-2A	66-2	2	66-106	**$12.75**
BEECH - Musketeer	66-55	2	66-105	**$12.75**
Sierra Sport Sundowner B-19; C-23, 24R	66-55	2	66-105	**$12.75**
Debonair CD-1 thru CD-387	66-4	2	66-111	**$21.00**
Debonair B-33	66-2	2	66-106	**$12.75**
Skipper	66-71	2	66-112	**$23.25**
BELLANCA - Citabria, Champ	66-2	2	66-106	**$12.75**
Scout	66-3	1	66-106	**$12.75**
Decathalon, Scout 8GCBC	66-2	2	66-106	**$12.75**
Viking, Aries 250	66-55	2	66-105	**$12.75**
CESSNA - 150A, B, C, D, E	66-2	2	66-106	**$12.75**
	66-56	2	66-106	**$12.75**
150F, G, H, J, K, 152, F-152, FA-152	66-55	2	66-105	**$12.75**
All Cessnas using Cessna/McCauley Brakes	B-30026	2	66-109	**$20.35**
Skyhawk 172, Cardinal 177 All	66-55	2	66-105	**$12.75**
Skywagon 180	66-55	4	66-105	**$12.75**
Skylane 182 H, J, K, L, M, N	66-55	2	66-105	**$12.75**
185A, B	66-2	2	66-106	**$12.75**
185C, D, E	66-55	2	66-105	**$12.75**
185 with crosswind gear	66-2	2	66-106	**$12.75**
AGWagon	66-55	4	66-105	**$12.75**
Stationair-6 205, 205A	66-2	2	66-106	**$12.75**
Stationair-6 205, 205A (s/n 205-0481 & up)	66-55	4	66-105	**$12.75**
206, U206A, D, E & Turbo models	66-55	4	66-105	**$12.75**
207, T207	66-55	4	66-105	**$12.75**
210C	66-4	2	66-111	**$21.00**
210, P210, T210, 210N, P210N	66-55	4	66-105	**$12.75**
303, T303	66-44	4	66-44	**$18.75**
305A, B, C, D, E, F	66-55	4	66-105	**$12.75**
310, 335	66-33	6	66-33	**$16.80**
Skymaster 336	66-2	2	66-106	**$12.75**
337, T337, 337B,C,D,E, T337B,C,D,E	66-55	4	66-105	**$12.75**
All Cessnas using Cessna/McCauley Brakes	B-30026	2		
CIRRUS				
SR-20	066-14100	4	66-141	**$27.95**
GRUMMAN				
AA-1,A,B,AA-5,AA-5A,AA-5B,Tiger,TR-2	66-55	2	66-105	**$12.75**
AG-CAT	66-3	1	66-106	**$12.75**
	66-56	2	66-106	**$12.75**
G-154	66-2	2	66-106	**$12.75**
G21, G21A	66-113	2	66-113	**$51.75**
Widgeon G44, G44A, Scan Type 30	66-11700	2	66-11700	**$59.75**
MAULE - Jetasen/Rocket, Lunar/Rocket	66-55	2	66-105	**$12.75**



Aircraft Make & Model	Old Cleveland P/N	# Req.	New Cleveland P/N	Price
MOONEY - Most M20, A, B, D, E	66-4	2	66-111	**$21.00**
PIPER - Colt PA22-108	66-2	2	66-106	**$12.75**
	66-56	2	66-106	**$12.75**
Apache PA-23-150, 160	66-2	2	66-106	**$12.75**
	66-56	2	66-106	**$12.75**
Apache/Aztec PA-23-235, 250 Series	66-2	4	66-106	**$12.75**
	66-3	4	66-106	**$12.75**
Comanche PA-24-180, 250, 260	66-2	2	66-106	**$12.75**
Pawnee C PA-25	66-2	2	66-106	**$12.75**
Cherokee/Cruiser PA-28-140	66-2	2	66-106	**$12.75**
PA-28-140 s/n 28-20521 & up	66-55	2	66-105	**$12.75**
Cherokee PA-28-150	66-2	2	66-106	**$12.75**
Cherokee PA-28-160 s/n 28-1761 & up	66-55	2	66-105	**$12.75**
Cherokee Warrier PA-28-151	66-55	2	66-105	**$12.75**
Cherokee PA-28-160	66-2	2	66-106	**$12.75**
Cherokee/Warrier II PA-28-161	66-55	2	66-105	**$12.75**
Cherokee/Archer PA-28-180 to 28-1760	66-2	2	66-106	**$12.75**
Cherokee/Archer PA-28-180 28-1761 & up	66-55	2	66-105	**$12.75**
Cherokee/Pathfinder PA-28-181, PA-28-236	66-55	2	66-105	**$12.75**
PA-28R-180, PA-28-200	66-2	2	66-106	**$12.75**
PA-28R-180 s/n 28R-7130006 & up	66-55	2	66-105	**$12.75**
PA-28-200 s/n 28R-7135110 & up	66-55	2	66-105	**$12.75**
PA-28R-201T, 201, PA-28RT-201, 201T	66-55	2	66-105	**$12.75**
Early PA-28-235	66-56	2	66-105	**$12.75**
Early PA-28R-180, 200	66-56	2	66-105	**$12.75**
Twin Comanche PA-30 Serial # 30-845 and on	66-19	2	66-62	**$25.75**
Twin Comanche PA-30 Serial # 30-2 thru 30-845	66-19	2	66-65	**$28.90**
Navajo B, PA31-300, 310, Turbo Navajo	66-33	6	66-33	**$16.80**
Chieftain, PA-31-350	66-33	6	66-33	**$16.80**
Cherokee/Six-260 PA-32-260	66-55	4	66-105	**$12.75**
PA-32-300 s/n 32-40000 thru 7200029	66-55	4	66-105	**$12.75**
PA-32R-300, 32RT-300	66-55	4	66-105	**$12.75**
PA-38-112 (6" wheel)	66-71	2	66-112	**$23.25**
PA-38-112 (5" wheel)	66-56	2	66-106	**$12.75**
PA-39	66-19	1	66-62	**$25.75**
PA-39, PA-39-1 & up	66-3	1	66-106	**$12.75**
PA-44-180	66-55	4	66-105	**$12.75**
TAYLORCRAFT				
Sportsman 100	66-55	2	66-105	**$12.75**

Advise aircraft make, model and serial number to assure that correct brake lining part number is furnished Extra rivets, P/N 105-2, for all models listed in table $0.02 each

CLEVELAND BRAKE LINING KITS



Pack of 4 linings
66-105 ..... P/N 06-01309 ..... **$51.85**
66-106 ..... P/N 06-01310 ..... **$49.95**

CLEVELAND BRAKE LININGS

066-10000 ..... P/N 06-01792 ..... **$61.90**
066-15300 ..... P/N 05-13686 ..... **$23.90**
066-13100 ..... P/N 06-01796-1 ..... **$33.50**

BRAKE LINING TOOLS



Designed especially to economically reline brakes, this riveting set is a handy tool for many other jobs where rivets are used to fasten leather, canvas, plastic and metal parts. Deluxe tool is screw-down type.

Dlxe. Brake Lining Tool #404 (Threaded) .... P/N 12-20810 ..... **$27.85**
Brake Lining Tool #403 (Not Threaded) ..... P/N 824 ..... **$28.50**
Brake Lining Rivets 4-4 ..... P/N 105-2 ..... **$0.02**
Brake Lining Rivets 4-6 ..... P/N 06-02300 ..... **$0.03**

LG

RAPCO BRAKE LININGS – BRAKE PARTS

RAPCO BRAKE LININGS



RAPCO FAA-PMA approved quality replacement linings for Cleveland and McCauley* brake assemblies. Most organic linings include an exclusive built in wear indicator.

RAPCO P/N	Cleveland P/N	Our P/N	Price Ea.
	Organic Linings		
RA066-10500	066-10500	06-16955	**$6.75**
RA066-10600	066-10600	06-16956	**$6.75**
RA066-10800	066-10800	06-16959	**$8.25**
RA066-11000	066-11000	06-01734	**$13.50**
RA066-11100	066-11100	06-16958	**$6.50**
RA066-11200	066-11200	RA66-112	**$8.25**
RA066-13100	066-13100	06-02833	**$21.75**
RA066-14100	066-14100	RA66-141	**$12.75**
RA066-14800	066-14800	06-01738	**$8.90**
RA066-30026	066-30026 *	06-16987	**$7.95**
	Metallic Linings		
RA066-02200	066-02200	06-16922	**$11.50**
RA066-03300	066-03300	06-16933	**$12.50**
RA066-04400	066-04400	06-16944	**$11.99**
RA066-06200	066-06200	06-16962	**$12.50**
RA066-06400	066-06400	06-01563	**$17.50**
RA066-06500	066-06500	06-16965	**$13.65**
RA066-06600	0066-06600	06-16966	**$11.50**
RA066-06700	066-06700	06-01562	**$16.55**
RA066-06800	066-06800	06-16968	**$16.80**
RA066-07300	066-07300	06-01558	**$28.99**
RA066-09000	066-09000	06-01556	**$26.50**
RA066-09100	066-09100	06-01559	**$112.75**
RA066-09200	066-09200	06-01560	**$205.95**
RA066-09700	066-09700	06-01561	**$12.60**
RA066-10000	066-10000	06-16955	**$6.75**
RA066-15300	066-15300	06-01557	**$23.50**

BRAKE LINING KITS

RAPCO FAA-PMA approved for Cleveland and McCauley* brake assemblies. The kits come with linings and rivets. The -4K, -8K, -12K refers to the number of linings in a kit.

RAPCO P/N	Description	Our P/N	Price/Kit
RA066-10500-4K	Lining Kit	06-00643	**$26.99**
RA066-10500-8K	Lining Kit	06-00650	**$52.75**
RA066-10600-4K	Lining Kit	06-00651	**$26.50**
RA066-10600-8K	Lining Kit	06-00652	**$52.75**
RA066-10800-8K	Lining Kit	06-00681	**$65.90**
RA066-10800-12K	Lining Kit	06-01739	**$97.75**
RA066-11100-4K	Lining Kit	06-00683	**$26.50**
RA066-11200-4K	Lining Kit	06-01740	**$34.50**
RA066-30026-4K	Lining Kit	06-00653	**$31.50**
RA066-30026-8K	Lining Kit *	06-00682	**$65.90**

RAPCO BRAKE RIVET TOOL KIT



The RAPCO rivet tool kit offers quality tooling for professional results with brass or steel rivets. The kit comes with punch to remove old rivets and screw style set and anvil to properly install new rivets.

RAPCO P/N	Description	Our P/N	Price
RA825	Rivet Tool Kit	10-02065	**$37.75**
RA825AP	Anvil & Punch	10-02066	**$7.50**

RAPCO BRAKE RIVETS



FAA-PMA approved tubular rivets for the installation of aircraft brake linings. Use with RA825 Rivet Tool Kit.

RAPCO P/N	Head, Shank	Our P/N	Price Ea.
RA105-00200	5/16, 5/32	06-00351	**$0.15**
RA105-06700	5/16, 3/16	06-02834	**$0.39**

BRAKE MOUNTING PINS



FAA-PMA approved quality stainless steel mounting pins for metallic brake linings.

RAPCO P/N	Head, Shank	Our P/N	Price Ea.
RA177-00300	5/16, 5/32	06-01215	**$3.50**
RA177-00400	5/16, 3/16	06-01499	**$3.70**
RA177-01600	3/8, 3/16	06-01501	**$3.35**

BRAKE PUCK - MAIN ROTOR BRAKE



FAA-PMA approved quality replacement main rotor brake puck for Bell 206A, 206B, 206L, 206L-1, 206L-3, 206L-4.

RAPCO P/N	OEM P/N	Our P/N	Price
RA5009212	5009212	06-01306	**$155.75**

GOODYEAR BRAKE PARTS

Most replacement parts are available for aircraft still equipped with Goodyear wheels and brakes. We provide prompt shipment on replacement parts such as brake linings, brake discs, clips, etc. Request quotation on any unlisted Goodyear part numbers.

Brake 5.00 x 5, Cessna 150, Assy. No. 9532302
9524161-1 ..... Piston Lining ..... **$62.50 ea.**

Brake 6.00 x 6, Cessna 120, 140, Aeronca 7AC, 11AC, Swift, Lusc., Assy. No. 9520517
9523482..... Disc Clips..... **$46.50 ea.**

Brake 6.00 x 6, Cessna 120, 140, Swift, Luscombe, Sedan, Aeronca 11AC, Assy. No. 9520298
9520435..... Disc Clips, 4 required ..... **$79.65 ea.**

Brake 6.00 x 6, Cessna 172, 175, 180, 182, 210, Lake, Assy. No. 9532181
9511271-2 ..... Anvil Lining ..... **$339.00 ea.**
9511269-2 ..... Piston Lining ..... **$206.95 ea.**

Brake 6.00 x 6, Cessna 170, 172, 175, 180, 182, 210 Assy. No. 9530839 Aeronca 7AC, 11AC, 15AC, Stinson 150, 165, Assy No. 951239 & 9532181
9511271-2 ..... Anvil Lining ..... **$339.00 ea.**
9511269-2 ..... Piston Lining ..... **$206.95 ea.**
9523482..... Disc Clip ..... **$46.50 ea.**

Brake 6.00 x 6, Aeronca 7AC, 11AC, Funk, Schweizer Glider, Luscombe 8,8A, Assy No. 9530131, Assy. No. 511254
9520435..... Disc Clips, 4 required ..... **$79.65 ea.**

Brake 6.00 x 6, Ercoupe Forney, Assy. No. 9520285
9523482..... Disc Clip ..... **$46.50 ea.**

Brake 6.50 x 8, Beech T34, 35, Camair, Assy. No. 511731
9510714-2 ..... Anvil Lining ..... **$98.75 ea.**
9510713-1 ..... Piston Lining ..... **$62.50 ea.**
9523937..... Disc Clip ..... **$84.75ea.**

Brake 6.50 x 10, Cessna 190, 195, 310, 320 Assy. No. 951731
5009853..... Piston Lining ..... **$108.75 ea.**

BRAKE TORQUE PLATE FOR AERONCA



Brake Torque Plate. 7A, 7BCM, 7CCM, 7EC, 7FC, 7GC, 7HC, 11A 11BC. Code 4.
P/N 05-08727..... **$20.00**

SHIMMY DAMPERS

LORD SHIMMY DAMPERS FOR PIPERS



PN	Lord #	Installation Eligibility	Price
05-12930	SE-1508-2 Replaces Piper 456-015 Supersedes SE-1508-1	PIPER PA-28 PA-28-151, PA-28-161, PA-28-235, PA-32-301, PA-32-301FT, PA-32-301XTC	**$913.00**

PIPER SHIMMY DAMPER SERVICING KIT

Finally, a shimmy damper servicing kit. One of the most neglected components on Piper aircraft is the shimmy dampener. The shimmy damper aids nose wheel steering by reducing the shimmy of the nose wheel during takeoff and landing, and during high-speed taxiing. Even minor shimmying can lead to serious damage to the nose gear and engine mount and affect the airworthiness of the aircraft. The shimmy damper is a sealed unit that, until now, could not be serviced and required costly replacement. The STC and accompanying servicing kit allows the MAECO shimmy damper to be modified and serviced, restoring the shimmy damper to like-new condition and enabling it to perform as originally designed Important: Enter Piper Aircraft Model, Serial number, and "N" number at time of order. P/N 06-00846..... **$175.95**

FOR COMPLETE INSTALLATION ELIGIBILITY LIST SEE www.aircraftspruce.com

LORD SHIMMY DAMPER FOR BEECH AIRCRAFT



This nose gear shimmy damper from LORD Corporation is FAA approved for many models of Beech Aircraft. The patented technology provides consistent damping without maintenance. Instead of using fluids to resist motion, the shimmy damper features a unique rubber formulation with a high-tech lubricant to absorb nose wheel vibration. Length: 5-1/2". Long Consistent damping - From -30 degrees to +150 degrees F. FAA Approved. P/N 05-03421 ..... **$869.00**

Beech Aircraft Eligibility List			
A36TC	B36TC	Bonanza 36	A36
G36	Bonanza 35	A35	B35
C35	D35	E35	F35
G35	H35	J35	K35
M35	N35	P35	S35
V35	V35-TC	V35A	V35A-TC
V35B	V35B-TC	E33	E33A
E33C	F33	F33A	G33A
Barron 55	A55	B55	C55
D55	E55	56TC	A56TC
58 Barron	58TC	58P	

LORD SHIMMY DAMPERS FOR CESSNAS



This high performance shimmy damper is designed to last at least 10 yrs without maintenance and contains no hydraulic fluid, so it cannot leak. Priced at about half the cost of equivalent Cessna factory dampers. 5-yr warranty. All dampers are STC'd and PMA approved.

Features: No Hydraulic Fluid: No periodic leaks or loss of damping. No servicing required. Reduced wear of nose gear linkages. Lower operating costs. **Consistent damping from -30° to 150°F:** No loss of damping at temperature extremes. Reduced wear of nose gear linkages. Lower operating costs. **No performance degradation over time and use:** Reduced wear of nose gear linkages. Lower operating costs. **Large diameter shaft:** Increased durability. Lower operating costs. **Simple Design:**High reliability. Lower operating costs. **Form, fit and function compatible:** Simplicity of use (one-for-one replacement). Compatibility with existing installation.

Note: Installation hardware not included.

PN	Lord #	Installation Eligibility	Price
05-00443	SE-1051-2 Approved Replacement For Cessna # 0442512-1, 0542119-1	150G, H, J, K , L , M F150G, H, J, K, L, M, A150K, L, M FA150K, L FFRA150L, FRA150M 152 (ALL) 1978 thru 1985 (no letter designators) A152 (ALL) 1978 thru 1985 (no letter designators) FA152 (ALL) 1978 thru 1984 (no letter designators) 172, 172 A, B, C, D, E, F, G, H, I, K, L, M, N, P, Q, R, S F172D, E, F, G, H, K, L, M, N, P, P172D, FR172E, F, G, H, J(REIMS ROCKET) R172K, FR172K 175, 175A, B, C 182B, C, D Note: The Lord Shimmy Damper PN 05-00443 will not work on Cessna 172 Years: 1956-1959	**$1,006.00**
05-00444	SE1051-3 Approved Replacement for Cessna # 0442512-2, 0542119-2	150A - F NOTE: Not for retractable gears.	**$1,279.00**
05-02610	SE-1068-5 Approved Replacement for Cessna 0743624-1	182K-N 182P-T T282T	**$1,038.00**
05-00446	SE-1069-3 Approved Replacement for Cessna # 0743624-2	206H, P206B-E, T206H, TU206B-G, U206B-G 207, 207A, T207, T207A, 210G-H, 210J-N, 210R, P210N, P210R, T210K-N	**$956.00**
05-03382	SE-1070-7 Approved Replacement for Cessna # 2643090-3	208, 208A, 208B	**$2,875.00**
05-04185	Approved Replacement for Cessna 0842410-2 for selected model, 0001-0710 for 182 models.	310, 310B, 310C, 310D, 310F, 310G, 310H, 3101, 310J, 310K, 310L, 310N, 310P, T310P, 3100, '1'3100, 310R, T310R,320, 320A, 320B, 320C, 320D, 320E, 320F, 340, 340A, 401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, 425, 404, 406, 441	**$2,414.00**

SEAL KITS FOR CESSNA SHIMMY DAMPENERS



Shimmy dampener seal kits contain the industry standard o-rings required to reseal the Cessna shimmy dampener.

Visit our website for application information.

Economy Kit ..... P/N 06-01679..... **$2.85**

McFarlane Kit ..... P/N 05-13150..... **$7.65**

LG

HUB CAPS – BLACK MAX – GOODRICH

METAL HUB CAPS



These FAA approved metal hub caps are designed for older Pipers using the 800x4 Goodrich (Hayes) brakes such as the J-3 and PA-18. A larger cap for 600 x 6 conversions are also available below. The caps are available with "CUB" stamped in raised letters or plain.

..... Cub 800x4 Goodrich hub cap
P/N 06-00010 ..... **$35.50 ea.**
(Identical in size and appearance to Cleveland #157-9)
Cub 600x6 Cleveland hub cap..... P/N 06-00020.....**$32.60 ea.**
Plain 800x4 Goodrich hub cap..... P/N 06-00030.....**$28.50 ea.**
Plain 600x6 Cleveland hub cap ..... P/N 06-00040.....**$32.50 ea.**

WHEEL COVERS



For Gerdes, McCauley, Cleveland, Hayes, Goodyear, Rosenhan and Matco wheels as listed. Furnished with mounting screws and lock washers.

P/N	Wheel Size	Application	Price ea.
157-8 ***Pictured***	5.00-5*	Cleveland, McCauley, Gerdes	**$123.95**
157-9	6.00-6**	Cleveland, McCauley, Gerdes	**$90.75**
06-03705	6.00-6	All Goodyear Wheels	**$46.75**
06-03900	5" Dia.	Rosenhan Matco Wheels	**$7.95**

GROVE HUB CAPS



GROVE HUB CAP 5"

For Grove, Cleveland and Gerdes wheels. Includes mounting screws. 011-012
P/N 06-01363.....**$20.90**



GROVE HUB CAP 6"

For Grove, Cleveland and Gerdes 600x6 wheels. Includes mounting screws. 011-013
P/N 06-00845.....**$24.85**

ECONOMY WHEEL COVER



For 600-6 Cleveland wheels
P/N 06-03710....**$16.95 ea.**
For 500-5 Cleveland wheels
P/N 06-00073....**$20.75 ea.**
Furnished with screws for installation

HUBBA HUBBA CAP



The Hubba Hubba Cap fits most 6 inch aircraft wheels. The Hubba Hubba Cap has an access door with a 1/4 turn fastener for EASY access to the air valve. How many times have your tires been low on pressure but you did not want to remove the hub cap to put air in your tires? The Hubba Hubba Caps will let you keep your wheels and bearings free of dirt and grime.
P/N 06-02572..... **$276.95**

BX-1000 BLACK MAX HYDRAULIC BRAKE SYSTEM



(Everything you need in one package)
This system has a full floating rotor which compensates for alignment giving you a smooth feeling brake action. The master cylinder has a built in reservoir which allows you to add oil and bleed from the top down. Maximum holding pressure to allow for a good run up. Uses standard brake fluid. Gross rating 1000 lbs.
Features: • Master Cylinder w/reservoir and brake handle • 2 6" polished aluminum wheels • 2 Hubs w/ bearings • 2 Tires • 2 Rotors • 2 Calipers 5/8" axle with keyway Brake Pads • 14' of Hydraulic Brake Line •Fittings and Hardware.

BLACK MAX AXLE ADAPTERS

Description	Part No.	Price
Challenger Metal Gear Leg	06-00973	**$69.75**
Adapter for Challenger w/ Fiberglass Left Gearleg	06-00974	**$68.75**
Adapter for Challenger w/ Fiberglass Right Gearleg	06-00975	**$68.75**
Hawk Left Axle Assembly	06-00976	**$68.75**
Titan Gear LED Adapter	06-00994	**$68.75**
Axle 3/4" x 8 w/Woodruff Key	06-01005	**$39.95**



Part#	Model	Rim Type	Rims Included	Rim Size	Gross Weight	Includes tires	Axle Size	PN	Price
BX44708	BX1000	WELDED	YES	4"W X 6" D	1000LBS	YES	5/8" X 8"	06-00707	**$464.00**
BX44708-4	BX1000	WELDED	YES	4"W X 6" D	1000LBS	YES	5/8" X 8"	06-00963	**$464.00**
BX44785	BX1320	SPLIT RIM	YES	6"W X 6" D	1320LBS	NO	5/8" X 8"	06-00967	**$624.00**
BX44785-4	BX1320	SPLIT RIM	YES	4"W X 6" D	1320LBS	NO	5/8" X 8"	06-00968	**$524.00**
BX44863	BX1500	SPLIT RIM	YES	6"W X 6" D	1500LBS	NO	3/4" X 8"	06-00969	**$592.00**
BX44863-4	BX1500	SPLIT RIM	YES	4"W X 6" D	1500LBS	NO	3/4" X 8"	06-00970	**$603.00**

BLACK MAX REPLACEMENT PARTS

Mfg. P/N	Description	Part No.	Price
44766	Caliper Assembly 5/8	06-00996	**$148.65**
44766-3/4	Caliper Assembly 3/4	06-00997	**$156.75**
44764	Master Cylinder Assembly	06-00995	**$115.00**
44747	Brake Handle	06-01017	**$19.95**
44771	Brake Handle Grip	06-01037	**$3.95**
-	Replacement Valve System	06-01013	**$1.95**
44743	Black Max Nylon Brake Line 1/8" O.D.	06-01006	**$0.62**
44848	Replacement O-Seal Kit (For Split Rims)	06-01012	**$12.00**

See www.aircraftspruce.com for more Brake Max Parts

GOODRICH 800X4 WHEEL PARTS

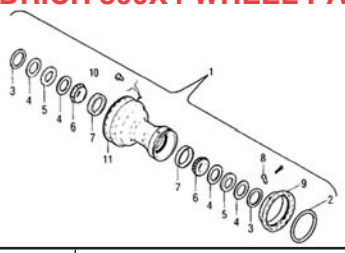
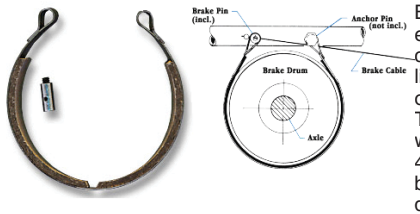


Figure No.	PN	Description	Price
5	B227-52	Felt, Grease Retaining	**$1.50**
6	08125	Cone, Bearing	**$57.90**
7	08231	Cup, Bearing	**$31.65**
9	B11-5	Casting, Side	**$50.95**
10	AN441-6-6P	Rivet, Brake Drum	**$0.64**
11	B13-4	Drum, Brake (I.D. Must be turned after installation.)	**$225.95**

4-1/2 INCH BRAKE BANDS WITH PINS



Band Brakes are simple, effective and economical for a variety of small, light-duty small vehicles, or as parking brakes. They were designed to work with either 4" or 4-1/2" diameter drums, but may work well with drums ranging in size from 3-7/8" through 4-5/8" O.D. • 2 Piece Bonded Lining • Comes with 1 band and 1 pin. • Riveted End/Mounting Brackets • Steel Brake Pin with Cable Hole Included • Band Brake for 4.5" drum - Packaged PN 2555
P/N 06-00662 ..... **$18.75**

GOODRICH WHEEL & BRAKE O-RINGS

Manufacturer	Dimensions (WxLxH)	Part No.	Price
68-448	0.19 in. X 4.07 in. X 0.19 in.	06-02273	**$44.70**
68-559	3.88 in. X 3.88 in. X 0.07 in.	06-02274	**$32.60**
68-1413	7.63 in. X 10 in. X 2 in.	06-02807	**$207.95**
68-1318	8 in. X 10.188 in. X 0.25 in.	06-02806	**$224.95**
68-216	8.25 in. X 10.25 in. X 0.11 in.	06-02567	**$64.75**

DIAPHRAGM FOR BRAKE CYLINDER

Master cylinder diaphragm for Piper J-3/PA-11
P/N 2844.....**$36.85**



GOODRICH BRAKE ASSEMBLY PARTS FOR ALL PIPERS WITH 8.00 X 4 WHEELS



Brake Block (750-033).....P/N 06-00013.....**$70.75**
Spring (750-029).....P/N 06-00430.....**$7.70**
Shield (750-093).....P/N 06-01042.....**$28.50**

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

AIRCRAFT TIRE APPLICATION CHART

Tires/Tubes Certified Aircraft Application Chart - Tires are low speed unless designated. Tires are tube-type unless otherwise indicated. Consult aircraft manual for individual tire pressure. ***– IMPORTANT: READ THIS LEGEND FIRST –***

Code: TL = Tubeless; SC = Smooth Contour; DT = Deflector Type; DDT = Dual Deflector Type

APPLICATION CHARTS - The application information presented within this manual is based on the most current information available and is intended for use as a ***GENERAL REFERENCE ONLY.*** Any inquiries regarding specific model aircraft should be directed to the applicable airframe manufacturer. Your requirements may vary depending on the actual configuration of your aircraft. All Goodyear aircraft tires are manufactured in accordance with TSO-C62, MIL-T-5041 or AIR8505A and/or applicable airframe manufacturer specifications. Additionally, all tire sizes included in this manual may not necessarily be available from Goodyear. Contact your Goodyear Representative for specific tire information and availability. ***Failure to make this verification and to install unapproved tires on an aircraft may result in tire failure causing property damage, serious injury, or loss of life.***

**** Please visit our website for the "Select by Aircraft" shopping tool.***

CESSNA

Model	Name	Main Tire		Auxiliary Tire	
		Tire Size	Ply	Tire Size	Ply
120, 140	—	6.00-6	4	5.00-5	4
150, 152	Commuter,Aerobat	6.00-6	4	5.00-5	4
172	Skyhawk	6.00-6	4	5.00-5	4
R172	Hawk XP	6.00-6	4	5.00-5	4
172 Q	Cutlass	6.00-6	6	5.00-5	4
172 RG	Cutlass RG	15x6.00-6	6	5.00-5	4
175	Skylark	6.00-6	4	5.00-5	4
177	Cardinal	6.00-6	6	5.00-5	4
177 RG	Cardinal RG	15x6.00-6	6	5.00-5	4
180	Skywagon	6.00-6	6	8.00"SC	6
182, T182	Skylane	6.00-6	6	5.00-5	6
182RG,T182RG	Skylane	15x6.00-6		5.00-5	4
185	Skywagon	6.00-6	6	8.00 SC	
188	AG Wagon	22x8.00-8		10.00 SC	6
188	AG Wagon(optional)	8.50-10	6	10.00"SC	
205	—	6.00-6	6	5.00-5	6
206	Station Air	6.00-6	6	5.00-5	6
206, 207	Optional	8.00-6	6	6.00-6	4
207	Skywagon	6.00-6	8	6.00-6	8
208 (FLO)	Caravan	8.50-10	8	22x8.00-8	
208 (STA)	Caravan	6.50-10	8	6.50-8	8
210	Centurion	6.00-6	8	5.00-5	6
T210, P210	Turbo, Centurion	6.00-6	8	5.00-5	10
T303	Crusader	6.00-6	8	6.00-6	6
T303	Optional	6.50-8	8	6.00-6	6
310, T310	—	6.50-10	6	6.00-6	4
320, 340	—	6.50-10	6	6.00-6	4
336	—	6.00-6	6	15x6.00-6	
337	Super Skymaster	18x5.5	8	15x6.00-6	
401, 402	—	6.50-10	8	6.00-6	6
404	Titan	22x7.75-10	10TL	6.00-6	6
411	—	6.50-10	8	6.00-6	6
414	Chancellor	6.50-10	8	6.00-6	6
421	Golden Eagle	6.50-10	8	6.00-6	6
425	Conquest I	6.50-10	10	6.00-6	6

BELLANCA

Model	Name	Main Tire		Auxiliary Tire	
		Tire Size	Ply	Tire Size	Ply
260A	Bellanca	6.00-6	6	6.00-6	4
17-30A	Viking	6.00-6	6	15x6.00-6	6/8
17-31A	Super Viking	6.00-6	6	15x6.00-6	6/8
17-31ATC	Turbo Viking	6.00-6	6	15x6.00-6	6/8
7GCAA	Citabria	6.00-6	4	5.00-5	4
7KCAB	Citabria	7.00-6	4	5.00-5	4
8KCAB	Decathlon	8.00-6	4	5.00-5	4
8GCBC	Scout	8.50-6	4/6	5.00-5	4

MOONEY

Model	Name	Main Tire		Auxiliary Tire	
		Tire Size	Ply	Tire Size	Ply
MO-20	Ranger	6.00-6	6	5.00-5	4/6
MO-21C	Super	6.00-6	6	5.00-5	4/6
MO-22	Mustang	6.00-6	6	15x6.00-6	6
MO-20E	Chapparal	6.00-6	6	5.00-5	4
MO-20F	Executive	6.00-6	6	5.00-5	6
MO-20J	201	6.00-6	6	5.00-5	6
MO-20K	Turbo 231	6.00-6	6	5.00-5	6
M-20K	TSE	6.00-6	6	5.00-5	4
M-20M	Bravo	6.00-6	6	5.00-5	6
M-20S	Eagle	6.00-6	6	5.00-5	6
M-20R	Ovation	6.00-6	6	5.00-5	6

COMMANDER AIRCRAFT

Model	Name	Main Tire		Auxiliary Tire	
		Tire Size	Ply	Tire Size	Ply
112	Commander	6.00-6	6	5.00-5	4
112B	—	7.00-6	6	5.00-5	4
112TC, TCA	—	7.00-6	6	5.00-5	6
114	—	7.00-6	6	5.00-5	6
114A, B	—	6.00-6	6	5.00-5	6

BEECH

Model	Name	Main Tire		Auxiliary Tire	
		Tire Size	Ply	Tire Size	Ply
C-17R	Staggerwing	7.50-10	6	10.00SC	—
BE 18	Twin Beech	11.00-12	8 TL	14.50SC	8TL
BE 18H	Twin Beech	8.50-10	8 TL	8.50-10	8TL
BE 19	Musketeer Sport	6.00-6	4	6.00-6	4
BE 23	Musketeer	6.00-6	4	6.00-6	4
BE23C,BE-A24	Sundowner	6.00-6	4	6.00-6	4
BE 24-R	Super Sierra	6.00-6	4	5.00-5	4
BE 33A	Bonanza	7.00-6	6	5.00-5	4
BE 35	Bonanza	7.00-6	6	5.00-5	4
BE 36	Bonanza	7.00-6	6	5.00-5	4
BE 50	Twin Bonanza	8.50-10	6	6.50-10	4
BE B55	Baron	6.50-8	8	5.00-5	6
BE C55	Baron	6.50-8	8	5.00-5	6
BE E55	Baron	6.50-8	8	5.00-5	6
BE 58	Baron	6.50-8	8	5.00-5	4
BE 60	Duke	19.5x6.75-8	10TL	15x6.00-6	4
BE 65	Queen Air	8.50x10	8TL	6.50-10	6TL
BE-80	Queen Air	8.50-10	8TL	6.50-10	6TL
BE-C90B	King Air	8.50-10	8TL	6.50-10	6TL
BE-B200	Super King Air	18x5.5	10TL	22x6.75-10	8TL
BE-200T	Super King Air	22x6.75-10	8TL	22x6.75-10	8TL
BE-99	—	18x5.5	8 TL	6.50-10	6TL
BE-300/350	Super King Air	22x6.75-10	8TL	19.5x6.75-8	10TL
BE-2000	Starship 1	H19.5x6.75-10	8 TL	19x6.75-8	10TL

PIPER

Model	Name	Main Tire		Auxiliary Tire	
		Tire Size	Ply	Tire Size	Ply
J3	Cub	8.00-4	4	8.00"SC	Solid
PA18-135	Super Cub	6.00-6	4	8.00"SC	Solid
PA18-150	Super Cub	6.00-6	4	6x2.00	Solid
PA22	Tri Pacer	6.00-6	6	6.00-6	6
PA23,160-235	Apache	7.00-6	6	6.00-6	4
PA23-250	Aztec	7.00-6	8	6.00-6	4
PA24-180	Commanche	6.00-6	4	6.00-6	4
PA24,250,260,400	Commanche	6.00-6	6	6.00-6	4/6
PA25-150	Pawnee	7.00-6	4	8x3.00-4	4
PA25,236,260	Pawnee	8.00-6	4	8x3.00-4	4
PA28R-201	Arrow	6.00-6	6	5.00-5	4
PA28-140	Cherokee	6.00-6	4	6.00-6	4
PA28-150	Cherokee	6.00-6	4	6.00-6	4
PA28-151,161	Warrior	6.00-6	4	5.00-5	4
PA28-160	Cherokee	6.00-6	4	6.00-6	4
PA28-180	Cherokee	6.00-6	4	6.00-6	4
PA28-181	Archer	6.00-6	4	5.00-5	4
PA28-235	Cherokee	6.00-6	4	6.00-6	4
PA30	Twin Commanche	6.00-6	4	6.00-6	6
PA31	Navajo	6.50-10	8	6.00-	6
PA31	Chieftain	6.50-10	8	6.00-6	6
PA31T	Navajo	6.50-10	10	6.00-6	6
PA31P	Pressurized Navajo	6.50-10	8	6.00-6	8
PA31T-500	Cheyenne 1A	6.50-10	10	6.00-6	6
PA32	6-300	6.00-6	6	6.00-6	6
PA32RT300	Lance	6.00-6	8	6.00-6	4
PA31P-350	Mojave	6.50-10	8	17.5x6.25-6	10
PA34-220	Seneca	6.00-6	8	6.00-6	6
PA36	Brave	8.50-10	6	10x3.5-4	6
PA38	Tomahawk	6.00-6	6	5.00-5	6
PA42	Cheyenne IIIA	6.50-10	12 TL	17.5x6.25-6	10
PA44-180	Seminole	6.00-6	6	6.00-6	6
600/601B (PA60)	Aerostar	6.50-8	8TL	6.00-6	6
601P(PA60-601P)	Aerostar	6.50-8	8 TL	6.00-6	6
602P(PA60-602P)	Aerostar	6.50-8	8 TL	6.00-6	6
700P(PA60-700P)	Aerostar	6.50-8	8 TL	6.00-6	6
PA46-350P	Malibu Mirage	6.00-6	8	5.00-5	6
PA34-270T	Seneca V	6.00-6	8	6.00-6	8
PA44-180	Seminole	6.00-6	8	5.00-5	6
PA32R-301	Saratoga II HP	6.00-6	8	5.00-5	6
PA32R-301T	Saratoga II TC	6.00-6	8	5.00-5	6
PA28-181	Archer III	6.00-6	4/6	6.00-6	4
PA28-161	Warrior III	6.00-6	4	5.00-5	4

MAULE

Model	Name	Main Tire		Auxiliary Tire	
		Tire Size	Ply	Tire Size	Ply
MX-7-160	—	7.00-6	4/6	280/250-4	4
MXT-7-160	—	7.00-6	4/6	280/250-4	4
M-8-235	—	7.00-6	4/6	280/250-4	4
MX7-420	—	7.00-6	4/6	280/250-4	4

GOODYEAR TIRES & TUBES



Flight Custom III™

Goodyear Flight Custom III™ Tires are the ONLY General Aviation tires with Kevlar®:

- Antioxidant formulation to help reduce cracking.
- Deeper Tread Depth.
- Wide Aquachannels®.
- Kevlar® belt package.
- Premium Wingstay® formulation.
- Dual polymer tread compound.
- Get up to 20% more landings.
- Superior wet traction, enhanced treadwear.
- The Goodyear® Flight Custom III® offers up to 20% more landings to removal than its predecessor. Dupont tm and Kevlar (circleR) are trademarks or registered trademarks or E.I. du Pont de Nemours and Company. Results may vary based on proper maintenance, runway and operating conditions.



Flight Special II™

A popular replacement tire for light aircraft, the Flight Special is an unsurpassed combination of value and performance. Designed for long treadlife, this tire is built to last. Every strand of nylon cord in the casing has been triple tempered with time, tension and temperature to provide the ultimate in tire construction, uniformity and strength.

FEATURES:

- Wide rib tread design and large footprint
- Enhanced tread compound for uniform wear and extended service life
- Triple-tempered nylon casing cord.

BENEFITS:

- Enhanced traction
- Uniform wear and extended

SERVICE LIFE:

- Excellent Treadwear.



TIRE TALC

Eases installation of tubes in tires. Size: 13oz. DISCOUNT: LESS 15% ON 12

P/N 17-250..... **$9.50**



SILICONE BASE TUBE TALC

16 oz. Shaker bottle of Silicone Base Tube Talc Adds Extra Life and Prevents Pinching & Chafing on rubber tubes.

P/N 05-11180..... **$20.50**

A "B" at the end of a description means BENT valve stem. An "S" at the end of a description means STRAIGHT valve stem.

(1) For use in both 5.00-5 and G380x150-5 (15x6.00-5).
(2) For use in both 6.00-6 and 15x6.00-6 tires.
(3) For use in both 7.00-6 and 8.00-6 tires.
(4) For use in 6.50-8, 19.5x6.75-8 & 22x8.00-8 tires.
(5) Discontinued, call for Special Pricing.

-Natural rubber aircraft tubes comply with the requirements of Goodyear QAI 2525, which the U.S. Military has accepted in lieu of MIL-I-5014.

-Flight Mate (Butyl) tubes comply with the requirements of SAE document AS 50141.

GOODYEAR TIRES – TUBE TYPE

Tire Size	PR	Description	Speed (MPH)	Avg. Weight (lbs.)	Part No.	Price ea.
5.00-4	6	RIB	120	4	06-04700	**$327.00**
15X6.00-5 / G380-150-5	6	RIB	120	7	06-01078	**$166.75**
5.00-5	4	Flight Custom III	160	7	06-04900-3	**$172.75**
5.00-5	4	Flight Special II	120	5	06-07110	**$109.75**
5.00-5	6	Flight Custom III	160	7	06-05100-3	**$167.75**
5.00-5	6	Flight Special II	120	5	06-07100	**$99.85**
5.00-5	10	Flight Special II	120	6	06-00208	**$136.85**
15X6.00-6	6	Flight Custom III	160	9	06-05500-3	**$184.75**
15x6.00-6	6	Flight Special II	160	8	06-07340	**$144.75**
6.00-6	4	Flight Custom III	160	11	06-05200-3	**$207.95**
6.00-6	4	Flight Special II	120	9	06-07200	**$126.80**
6.00-6	6	Flight Custom III	160	11	06-05400-3	**$212.95**
6.00-6	6	Flight Special II	120	9	06-07300	**$133.80**
6.00-6	8	Flight Custom III	160	11	06-05410-3	**$218.95**
6.00-6	8	Flight Special II	120	9	06-07310	**$125.99**
6.50-8	6	Flight Custom III	160	14	06-05600-3	**$270.95**
6.50-8	8	Flight Custom III	160	14	06-05800-3	**$299.95**
6.50-8	8	Flight Special II	120	12	06-07320	**$213.95**
6.50-10	8	Flight Custom III	160	16	06-06100-3	**$335.00**
6.50-10	8	Flight Special II	120	14	06-00209	**$253.95**
6.50-10	10	Flight Custom III	160	17	06-06110-3	**$391.00**
7.00-6	6	Flight Custom III	160	13	06-06200-3	**$255.95**
7.00-6	6	Flight Special II	120	10	06-07330	**$198.00**
7.00-6	8	Flight Custom III	160	13	06-06210-3	**$274.95**
8.00-4	4	RIB	120	9	06-06600	**$312.00**
8.00-6	6	Flight Special II	120	13	06-01145	**$199.85**
8.00-6	8	Flight Special II	120	12	06-00212	**$246.95**
8.50-10	8	Flight Custom III	160	24	06-06900-3	**$396.00**
6.00-6.5 / 420X150	4	RIB	120	6	06-01088	**$329.00**
18X5.5	8	Flight Special II	120	11	06-00203	**$230.95**
22X8.00-8	6	Flight Special II	120	14	06-00205	**$242.95**

GOODYEAR TIRES – TUBELESS

Tire Size	PR	Description	Speed (MPH)	Avg. Weight (lbs.)	Part No.	Price ea.
5.00-4	14	RIB	120	7	06-01057	**$400.00**
6.00-6	8	Flight Custom III	160	12	06-01058	**$278.95**
17.5X6.25-6	10	Flight Special II	160	11	06-00202	**$323.00**
6.50-8	8	Flight Custom III	160	15	06-01060	**$297.95**
6.50-10	6	Flight Custom III	160	17	06-05900-3	**$299.95**
6.50-10	12	Flight Special II	160	21	06-00210	**$369.00**
7.00-6	10	Flight Custom II	120	12	06-01061	**$310.00**
7.00-8	10	RIB, All Weather	120	15	06-01062	**$425.00**
7.50-14	12	RIB	160	36	06-01063	**$813.00**
8.50-10	8	Flight Custom III	160	27	06-01064	**$439.00**
8.50-10	10	Flight Custom III	160	28	06-01065	**$516.00**
8.90-12.50	6	RIB	160	29	06-01066	**$731.00**
8.90-12.50	6	RIB, All Weather	160	24	06-01067	**$674.00**
9.00-6	10	RIB	120	22	06-01068	**$697.00**
9.25-12 / 28X9.0-12	12	RIB	160	38	06-01069	**$650.00**
11.00-12	10	RIB	160	45	06-01070	**$775.00**
13X5.0-5	8	Smooth	120	7	06-01071	**$404.00**
14.5X5.5-6	14	RIB	120	10	06-01072	**$730.00**
15X6.0-6	10	Flight Custom II	160	9	06-01073	**$336.00**
22X6.75-10	8	Flight Custom III	160	20	06-01074	**$396.00**
26X10.5-6	6	Smooth	120	23	06-01075	**$735.00**
27	10	RIB	120	-	06-03040	**$799.00**
29X11.00-10	10	RIB	120	36	06-00206	**$674.00**
15.00-12	14	RIB	160	59	06-01076	**$1,434.00**
15.00-16	16	RIB	120	95	06-01077	**$2,150.00**

GOODYEAR TUBES

Tube Size	Description	Avg. Weight (lbs.)	Part No.	Price ea.
5.00-4 Flight Mate	Butyl Tube TR 67, B	1	06-04800	**$125.75**
5.00-5 Flight Mate	Butyl Tube TR 67A (1), B	1	06-05000	**$96.90**
6.50-10 Flight Mate	Butyl Tube TR 25, S	2	06-06000	**$81.75**
7.00/8.00-6 Flight Mate	Butyl Tube TR 20, (3), S	2	06-06300	**$76.85**
7.50/8.50-10 Flight Mate	Butyl Tube TR 25, S	3	06-07000	**$115.75**
8.50-6 Flight Mate	Butyl Tube TR 20, S	3	06-01050	**$162.75**
8.90-12.50 Flight Mate	Butyl Tube TR 15, S	6	06-01051	**$162.75**
G15/6.00-6 Flight Mate*	Butyl Tube TR 67A, B	1	06-05305	**$149.75**
G15/6.00-6 Flight Mate*	Butyl Tube TR 20, (2), S	1	06-05300-1	**$69.75**
17.00-16	Reg. Tube TR 91G, B (5)	14	06-01054	**$410.00**
G19.5X6.75-8 Flight Mate	Butyl Tube TR 15, (4), S	2	06-05700	**$79.90**

*** ALSO FOR 600 X 6 TIRES.**

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

GOODYEAR FLIGHT EAGLE TIRES



GOODYEAR FLIGHT EAGLE TIRES

With over 100 years of brighter ideas about lighter flight, it's only natural that Goodyear lights the way with LJs and VLJs.

Goodyear Flight Eagle LT is a new tire, but it's already been chosen for the Embraer Phenom 100 and Phenom 300 aircraft. The LT stands for Light Turbine... a new generation of aircraft tires for demanding high speed take-offs and landings.

Features:

- Computer-aided design
- Special inner-liners
- Enhanced bead compounds and construction
- Sidewalls with a reservoir of antioxidants
- Benefits:
- Maximum number of landings
- Enhanced air retention
- Great serviceability and resistance to wheel damage
- Special wear-resistant tread compounds Low cost-per-landing
- Excellent resistance to weather effect of sunlight and ozone

BUSINESS BIAS AIRCRAFT TIRES

Tire Size	PR	Description	Speed (MPH)	Avg. Weight (lbs.)	Aircraft	Part No.	Price
5.00-5	10	Flight Eagle LT	190	11	TBM900	06-02499	$189.80
18X4.25-10	6	Flight Eagle, DT	210	12	Hawker 125	06-01316	$485.00
16X4.4	4	Flight Eagle	210	8	Westwind 1124	06-01317	$578.00
16X4.4	6	Flight Eagle	210	10	Westwind 1125	06-01318	$576.00
16X4.4	6	Flight Eagle, DT	210	10	Westwind 1125, SJ30-2, AstraSPG100	06-01319	$665.00
16X4.4	10	Flight Eagle	210	11	Citation X	06-01320	$713.00
16X4.4	12	Flight Eagle	190	9	SJ-30-2	06-01321	$759.00
18X4.4	6	RIB,DDT	190	11	Cit 525, CJ,CJ-1,CJ-2	06-01322	$493.00
18X4.4	10	Flight Eagle, DT	210	12	Dash8, CL-600	06-01323	$472.00
18X4.4	10	RIB, DDT	210	13	Cessna CIT I/II, Lear	06-01324	$521.00
18X4.4	10	RIB, DDT	190	13	Cessna CIT II, CJ-3	06-01325	$531.00
18X4.4	10	RIB, DDT	210	14	Diamond I/II, Beech Jet, CIT II, III, V, VI, VII	06-01358	$548.00
18X4.4	12	Flight Eagle, DT	210	13	Jetstar II, CL600/601	06-01326	$519.00
18X5.5	8	Flight Leader	210	12	Saab 2000	06-02224	$500.00
14.5X5.5-6	LR2800	Flight Eagle, DT	210	11	Falcon 20	06-01327	$880.00
18X5.5	8	Flight Eagle	190	13	Lear23, KingAir, CE-337	06-01328	$442.00
18X5.5	10	Flight Eagle	210	14	Lear23/24/25, EMB120	06-01329	$457.00
18X5.5	10	Flight Leader	210	15	Challenger 300	06-01330	$678.00
19.5 X 6.75	8	Flight Leader	210	17	Embraer:ERJ 135/140/145 ER Regional Jet Embraer: ERJ 145LR Regional Jet	06-02972	$583.00
24X7.25	12	Flight Leader	190	27	Aero - L-39 Albatros Embraer - EMB 120 Brasilia	06-03013	$740.00
17.5X5.75-8	12	Flight Eagle	210	15	Learjet 30 Series	06-01331	$519.00
17.5X5.75-8	17	Flight Eagle	210	17	Learjet 55, 60	06-01332	$687.00
21x7.25-10	14	Flight Eagle	225	--	Gulfsteam G650	06-02843	$720.00
18X5.75-8	8	Flight Eagle, DDT	190	13	Falcon 10	06-01333	$754.00
22X5.75-12	10	Flight Eagle	190	20	CITII,VI,VII,F-10, Lear 45	06-01334	$653.00
22X5.75	12	Flight Eagle	210	24	Sabre80	06-01335	$1,146.00
15X6.00-6	10	Flight Eagle LT DDT	160	11	EMB Phenom	06-01336	$322.00
17.5X6.25-6	8	RIB, DDT, TT	190	II	Corvette	06-01337	$696.00
21X6.50-10	12	Flight Eagle LT	160	18	EMB Phenom 100	06-01338	$400.00
26X6.6	14	Flight Eagle	210	31	CL-600/601, Jetstar I/II, Corvette, Falcon 20, 50, 200	06-01339	$1,104.00
26X6.6	14	Flight Eagle	210	31	CL-600/601, Jetstar I/II, Corvette, Falcon 20, 50, 200	06-01334	$653.00
25.75X6.75-14	14	RIB	210	33	CL-600/601	06-01340	$1,043.00
26.6.75-14	16	Flight Eagle	190	38	Sabre 60, 65	06-01341	$1,393.00
23X7.00-12	12	Flight Eagle	210	28	Hawker 125 Astra SP G100	06-01342	$730.00
21X7.25-10	12	Flight Eagle, DT	225	20	GII,III,IV,V,G300, 350, 400, 450, 550, Global Express	06-01343	$613.00
24X7.7	16	Flight Leader	210	32	Beechjet 400	06-01344	$791.00
22X7.75-10	10	RIB	190	20	1, CJ1+	06-01345	$558.00
22X7.75-10	12	RIB	190	25	CIT C-2, CJ-2+	06-01346	$576.00
22X8.00-10	10	Flight Eagle	190	24	CIT I/II	06-01347	$632.00
22X8.00-10	12	Flight Eagle	190	28	CIT II, V	06-01348	$700.00
H26.5X8.0-14	14	Flight Leader	210	32	Challenger 300	06-02220	$1,151.00
H22X8.25-10	12	Flight Eagle	190	22	CJ-3	06-01350	$752.00
H22X8.25-10	14	Flight Eagle	190	31	Citation 550/560	06-01351	$871.00
30X9.5-14	16	Flight Leader	210		Embraer	06-02482	$1,346.00
34X9.25-16	18	Flight Eagle	210	68	GII, III, IV	06-01352	$1,654.00
H34X9.25-18	18	Flight Eagle	225	58	GIV-SP, G300,350, 400,450	06-01353	$1,983.00
B24X9.5-10.5	18	RS700	210	40	Westwind 1124	06-01354	$1,679.00
29X9.0-15	16	Flight Eagle LT	210	44	CRJ100 Regional Jet, CRJ200 Challenger 800/850, CRJ200 Regional Jet	06-02235	$1,220.00
H35X11.0-18	20	Flight Eagle	335	82	GV, G500, 550	06-01355	$2,194.00
H38X12.0-19	20	Flight Eagle	210	87	Global Express	06-01356	$2,255.00

BUSINESS RADIAL AIRCRAFT TIRES

34x10.75-16	16	Flight Leader	210	55.8	Bombardier Q400 (HDC-8 Series 400)	06-03012	$1,218.00
22x6.5-10	8	RIB	190	19	Bombardier Q400 (HDC-8 Series 400)	06-03011	$657.00
26X6.6R14	14	Flight Radial	225	26	Falcon 20/50/200	06-01357	$1,260.00
H34x10.0R16	14	Flight Radial	190	55.7	ATR72	06-01951	$2,013.00
H25X8.0-12	16	Flight Eagle LT	210	-	EMB Phenom 300	06-02570	$1,085.00
H37.5x12.0R19	20	Flight Radial	225	-	See website for application information	06-02844	$2,669.00
29X9.0-15	16	Flight Leader	210	-	CRJ100 Regional Jet, CRJ200 Challenger 800/850, CRJ200 Regional Jet	06-02235	$1,220.00

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SPECIALTY TIRES & TUBES

Mfg. by Specialty Tires of America
(Formerly McCreary)



These fine nylon cord tires with rib tread design are rigidly tested to meet FAA Standard TSO-C62. The Air Trac® is an excellent choice for single engine, piston aircraft. It is ideal for aircraft operated on grass strips while being perfectly usable on hard surfaces. This unique, narrow-ribbed, oval shaped tire is designed for soft field applications.
The 7.00/8.00-6 tube can be utilized in both 7.00-6 and 8.00-6 tires.

AIR TRAC TIRES & TUBES

Tube-Type Tire Size	Ply Rating	Wt./Lbs.	Tire Pressure PSI (a)	Max. Load Rating Lbs.(a)	Tire		Tube	
					Part No.	Price	Part No.	Price
5.00-5	4	4.4	31	800	06-08210	**$62.00**	06-08300	**$77.50**
5.00-5	6	4.3	50	1285	06-08200	**$63.00**	06-08300	**$77.50**
6.00-6	4	6.8	29	1150	06-08400	**$75.00**	06-08700	**$66.00**
6.00-6	6	7.0	42	1750	06-08500	**$74.95**	06-08700	**$66.00**
6.00-6	8	7.3	55	2350	06-08600	**$82.00**	06-08700	**$66.00**
15x6.00-6	4	6.3	45	1250	06-08800	**$113.95**	06-08901	**$63.75**
15x6.00-6	6	6.6	68	1950	06-08900	**$113.95**	06-08901	**$63.75**
6.50-8	6	9.3	51	2300	06-02973	**$158.90**	06-09200	**$67.99**
6.50-8	6	9.5	51	2300	06-09000	---	06-09200	**$67.99**
6.50-8	8	10.0	75	3150	06-07914	**$167.00**	06-09200	**$67.99**
6.50-10	6	10.7	60	2770	06-02552	---	06-09500	**$67.50**
6.50-10	8	12.0	80	3750	06-09400	**$211.95**	06-09500	**$67.50**
6.50-10	10	15.2	100	4750	06-09410	**$252.95**	06-09500	**$67.50**
7.00-6	6	9.0	38	1900	06-09600	**$144.00**	06-09800	**$66.50**
7.00-6	8	9.4	54	2550	06-09700	**$158.75**	06-09800	**$66.50**
7.50-10	6	14.3	46	3000	06-09710	**$289.00**	06-09810	**$99.75**
8.00-6	4	10.0	23	1350	06-09900	**$175.75**	06-09800	**$66.50**
8.00-6	6	10.3	35	2050	06-10000	**$162.00**	06-09800	**$66.50**
8.50-6	6	16.5	30	2275	06-10100	**$239.00**	06-10200	**$121.50**
8.50-10	6	17.5	41	3250	06-02975	**$288.95**	06-10500	**$105.75**
8.50-10	6	16.5	41	3250	06-10300	---	06-10500	**$105.75**
8.50-10	8	19.5	55	4400	06-10400	**$322.00**	06-10500	**$105.75**
6.50-10	6	10.9	60	2770	06-02552	---	06-09500	**$67.50**
12.5x4.5	10	--	--	--	06-02976	**$282.95**	06-02497	**$94.75**
14.5	8	--	--	--	06-02977	**$406.00**	--	--

The 7.00/8.00-6 tube can be utilized in both 7.00-6 and 8.00-6 tires.

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AIR HAWK TIRES

Tube-Type Tire Size	Ply Rating	Wt./Lbs.	Part No.	Price
5.00-5	4	3.8	06-07710	**$65.00**
5.00-5	6	4.3	06-07700	**$63.75**
5.00-5	10	6.2	06-07720	**$76.00**
6.00-6	4	6.8	06-07800	**$75.00**
6.00-6	6	7.0	06-07900	**$79.95**
6.00-6	8	7.8	06-07910	**$85.00**
6.50-8	6	10.5	06-07912	**$179.99**
6.50-8	8	10.5	06-07914	**$167.00**
6.50-10	6	11.5	06-07916	**$198.00**
6.50-10	8	11.8	06-07918	**$197.00**
6.50-10 Special	8	14.5	06-00416	**$213.95**
6.50-10	10	16.2	06-07920	**$258.95**
7.00-6	6	9.5	06-07922	**$145.00**
7.00-6	8	9.4	06-07924	**$149.00**
8.00-6	4	10.4	06-07926	**$165.00**
8.00-6	6	10.7	06-07928	**$165.00**
8.00-6	8	11.8	06-07929	**$185.00**
8.50-10	6	19.9	06-07932	**$341.00**
8.50-10	8	23.3	06-07934	**$339.00**
15/600-6	6	7.0	03-00208	**$106.75**
17.5/625-6	10	--	06-00309	**$230.95**
18-5.5	8	--	06-00310	**$178.75**
22/800-8	6	--	06-00311	**$253.95**
29/1100-10	10	--	06-00312	**$389.00**

SUPER HAWK TIRES

Designed to handle higher landing speeds and heavier loads, the Super Hawk® offers advanced design. The result is a premium belted aircraft tire that surpasses FAA specifications and matches the performance levels of far more expensive brands.

Part No.	Tire Size	Ply Rating	Price.Ea.
06-17000	5.00-5	6	**$152.75**
06-18000	6.00-6	6	**$202.95**
06-02892	6.50-8	6	**$475.00**
06-17500	6.50-10	8	**$281.95**
06-17505	6.00-6	8	**$199.00**
06-17510	6.50-10	10	**$315.00**
06-17515	7.00-6	6	**$215.95**
06-17520	7.00-6	8	**$226.95**
06-17525	6.50-8	6	**$225.95**

Call for pricing on other sizes of Hawk Tires.

AERO TRAINER TIRES

Tube Type Tire Size	Ply	Part No.	Price Each
5.00-5	6	06-01700	**$65.00**
6.00-6	6	06-01800	**$73.00**

Aero Trainer Tires use standard Specialty Tires tubes listed above

NYLON TUBELESS TIRES

Nylon Tubeless Tires: Designed especially for classic planes including warbirds, DC-3's and Beech 18's. The Aero Classic® is also great for many foreign and European aircraft. Many sizes of the Aero Classic® come in both historical diamond tread or in the more current rib tread for work uses.

Tire Size	Ply	PN	Price
27" Diamond Tread	10	06-00080	**$793.00**
27" Rib	10	06-00081	**$739.00**
8.9 X 12.5 Diamond	6	06-00082	**$586.00**
8.9 X 12.5 Rib	6	06-00083	**$524.00**
11.00-12 Rib	10	06-00087	**$717.00**



SPECIALTY TIRE & TUBE PACKAGES

600 X 6, 4 PLY KIT - Consists of three 600 x 6 4 ply tires and tubes. Fits PA-24-180 Comanche, PA-28 Cherokee, Beech Musketeer, Musketeer Sport, and Sundowner.
W/Air Trac tires..... P/N 06-21200 .... **$422.95**
W/Air Hawk tires..... P/N 06-21205 .... **$422.95**

600 X 6, 6 PLY KIT - Consists of three Specialty Tires 600 x 6 6 ply Air Trac tires and tubes. Fits Piper PA-44 Seminole, PA-30 Twin Comanche, and Cessna 337.
W/Air Trac tires..... P/N 06-21300 .... **$421.95**
W/Air Hawk tires..... P/N 06-21305 .... **$436.95**

6.00 X 6, 6 PLY / 5.00 X 5, 6 PLY KIT - Two Specialty Tires 6.00 x 6, 6 ply tires and tubes and one 5.00 x 5, 6 ply tire and tube. Fits Cessna 182, 182N; all 206 Skylane, Skywagon, and Station Air 207; Mooney 201, 220; Waco 250 260, PA-32 6-300 Lance.
W/Air Trac tires..... P/N 06-21100 .... **$421.95**
W/Air Hawk tires..... P/N 06-21105 .... **$409.95**

6.00 X 6, 4 PLY KIT - Two Specialty Tires 6.00 x 6, 4 ply tires and tubes. Fits Bellanca Citabria 7ECA, 7GCA-A, 7GCBC and 7KCA-B.
W/Air Trac tires..... P/N 06-21110 .... **$281.95**
W/Air Hawk tires..... P/N 06-21115 .... **$281.95**

6.00 X 6, 4 PLY / 5.00 X 5, 4 PLY KIT - Two Specialty Tires 6.00 x 6, 4 ply tires and tubes and one 5.00 x 5, 4 ply tire and tube. Fits Beech Super/Musketeer Sierra; Cessna 150, 172, 175, 177; Grumman AA1B, AA5; PA-28, 151, 180R, 200R.
W/Air Trac tires..... P/N 06-21120 .... **$420.95**
W/Air Hawk tires..... P/N 06-21125 .... **$423.95**

6.00 X 6, 6 PLY / 5.00 X 5, 4 PLY KIT - Two Specialty Tires 6.00 x 6, 6 ply tires and tubes and one 5.00 x 5, 4 ply tire and tube. Fits Beech Debonair 33, 33A; Bonanza 33; Mooney 200, Mark 21C; Rockwell Commander.
W/Air Trac tires..... P/N 06-21130 .... **$420.95**
W/Air Hawk tires..... P/N 06-21135 .... **$433.95**

6.00 X 6, 6 PLY / 6.00 X 6, 4 PLY KIT - Two Specialty Tires 6.00 x 6, 6 ply tires and tubes and one 6.00 x 6, 4 ply tire and tube. Fits Bellanca 206, Viking; PA-24-250, 260, PA-32-260, 300.
W/Air Trac tires..... P/N 06-21140 .... **$421.95**
W/Air Hawk tires..... P/N 06-21145 .... **$431.95**

6.50 X 10, 8 PLY / 6.00 X 6, 6 PLY KIT - Two Specialty Tires 6.50 x 10, 8 ply tires & tubes & one 6.00 x 6, 6 ply tire and tube. Fits Cessna 340, 401, 402, 411, 414, 421; PA-31-300, 310, 350, PA-31P-425.
W/Air Trac tires..... P/N 06-21155 .... **$698.00**
W/Air Hawk tires..... P/N 06-21160 .... **$673.00**

7.00 X 6, 6 PLY / 6.00 X 6, 4 PLY KIT - Two Specialty Tires 7.00 x 6, 6 ply tires and tubes and one 6.00 x 6, 4 ply tire and tube. Fits PA-23, 160, 235, 250.
W/Air Trac tires..... P/N 06-21165 .... **$562.00**
W/Air Hawk tires..... P/N 06-21170 .... **$564.00**

8.50 X 6, 6 PLY KIT - Two Air Trac 8.50 x 6, 6 ply tires and tubes. Fits Bellanca Decathlon 8KCA-B and Scout 8GCBC.
W/Air Trac tires..... P/N 06-21175 .... **$721.00**

Prices Subject to Change Without Notice

MICHELIN® TIRES



MICHELIN® AIR® & AVIATOR® GENERAL AVIATION TIRES

Michelin® AIR®: The tire for demanding pilots. The sidewall compound is optimized to provide maximum ozone and ultraviolet light protection, while the MX2000 tread compound is Michelin's toughest. In addition, the new Air Cushion Inner Liner provides a protective cushion over the casing plies which guards against inner tube chafing. And the "Posi-Fit" bead construction reduces movement between the tire and the wheel for improved lateral stability.

Michelin® Aviator®: A Michelin quality tire at a great price. Like the Michelin AIR, the Aviator offers exceptional balance, a new sidewall configuration and an extra strong nylon casing. It also features the tough MX1000 tread compound for long life, and a specialized sidewall compound to protect against ultraviolet light.

Size	Ply	Speed (MPH)	Brand	Avg W (lbs)	Applications	Part No.	Price
11.00-12	10	160	Michelin Aviator	46	"IAI 201, Bombardier DHC6, Casa 212, 235 (MLG)"	06-01397	**$851.00**
15x6.0-6	6	160	Michelin Aviator	7	"Beech 17, 24, Baron 58, 60, 77 - Bellanca 1730, 1731 - Cessna 172, 177, 182RG (MLG) - Cessna 336, 337 - Rockwell Int'l 695, 700, 840 (NLG)"	06-00308	**$194.75**
15x6.0-6	6	160	Michelin Air	7	"Cessna 172, 177, 182 - Cirrus SR20, SR22 (MLG) - Cessna 336, 337 (NLG)"	06-01398	**$167.75**
16x4.4	8	160	Michelin Aviator	9	Raytheon T6A Texan - Pilatus PC9 - Embraer Xingu - Fairchild SA226 (NLG)	06-01399	**$316.00**
16x4.4	8	160	Michelin Air	9	Cessna Mustang (NLG)	06-01401	**$409.00**
17.5x5.75-8	12	210	Michelin Aviator	14	"Learjet 20, 31, 35, 36 (MLG)"	06-01402	**$662.00**
17.5x6.25-6	10	120	Michelin Air	11	"Piper PA31, 42 (NLG)"	06-01403	**$386.00**
17.5x6.25-6	8	160	Michelin Air	11	Pilatus PC-12 (NLG)	06-01404	**$349.00**
18x4.25-10	6	210	Michelin Air	11	Hawker 700, 800, 800XP, 1000 (NLG)	06-01405	**$521.00**
18x4.4	6	190	Michelin Air	9	Hawker Premier 1 (NLG)	06-01413	**$609.00**
18x4.4	10	210	Michelin Air	12	"Learjet 31, 35, 36, 55, (NLG)"	06-01410	**$529.00**
18x4.4	6	190	Michelin Air	13	"Cessna CJ, CJ1, CJ1+, CJ2 (NLG)"	06-01411	**$578.00**
18x4.4	6	160	Michelin Aviator	8	"Fairchild SA226, 227, Piper PA31 (NLG)"	06-01414	**$238.95**
18x4.4	10	210	Michelin Air	12	Hawker Beechjet 400A - Cessna CJ2+, CJ3, Citation I, II, III, V, VI, VII, Bravo, Encore, Encore+, Excel, XLS (NLG) - Learjet 40, 45	06-01407	**$552.00**
18x4.4	10	190	Michelin Air	12	Cessna Citation III, VI, VII (NLG) * Citation III over 20,000 lbs MTOW	06-01412	**$586.00**
18x4.4	12	210	Michelin Air	13	Bombardier Challenger 600, 601, 604 (NLG)	06-01408	**$565.00**
18x5.5	10	210	Michelin Air	14	"Beech King Air 200, 55 (MLG) - Socata TBM 700, 850 (MLG)"	06-01415	**$474.00**
18x5.5	8	190	Michelin Aviator	12	"Beech King Air 200, 99, 100 - Cessna 337 -Socata TBM700 (MLG) - Bombardier DHC8 - Embraer EMB120, Fairchild SA226 (NLG)"	06-01416	**$496.00**
19.5x6.75-8	10	160	Michelin Aviator	14	"Beech King Air 300, Baron 58, 60 - Fairchild SA226, 227 (MLG)"	06-01417	**$343.00**
19.5x6.75-8	10	190	Michelin Aviator	17	Beech 1900, C, D (NLG)	06-01418	**$392.00**
20x4.4	8	160	Michelin Aviator	13	Pilatus PC9 (MLG)	06-01419	**$379.00**
22x6.75-10	10	190	Michelin Air	18	"Beech King Air 200 (NLG), Beech 1900D (MLG), IJT36 (MLG)"	06-01422	**$488.00**
22x6.75-10	8	160	Michelin Aviator	16	"Beech 1900C (MLG), King Air 300 & 200 (NLG) - Tucano S312 (MLG) - Cessna Mustang (MLG)"	06-01423	**$441.00**
22x7.75-10	12	190	Michelin Air	20	"Cessna CJ, CJ1, CJ1+, CJ2, CJ2+ (MLG)"	06-01424	**$662.00**
22x7.75-10	10	160	Michelin Air	19	"Cessna 404 Titan, 441 Conquest II (MLG)"	06-01425	**$546.00**
22x8.0-10	10	190	Michelin Aviator	24	Cessna Citation I (MLG)	06-01427	**$643.00**
23x7.0-12	12	210	Michelin Air	27	Gulfsteam G150 (MLG), Hawker 800, 800XP, 1000 (MLG)	06-01429	**$809.00**
23x7.0-12	12	210	Michelin Air	27	Gulfsteam G150 (MLG), Hawker 800, 800XP, 1000 (MLG)	06-01430	**$809.00**
24x7.7	14	210	Michelin Air	26	Hawker Beechjet 400A - Mitsubishi MU-300 (MLG)	06-01431	**$752.00**
29x11.0-10	10	160	Michelin Air	35	Cessna 208 (MLG)	06-01432	**$795.00**
34x9.25-16	18	210	Michelin Air	72	Gulfstream II, IIB, III, IV (MLG)	06-01433	**$1,813.00**
380x150-5	6	120	Michelin Air	7	Robin	06-01434	**$197.80**
5.00-5	8	160	Michelin Air	6	Eclipse 500 (NLG)	06-01436	**$194.75**
5.00-5	6	120	Michelin Air	6	"Cirrus SR20, SR22 (NLG)"	06-08052	**$149.75**
5.00-5	10	120	Michelin Aviator	6		06-01437	**$174.00**
5.00-5	8	160	Michelin Aviator	7	Eurocopter Tigre (TLG)	06-01438	**$189.90**
5.00-5	4	120	Michelin Air	6		06-01439	**$143.75**
6.00-6	6	120	Michelin Air	9		08-08080	**$186.75**
6.00-6	6	120	Michelin Aviator	9		06-00018	**$208.95**
6.00-6	8	120	Michelin Air	9		06-08058	**$192.75**
6.00-6	4	120	Michelin Air	9		06-01441	**$191.99**
6.00-6	6	160	Michelin Aviator	9		06-00018	**$208.95**
6.50-10	12	190	Michelin Aviator	18	"Piaggio P180, Piper PA-31 (MLG)"	06-01444	**$430.00**
6.50-10	8	120	Michelin Air	16	"Cessna 208, 310, 335, 401, 402, 414, 421, 425, Piper PA-30, 31 (MLG)"	06-08065	**$303.00**
6.50-10	10	120	Michelin Aviator	16	Cessna 425 Conquest I (MLG)	06-01446	**$364.00**
6.50-10	6	120	Michelin Air	16	Beech King Air 90 (NLG)	06-01447	**$299.00**
6.50-10	12	160	Michelin Aviator	17	Piper PA-42 (MLG)	06-01448	**$395.00**
6.50-10	10	120	Michelin Air	16	Cessna 425 Conquest I (MLG)	06-01450	**$321.00**
6.50-10	10	160	Michelin Air	16		06-01450	**$321.00**
6.50-8	8	160	Michelin Air	13	"Beech Baron 55,56 (MLG)"	06-08070	**$274.95**
7.00-6	6	120	Michelin Air	11	"Beech 33, 35, 36 (MLG)"	06-08059	**$219.95**
7.00-6	8	120	Michelin Air	11	Piper PA23 (MLG)	08-08075	**$239.95**
7.50-14	12	160	Michelin Aviator	35	Gulfstream 1 (MLG)	06-01454	**$879.00**
7.50-14	12	160	Michelin Aviator	28	Convair CV-340,440,540,580/600 (NLG)	06-01455	**$871.00**
8.00-6	6	120	Michelin Aviator	13	"Cessna 140, 185, 206, 207, 305, 01E, Socata Rallye"	06-01456	**$264.95**
8.50-10	10	160	Michelin Aviator	25	"Gulfstream 690, 680T - Rockwell Int'l 685, 690, 695, 700, 840 (MLG) -Pilatus PC12 (MLG)"	06-01457	**$486.00**
8.50-10	8	160	Michelin Air	25	"Beech 18, 50, 65, 70, 80, 88, King Air 90 - Cessna 188, 208, 308, 406 - Gulfstream 500, 560, 680, 681, 685, 720 - Mitsubishi MU2 - Piaggio 149, 166, 136 - Rockwell Int'l 500, 560, 680, 520 (MLG)"	06-01458	**$385.00**
8.50-10	10	160	Michelin Air	25	"Gulfstream 690, 680T - Rockwell Int'l 685, 690, 695, 700, 840 (MLG)"	06-01459	**$534.00**
8.50-6	6	120	Michelin Air	--	"High flotation, fixed gear"	06-01461	**$331.00**
6.50	10	160	Michelin Air	14		06-03021	**$336.00**
H22x8.25-10	12	190	Michelin Air	20	Cessna CJ3 (MLG) - Hawker Premier 1 (MLG)	06-01463	**$944.00**
H22x8.25-10	14	190	Michelin Air	22	"Cessna Citation Encore, Encore+, 560 (MLG)"	06-01464	**$1,024.00**
H27x8.5-14	16	210	Michelin Air	40	Bombardier Challenger 604 (MLG)	06-01465	**$1,066.00**

MICHELIN® TIRES & TUBES

MICHELIN® AIR X® GENERAL AVIATION RADIAL TIRES



Michelin® AIR X® radials typically weigh 20–30% less than comparable bias tires, and they operate at cooler temperatures. Helps provide measurable fuel savings, more landings per tread, longer wear characteristics and a more stable contact patch than bias tires, as well as shorter turnaround times and reduced carcass fatigue. Extra Strong Carcass Michelin's carcass design helps restrict tire growth and the stretching of rubber. Durable cut-resistant tread includes deep skid depth and specially-designed circumferential grooves. Sidewall is optimized for both ozone and ultraviolet light protection which helps reduce ozone cracking in key areas of the tire. The Michelin® AIR X® casing is more flexible than casings used in bias tires.

Size	Ply	Speed (MPH)	Brand	Avg W (lbs)	Applications	Part No.	Price
14.5x5.5R6		225	Michelin Air X	8	"Falcon 20, 50, 200, 2000 (NLG)"	06-01382	$1,214.00
14.5x5.5R6	10	225	Michelin Air X	8	Falcon 2000EX (NLG)	06-01383	$1,412.00
16x4.4R8	10	210	Michelin Air X	10	"Cessna Sovereign, Citation X (NLG) - Gulfstream G150 (NLG)"	06-01384	$1,144.00
16x4.4R8	12	190	Michelin Air X	10	Pilatus PC21 (NLG)	06-01385	$1,659.00
16x6.0R6	12	225	Michelin Air X	11	Falcon F7X (NLG)	06-01387	$1,687.00
17.5x5.75R8		225	Michelin Air X	11	Falcon 900 (NLG)	06-01388	$1,683.00
20x4.4R12	14	190	Michelin Air X	14	Pilatus PC21 (MLG)	06-01390	$1,820.00
23.5x8.0R12	14	190	Michelin Air X	24	"Cessna Citation Excel, XLS (MLG)"	06-01391	$2,027.00
26x6.6R14	14	225	Michelin Air X	22	"Falcon 20, 50, 200, 2000, 2000EX, Gulfstream G200 (MLG)"	06-01392	$1,436.00
26x6.6R14	12	210	Michelin Air X	24	"Cessna Sovereign, Citation X (MLG)"	06-01393	$1,512.00
26x6.6R14	14	225	Michelin Air X	22	Hawker 4000 (MLG)	06-01394	$1,350.00
29x7.7R15		225	Michelin Air X	31	Falcon 900 (MLG)	06-01395	$2,466.00
H32x10.5R16.5	16	225	Michelin Air X	44	Falcon F7X (MLG)	06-02581	$2,837.00
1400 x 530R23	36	235	Michelin Air X	32	Airbus Industries	06-03036	$3,598.00
1050 x 395R16	28	225	Michelin Air X	32	Falcon 900 (MLG)	06-03037	$2,329.00

MICHELIN REGIONAL RADIAL AIRCRAFT TIRES AIR X

Size	Ply Rating	Speed (MPH)	Avg W (lbs)	Application	Part No.	Price
24X7.7R10	16	225	24	Embraer 190 (NLG)	06-01522	$793.00
32X8.8R16	12	90	41	ATR 42 (MLG)	06-01523	$1,780.00
H34X10.0R16	14	190	55	ATR 72 (MLG)	06-01524	$2,043.00
H38X13.0R18	20	225	84	Embraer 170, 175, 175AR (MLG)	06-01525	$3,031.00
H41X16.0R20	22	225	129	Embraer 190 (MLG)	06-01526	$3,754.00
16x4.4R8	10	-	-	-	06-02996	$1,470.00
17.5x5.75R9	12	-	-	-	06-02997	$1,343.00

MICHELIN REGIONAL BIAS AIRCRAFT TIRES

Size	Ply Rating	Speed (MPH)	Special	Avg W (lbs)	Application	Part No.	Price
17.5x6.25-6	8	190	-	11	Saab 340	06-01530	$242.95
18x4.4	12	210	CH	13	Bombardier CRJ100/200	06-01406	$544.00
18x4.4	10	210	CH	13	Fairchild Metro	06-01409	$546.00
18x5.5	10	210	-	14	Embraer EMB120ER	06-01415	$474.00
19.5x6.75-8	8	210	CH	15	Embraer ERJ135, 140, 145ER/LR	06-01539	$407.00
19.5x6.75-8	10	190	-	15	Fairchild Metro	06-01540	$256.95
20.5x6.75-10	12	225	CH	19	Bombardier CRJ700/900	06-01541	$971.00
24x7.7	14	190	-	25	Saab 340	06-01543	$504.00
28x9.0-12	12	160	-	35	Jetstream 31	06-01547	$769.00
30x9.5-14	16	210	0	49	Embraer ERJ135, 145ER	06-01548	$1,075.00
32x8.8	14	210	-	46	Saab 2000	06-01549	$1,048.00
450x190-5	10	190	-	14	ATR 42, 72	06-01550	$546.00
670x210-12	10	160	-	30	Embraer EMB110, 121, Xingu	06-01551	$336.00
H29x9.0-15	16	210	-	45	Bombardier CRJ100/200	06-01552	$881.00
H30x9.5-16	16	225	0	55	Embraer ERJ140, 145LR	06-01553	$1,183.00
H31x9.75-13	12	190	-	39	Bombardier DHC8 - 100/200	06-01554	$950.00
H36x12.0-18	18	225	0	89	Bombardier CRJ700/900	06-01555	$1,996.00

AIRCRAFT WHEEL BALANCER



The Aircraft Wheel Balancer uses the same static balancing method that is used to balance helicopter rotors. The patent pending design features a pivot point that is easily adjustable on-the-fly for maximum sensitivity, and includes bushings to accommodate both 1 1/4" and 1 1/2" axle sizes.

You now have an extremely portable wheel balancer that is small enough to fit in a tool box and does not require a bulky stand. The McFarlane design is more precise than other static balancing methods, and allows the wheel to be balanced while the bearings and seals are installed.

It's fast and easy! Due to the horizontal balancing and orientation, test weights can be temporarily set in place and easily adjusted while balancing. This eliminates the need to tape the test weights. The McFarlane wheel balancer is precision machined with a black, hard anodized finish, and comes in an oiled wooden case. This is a lifetime tool that fits almost all light aircraft wheel/tire assemblies.

Features:

- Adjustable pivot point for maximum sensitivity (Patent Pending)
- More accurate than "bubble" or "axle and bearing" style balancers
- Portable - small enough to fit in your tool box
- Does not require removal of bearings or seals
- High quality wooden case
- Less than half the price of bulky axle and bearing type balancers

Description	PN	Price
Wheel Balancer for 1-1/4", and 1-1/2" axles, including Cessna 300 and 400 Series tapered axles with 1-1/2" bearing bores.	05-06878	$192.75
Wheel Balancer for 1", 1-1/4", and 1-1/2" axles, including Cessna 300 and 400 Series tapered axles with 1-1/2" and 1" bearing bores.	05-12922	$248.95
Tool129 Large Axle Bushing Kit	05-12923	$195.75
Tool108 Large Axle Bushing Kit	05-12924	$195.75
Aircraft Wheel Balancer Tool For 3/4 Axles	05-12921	$188.90

MICHELIN® TIRES – RETREAD TIRES



CONDOR AIRCRAFT TIRES

Strong sidewalls for exceptional durability, even after frequent hard landings. Tough treads compounded for high abrasion resistance, low heat generation and extra long life. Smooth liners to help prevent tube chafing. Full FAA qualification based on thorough static and dynamic testing. Each production tire is subject to final inspection and a check for weight and balance. Limited warranty guarantees that each Condor tire is free from any manufacturing defects. Condor tires are available in a variety of sizes for light to medium general aviation aircraft.

Size	Ply	Speed (MPH)	Brand	Avg W (lbs)	Part No.	Price
15x6.0-6	6	120	Condor	7	06-08040	**$145.80**
29x11.0-10	10	160	Condor	31	06-01379	**$604.00**
5.00-5	6	120	Condor	6	06-08010	**$93.95**
5.00-5	4	120	Condor	6	06-08005	**$93.75**
6.00-6	6	120	Condor	9	06-08020	**$127.75**
6.00-6	8	120	Condor	9	06-08025	**$137.75**
6.00-6	4	120	Condor	9	06-08015	**$124.75**
6.50-10	8	120	Condor	16	06-00197	**$258.95**
6.50-10	10	120	Condor	16	06-00198	**$365.00**
6.50-8	8	120	Condor	13	06-00199	**$206.00**
7.00-6	8	120	Condor	11	06-08035	**$212.95**
7.00-6	6	120	Condor	11	06-08030	**$194.75**
8.00-6	8	120	Condor	13	06-08050	**$237.95**
8.00-6	6	120	Condor	13	06-08045	**$222.95**
8.50-10	8	120	Condor	24	06-00201	**$452.00**
8.50-10	10	120	Condor	24	06-01381	**$549.00**



MICHELIN PILOT® TIRES

The MICHELIN® PILOT® high performance bias tire is designed to be the best tire money can buy for propeller driven aircraft. Reflecting their proven history of developing ultra high performance tires, the MICHELIN PILOT tire offers the latest state-of-the-art features.

Size	Ply	Speed	Brand	Avg W (lbs)	Part No.	Price
15x6.0-6	6	160	PILOT	8.7	06-03067	**$279.00**
5.00-5	6	160	PILOT	6.6	06-03068	**$249.00**



MICHELIN® AIRSTOP® AIRCRAFT INNER TUBES

MICHELIN® AIRSTOP® Aircraft Tubes provide long-lasting, dependable performance you can rely on in just about any operating condition. Because they're made with advanced materials, MICHELIN® AIRSTOP Aircraft Tubes offer extended air retention and can sustain temperatures as low as minus 50°C. So when you fly with MICHELIN® AIRSTOP Aircraft Tubes, you fly with confidence.

Size	Valve Stem	Avg W (lbs)	Part No.	Price
15x6.0-6	TR-20 / Straight	1	06-01373	**$74.75**
15x6.0-6 (H60 TW)	TR-67 / Bent 90 degrees	1	06-00853	**$158.85**
22x8.0-8	TR-15 / Straight	3	06-01374	**$122.75**
5.00-4	TR-67 / Bent 90 degrees	1	06-01375	**$165.80**
5.00-5	TR-67A / Bent 90 degrees	1	06-00019	**$88.75**
6.00-6	TR-20 / Straight	1	06-00021	**$72.85**
6.50-10	TR-25 / Straight	2	06-00849	**$82.75**
6.50-8	TR-15 / Straight	2	06-00851	**$82.00**
7.00-6	TR-20 / Straight	2	06-00848	**$79.75**
7.00-8	TR-15 / Straight	2	06-00851	**$82.00**
7.50-10	TR-25 / Straight	3	06-01376	**$154.75**
8.00-6	TR-20 / Straight	2	06-00848	**$79.75**
8.50-10	TR-25 / Straight	3	06-00850	**$120.75**
8.90-12.50	TR-15 / Straight	5	06-01378	**$169.90**
355 x 150-4	Bent 90°	2	06-01487	**$112.75**
7.00-6	TR-20 / Straight	2.5	06-00848	**$79.75**
6.50-8	TR-15 / Straight	2.5	06-00851	**$82.00**



RETREAD TIRES

500-5 10 ply high performance retreaded tires *Subject To Limited Core Availability*
Their premium retreads are produced by: Aero Wheel & Brake Service Corp. Aero WBS holds FAA certification to retread high speed aircraft tires up to 225 MPH.
Their sizes range from small piston engine aircraft through Regional Jet aircraft. 95% of the world's airlines depend on retreads not only for cost control, but for the extended life they provide over most new tires.

Size	Ply	Part No.	Price
600-6 Standard	6	06-01472	**$104.00**
600-6 - Monster retread. Almost 12/32nds tread Depth	6	06-01473	**$119.95**
600-6 - Elite Premium 2 Groove Top of the line. 2 Wide Hydro-Grooves	6	06-01474	**$115.95**
15/600-6 Standard	6	06-01471	**$115.75**
700-6 Standard	6	06-01475	**$125.75**

Subject To Limited Core Availability* **Tire cores are of various makes and models*

SMOOTH TUNDRA FAA TSO TIRE



Aero Classic Tundra 22 x 8.50-6 4 Ply "Pillow Soft" 22 x 8.50-6 4 Ply stands 22 inches tall and weighs in "featherlight" at under 10 lbs. Compare that to a standard 850-6 6 Ply which average 15 lbs. each. The load rating is 1,600 lbs. per tire. Tube Type. FAA TSO

Tire..... P/N 06-02501.....**$284.95**
Tube..... P/N 06-00765.....**$101.90**

ULTRALIGHT BUSHWHEEL TIRE



Ultralight Bushwheel Tire : lightest yet most reliable bush tire available to backcountry pilots flying experimental LSA. Designed, built, and tested originally for the European LSA market (only planes with a take-off weight of 1320 lbs are allowed to operate off airport in Europe). 15.25 lbs, the 26" x 12" x 6". Max load: 660 lbs (per tire) Features: Kevlar cording, reengineered sidewalls, and .150" tread. Experimental use Only,

P/N 06-02916.....**$975.00**

LG

AERO CLASSIC TIRES & TUBES



AERO CLASSIC TIRES

Aero Classic is a proprietary line of over 50 aircraft tires and tubes made to meet or exceed the original specifications.

Size	Ply	Description	Part No.	Price
10/350-4	4	Aero Classic Premium	06-01238	$60.99
10/350-4	6	Aero Classic Premium - HD	06-01239	$64.75
11/400-5	8	Aero Classic Wide Channel	06-01240	$78.75
11/12TL	8	Aero Classic Tubeless	06-01467	$662.00
12.5-4.5	10	Aero Classic Channel	06-01241	$321.00
15/600-6	6	Aero Classic Rib	06-03028	$286.95
200-50	6	Aero Classic Rib	06-01243	$34.95
280/250-4	4	Aero Classic Premium	06-01244	$46.65
280/250-4	6	Aero Classic Premium - HD	06-01245	$63.75
380/150-5	6	Aero Classic Rib	06-01249	$161.75
400-6	6	Aero Classic Rib	06-00944	$66.75
400-4	8	Aero Classic Rib	06-00844	$66.75
420-150	4	Aero Classic Rib	06-01250	$263.50
500-5	6	Aero Classic All Weather	06-01252	$141.75
500-5	10	Aero Classic All Weather	06-01253	$185.75
6 x 2		Aero Classic Solid Tailwheel	06-01044	$90.95
600-6	4	Aero Classic All Weather	06-01254	$152.75
600-6	6	Aero Classic All Weather	06-01255	$184.75
600-6	8	Aero Classic All Weather	06-01256	$152.99
700-7.5	6	Aero Classic All Weather	06-01258	$499.00
700-8	6	Aero Classic Diamond Tread	06-01126	$348.00
8.9 x 12.5	6	Aero Classic Diamond (Stearman)	06-01518	$635.00
30"	8	Aero Classic Rib	06-02984	$1,238.00
10.00 SC	8	Aero Classic Channel Rib	06-02958	$253.95
15/600-6	10	Aero Classic Tubeless (Cirrus)	06-03043	$276.95

LG

AERO CLASSIC RIB / SAWTOOTH TIRES

Size	Ply	Description	Part No.	Price
11/400-5	2	Rib Tire	06-00715	$23.70
300-4	4	Rib Tire	06-00361	$38.65
400-6	2	Rib Tire	06-00363	$21.50
800-6	4	Sawtooth Tire	06-00366	$83.75

AERO CLASSIC SMOOTH TUNDRA TIRES

Size	Ply	Description	Part No.	Price
8.50-6	4	22x8-50	06-02501	$284.95
27.5x10-8	4	For 8" Wheels	06-02964	$479.00
31x11-10	4	For 10" Wheels	06-02965	$966.00

LEAKGUARD TUBES

EASY INFLATE Valve Makes Inflation Less Of A Chore. Valve Is Angled Toward You, Easier To Inflate, Easier To Check The Pressure. WILL NOT WORK WITH HUBCAPS "LEAKGUARD®" Inner Tubes Are Blended With A Proprietary Leak Resistant Compound For Less Maintenance

Size	Valve	Model	Part No.	Price
10/350-4	TR-87	Tube, Leakguard Butyl	06-00761	$23.95
1100-12	TR-13	Tube, Low Temp. Natural	06-01218	$168.50
12.5-4.5	TR-67	Tube, Leakguard Butyl	06-00762	$67.75
15/600-6	TR-20	Tube, Leakguard Butyl	06-00770	$59.75
18-5.5	TR-15	Tube, Leakguard Butyl	06-01221	$141.75
19.5/675-8	TR-15	Tube, Leakguard Butyl	06-01222	$57.75
22/800-8	TR-15	Tube, Leakguard Butyl	06-01223	$87.75
280/250-4	TR-87	Tube, Leakguard Butyl	06-00760	$16.75
29/1100-10	TR-150	Tube, Leakguard Butyl	06-01224	$166.75
500-4	TR-67	Tube, Low Temp. Natural	06-01227	$93.75
500-5	TR-67	Tube, Leakguard Butyl	06-00755	$65.80
600-6	TR-20	Tube, Leakguard Butyl	06-00754	$55.75
600-6.5	TR-67A	Tube, Low Temp Natural 90°	06-01229	$110.75
600-6.5	TR-67	Tube, Low Temp Natural	06-01230	$115.85
6.50-10	TR-25	Tube	06-00767	$58.75
650/700-8	TR-15	Tube, Leakguard Butyl	06-00766	$64.75
700/800-6	TR-20	Tube,Leakguard Butyl	06-00764	$67.75
750-10	TR-25	Tube, Leakguard Butyl	06-00768	$86.80
800-4	TR-12	Tube, Low Temp. Natural	06-00821	$187.75
850-10	TR-25	Tube, Leakguard Butyl	06-00769	$79.75
890-12.50	TR-15	Tube, Low Temp. Natural	06-01237	$169.75

AERO CLASSIC TUBES



** Can be used with Tundra Tires.*

Size	Valve	Part No.	Price
11 x 4.00 x 6	TR-87	06-00716	$15.50
10/350-4	TR-87	06-00761	$23.95
400-6	TR-87	06-00945	$16.50
200-50	TR-87	06-01368	$20.90
380/150-5	TR-67A	06-02787	$79.95
410/350-5	TR-87	06-00714	$11.50
480/400-8	TR-87	06-00720	$12.50
700/800-6	TR-87	06-00358	$37.60
800-4	TR-12	06-00821	$187.75
*850-6	TR-20	06-00765	$101.90
*850-10	TR-20	06-01236	$114.90
10.00 SC	Straight	06-02959	$109.75
27" SC	Straight	06-02955	$179.00

AZUSA 4 PLY TURF SAVER TIRE 16-650 X 8



Azusa Turf Saver Tire 16-650 x 8. 4 ply. Width: 6.4 in. OD:16.4

Tire 16-650 x 8..... P/N 06-01579...**$43.75**

Tube #7118 16-650/750 x 8.. P/N 06-01593...**$15.90**

HOMEBUILT TIRES & TUBES



These industrial tires & tube assemblies are used on a unique variety of homebuilt & ultralight aircraft airplanes. Sold as set of tire & tube only.

Dimensions	Ply	Part No.	Price
4.10 x 3.50 x 4	4 PLY	06-10830	$37.50
3.40 x 3.00 x 5	4 PLY	06-10840	$22.40
11 x 4.00 x 5	2 PLY	06-10860	$38.00
13.5 x 6.00 x 6	2 PLY	06-10870	$35.50
4.80 x 4.00 x 8	4 PLY	06-10880	$28.00
400x6 Bent Stem	--	06-00945	$16.50
400X6 Strgt. Stem	--	06-00945	$16.50
4.10 x 3.50 x 5	--	06-00714	$11.50
11 x 400x 5	2 PLY	06-00715	$23.70
11 x 400 x 5	--	06-00716	$15.50
4.80 x 4.00 x 8	--	06-00720	$12.50

2008 tire superceded by Carlisle.

11.400 X 5 TIRES & TUBES



This tire fills the size gap between the 5.00-5 aircraft tire and the 3.40-5 industrial tire. Looks like a scaled-down 5.00-5. Fits VariEze, KR's and most experimentals using 5" wheels. These tires require tubes. (tube-type). Formerly known as Lamb tires.

11.400-5 (6 Ply) Tire ..... P/N 06-02952 .....**$27.85**

11.400-5 (8 Ply) Tire ..... P/N 06-01573 .....**$29.90**

11.400-5 Tube..... P/N 15-04651 .....**$8.90**

CST SLICK NOSE TIRE & TUBE 2.80X4

This tire has a smooth tread design suitable for professional grounds crew / maintenance machines as well as a wide variety of experimental aircraft.

Tire Size	Rim Size (inch)	Ply Rating	Overall Diameter (mm/in)	Overall Width (mm/in)	Tire Pressure (kpa/psi)	Max Load (kg/lbs)	Tread Depth (mm/in)
2.80/2.50-4	4X2.15	4	224.0 / 8.8	69 / 2.70	345 / 50	134 / 295	0.00 / 0.00

Tire..... P/N 06-02809.....**$22.75**

Tube..... P/N 06-02810.....**$9.85**

TIRES & TUBES FOR ULTRALIGHTS

TIRES

Part No.	Nom. Size	W	Dia.	Price
06-00361	300 x 4	3.2"	10.0"	$38.65
06-00362	400 x 5	3.9"	10.5"	$21.60
06-00363	400 x 6	4.1"	13.0"	$21.50
06-00366	800 x 6	6.0"	16.3	$83.75

TUBES

Part No.	Size	Price
06-00761	300x4	$23.95
06-00355	3.50x5	$11.85
06-00356	600x6	$17.85
06-00358	800x6	$37.60

RIBBED / FLAT PROFILE TIRES

Ribbed/Flat Profile Tires. Price per tire. Note: These are not automotive tires, extra inflation precautions are required.

Size / Tire	Ply / Width	OD* / Innertube	Part No.	Price
11-400 X 5 / 7164	2 / 3.2"	10.5" / 7131	06-01571	$22.85
11-400 X 5 / 7046	4 / 3.9"	10.5" / 7131	06-00362	$21.60
11-400 X 5 / 7046-8	8 / 4"	10.8" / 7131	06-01573	$29.90
13-500 X 6 / 7168	2 / 4.8"	12.6" / 7133	06-01568	$27.85
410/350 x 6	4 / 4.0"	12.5 / 7039	06-00074	$18.50
13-500 X 6 / 7018	4 / 4.8"	12.6" / 7133	06-01572	$24.90
13-650 X 6 / 7031	4 / 6.0"	12.5" / 7141	06-01575	$38.80
15-600 X 6 / 7169	2 / 5.9"	14.8" / 7125	06-01576	$34.50
800 X 6 / 7007	4 / 8.0"	16.0" / 7138	06-00366	$83.75
16-650 x 8 /7024-2	2 / 6.4"	16.4" / 7118	06-01609	$43.75
16-650 X 8 / 7024-2	2 / 6.4"	16.4" / 7118	06-01579	$43.75
18-850 X 8 / 7002	4 / 8.0"	16.5" / 7120	06-01580	$58.50
18-950 X 8 / 7027	4 / 8.0"	17.4" / 7120	06-01581	$65.50
13-500 x 6 / 7018	2 / 4.8"	12.6" / 7133	06-01568	$27.85

Tubes	Part No.	Price
Tube #7133 410/350X6	06-00075	$7.95
Tube #7130 410/350 X 4	06-00773	$7.35
Tube #7132 410/350 X 5	06-00775	$8.50
Tube #7131 340/300 X 5	06-00822	$7.90
Tube #7129 280/250 X 4	06-01288	$5.65
Tube #7141 410/350X6	06-01590	$11.50
Tube #7138 800 X 6	06-01592	$21.65
Tube #7118 16-650/750 X8	06-01593	$15.90
Tube #7125 15-600 X 6	15-04869	$10.90
Tube #7116 11-600 X 5	15-06300	$12.90
Tube#7120 18-950 X 8	15-04731	$24.50
Tube #7121 480/400 X 8	7121	$10.85
Azusa Inner Tube 13-500 X 6	06-01988	$10.55

SAWTOOTH TREAD TIRES AND TUBES

Description	Part No.	Price
Tire 4.10/350 X 4 4 PLY	06-00772	$13.95
Tire 4.10/350 X 5 4 PLY	06-00774	$15.70
Tire 280/250 X 4 4PLY	06-01287	$9.95
Tire #7038 3.40 X 3.00 X 5 4 PLY	06-01655	$14.50
Tire #7039 410/350X6 4PL	06-00074	$18.50
4.10 x 3.50 x 5 Tire and Tube Kit	06-01659	$27.20
Tube #7130 410/350 X 4	06-00773	$7.35
Tube #7132 410/350 X 5	06-00775	$8.50
Tube #7129 280/250 X 4	06-01288	$5.65
Tube #7131 340/300 X 5	06-00822	$7.90
Tube #7133 410/350X6	06-00075	$7.95
Azusa Sawtooth 480/800X8 4 PLY TIRE	06-01948	$23.95
Tube #7121 480/400 X 8	7121	$10.85
Tube #7131 340/300 X 5	7131	$7.90

MASTER BRAKE CYLINDERS

BERINGER BRAKE PADS



Friction material: sintered metal. High coefficient of friction, very long life time, no fading till very high temperatures: 1100° F Includes: 2 brake pads (for 1 brake caliper), bolts and procedure

Description	Model	Part No.	Price
Pads for BERINGER standard caliper EA-006 or EA-001	ZEA01	06-01103	$58.75
Pads for BERINGER caliper EA-002N(A), EA-002E(A), EA-002.2N(A) and EA-002.2E(A)	PQT-009(A)*	06-03027	$73.75
Pads for BERINGER caliper EA-003N and EA-003.4N	PQT-010*	06-01991	$95.75

BERINGER REPAIR / OVERHAUL KITS



Repair kits are available for the following BERINGER® parts: Hand master cylinder, Rudder pedal master cylinder, 2 and 3 piston brake caliper. Includes all wear parts: pistons, seals, screws, grease, repair procedure.

Description	Part No.	Price
Repair kit for rudder pedal master cylinder HBA01: all piston seals, specific grease, ball bearings, copper seals, instructions	06-01114	$137.95
Repair kit for 2 piston caliper : piston seals, pistons, specific grease, copper washer	06-01115	$103.85

CLEVELAND MASTER BRAKE CYLINDERS



MODEL 10-35 - This model has a built-in reservoir and is used in production aircraft. Cast aluminum construction. 5/8" bore, 1.2" stroke, 0.36 cu. in. displacement. Outlet 1/8" NPT. Pin center length 8". Designed to mount on rudder pedal. Formerly Gerdes Model A-049. ..... P/N 10-35 ..... **$712.00**
Model 10-35 O-Ring Kit..... P/N 199-513 ..... **$25.55**



MODEL 10-20 - Spring-loaded piston type assembly without reservoir. Simple design assures long troublefree service. Pin center length 7-1/2". Bore 9/16". Stroke 1.25". Weight: 10 oz. Used on Pitts Special, Acro-Sport and other homebuilts. P/N 10-20 ..... **$385.00**
Model 10-20 & 10-19 O-ring kit..... P/N 06-10600 .... **$22.50**



MODEL 10-19 - Used on Pitts and other homebuilts. Similar to Model 10-20 except with ports aligned differently..... P/N 10-19 ..... **$872.00**
Model 10-20 & 10-19 O-ring kit..... P/N 06-10600 ..... **$22.50**



MODEL 10-5B - Same type construction as Model 10-20, but does not have a parking brake feature. 1/8" NPT ports, on opposite sides of cylinder, have AN823-4D fittings for use with 1/4" brake line. Pin center length 8". Wt. 9.5 oz. Bore 0.562". Stroke 1.25". Used on Piper PA25 and homebuilts. O-Ring kit is Cleveland part No. 199-502.
Master Cylinder Number 10-5B..... P/N 10-5B **$1,153.00**
Model 10-5B O-Ring kit (199-503) ..... P/N 06-00708 ..... **$45.70**
Model 10-5 O-Ring kit (199-502)..... P/N 06-10700 ..... **$46.60**
Model 10-22 ..... P/N 05-13316 ..... **$749.00**
Model 10-30 ..... P/N 05-13319 ..... **$367.00**
Model SSFA232-5 ..... P/N 05-13328 ..... **$909.00**



MODEL 10-54 - Spring-loaded piston type assembly without reservoir. Simple design assures long troublefree service. Pin center length 7.88". Bore 5/8". Stroke 1.62". Wt. .45 oz. Ports in-line, no fittings. P/N 06-01214..... **$396.00**



MASTER CYLINDER O-RING KIT

O-Ring Kit is for use with 5/8" bore cylinders in the 670, 671, 672, 673, and 674 Series. For use with MIL-H-5606 fluid only. O-Ring kit contains 1 ea of the following O-Rings : • Spruce PN: AN6227B-3 (MS28775-008) • Spruce PN: AN6227B-7 (MS28775-012). Spruce PN: AN6227B-9 (MS28775-111) • Spruce PN: AN6227B-10(MS28775-112)..... P/N 06-00805 ..... **$5.45**



CLEVELAND 199-512 MASTER CYLINDER REPAIR KIT

Elastomeric cure date required per ESP3620. This Service Kit will overhaul one 10-30, 10-30A, 10-30C, or 10-300 Master Cylinder Assembly. CM10-30 Overhaul Instructions for 10-30, 10-30A, 10-30C, & 10-300. ..... P/N 06-01130 ..... **$27.85**

VISIT OUR WEBSITE FOR MASTER CYLINDER SEAL KITS

MATCO MC-4 MASTER CYLINDER



MC-4 EXTERNAL RESERVOIR

MATCO mfg's MCMC-4 master cylinder uses a REMOTE reservoir. The MCMC-4 can be used in individual or dual brake applications. Buna-n o-rings are used in this assembly. Mil-H-5606 aircraft hydraulic fluid or compatible fluids are reccommended. DOT5 may be used but not DOT5.1 which contains glycol. DOT3 and DOT4 may not be used and will cause immediate damage to the seals. The MCMC-4 master cylinder measures 8.05 +-0.25 inches from end to end and 7.5 +-0.25 inches from mounting hole to mounting hole. A 0.625 inch diameter piston is used. Available stroke is approximately 1.388 inches and displacement is 0.43 cubic inches. The ports on all MATCO mfg master cylinders are 1/8 inch NPT (except the MC-4E). The MC-4 has an adjustable clevis.

UNIVERSAL - Vertical or horizontal mounting with exterior reservoir.
MC-4..... P/N 06-11150..... **$107.85**
MC-4A (0.50" shorter than the MC-4) ..... P/N 06-11100..... **$115.75**

MATCO MC-5 MASTER CYLINDER



MC-5 VERTICAL

MATCO mfg's MCMC-5 master cylinder uses an INTERNAL reservoir. The MCMC-5 can be used in individual or dual brake applications. Buna-n o-rings are used in this assembly. Mil-H-5606 aircraft hydraulic fluid or compatible fluids are reccommended. DOT5 may be used but not DOT5.1 which contains glycol. DOT3 and DOT4 may not be used and will cause immediate damage to the seals. The MCMC-5 master cylinder measures 8.25 inches from end to end and 7.7 inches from mounting hole to mounting hole. A 0.625 inch diameter piston is used. Available stroke is approximately 1.388 inches and displacement is 0.43 cubic inches. The ports on all MATCO mfg master cylinders are 1/8 inch NPT (except the MC-4E). The MC-5 has an adjustable clevis. The MC-5 can not be used in series with a second MC-5 or MC-5A

VERTICAL STYLE - Cylinder for vertical mounting, with steel housing and reservoir. MC-5..... P/N 06-11000..... **$115.80**
MC-5A (0.50" shorter than the MC-5) ..... P/N 06-00375..... **$121.75**



MC-7 MASTER CYLINDER - The black anodized MC-6 is designed to attach to a 1" diameter control stick and function similar to a motorcycle brake. Designed for ultralight aircraft, it is completely self-adjustable as the lining wears and draws additional fluid from the cylinder. The 6:1 mechanical leverage allows the average pilot to generate 1,500 psi in the system. P/N 06-00014..... **$188.75**

MATCO MASTER CYLINDER REBUILD KITS

Description	Part Number	Price
MC-4 Rebuild Kit	06-02998	$12.50
MC-4A Rebuild Kit	06-03003	$11.75
MC-5 Rebuild Kit	06-02999	$12.65
MC-5A Rebuild Kit	06-03002	$12.65
MCMC-7/MCMC-7s Universal Rebuild Kit	06-03001	$16.50

HEGAR MASTER CYLINDERS



5" SINGLE LEVER MASTER CYLINDER - 5" single lever, foot operated. Designed for single braking.
1/2" Bore ..... P/N 06-01277 ..... **$94.75**
5/8" Bore ..... P/N 06-01671 ..... **$89.75**

5" DUAL LEVER MASTER CYLINDER - 5" dual lever, foot operated. Designed for differential braking. Comes in your choice of 1/2", 5/8" and 3/4" bore sizes.
1/2" ..... P/N 06-01278 ..... **$177.75**
5/8" ..... P/N 06-01611 ..... **$175.75**
3/4" ..... P/N 06-01612 ..... **$175.75**

7" SINGLE LEVER MASTER CYLINDER - 7" single lever, hand operated. Designed for single braking. Comes in your choice of 1/2", and 5/8" bore sizes. P/N 06-01279 ..... **$89.75**

7" DUAL LEVER MASTER CYLINDER - 7" dual lever, hand operated. Designed for differential braking. Comes in your choice of 1/2", 5/8" and 3/4" bore sizes. P/N 06-01280 ..... **$177.75**

STANDARD MASTER CYLINDER WITH 2 INCH ROUND PEDAL



16982 STANDARD master cylinder with 2" round pedal cylinder. STANDARD master cylinder with 2" round pedal. Can be used for hand or foot operation. Comes with mounting bracket as shown. P/N 06-00328..... **$94.85**

MASTER CYLINDER PLUG



Master cylinder plug 1/8" NPT for Black Max.
P/N 06-01028..... **$0.68**

O-RING KIT FOR HEGAR BRAKES



Replacement o-ring for 6.375" or 6" brake caliper. Simply remove the piston, clean, lube and install the new o-ring for a perfect seal. Kit comes with two o-rings for one set of calipers (one aircraft). P/N 15-05062..... **$4.95**

LG

BRAKE RESERVOIRS - BRAKE BLEEDERS

CLEVELAND BRAKE LINE BLEEDER 87-5



A unique tool which simplifies the brake bleeding job. This brake line bleeder can be used to service all brake assemblies utilizing the bleeder screw assembly pictured above. P/N 06-01202 ..... **$144.75**

ACS BRAKE BLEEDER ASSEMBLY



Universal brake bleeder fitting. Fits all standard brake systems. 1/8" male NPT Seat is brass. Bleeder screw is stainless steel. P/N 11225 ..... **$12.65 Ea.**

HYDRAULIC BRAKE BLEEDER TANK

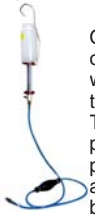


This Deluxe Brake Bleeder Tank has been completely redesigned to resist the solvent effects of most types of aviation brake fluids. The high-impact plastic reservoir and specialized seals are compatible with 5606 and Skydrol. The hand operated pressurizing pump has also been totally re-engineered to deliver more pressure with fewer strokes. Includes a Cleveland adapter and the universal adapter which will fit most brake receptacles. 12 lbs (5.5Kg) shipping weight.225DX

Economy Bleeder Tank ..... P/N 06-11413-1 ..... **$99.95**

Option Adapter for Brake Bleeder ..... P/N 06-11414 ..... **$29.90**

HOMEBUILDERS BRAKE BLEEDER



Quickly and easily bleed and flush your brakes without the aid of another person. By using a reverse flow system, combined with slow fluid flow, one person can fill an empty brake system in less than 15 minutes without having air in the brakes. This is a gravity fed brake bleeder and does not require compressed air. This system is so easy that once you start the process you can walk away; come back in 15 minutes later and the job is done. Commonly used for Cleveland & Matco brakes. Not FAA approved. P/N 06-00120 ..... **$86.75**

BRAKE BLEED VALVES FOR CLEVELAND & MCCAULEY WHEELS



The bleeder valves consist of a bleeder needle, bleeder seat, needle cap, and in some cases an O-ring. Bleeder seats are precision manufactured from stainless steel for corrosion resistance, and cadmium plated to prevent galvanic corrosion with the magnesium housing. The bleeder needle is made from strong, heat treated 17-4 stainless steel. Two kits are required per aircraft. FAA Approved.

Model	Part No.	Price
MCBB-KT-1: (1) Bleeder Seat 081-00100, (1) Bleeder Needle 079-00300, (1) Needle Cap 183-00100	05-06974	$27.55
MCBB-KT-2: (1) Bleeder Seat 081-00200, (1) Bleeder Needle 079-00300, (1) Needle Cap 183-00100, (1) O-Ring MS28775-012	05-06975	$34.60
MCBB-KT-3: (1) Bleeder Seat 081-00500, (1) Bleeder Needle 079-00300, (1) Needle Cap 183-00100, (1) O-Ring MS28775-011	05-06976	$39.60
MCBB-KT-4: (1) Bleeder Seat 081-00600, (1) Bleeder Needle 079-00300, (1) Needle Cap 183-00100, (1) O-Ring NAS1612-4A	05-06977	$55.80
MCBB-KT-5: (1) Bleeder Seat 081-30169, (1) Bleeder Needle 079-00300, (1) Needle Cap 183-00100, (1) O-Ring MS28775-011	05-06978	$76.85

BLEEDER SCREW PLUG



Steel set screw with nylon flat point 1/4-28x3/8" Bleeder screw plug. P/N 06-01674 ..... **$1.88**

90 DEG COMPRESSION FITTING



90° Compression fitting 1/8" NPT x 1/8" Tube.
P/N 06-01673 ..... **$19.95**

ACS MODEL A-315 RESERVOIR



Machined from 6061-T6 billet and anodized for improved corrosion resistance. Available with choice of filler port location for firewall or floor mounting. Capacity 5 oz. Size: 2-1/4" dia. x 2-1/2" long. Wt: 7oz. Specify style.

P/N A-315 (firewall mounting) **$45.85**
P/N A-315-1 (floor mounting) **$43.50**

ACS MODEL A-600 RESERVOIR



Machined from 6061T6 billet. Cap is threaded into body and sealed with a Viton o-ring for easy filling and cleaning. Cap and body have 1/8" female threads. 1-3/8" dia. x 2-3/8" high. Capacity 1.8 oz. Can be threaded directly into master cylinder port. Two units required on most installations (one per master cylinder). Supplied with vented plug in cap and 1/8" NPT male fitting in body. P/N 06-00391 ..... **$25.95 ea.**

ACS MODEL A-650 RESERVOIR



Machined from 6061T6 billet and anodized for improved corrosion resistance. Attaching bracket is included for firewall or other installation. Extra capacity of 70 ml. Supplied with vented plug in cap and outlet has a female 1/8 NPT thread."
P/N 06-01480 ..... **$39.65**

BEECHCRAFT STYLE BRAKE RESERVOIR



12oz & 8oz Available in Silver or White.

Silver 8 oz ..... P/N 05-07194 ..... **$103.75**
White 8 oz ..... P/N 05-07196 ..... **$104.75**
White 12 oz ..... P/N 05-07118 ..... **$103.75**

PETRO BRAKE BLEEDER



Clean and test carburetors and more. Bleed power steering systems. Bleed aircraft brakes. Pressure test fuel systems to 100 psi. Reverse, pressure, and vacuum bleed. Test automatic transmissions. Test pressure and vacuum sensors. Patented. Use for all petroleum fluids. *NOT for automotive brake fluid*** ..... P/N 12-03214 .. **$179.99**

MATCO BRAKE BLEEDER VALVE ASSEMBLY



Matco brake bleeder valve assembly MSCBBS(S) S. Latest generation bleeder assembly provides a seal and wrenching feature for either US or metric sizes. ..... P/N 06-02801 .... **$17.70**

MATCO BRAKE FLUID RESERVOIR



This brake fluid reservoir from Matco features a clear plastic bowl for easy inspection of reservoir fluid. Furnished with pre-drilled aluminum flange for easy mounting.Small and compact, this reservoir mounts almost anywhere. Temperature limit is 250°F Reservoir only
P/N 06-11225 ..... **$33.50**

Reservoir Kit (includes reservoir, tubing, & fittings for installation)
P/N 06-11230 ..... **$52.75**

MATCO MCR-100A AEROBATIC REMOTE RESEVOIR



This Remote Reservoir is designed for both aerobatic or nonaerobatic flight and includes mount bracket, cap,check valve, and bowl. Reservoir has approximately 2 oz. volume and has valve incorporated for checked flow to the vent when inverted or negative g's. Reservoir includes 1/8 NPT adapter fitting and seal for connection to poly bowl and easy open top. ..... P/N 06-01662 .... **$57.80**

GROVE BRAKE FLUID RESERVOIRS



067-050 - Grove remote reservoirs are quality machined from 6061 billet. Top is held in place with a snap ring with O-ring seal. Supplied with vented 1/8" NPT cap plug. Anodized for corrosion resistance. Normal installation requires two (one for each master cylinder). Supplied with 1/8" NPT Fitting. Attaches directly to the master cylinder. Holds 1.10 fluid ounces. 1.98" High. 1.38" Dia. 1.5 oz
P/N 06-00818 ..... **$44.95**



067-067 - Grove remote reservoirs are quality machined from 6061 billet. Top is held in place with a snap ring with O-ring seal. Supplied with vented 1/8" NPT cap plug. Anodized for corrosion resistance. Attaches to firewall or other remote location with integral 10-32 tapped holes. 1/8" Female NPT thread at side of reservoir and hold 3.25 fluid ounces. 2.63" High. 2.00" Dia. 3.3 oz
P/N 06-01744 ..... **$59.85**



067-054 - Grove remote reservoirs are quality machined from 6061 billet. Top is held in place with a snap ring with O-ring seal. Supplied with vented 1/8" NPT cap plug. Anodized for corrosion resistance. Attaches to firewall or other remote location. Adequate capacity to serve both master cylinders. 1/8" Female NPT thread at bottom of reservoir and hold 3.6 fluid ounces. 2.75" High. 1.75" Dia. 3.6 oz
P/N 06-00819 ..... **$54.75**



067-065 - Grove remote reservoirs are quality machined from 6061 billet. Top is held in place with a snap ring with O-ring seal. Supplied with vented 1/8" NPT cap plug. Anodized for corrosion resistance. Attaches to firewall or other remote location with integral 10-32 tapped holes. 1/8" Female NPT thread at bottom of reservoir and hold 3.38 fluid ounces. 2.75" High. 2.00" Dia. 3.3 oz. P/N 06-01743 ..... **$59.75**

BERINGER PARKING BRAKE VALVE



Lightweight parking brake valve, aluminum anodized, fully CNC machined, for dual brake installations. Available for mineral-based fluid type MIL-H-5606 or DOT4 brake fluid.
Complete with fittings, Wt. 6oz
Max. operating pressure: 1450 PSI
Features: • Lightweight parking brake valve, Aluminum anodized. • Available for mineral-based fluid like MIL-5606 or synthetic DOT4 fluid. • Machined from billet on CNC. • Max. input pressure: 1450 PSI

Description	Part No.	Price
Beringer parking brake valve for DOT4 brake fluid, dash-3 fittings (3/8X24), red anodizing color.	06-01107	$315.00
Beringer parking brake valve for mineral-based fluid MIL-H-5606, dash-4 fittings (7/16x20), blue anodizing color.	06-01108	$316.00

LG

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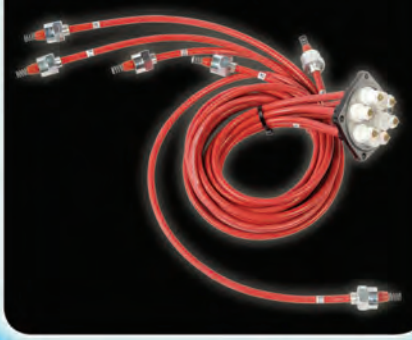
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* Based on actual sidewall indications for skid depth of 15.00 x 6-6 6 ply tire size (required by FAA regulations) comparing a MICHELIN Pilot bias tire and a Goodyear Flight Custom III bias tire. Comparison made in May, 2018. | Copyright © 2018 Michelin North America, Inc. All rights reserved. The Michelin Man is a registered trademark owned by Michelin North America, Inc.

SKYBOLT

AEROSPACE FASTENERS

SK2003-42 A





SK40S5(X)

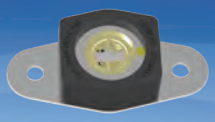
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CCA-2475 Rotax Assy



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CCA-1400 CCA-1700

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CCB-38000 CCA-38001 CCB-36000 CCB-33000

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AEROSHELL 41 MIL-PRF-5606H HYDRAULIC FLUID

Mineral oil based "super clean" hydraulic fluid for use with brake and hydraulic systems with synthetic rubber seals. Meets specifications MIL-PRF-5606H. Colored red. Note: Containers are cans and are non-resealable. For reduced pricing on large volume orders, please contact sales.

Quart ..... P/N 09-27000-QT **$7.75**
Case of 24 Quarts. ... P/N 09-27000-1 ..... **$182.75**
Gallon ..... P/N 09-27100 ..... **$29.50**
Case of 6 Gallons ..... P/N 09-27100-2 ..... **$172.85**
55 Gallon ..... P/N 09-27100-55 ... **$1,679.00**



AEROSHELL 41 HYDRAULIC FLUID MIL-H-5606A

MIL-H-5606A Mineral oil based hydraulic fluid for use with brake and hydraulic systems with synthetic rubber seals. Colored red.

Pint with screw cap ..... P/N 09-27110 ..... **$4.85**
Quart with screw cap ..... P/N 09-27000 ..... **$8.75**
Gallon with screw cap ..... P/N 08-12396 ..... **$29.50**



AEROSHELL 31 MIL-PRF-83282D HYDRAULIC FLUID

A synthetic hydrocarbon hydraulic fluid with greatly improved fire resistance characteristics when compared with conventional petroleum products. Specially developed base stock that provides a relatively high flash point, excellent low temperature properties, and good oxidation and thermal stability. In addition, additives are incorporated to further enhance stability and lubricity.

Gallon ..... P/N 08-14635-1 .. **$33.50**
Case of 6 Gallons .. P/N 08-14635 ... **$199.85**



AEROSHELL FLUID 4

Mineral oil based hydraulic fluid containing an oxidation inhibitor and a non-zinc anti-wear additive. It is dyed red for identification and leak detection purposes. It may be used in aviation and industrial hydraulic systems where synthetic rubber seals are in use. It is not recommended for systems using natural rubber seals.

Case of 6 Gallons ..... P/N 08-12396-1 ..... **$176.80**
55 Gallon Drum ..... P/N 08-12396-55 ..... **$1,523.00**



PHILLIPS 66 X/C MIL-PRF-5606H HYDRAULIC FLUID

A mineral-based hydraulic oil with low temperature characteristics capable of operating over a wide range of temperatures. Can be used in both aviation and non-aviation systems with synthetic rubber components, but should not be used in systems that incorporate natural rubber.

Quart ..... P/N 09-00774 ..... **$5.75**
Case of 24 Quarts ..... P/N 09-00773 ..... **$149.75**
Gallon ..... P/N 08-13851-1 ..... **$27.50**
Case of 6 Gallons ..... p/N 08-13851 ..... **$151.75**
55 Gallon Drum ..... P/N 08-13852 ..... **$1,306.00**

ANDEROL ROYCO 756 HYDRAULIC FLUID



MIL-PRF-5606H - ROYCO 756 is a red-dyed, mineral oil based hydraulic fluid developed for the severe duty demands of aerospace and industrial service. USES: ROYCO 756 is designed for use in aircraft, missiles, auto pilots, shock absorbers, cherry pickers, boom trucks, robotics, and auto wreckers requiring all - weather performance. ROYCO 756 can be used in unpressurized systems operating at temperature ranges from -54 to 90 C (-65 to 195 F) and in pressurized systems from -54 to 135 C (-65 to 275 F) at pressures up to 3000 p.s.i.

Size	Part No.	Price	Size	Part No.	Price
Quart	08-12080-1	**$14.25**	Case of Quarts	08-12080	**$314.00**
Gallon	08-12119-1	**$45.75**	Case of Gallons	08-12119	**$264.00**
5 Gallon	08-12121	**$259.00**	55 Gal.	08-15970	**$2,856.00**



DOT4 BRAKE FLUID

The racing grade has a minimum boiling point of 600°F which assures fade-free operation under the most severe use. • Exceeds current SAE J1703, J1S K2233 and U.S. and FMVSS116 DOT 3 & 4 specifications. • Recommended for all U.S., U.K., Japanese and European motor cycles. • Anti-vapor lock formula • Mixes with other DOT 3 and DOT 4 brake fluids ..... P/N 06-01497 ..... **$7.85**



SKYDROL LOW DENSITY HYDRAULIC FLUID LD-4

Skydrol LD-4 features low density, excellent thermal stability, valve erosion prevention, and deposit control.

Quart ..... P/N 08-12239 ..... **$36.25**
Gallon ..... P/N 08-12241 ..... **$131.95**
5 Gallon ..... P/N 08-12240 ..... **$575.00**



SKYDROL FIRE RESISTANT HYDRAULIC FLUID

500B-4 is the most worker friendly of the aviation phosphate esters; it is least irritating to skin and less prone to form mists.

Quart ..... P/N 08-12463 ..... **$39.50**



SKYDROL TYPE V HYDRAULIC FLUID

Skydrol 5 offers higher temperature capability than Type IV fluids, the lowest density, and better paint compatibility.

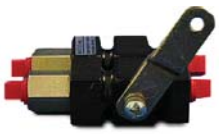
Quart ..... P/N 08-12242 ..... **$41.25**

SKYDROL HYDRAULIC ANALYSIS KIT



Skydrol Hydraulic Test Kit. Testing includes chlorine content, elemental contamination, Karl Fisher water, specific gravity, total acid number, viscosity, particle count, and wear metals. P/N 08-13479 ..... **$336.00**

MATCO PARKING BRAKE VALVE



Ideal for installation in a wide variety of home-built aircraft applications. The arm actuates the valve in approximately a 45 degree arc allowing for ease of installation. In-line installation can be used in conjunction with either a single or dual parking brake system setup. Body is made from 6061 anodized aluminum for lasting durability. P/N 06-17200 ..... **$139.95**



MATCO SINGLE SIDED PARKING BRAKE VALVE

Light weight, and easy in-line installation The overall dimensions of this product are a slim 2.3" X 0.75" X 0.75".

P/N 06-01267 .... **$114.75**

SCOTT TYPE PARKING 4500-A1 BRAKE VALVES



A fine quality valve for applications in parking brake systems, helicopter rotor braking systems, pneumatic pressure controls and other hydraulic uses. Molded rubber valve seat designed for use with MIL-H-5606BB petroleum base hydraulic fluid. Maximum working pressure. Mounting holes extend through entire body. 1/8" NPT ports. Valve assembly for Piper and Stinson. Visit our website for a complete application guide.

Model No.	Port A / Port B	Part No.	Price
4500-A1	1/8 ANPT	06-00393	**$365.00**
4500S-A1	7/16-20 NF	06-00949	**$376.00**

MANUAL PARKING BRAKE VALVE



Miniature inline hydraulic manually operated ball valve. Fits in the bottom of the Master cylinder. Just pull the brake handle and hold the pressure and turn the lever on the ball valve. Let go of the handle and the ball valve holds the pressure until you release the lever back. 1/8"NPT Female x 1/8"NPT Male Chrome Plated Brass Valve 1.7" overall length.

P/N 06-00971 ..... **$19.70**

CLEVELAND PARKING BRAKE VALVE



Aluminum valve as used in production aircraft with Model A-110 master cylinders for dual brake installations. Complete w/AN flare fittings. P/N 60-5 ..... **$615.00**

GROVE INLINE PARKING BRAKE VALVE



06-01261

Innovative design allows control lever to be attached in any of four positions as well as on either side of valve body. Internal poppet valves insure easy, secure operation. Body is drilled for mounting with two 3/16" bolts. Valve body dimensions: 1.5"x2.0"x0.75". Control arm has 45° of travel. Max operating pressure: 1,200 psi. For use with MIL-H-5606 Hydraulic Fluid. Weight: 0.32 lbs. Side or top inlet ports: 1/8"NPT * Outlet ports: 1/8" Female NPT or -4 Flare.

Part No.	Inlet	Outlet	Price
06-01260	Top	1/8" NPT	**$239.95**
06-01261	Side	1/8" NPT	**$239.95**
06-01262	Top	-4 Flare	**$239.95**
06-01263	Side	-4 Flare	**$239.95**

AEROSHELL LANDING GEAR FLUID

AeroShell Landing Gear Fluid (LGF) is a mineral hydraulic fluids to which additional additives have been added to improve the extreme pressure characteristics and the fluid's natural lubricity. When severe conditions exist (landing/touchdown), the extreme pressure additive supplies the load carrying needed at the metal-to-metal surfaces to prevent the occurrence of such phenomena as "ladder cracking" and "slip stiction" of the piston component of the landing gear.

P/N 08-13277 ..... **$142.75**

LG

HOMEBUILDERS MAIN GEAR AXLES
ACS AXLES - BOLT-ON TYPE



500X5 AXLE - Machined from 2024T3 aluminum. Gold anodized per specification MIL-A-8625C, Type II for improved corrosion resistance. Length 5-3/4". Mounting bolt pattern is four equally spaced 1/4" dia. holes on 1-15/16" dia. bolt circle. Thread size: 1-1/4 x 16.
P/N 11701 ..... **$45.60 Ea.**

500X5 AXLE - For 199-152 heavy duty discs (as used in Cozy). Same as #11701 axles above except 6" long and without undercut between bearings. P/N 11701-2 ..... **$44.75**

SPACERS FOR 500 X 5 AXLE - 2 required per axle when used with Cleveland wheels. Not required on 600x6 size.
P/N 11716 ..... **$7.50 Ea.**

EXTRA WIDE SPACER FOR 500X5 AXLE - 7/16" wide as used on 199-152 heavy duty discs. 1 required per axle with P/N 11716 (Use Axle # 11701-2) P/N 11716-2 ..... **$7.95 Ea.**

600X6 AXLE - Similar to 500 x 5 size but 1-1/2" dia. x 6-1/4" long. Two 5/16" dia. and two 3/8" dia. mounting holes on 2-1/4" dia. bolt circle. Thread size: 1-1/2 x 16. P/N 11702 ..... **$68.95 Ea.**

ACS AXLES - WELD-ON TYPE

500 X 5 AXLE - For use on welded type gear. Fabricated from 1-1/4" O.D. x .120 wall 4130N steel tubing. Precision ground for proper bearing fit. One end threaded 1-1/4 x 12 for round axle nut. 12" long.
P/N 11703-1 ..... **$36.75 Ea.**

600 X 6 AXLE - For use on welded type gear. Fabricated from 1-1/2" O.D. x .120 wall 4130N steel tubing. Precision ground for proper bearing fit. One end threaded 1-1/2 x 16 for round axle nut. 12" long.
P/N 11704-1 ..... **$37.95 Ea.**



P/N 06-11800 / 06-11900

AXLE NUTS

Castle type nuts manufactured to MIL Specification MS21025 using 4140 steel. Mild steel nuts are not acceptable for use on certificated aircraft. 1-1/4" dia. nuts for 500 x 5 axles, 1-1/2" dia. nuts for 600 x 6 axles.

Nut Type		Thread	Axle Type	Part No.	Price
Matco	Castle	5/8-18	Matco	06-11815	$2.91
---	Castle	1-1/4-16	Cessna	06-11800	$11.75
---	Castle	1-1/2-16	Cessna	06-11900	$12.90
ACS	Round	1-1/4-12	Piper	11725	$18.70
ACS	Round	1-1/2-16	Piper	11726	$18.70
Grove	Round	1-1/4-12	Piper	06-00937	$28.50



HOMEBUILDERS AXLE NUTS

These 1-1/4" - 16 Castle axle nuts are similar in size & design to pn 06-11800 and are for homebuilts only. Used on Cozy and many other designs
PN 01-00814 ..... **$9.50**



GROVE AXLES

For 500X5 Wheels w/Wheel Pant Stub - • Diameter: 1.25" • Material: Solid 2024-T3 aluminum w/anodized finish • Hole Pattern: 1-15/16" bolt circle; 1/4"dia. holes. Requires (2) P/N5710 spacers per axle.
P/N 06-00601 ..... **$71.75**



For 600X6 Wheels w/Wheel Pant Stub - • Diameter: 1.5" • Material: Solid 2024-T3 aluminum w/anodized finish • Hole Pattern: 2.25" bolt circle; (2) 2-15/16" dia. bolt holes & (2) 2-3/8" dia. bolt holes.
P/N 06-00602..... **$96.85**



GROVE AXLE SPACER 5712

I.D.: 1.25", O.D.: 1.438", Thickness: 0.360", Used with 5015 axle, 1 (one) required per axle.
P/N 06-01504 ..... **$7.50**

GROVE AXLE SPACER 5710

I.D: 1-1/4" • O.D. 1-3/4", Thickness: 1/4", Used with 500x5 axle, 2 required per axle. P/N 06-00852 ..... **$7.50**



GROVE ALUMINUM WHEEL PANT AXLE NUTS

Model	Axle	Thread	PN	Price
5512	500x5	1-1/4x16	06-01677	$35.95
5513	600x6	1-1/2x16	06-01678	$41.95
--	400x4	3/4x16	06-01742	$30.75



CESSNA MAIN GEAR AXLE

For use on flat spring landing gear, Cessna models 180, 182, 185 and 206. It is highly recommended to replace aluminum axles with these much stronger steel axles when operating on rough conditions, with larger wheels or on skis. FAA-PMA approved.
Steel ..... P/N 05-00481 ..... **$379.00**
Titanium ..... P/N 05-12478 ..... **$1,258.00**

AXLE WITH WOODRUFF KEY

Axle 5/8" x 8" with Woodruff Key (Cotter Pin hole).
P/N 06-01004 ..... **$34.95**

TAPER SHIMS

For wheel alignment. Ideal setting is zero toe-in and zero camber at normal operating weight. Shims may be rotated to any one of four positions to obtain desired result.



0441157-1

Axle Size	Shim Part No.	Approx. correction value Camber	Toe-In	Price Each
500x5	0441157-1	1/2°	0.06"	$125.80
	0441157-3	1°	0.12"	$229.85
	0441157-2	2°	0.006"	$386.00
600x6	0441139-5	1/2°	0.12"	$118.75
	0441139-6	1°	0.20-0.25"	$99.75
	0541111-2	2-1/2°	0.10-0.25"	$252.95



COZY LANDING GEAR STUD

A custom fabricated 4140 steel heat treated shaft with rolled 1/2-20 threads on both ends Used a gear attachment on Cozy Mark IV. 10.75"L. 2 required.
P/N 01-00254 ..... **$46.50**



GROVE HOMEBUILT AIRCRAFT LANDING GEAR

These custom landing gear are fabricated from aircraft grade 2024T3 aluminum. After cutting and milling, they are annealed to "O" condition for bending, and then heat-treated to "T6" condition for exceptional strength and durability. Top quality landing gear at exceptional pricing.

Aircraft Type	Part No.	Price
KITFOX - Mod 3&4 TD	06-04025	$1,995.00
PITTS - S1	06-03915	$1,630.00
S1-11B SuperStinker	06-04035	$1,939.00
Baby Lakes	06-04070	$1,419.00
VP1 - 1100B Free Standing No Cables	06-04040	$1,399.00
Zenair CH701	06-00058	$1,379.00

NOTE:Request landing gear layout sheet when placing order or quotation Request for custom landing gear to verify correct gear for application.

NOTE:
ALL GROVE AIRCRAFT LANDING GEAR IS NON-CANCELLABLE / NON-RETURNABLE.

Prices Subject to Change Without Notice

SHOCK CORDS - RINGS



MIL FRESH SHOCK RINGS

An endless elastic ring composed of multiple strands of natural rubber, wound into a circular skein. Braided cover is high grade yarn. Manufactured to meet specification MIL-C-5651B, Type II. Shock cord is used in landing gear to reduce shock transmitted to fuselage while landing and taxiing and on other shock mounting applications. Color coded to insure fresh stock.

Ring No.	Ring Size* (In.)	Test (Lb.)	Aircraft	# Req.	Part No.	Price Ea.
9044	9/16x4-1/2	400	Hatz Bi-Plane	4	9044	$28.50
9090	9/16x9	425	Taylorcraft B	4	9090	$29.75
9010HD	9/16x10	475	Taylorcraft BC	4	06-00829	$25.90
9010HDX	9/16" X 10"		Taylorcraft F-19/F-21	4	06-01132	$33.85
1080	5/8x8	750	Stolp Starduster,Rans S4/5	4	1080	$31.50
1080HD	5/8x8	900	PA-16, PA-18	4	06-00823	$31.65
			PA-20, PA-22, PA-25	4		
1174	11/16x7-1/2	730	Piper J-2, Early J-3, J-5	4	06-00756	$39.70
1192	11/16x9-1/4	750	Taylorcraft D	4	1192	$58.75
11104	11/16x10-1/2	750	Taylorcraft L-2	4	11104	$62.80
1280	3/4x8	750	Stolp Starduster Too	4	1280	$39.50
1280-HD	3/4x8	950	Piper J-3 (S/N8277 up),	4	06-00826	$28.50
			PA-11, PA-12, PA-14	4		
			PA-18 (thru S/N18-3013)Rans	4		
			S10 Acrosport, Pitts S-2			
8097	1/2 x 9-7/8	400	PA-24, PA-30	2	8097	$22.50
1286	3/4x8-3/4	750	Aeronca (S/N330 up)	4	1286	$41.60
1286HD	3/4x8-3/4	950	Skybolt	6	06-00827	$77.75
1380	13/16x8	1160	PA-20 (before 1952) Pitts (S-1, S-1C, S-1S) Husky,Acrosport 2, Rans S9	2 4	1380	$32.75
1380HD	13/16 x 8	1460	Rans 57	1	06-00828	$81.75

1st dimension is cross section; 2nd dimension is inside dia. of ring.
HD - Heavy Duty, higher test rings. ***6 Rings for J-5. HDX - Extra Heavy Duty.
See our website for application chart on Shock Rings.

CW (Cold Weather) shock rings available on Special Order basis. Prices are approx. twice that of standard shock rings. Add "-CW" to standard part number when ordering.

SHOCK CORD

MIL-C-5651D TYPE I SHOCK CORD: This cord has a double cover of glazed cotton over natural cotton. It has 3 markers: 2 for the year and 1 for the quarter.

The certifiable cord sizes of Type I are: 1/4", 3/8", 1/2", 5/8"

TYPE 1

Dia. (In.)	Part No.	Price/Ft. Less Than 100 Ft.	100 Ft.	Dia. (In.)	Part No.	Price/Ft. Less Than 100 Ft.	100 Ft
1/8	06-12100	$0.33	$29.70	1/2	06-12500	$2.20	$198.00
1/4	06-12200	$0.73	$65.70	5/8	06-12600	$4.95	$445.50
5/16	06-12300	$0.79	$71.10				
3/8	06-12400	$1.40	$126.00				



SHOCK CORD FASTENERS

These cone spring hooks and locking rings are used as terminal fasteners. Insert cord through small end of cone. Apply and crimp locking ring about 1/2" from end of cord, pull cord back until locking ring contacts inside of fastener. Cut ends of cord may be sealed by dipping in rubber cement. Set includes cord and locking ring.

Shock Cord Size	Fastener P/N	Price/Set
1/4"	06-12800	$0.90
3/8"	06-12900	$1.32
1/2"	06-13000	$2.35



SHOCK CORD INSTALLATION TOOL

This handy new tool installs standard shock rings on most aircraft without the great effort required in the past. This tool is designed for use with the shock cords shown above. Our price is the best anywhere.

P/N 06-16600 ..... **$279.95**

BOGERT AVIATION PA-24/30 BUNGEE TOOL



• Lower damage risk with the right tool • Complete control of bungee shock cords coming off • Complete control of bungee shock cords going on. • E-Z instructions with detailed drawings • Safe landings depend on new cords every few years. Comanche Owners: 30 minutes to change bungees. P/N 06-00419 ..... **$138.75**

BOGERT AVIATION COMANCHE GEAR RETRACTION TOOLS

Retract landing gear using only retraction tool & torque wrench.

Straight - Fits: PA-24, SN 24-1 through 24-4782 & 24-4784 through 24-4803 P/N 12-02095 ..... **$89.80**

Angled - Fits: All PA-30's, PA24, Serial number 24-4783, 24-4804 & up P/N 12-02094 ... **$133.75**



SHOCK ABSORBER COIL RINGS

High pressure springs fabricated from alloy steel for top performance and long spring life. The Claude Gray shock absorber design has been service-proven on the EAA Biplane, Miniplane, Pitts and others. Over 1,000 pair in use. Length 6", 2" O.D., 1" I.D.. Wt. 4-1/2 lbs. per pair. Spring deflection 0.7" per 1,000 lb. force. Set of two springs. ..... P/N 06-13200 ..... **$119.90**

Discount 10% on 6, 15% on 12



GRANVILLE'S STRUT SEAL

Landing gear strut packing seals shrink due to fluctuating weather conditions and age. This specially engineered hydraulic chemical additive leaves a protective coating on the strut shaft and allows the seal to expand to its normal size. It will stop strut leaks and is an excellent lubricant and corrosion preventative. Application is fast and easy - any owner or pilot can do the job in minutes. FAA approved.

Single-Strut Kit ..... P/N 06-13300 ..... **$42.70**
3-Strut Kit (Single Engine)..... P/N 06-13400 ..... **$75.50**
3-Strut Kit (Medium Twins)..... P/N 06-13500 ..... **$91.85**
Large Twin kit (16 oz0..... P/N 06-00110 ..... **$115.75**
Granville Strut Additive (Pt.)..... P/N 06-00111 ..... **$98.75**
Granville Strut Additive (Quart) ..... P/N 06-03048 ..... **$144.06**
Granville Strut Additive (1/2 Gallon) ..... P/N 06-03049 ..... **$272.50**
Granville Strut Additive (Gallon) ..... P/N 06-03050 ..... **$493.20**

STRUT REBUILD KITS

FOR CESSNA NOSE STRUTS

For Cessna models 150, 152, 172, 175, 182, R182, 205, 206, 210, T210, P210, 310-310Q, 320, 336, & 337. Includes 5 O-Rings, 2 Back-Up Rings, Scraper Ring,. ..... P/N 06-03960 ..... **$16.75**

FOR PIPER NOSE STRUTS

For Piper PA28-140, 150, 151, 160, 161, 180, 181, & 235, PA32-260 & 300. Includes O-Rings, Back-Up Ring, Seal, Wiper & Aluminum Gasket. ..... P/N 06-03965 ..... **$16.85**

For Piper PA28R & PA32R series retractable nose struts. Includes Seals, O-Rings & Gasket. ..... P/N 06-03970 ..... **$19.75**

FOR PIPER MAIN STRUTS

For Piper PA28-140, 150, 151, 160, 161, 180, 181 & 235, PA32-260 & 300. Includes O-Rings, Scraper, Seal & Aluminum Gasket. P/N 06-03975 ..... **$22.95**

For Piper PA28R & PA32R series retractable main struts, Includes Seals, O-Rings & Gasket. ..... P/N 06-03980 ..... **$16.50**

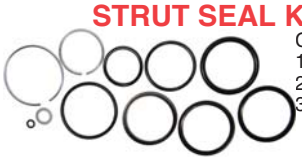


STRUT SEAL KITS FOR PIPER

Kits contain Mil-Spec & Industry Standard Seals and Components required for various Piper Strut application

Seal kit for nose or main strut for Piper Apache/ Aztec ..... P/N 06-00126 ..... **$15.50**
Strut seal kit for Piper PA-24 main gear ..... P/N 06-00127 ..... **$13.85**
Strut seal kit for Piper PA24 nose gear..... P/N 06-00128 ..... **$15.95**
Strut seal kit for Piper PA30 main gear..... P/N 06-00129 ..... **$15.95**
Strut seal kit for Piper PA30 nose gear..... P/N 06-00130 ..... **$15.95**
Main Strut seal kit for Piper PA28 140, 150, 151, 160, 161, 180, 181, 235, & PA32-260, 300 ..... P/N 06-03975 ..... **$22.95**
Nose strut seal kit for PA28-140, 150, 151, 160, 161,180, 181, 235, & PA32-260, 300 ..... P/N 06-03965 ..... **$16.85**
Main strut seal kit for PA28R & PA32R-300, 301, 301T, & PA32RT-300, 300T ..... P/N 06-03980 ..... **$16.50**
Nose strut seal kit for PA28R & PA32R-300, 301, 301T, & PA32RT-300..... P/N 06-03970 ..... **$19.75**
Nose strut seal kit for PA PA22 Series ..... P/N 06-01370 ..... **$15.95**
Piper PA34 Strut Seal Kit for main or nose for Seneca I, Seneca II & Seminole 180/180T ..... P/N 05-03603 ..... **$14.85**

STRUT SEAL KITS FOR CESSNA



Cessna Nose Strut Seal Kit Fits: 150, 152, 172, 172RG, 175, 182, R182, 205, 206, 210, P210, T210, 310 - 3500 thru 310Q thru 1160, 320, 336, and 337.

P/N 04-03468 ..... **$17.50**

STRUT SEAL KITS FOR BEECHCRAFT

Main strut seal kit for Beechcraft, fits B-33, F-33, V-35B, & 36, A36, G-36, A36TC, B36TC (s/n A0001 thru A9999 & E0001 thru E9999)



P/N 06-02802 ..... **$41.85**

Nose Strut Seal Kit for Beechcraft... P/N 06-02803 ..... **$42.50**

NOTE: These kits may fit other models. It DOES NOT fit earlier model Bonanza & Debonair.

Main Strut Seal Kit. Kit contains Mil-Spec & Industry Standard Seals and Components required for Beech 55 Strut application.

P/N 05-12280 ..... **$33.50**

LG

RUDDER PEDALS



ACS RUDDER PEDALS

Professionally made black powder coated aluminum pedals as used in production aircraft. Approved by Rutan Aircraft Factory for use on the Defiant. 5"W x 6"L. Wt. 3/4 lb. ea.

P/N 06-00392 ..... **$69.85 Pr.**

Discount Less 10% on 6 Pr., 15% on 12 Pr., 20% on 20 Pr.

ACS RUDDER PEDAL/ TOE BRAKE ASS'Y



For use with any standard master brake cylinders. 2-piece design. Completely finished, assembled, ready for installation. Wt. 2 lbs. each. P/N 11350 **Set of 2 $97.75**

Discount Less 10% on 6 Pr.
15% on 12 Pr., 20% on 20 Pr.



AZUSA STEEL PEDAL SET

This rugged pedal set (left & right) features built-in stops, (4) 1/4" pre-drilled holes to allow adjustable rod connections and a 5/16"-18 x 1-3/4" long mounting bolt. Wt 7oz. ea. length 6.5' P/N 06-00107 ..... **$12.50 /set**

LG

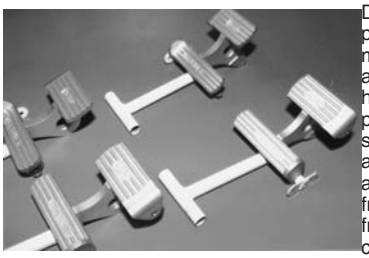
RUDDER PEDAL RETURN SPRINGS



4-1/2" Long.

P/N 01-27300 ..... **$5.35 ea.**

DELUXE HOMEBUILDERS / RUDDER PEDAL KITS



Designed for single or two place tandem seating experimental aircraft. The pedals are aluminum castings and the hinge bracket and pedal pivot pin are constructed from 4130 steel tubing. The pedals have an attachment point (1/4" hole) at the top to link the toe brake from the rear cockpit to the front cockpit only 2 master cylinders required). To mount the pedals the builder will need 2 steel bushings 3/4" long to weld through the fuselage and a tube to put through the bushings and the bottom tube of the hinge bracket. Will work well in almost any homebuilt aircraft.

Single Place Kit..... P/N 06-17015..... **$323.00**
Two Place Tandem Kit..... P/N 06-17025..... **$399.00**

RUDDER ARMS



SCOTT TYPE - Cast aluminum brackets with reinforced chain mounting holes. Originally used on Piper J-3, J-4, J-5, PA-11, PA-18, L-21B. 3/4"dia. post between mounting holes.

P/N 1140..... **$169.75**

HOMEBUILDERS MODEL - Same style as Scott model. 3/4" dia. post and 3/4" arm (width)

P/N 06-15900..... **$39.99**

RUDDER ARM 1" SHANK - Originally designed for J-3 through PA-18 series, but adapts nicely to most homebuilts. Code 1

PN 06-01045..... **$43.99**



SCOTT TYPE TAILWHEEL ARM ASSEMBLY

FAA/PMA approved; for the Scott 3250 8-inch tailwheel assembly

P/N 3214T..... **$334.00**

CESSNA RUDDER PEDAL EXTENSIONS



P/N 06-00838 ***P/N 06-00839*** ***P/N 06-00641***

The Saircorp/Flight Boss Ltd S-RPE Series Rudder Pedal Extensions fit most high wing Cessna aircraft from 1953 to 2008. Refer to Application Chart or AML for proper selection by visiting our website.

These are constructed from high quality cast aluminum, have a durable Powder Coat finish and use Stainless Steel fasteners. They are strong, durable and built to last.

Installation and removal is quick and easy, the extensions lock in place over your existing rudder pedals giving you that extra needed reach. Your existing rudder pedals do not need to be removed or altered for installation or removal of the extensions.

No more struggling or submarining to get that extra needed rudder deflection. Even "robust" and taller pilots can benefit from the S-RPE Series Rudder Pedal Extensions, they allow you to set back and get the yoke out of your chest. They can be installed and used right seat, left seat or both.

EXT S-RPE-C - fits most 1960's to 1980's ..... P/N 06-00838.... **$732.00**
EXT S-RPE-CN - fits most 1980's to 2000 and up P/N 06-00839.... **$750.00**
EXT S-RPE-CO - fits most 1950's to 1960's .. P/N 06-00841.... **$732.00**

UNIVERSAL AIRCRAFT HEEL PLATES



These Universal Heel Plates can be installed in any aircraft without fasteners or hardware. Velcro secures them to the floor or carpeting. The Heel Plates are available in 22 gauge stainless steel and are furnished with a clear finish. The stainless plates are available in brush finish only. Plates are 8" wide x 12" long with Velcro strips supplied, but not mounted, Sold in sets of two plates. Not FAA Approved.

Stainless steel brush finish heel plates .....05-00839 .... **$69.95**

SPECIAL ORDER COLORS AVAILABLE

HOMEBUILDERS TAIL SKID



The skid is 1" wide and 6" long. It is made out of 3/16" thick 347 Stainless Steel. It will accept up to a 1-3/4" O.D. 3/8" thread tie down ring. This skid will eliminate bending of the tie down ring and damage to the tail. This a must have for training aircraft. The skid is currently mounted on several experimental and certified aircraft. P/N 05-04383 ..... **$68.75**



CESSNA 120 / 140-140A TAILWHEEL BRACKET

FAA/PMA Approved for Cessna 120, 140, & 140A. Cessna ID 0412139-1.

P/N 05-06994 ..... **$919.00**



SCOTT TYPE BRAKE BRACKETS

These economical brake brackets fit the popular Scott brake master cylinders and are cast from 356-6 aluminum. These brackets are not PMA'd and are recommended for experimental aircraft only.

Scott Type 1230 Brake Bracket LH
P/N 05-11551 ..... **$246.95**

Scott Type 1220 Brake Bracket RH
P/N 1220 ..... **$285.95**

PIPER AEROSTAR LANDING GEAR CONTACTING BUMPERS

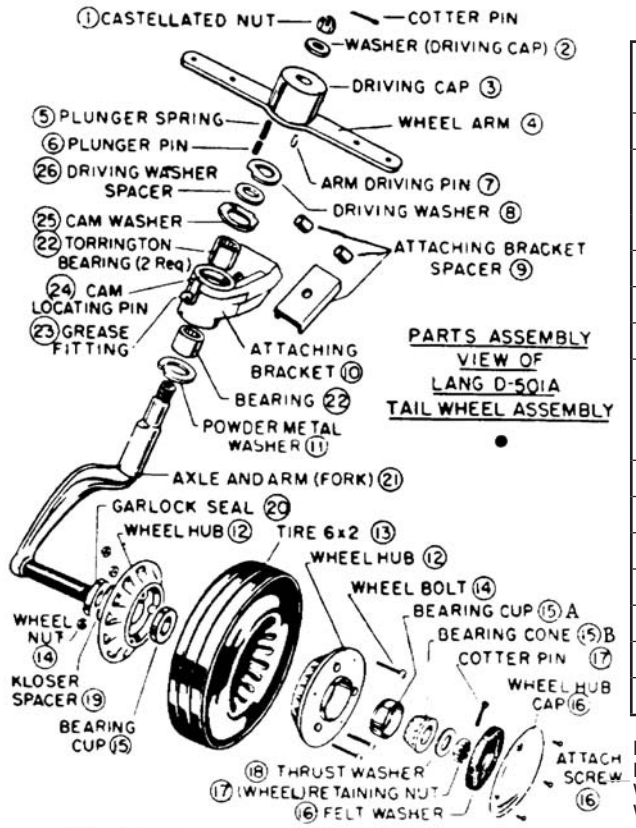


These are the contacting bumpers for the landing gear upstops and downstops on the Piper Aerostar. It's not unusual for them to be in pretty bad shape. When they're worn out, there is risk of damage as the landing gear extends and retracts beyond its normal limits, imposing concentrated loads on the airframe which are normally cushioned and distributed by the bumpers. Our bumpers are made from a tough, high-tech polymer that should last as long as the airframe. They will never crack or bulge. And they're easy to install! Package of 2.

Upper Blue Bumper M1018 .....P/N 05-14952 ..... **$214.95**
Lower Red Bumpers M1019 .....P/N 05-14953 ..... **$214.95**

Prices Subject to Change Without Notice

TAILWHEELS

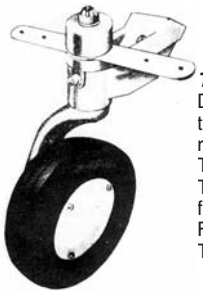


PARTS ASSEMBLY VIEW OF LANG D-501A TAIL WHEEL ASSEMBLY

LANG TAILWHEEL PARTS

Ref No.	Lang No.	Part No.	Qty	Price Each	Ref No.	Lang No.	Part No.	Qty	Price Each
1&2	A-501, A521	06-13601	1	**$4.95**	16	A-522, A-523 & A-524	--	--	--
3,5, 6,7	A503, A507	06-01570	1	**$18.90**			06-13600	1	**$19.75**
	A-505, A506		1						
4	A-504	06-13604	1	**$15.90**	17	A-521	06-13617	1	**$2.10**
					18	A-531	06-13618	1	**$0.05**
8	A-509	06-13608	1	**$5.90**	19	A-546	06-13619	1	**$3.20**
9	A-512, A560-1 A560-2	06-13609	1	**$11.50**	20	A-547	06-13620	1	**$18.80**
10	C-501	06-13610	1	**$118.85**	21	C-503	06-13621	1	**$158.95**
11	A-516	06-13611	1	**$5.95**	22	A-554	06-13622	2	**$13.60**
12	A-544, A545	06-13800	2	**$127.95**	23	A-525	06-13623	1	**$2.35**
13	A-590	06-15800	1	**$89.90**	24	A-508	06-13624	1	**$2.85**
14	A-548, A549	06-13614	3	**$12.50**	25	A-511	06-13625	1	**$5.95**
15A	A-518	13287	2	**$57.75**	26	A-510	06-13626	1	**$1.45**
15B	A-519	13286	2	**$61.75**					

HUB ASS'Y (2 #12 Hub Halves, 3 #14Bolts & Nuts).. P/N 06-13800 .**$127.95**
HUB ASS'Y W/ BEARING CUPS..... P/N 06-13900 .**$152.95**
WHEEL ASS'Y (Hub Ass'y & 2 Bearing Cups & Cones). P/N 06-14000 .**$263.50**
WHEEL & TIRE ASS'Y (Wheel Ass'y & 6 x 2 Tire) .... P/N 06-14100 .**$398.00**



THE LANG TAILWHEEL – FAA APPROVED STEERABLE – FULL SWIVEL

THE ONLY TAILWHEEL TO MEET THE EXACTING REQUIREMENTS OF THE CHRISTEN EAGLES - The Lang Model D-501-A Tailwheel is full swivel, fully automatic and steerable. It is impossible to throw the Lang tailwheel into full swivel unintentionally regardless of rough field conditions or cross winds. This tailwheel will not lock in any position except steerable, but releases easily when plane is pushed sideways or backwards by hand or when maneuvering plane on ground using brakes. The Lang tailwheel fits both 1-1/4" and 1-1/2" leaf springs. Drop forged, heat-treated 4130 chromoly steel fork of single arm type. The cast aluminum wheel is grease packed for 100 hours service. The 6 x 2.00 solid rubber tire has interior wire reinforcement for added strength. Manufactured by ACS Products Co. under FAA-PMA. All replacement parts available. The Lang tailwheel is FAA-approved for installation on many light aircraft including Aeronca 7AC, Piper J-3 and PA-12, Cessna 140, Luscombe and Taylorcraft. Comparable to Scott Model 2000. Wt. 6 Lbs. ***OEM & DISTRIBUTOR PRICING AVAILABLE***

P/N 06-00398..... **$890.00**

HOMEBUILDERS SPECIAL TAILWHEELS



FULL SWIVEL AND STEERABLE 4 INCH DIAMETER FULL SWIVEL/STEERABLE

P/N 06-00399 Standard 45° spring angle, for 1-1/4" or 1-1/2" flat spring.
P/N 06-00401 Optional 20° spring angle, for 1-1/4" or 1-1/2" flat spring.
P/N 06-00402 10° Angle, for 5/8" round spring. Any Model (Wt. 3 Lbs.).....**$288.95**
P/N 06-03007 20° Angle, for 5/8" round spring. Any Model (Wt. 3 Lbs.).....**$288.95**
***Note: Requires spacer P/N 06-13609 for use w/ 1.25" spring**



HEAVY DUTY DOUBLE FORK 6 INCH DIA. FULL SWIVEL / STEERABLE

Locks in steerable mode when aircraft is moved forward. Releases to full swivel when pushed sideways or backwards, or when maneuvering on the ground using brakes. Tire is solid soft rubber, with sealed ball bearings.
P/N 06-06131 - Std. - 45° Angle for 1-1/4 or 1-1/2 flat spring.
P/N 06-06133 - Optional-20° Angle for 1-1/4 or 1-1/2 flat spring.
P/N 06-06135 - 10° Angle for 5/8 round spring. Any Model (wt. 6lbs.).....**$312.00**
****Note: Requires spacer P/N 06-13609 for use with 1-1/4" spring.***



6 INCH DIAMETER FULL SWIVEL/STEERABLE

P/N 06-00403 Standard 45° spring angle, for 1-1/4" or 1-1/2" flat spring.
P/N 06-00404 Optional 20° spring angle, for 1-1/4" or 1-1/2" flat spring.
P/N 06-00405 10° Angle, for 5/8" round spring. Any Model (Wt. 5 Lbs.)..... **$288.95**
***Note: Requires spacer P/N 06-13609 for use w/ 1.25" spring.**



REPLACEMENT WHEELS FOR HOMEBUILDER'S SPECIAL TAILWHEELS

Replacement wheels with tires & bearings for the Homebuilder's tailwheels shown above.
4X1.5X5/8 BB Natural..... P/N 06-03500..**$24.80**
4X1.5X3/8 BB Natural..... P/N 06-00067..**$24.80**
6X2.125X5/8 Balloon* ..... P/N 06-03600..**$37.85**
*This is a solid Tire

LONGLIFE SEALED BALL BEARINGS

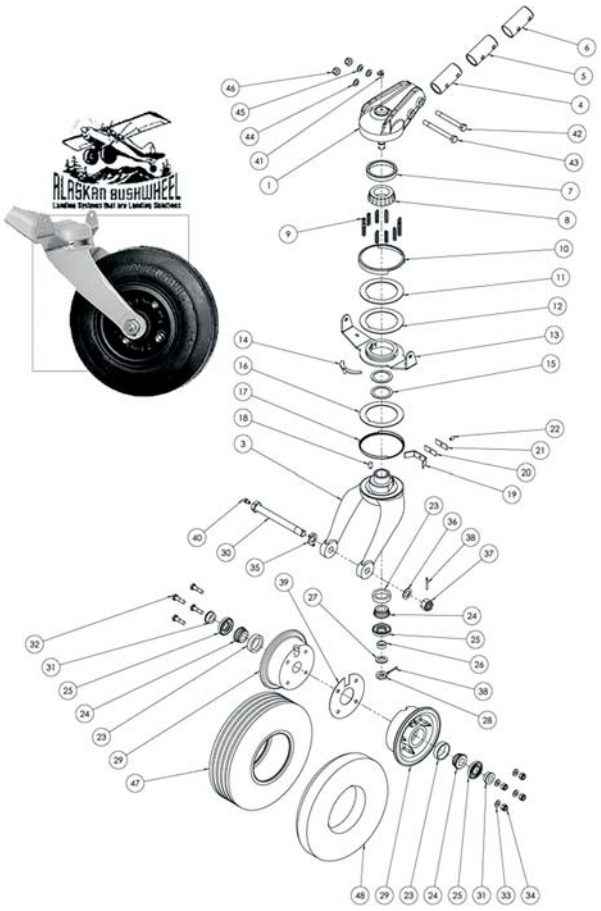
These high quality bearings are superior to standard bearings furnished with homebuilder tailwheels ..... P/N 06-00060..**$11.50**
***Can only be used on single arm 4" and 6" tailwheels.**

LG

ALASKAN BUSHWHEEL INC. 3200/3400 TAILWHEEL ASSEMBLY

The Alaskan Bushwheel Tailwheel Assembly is an FAA-PMA (PMA # PQ1557NM, Supplement 9) replacement part for the Scott 3200 assembly and parts contained therein, includes Heavy Duty Steering Arm. One Year Warranty.

ABI-3200 Standard Tailwheel Assembly(3214 Standard Arm) ..... P/N 06-00836..... **$1,176.00**
ABI-3200-3 direct replacement for the Scott 3200-3..... P/N 06-01313..... **$1,250.00**
ABI-3224A Standard Tailwheel Assembly(3214T Heavy Duty Arm)..... P/N 06-00722..... **$1,178.00**
ABI-3200B Tailwheel Tundra Assembly..... P/N 06-00723..... **$1,985.00**
ABI-3400 8" Bent Steering Arm Tailwheel ..... P/N 06-02914..... **$1,550.00**
ABI-350 10" Bent Steering Arm Tailwheel ..... P/N 06-02915..... **$1,671.00**
1154.R Baby Bushwheel ..... P/N 05-15215..... **$396.00**
ABI-800613-00 Pawnee 2-bolt Tailwheel Head ..... P/N 06-00820..... **$378.00**
ABI-2600A 4" wheel halves with 2.80x2:50x4 tire & tube mounted and ready to go..... P/N 06-01190..... **$453.00**



#	ABI PN	Description	PN	Price
-----	ABI-3400-00	8" Tailwheel Assembly	06-01147	$1,750.00
-----	ABI-3450-00	10" Tailwheel Assembly	06-01148	$1,628.00
-----	ABI-3450-23 (S)	2-Bolt, 10" Tailwheel Assembly Staight Arm	06-01149	$1,628.00
-----	ABI-3450-23 (T)	2-Bolt, 10" Tailwheel Assembly Bent Arm	06-01741	$1,628.00
-----	ABI-3400B	Bushwheel Tailwheel Assembly	06-01150	$2,389.00
1	ABI-3412MK	Tailwheel Head	06-01151	$448.00
1A	ABI-3450-23-M	2-Bolt Tailwheel Head	06-01152	$354.00
2	ABI-3423-01**	10" Fork	06-01153	$279.95
2A	ABI-3413-01**	8" Fork	06-01154	$267.95
2B	ABI-F2******	Wide Fork	06-01155	$545.00
4	ABI-3412-S.875***	7/8" Head Spacer	06-01156	$88.75
5	ABI-3412-S.937***	15/16" Head Spacer	06-01157	$88.75
6	ABI-3412-S1.00***	1" Head Spacer	06-01158	$94.75
7	8231	Bearing Race	06-01162	$22.85
8	8118	Bearing	06-01163	$35.75
9	ABI-3233-00	Compression Spring	06-00728	$4.35
10	ABI-3411-02	Dust Cap, Upper	06-01166	$36.50
10A	ABI-3411-07*	Dust Cap, Upper (For Locking Tailwheels)	06-01167	$37.60
11	ABI-3408-00	Thrust Washer	06-01168	$19.65
12	ABI-3408-01	.036 Fiber Thrust Washer	06-01170	$18.50
12A	ABI-3479-01*	Fiber Thrust Washer	06-01169	$18.50
13	ABI-3410-03	Steering Arm Bent (Bent)****	06-01171	$283.95
13A	ABI-3410-05	Straight Steering Arm	06-01172	$264.95
14	ABI-3219-00	Short Pawl	06-00732	$37.50
15	ABI-3407-00	Spacer	06-01164	$5.70
16	ABI-3408-02	.065 Fiber Thrust Washer	06-01173	$18.50
17	ABI-3411-02	Dust Cap, Lower	06-01174	$36.50
17A	ABI-3411-05*	Dust Cap, Lower (For Locking Tailwheels)	06-01175	$38.50
18	ABI-232-046	Pin	06-00749	$15.50
19	ABI-3432-00	Compression Spring	05-15222	$14.50
20	ABI-3258-01	Spacer	06-00739	$2.89
21	ABI-3258-00	Spacer	06-00738	$2.75
22	ABI-3257-00	Pin	06-00740	$10.50
23	A4138	Bearing Race	06-01183	$16.60
24	A4050	Bearing	05-15223	$36.99
25	ABI-1863	Grease Retainer	06-00746	$11.50
26	ABI-2504-01	Spacer	06-01178	$16.50
27	AN960-816	Washer (Axle)	05-15224	$0.25
28	AN320-8	Nut	05-15225	$2.73
29	ABI-3244-00	Wheel Half	06-00745	$148.75
29A	ABI-S2	Wide Spacer (ABI-3400-B Tailwheels)	06-00744	$75.75
30	ABI-3236-C2**	10" Axle Bolt	06-01186	$53.75
30A	ABI-872	Wide Fork Axle Bolt (ABI-3400-B Tailwheels)	06-00741	$49.50
31	ABI-3227-00	Spacer	06-00743	$25.50
32	AN4-7A	Wheel Bolt	05-15226	$1.93
32A	AN4-34A	Wide Wheel Bolt (ABI-3400-B Tailwheels)	05-15227	$3.35
33	AN960-416	Washer (Wheel)	05-15228	$0.08
34	AN365-428A	Nut (Attach)	05-15229	$0.23
35	ABI-3225-00	Tab Lock Washer	06-00742	$6.99
36	AN960-816L	Washer (Axle)	05-15232	$0.25
37	AN310-8	Nut	05-15233	$3.35
38	MS246655-283	Cotter Pin	05-15234	$0.18
39	ABI-2602	Gasket	06-00750	$4.55
40	T7201	Zerk Fitting	06-00753	$2.40
41	T7208	Zerk Fitting	06-01184	$1.84
44	AN960-516	Washer (Wheel)	05-15236	$0.18
45	AN960-516L	Washer	05-15237	$0.13
46	MS21044-N5	Locknut	05-15238	$0.36
47	280X2.50X6	8" Tire (Scott/ABI-3400 Tailwheels)	05-15239	$69.95
47A	10X3.50-4	10" Tire (Scott/ABI-3425 and 3450 Tailwheels)	05-15240	$86.75
47B	1154.R	Baby Bushwheel (ABI-3400-B Tailwheels)	05-15241	$475.00
48A	280X2.50X4TUBE	8" Tube	05-15242	$31.65
-	3400MBK-01	Miscellaneous Mounting Bolt Kit	05-15243	$8.90

**** Parts not included in ABI-3200/ABI-3224A Assembly***
***** Parts not included in ABI-3200B Assembly***
******* Parts not included in assemblies.***
Parts in red are not sold individually.

ALASKAN BUSHWHEEL 3400 TAILWHEEL

Item	ABI PN	Description	Part No.	Price
-----	ABI-3400-00	8" Tailwheel Assembly	06-01147	$1,750.00
-----	ABI-3450-00	10" Tailwheel Assembly	06-01148	$1,628.00
-----	ABI-3450-23 (S)	2-Bolt, 10" Tailwheel Assy Straight Arm	06-01149	$1,628.00
-----	ABI-3450-23 (T)	2-Bolt, 10" Tailwheel Assy Bent Arm	06-01741	$1,628.00
-----	ABI-3400B	Bushwheel Tailwheel Assembly	06-01150	$2,389.00
1	ABI-3412M	Tailwheel Head	06-01151	$448.00
1A	ABI-3450-23-M	2-Bolt Tailwheel Head	06-01152	$354.00
2	ABI-3423-01**	10" Fork	06-01153	$279.95
2A	ABI-3413-01**	8" Fork	06-01154	$267.95
2B	ABI-F2******	Wide Fork	06-01155	$545.00
3	ABI-3412-S.875***	7/8" Head Spacer	06-01156	$88.75
4	ABI-3412-S.937***	15/16" Head Spacer	06-01157	$88.75
5	ABI-3412-S1.00***	1" Head Spacer	06-01158	$94.75

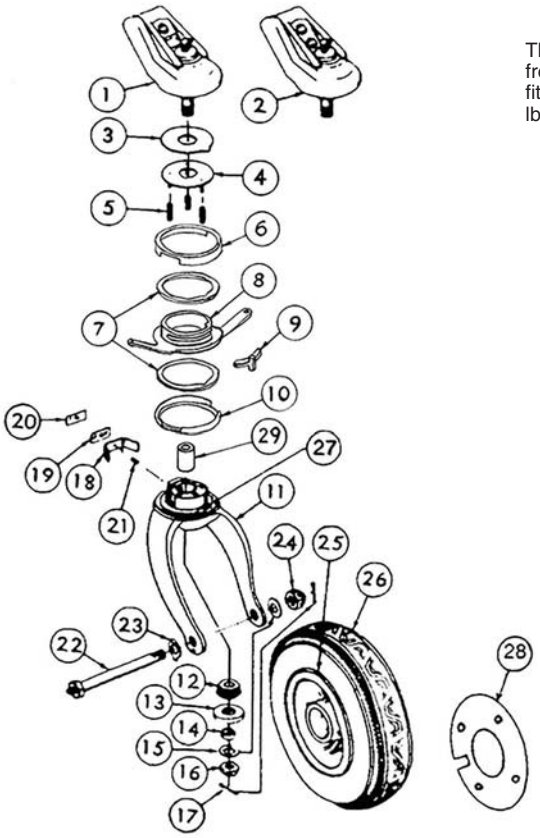
Item	ABI PN	Description	Part No.	Price
6	ABI-3412-02	Head Bolt	06-01159	$77.85
6A	ABI-3412-05	Head Bolt	06-01160	$77.75
8	8231	Bearing Race	06-01162	$22.85
9	8118	Bearing	06-01163	$35.75
10	ABI-3407-00	Spacer	06-01164	$5.70
11	ABI-3219-00	PAW	06-00732	$37.50
12	ABI-3411-02	Dust Cap, Upper	06-01166	$36.50
12A	ABI-3411-07*	Dust Cap, Upper	06-01167	$37.60
13	ABI-3408-00	Thrust Washer	06-01168	$19.65
13A	ABI-3479-01*	Fiber Thrust Washer	06-01169	$18.50
14	ABI-3408-01	.036 Fiber Thrust Washer	06-01170	$18.50
15	ABI-3410-03	Steering Arm Bent (Bent)****	06-01171	$283.95

SEE WWW.AIRCRAFTSPRUCE.COM FOR DIAGRAM AND ITEM #.



3400 SERIES TAILWHEEL FORK CONVERSION KIT

Use this kit to modify an existing Scott or Alaskan Bushwheel 3400 Series Tailwheel for use with an Alaskan Baby Bushwheel. This is a less expensive option than purchasing a whole new tailwheel. P/N 05-15210 ..... **$1,078.00**



REPLACEMENT PARTS FOR SCOTT 3200 TAILWHEEL

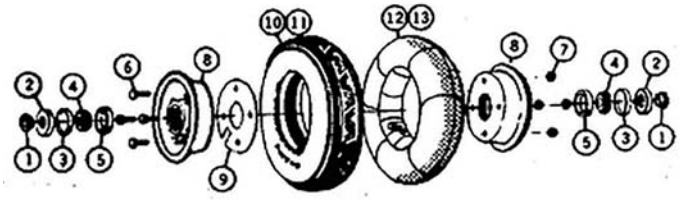
The Scott Model 3200 tailwheel, with 8" pneumatic tire, is designed to give years of trouble-free service. The swivel mechanism is sealed to keep out water, sand and mud. Grease fittings are provided for lubrication. Bracket fits 1-3/4" wide tailwheel leaf spring. Wt. 7-1/2 lbs. Attaching hardware not furnished.

Item No.	Description	No Req'd	Part No.	Price
2	Bracket Assembly ABI-800613	1	06-01291	**$378.00**
3	Washer, Thrust	1	3207	**$5.90**
4	Thrust Plate Ass'y	1	3234	**$50.95**
5	Spring, Compression	5	3233	**$3.99**
6	Dust Cap	1	3235-2	**$29.65**
7	Washer, Thrust	2	3206	**$15.95**
8	Arm Assembly	1	3214	**$264.95**
9	Pawl	1	3219	**$34.50**
10	Dust Cap	1	3235-1	**$32.60**
12	Cone Bearing	1	13286	**$61.75**
13	Retainer, Grease	1	1863	**$9.50**
14	Spacer	1	2504-1	**$18.50**
15	Washer, AN960-816	2	AN960-816	**$0.07**
16	Nut, Shear AN320-8	1	AN320-8	**$2.01**
17	Pin, Cotter	2	18482	**$0.03**
18	Spring	1	3222	**$11.50**
19	Spacer	1	3258	**$3.35**
20	Spacer	1	3258-1	**$3.35**
21	Pin	1	3257	**$9.80**
22	Axle Ass'y	1	3236	**$48.85**
23	Washer, Lock	1	3225	**$7.70**
24	Nut, Castle, AN310-8	1	AN310-8	**$2.77**
25	Wheel Assembly, ABI-3244-00		06-00745	**$148.75**
27	Pin, 3226	1	3226	**$11.50**
28	Gasket	1	2602	**$5.65**
29	Bushing	1	3205	**$25.65**
--	Adapter D306-007	1	05-09044	**$42.50**

LG

SCOTT MODEL 2600 8-INCH PNEUMATIC TIRE

The Model 2600 8" pneumatic tire and wheel assembly is used on the 3200, 3250, 3400 and 3425 Series tailwheel assemblies. The Model 3245-1 10" pneumatic tire and wheel assembly is used on the 3425 & 3450 Series tailwheel assemblies. Total Wt. 3 lbs. 13 oz.



Item No.	Part No.	Description	8" Assy P/N 2600	10" Assy P/N 3245-1	Price Each
1	3227	Spacer	2	2	**$29.50**
2	1863	Retainer, Grease	2	2	**$9.50**
3	1862	Spacer	2	2	**$10.85**
4	13286	Bearing Cone (A-4050)	2	2	**$61.75**
5	13287	Bearing Cup (A-4138)	2	2	**$57.75**
6	18438	Bolt	4	4	**$0.21**
7	33478-202	Nut, Self Locking	4	4	**$0.13**
9	2602	Gasket	1	1	**$5.65**
10	3228	8" Tire	1		**$49.75**
11	06-08100	10" Tire		1	**$59.75**
12	3223	8" Tube	1		**$22.50**
13	3247	10" Tube		1	**$23.95**

SCOTT LEAF SPRING SPACERS AND SPRING KITS

3241-3S - Spacer Only..... P/N 06-00406..... **$67.75**
3243-2 - Spacer Only..... P/N 06-00407..... **$71.75**
3241-1S - Adapter Kit - Converts 1-3/4" 3216 (1 3/4") bracket to 1-1/2" width. ..... P/N 06-00408..... **$73.75**
3239 - Heavy Duty Tension Spring Kit..... P/N 06-00008..... **$71.85**
3243-01 - Converts 1-3/4" Bracket to 1-1/4" Bracket. Used on 3200 Tailwheel..... P/N 06-00421..... **$102.75**

ALASKAN BUSHWHEEL T3 TAILWHEEL SUSPENSIONS



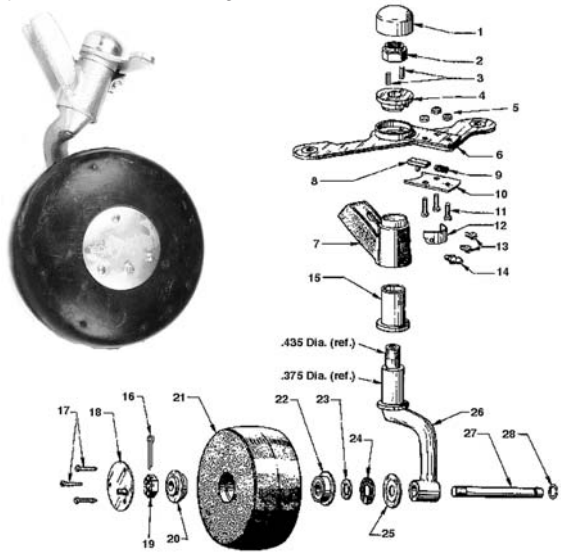
The T3 - Heavy Duty suspension is a bolt-on replacement that works with a Scott or ABI 3200 single bolt tailwheel setup. Installation typically takes less than an hour.

Model No.	Description	Part No.	Price
ABI-51215	Designed for experimental PA-18 aircraft and direct copies with a max gross weight of 2000 lbs, the heavy duty T3 offers 1500 lbs/in compression for shock absorption that's neither abrupt nor too yielding.	05-15106	**$675.00**
ABI-51272	Designed for experimental CubCrafters aircraft and direct copies with a max gross weight of 2000 lbs, the heavy duty T3 offers 1500 lbs/in compression for shock absorption that's neither abrupt nor too yielding.	05-15107	**$675.00**
ABI-51343	Designed for experimental Piper type aircraft (like SQs) with a gross weight up to 2500 lbs, the super heavy duty T3 offers dual coil springs with 2000 lbs/in total compression for shock absorption that's ideal for heavier weight aircraft.	05-15108	**$875.00**
ABI-51263	Designed for experimental Rans S7/S20 with a gross weight of 1320 lbs, the light-sport T3 offers 1000 lbs/in compression for shock absorption that's ideal for lighter weight aircraft.	05-15109	**$675.00**
ABI-51376	Designed for experimental Kitfox, the light-sport T3 offers 1000 lbs/in compression for shock absorption that's ideal for lighter weight aircraft.	05-15110	**$675.00**

MAULE MODEL SFSA SOLID TAILWHEELS

The SFSA tailwheel assembly is of the same type construction as the SFS-P8A unit except for the tire, which is a 6.50 x 2.50 soft rubber solid tire. Spring connector kit not furnished with this model. FAA-approved. Wt. 6 lbs.

SFSA-1-4, for 1-1/4" Spring ..... P/N 06-16710 ..... **$711.00**
SFSA-1-2, for 1-1/2" Spring ..... P/N 06-16720 ..... **$576.00**
Replacement Tire & Bearings ..... P/N TW-23A **$149.65**

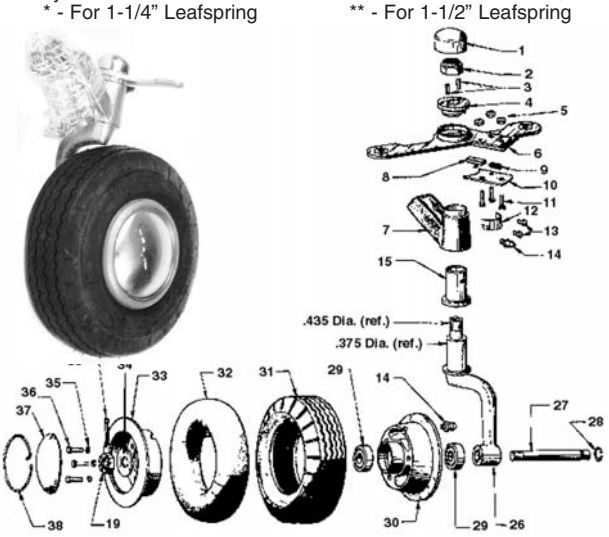


MAULE MODEL SFS-P8A PNEUMATIC TAILWHEELS

An inexpensive 8" pneumatic tailwheel assembly which is steerable and full swiveling, with new improved single arm shimmy-free fork. All working parts heat treated. FAA approved. Wt. 7 lbs.

Maule Tailwheel #SFS-P8A-1-4* ..... P/N 06-16730 ..... **$688.00**
Maule Tailwheel #SFS-P8A-1-2** ..... P/N 06-16740 ..... **$688.00**
Specialty Tire 2.80/2.50-4 4 Ply ..... P/N 06-08000 ..... **$49.75**
Specialty Tube 280 X 250 X 4 ..... P/N 06-08101 ..... **$22.50**

* - For 1-1/4" Leafspring ** - For 1-1/2" Leafspring



MAULE P8B TUNDRA TAILWHEEL



A new tailwheel with 8" pneumatic tire designed and engineered to meet the toughest conditions on all types of airports and landing fields.

SFS-P8B-1-4 ..... For 1-1/4" Leaf Spring Width ..... P/N 06-16750 ..... **$785.00**
SFS-P8B-1-2 ..... For 1-1/2" Leaf Spring Width ..... P/N 06-16760 ..... **$785.00**
SFS-P8B-3-4 ..... For 1-3/4" Leaf Spring Width ..... P/N 06-16770 ..... **$785.00**

NEW SURPLUS MAULE WHEEL AND TIRE ASSEMBLY



Maule tailwheels are designed and engineered to meet the toughest conditions on all types of airports and landing fields. Equipped with a 10" pneumatic tire. These tailwheels were manufactured by Maule Aircraft in 2005 and quantities are limited. Assemblies have the following components: • TW-31 Hub Wheel Half (Outer) • TW-30 Hub Wheel Half (Inner) • 10-3.50-4 Tire & Tube ***Note: Be aware these units have a 10" tire and tube stem is protruding from outer wheel half. See photo above.***..... P/N 06-01663 ..... **$68.00**

MAULE TAILWHEEL PARTS LIST

Old Style (Pre 1976) has 3/4" Fork Shaft & New Style (Post 1976) has 7/8" Fork Shaft		Old Style SFS-P8 Pneumatic or SFS Solid Rubber	New Style SFS-P8A Pneumatic and SFSA Solid Rubber	Qty. Req.	Price Each
#	Description	Part Number	Part Number		
1	Cover Cap	TW-18 (1-1/4")	TW-63A (1-3/8")	1	**$6.50**
2	Nut	AN364-720A or	AN364-720A or	1	**$1.42**
		AN365-720	AN365-720		
3	Lock Ring Pin	TW-17	TW-60AB	1/2	**$1.10**
4	Lock Ring	TW-16	TW-57	1	**$37.65**
5	Nut	AN364-440A	AN364-440A	3	**$0.32**
6	Steering Arm Assembly*	TW-15 (TW-13 & TW-16 are included in this Assembly)	TW-15A	1	**$100.75**
7	Bracket Assy., 1-1/4 In	06-16101	06-16201	1	**$191.75**
	Bracket Assy., 1-1/2 In	06-16102	06-16202	1	**$184.75**
8	Lock Pin	TW-13	TW-13	1	**$23.50**
9	Steering Arm Spring	TW-14	TW-14	1	**$1.10**
10	Lock Cover Plate	TW-12	TW-12	1	**$11.95**
11	Screw	MS35206-217	MS35206-217	3	**$0.05**
12	Cam	TW-10	TW-10	1	**$13.50**
13	Screw	AN501-A10-4	AN501-A10-4	2	**$0.38**
	AN520-10-4	AN520-10-4			
14	Zerk Fitting	TW-7-A14	TW-7-A14	1	**$2.65**
15	Oilite Bearing	TW-7 (3/4" I.D.)	TW-59A (7/8" I.D.)	1	**$25.90**
Items 16 through 25 are for the solid rubber tire assembly only.					
16	Cotter Pin	AN380-3-3	AN380-3-3	1	**$0.03**
17	Screw	TW-A18	TW-A18	3	**$0.82**
18	Hub Cap	TW-27	TW-27	1	**$15.50**
19	Axle Nut	AN320-8	AN320-8	1	**$2.01**
20	Bearing	TW-3	TW-3/A15	1	**$22.50**
21	Tire–solid, no bearings	TW-23	TW-23	1	**$133.75**
	Tire–solid, with bearings	TW-23A	TW-23A	1	**$149.65**

Old Style (Pre 1976) has 3/4" Fork Shaft & New Style (Post 1976) has 7/8" Fork Shaft		Old Style SFS-P8 Pneumatic or SFS Solid Rubber	New Style SFS-P8A Pneumatic and SFSA Solid Rubber	Qty. Req.	Price Each
#	Description	Part Number	Part Number		
22	Bearing (with washer)	TW-A15	TW-A15	1	**$22.50**
23	Washer	TW-28	TW-28	1	**$1.85**
24	Felt Seal	TW-26	TW-26	1	**$2.20**
25	Retainer Washer Fork (with axle)	TW-64	TW-64	1	**$0.84**
	Solid Rubber	06-00093	TW-61A-1	1	**$112.65**
27	Axle	TW-5	TW-5	1	**$37.55**
28	Axle Sirclip Ring	TW-6	TW-6	1	**$0.50**
29	Bearing	TW-A7	TW-A7	2	**$118.95**
30	Inboard Wheelhalf, with bearings	TW-30	TW-30	1	**$209.95**
31	Tire, 8-inch			1	-------
32	Tube			1	-------
33	Outboard Wheelhalf	TW-31	TW-31	1	**$49.90**
34	Washer	TW-A6	TW-A6	1	**$1.06**
35	Lock Washer	AN935-516	AN935-516	3	**$0.04**
36	Bolt	TW-A12	TW-A12	3	**$2.18**
37	Hub Cap	TW-32	TW-32	1	**$16.50**
38	Hub Cap Sirclip Ring	TW-33	TW-33	1	**$1.75**
39	Cotter Pin	AN380-3-3	AN380-3-3	1	**$0.03**
Items 40 through 44 are used on the "Old" style & pneumatic tailwheel that have a shimmy dampener.					
40	Adjusting Screw	TW-40		1	**$0.70**
41	Dampener Spring	TW-41		1	**$0.88**
42	Friction Block	TW-42		1	---------
43	Hex Housing	TW-43		1	---------
44	Bracket Assembly, 1-1/4 inch drilled	TW-44-1-4		1	-------
	Bracket Assembly, 1-1/2 inch drilled	TW-44-1-21	-------		-------

MAULE ARM ASSEMBLIES

Fig. No.	Description	Style	Qty Req.	Part No.	Price
26	Arm Assembly .375 Dia. (Pneumatic)	Old	1	TW-58A	**$94.85**
26	Arm Assembly without Axle .435 Dia. (Solid Rubber)	New	1	TW-61A	**$89.75**
26	Arm Assembly with Axle .435 Dia. (Solid Rubber)	New	1	TW-61A	**$89.75**
26	Arm Assembly .375 Dia. (Pneumatic)	New	1	TW-58A-1	**$114.80**
26	Arm Assembly .375 Dia. (Solid Rubber)	Old	1	TW-21-1	**$112.65**

P/N 06-01615



P/N 06-01620



P/N 06-00831



MATCO SINGLE ARM TAILWHEELS

Matco tailwheels use a fiberglass reinforced nylon wheel with an operating load of 450 lbs. It takes over 5000 lbs to fail the wheel and it will hold up in the most rigorous conditions. Can be used with 1-1/4" or 1-1/2" leaf spring. These tailwheels are steerable, and are available with a 6 inch hard rubber solid tire or with 8" Shin pneumatic tire and tube for heavier aircraft. Tailwheel construction is anodized aluminum. Weight: 5 lbs.

Item	Part No.	Price
Matco solid rubber tire tailwheel assy	06-01615	**$179.75**
Replacement Tire (solid rubber) for T-6	06-00004	**$93.75**
Matco 6" Pneumatic the tailwheel assy.	06-00831	**$213.75**
Replacement 6" Pneumatic Tire * Tube	06-00832	**$23.50**
Matco 7" pneumatic tire tailwheel assy. Overall length of 10.50" and max width of this tail wheel with fully splayed arms is 9.29" and overall height is 10.2".	06-01362	**$239.95**
Matco 8" pneumatic wide tailwheel assy. Overall length of 11.20". Max fully splayed arms is 9.29" and overall height is 11.7", weight 7 lbs.	06-01620	**$252.95**
Matco 8" pneumatic wide tailwheel assy. Overall length of 12.51". Max fully splayed arms is 9.29" and overall height is 15.7". Weight 8lbs.	06-01361	**$279.95**
Specialty Replacement 8" Tire 2.80/2.50-4 4PLY	06-08000	**$49.75**
Specialty Replacement Tube 8" 280 X 250 X 4	06-08101	**$22.50**

MATCO DUAL ARM TAILWHEELS

MATCO TAILWHEEL DUAL ARM 7 INCH PNEUMATIC



MATCO mfg produces a superior light weight dual fork seven inch tail wheel for use with tail dragger aircraft which require a lighter weight tail wheel-the T-7D. The T-7D tail wheel utilizes a dual fork configuration and incorporates a geometric release mechanism that allows the wheel to caster after reaching a steered angle of 40 degrees (earlier release available with optional steering arms WHLT-03A). The WHLTW37 wheel used on the WHLT-7D has a .625 precision sealed ball bearing which is rigorously tested and designed to resist bearing fatigue providing a long bearing life. The arms and wings of the tail wheel fork assembly are composed of 4130 which is heat treated to a Rockwell 38-43 to ensure strength and are irridited to prevent corrosion. The tail wheel base and forks are cast and then black anodized to prevent corrosion as well. The wheel halves are die cast aluminum for light weight and superior strength. The T-7D features split rims for ease of mounting and dismounting its 7x1.75 tire and tube assembly. The T-7D tail wheel has a seven inch pneumatic tire and an overall length of 10.3 inches. Maximum width of this tail wheel with fully splayed arms is 7 inches and overall height is 10.3 inches. This machined aluminum tail wheel weighs 5.2 pounds.

P/N 06-01527 .....**$441.00**

DUAL ARM TAIL WHEEL ASSEMBLY 8 INCH PNEUMATIC TIRE



The T-8LD tail wheel utilizes a dual fork configuration and incorporates a geometric release mechanism that allows the wheel to caster after reaching a steered angle of 40 degrees. The WHLTW37 wheel used on the WHLT-8LD has a .625 precision sealed ball bearing which is rigorously tested and designed to resist bearing fatigue providing a long bearing life. The arms and wings of the tail wheel fork assembly are composed of 4130 which is heat treated to a Rockwell 38-43 to ensure strength and are irridited to prevent corrosion. The tail wheel base and forks are cast and then black anodized to prevent corrosion as well. The wheel halves are die cast aluminum for light weight and superior strength. The T-8LD features split rims for ease of mounting and dismounting its 200x50 (8"x2") tire and tube assembly. Specifications: 8 inch pneumatic tire, Overall length of 10.8 inches, Maximum width of this tail wheel with fully splayed arms: 7 inches, Overall height: 10.8 inches, This cast aluminum tail wheel weighs 5.4 pounds P/N 06-01528 .....**$459.00**

LIGHTWEIGHT DUAL ARM TAIL WHEEL ASSEMBLY 8.5 INCH PNEUMATIC TIRE



The T-8D tail wheel utilizes a dual fork configuration and incorporates a geometric release mechanism that allows the wheel to caster after reaching a steered angle of 40 degrees. The WHLTW40EE wheel used on the WHLT-8D has a .625 precision sealed ball bearing which is rigorously tested and designed to resist bearing fatigue providing a long bearing life. The arms and wings of the tail wheel fork assembly are composed of 4130 which is heat treated to a Rockwell 38-43 to ensure strength and are irridited to prevent corrosion. The tail wheel base and forks are cast and then black anodized to prevent corrosion as well. The wheel halves are die cast aluminum for light weight and superior strength. The T-8D features split rims for ease of mounting and dismounting its 2.80/2.50-4 tire and tube assembly. Specifications: 8.5 inch pneumatic tire, Overall length of 11.6 inches, Maximum width of this tail wheel with fully splayed arms: 7 inches, Overall height is 11.8 inches, This cast aluminum tail wheel weighs 6.7 pounds. P/N 06-01529 .....**$468.00**

DUAL ARM TAIL WHEEL ASSEMBLY 8.5 INCH PNEUMATIC TIRE



The T-8WD tail wheel utilizes a dual fork configuration and incorporates a geometric release mechanism that allows the wheel to caster after reaching a steered angle of 40 degrees. The WHLNW40EE wheel used on the WHLT-8WD has a .625 precision sealed ball bearing which is rigorously tested and designed to resist bearing fatigue providing a long bearing life. The arms and wings of the tail wheel fork assembly are composed of 4130 which is heat treated to a Rockwell 38-43 to ensure strength and are irridited to prevent corrosion. The tail wheel base and forks are cast and then black anodized to prevent corrosion as well. The wheel halves are die cast aluminum for light weight and superior strength. The T-8WD features split rims for ease of mounting and dismounting its 9x3.50-4 tire and tube assembly. Specifications: 8.5 inch pneumatic tire, Overall length of 11.7 inches, Maximum width of this tail wheel with fully splayed arms: 7 inches, Overall height is 11.9 inches, This cast aluminum tail wheel weighs 8.3 pounds. P/N 06-01531 .....**$485.00**

DUAL ARM TAIL WHEEL ASSEMBLY 10 INCH PNEUMATIC TAIL WHEEL



This wheel features split rims for ease of mounting and dismounting its 10 x 3.50-4 tire and tube assembly. The tail wheel assembly is both steerable and full swiveling and provides easy installation with variant spring tension. This wheel has been designed to release with light spring tension and fits a 1.75 wide spring. Adapter plates can accommodate either a 1.25 or 1.50 inch wide spring. The base unit that mounts to the spring is also machined from extrusion. It is available with a two hole mounting option. The assembly should be mounted on the flat spring so that the pivoting axle is as close to vertical as possible when the plane is loaded. All assembly bushings are made of oil impregnated brass so no lubrication is needed during the life of the tail wheel. In addition, the shaft has been redesigned to .625 for added strength and durability.
Specifications: • Tail wheel has a 10 inch pneumatic tire, overall length of 11.4 inches• Max width of tail wheel with fully splayed arms is 7 inches, overall height of 13.1 inches• Weight: 8.5 pounds.

P/N 06-01781 .....**$770.00**

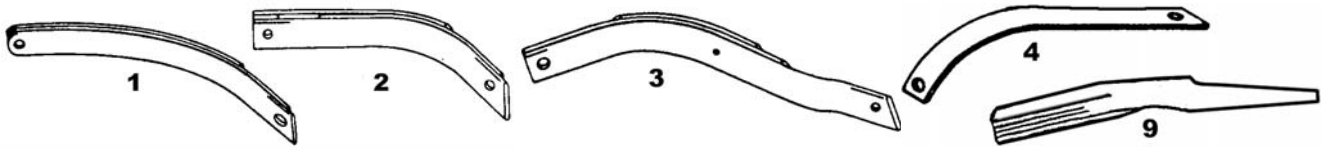
DUAL ARM TAIL WHEEL ASSEMBLY 11 INCH PNEUMATIC TIRE



The T-11D tail wheel utilizes a dual fork configuration and incorporates a geometric release mechanism that allows the wheel to caster after reaching a steered angle of 40 degrees. The MH5N-S wheel used on the WHLT-11D has a .625 precision sealed ball bearing which is rigorously tested and designed to resist bearing fatigue providing a long bearing life. The arms and wings of the tail wheel fork assembly are composed of 4130 which is heat treated to a Rockwell 38-43 to ensure strength and are irridited to prevent corrosion. The tail wheel base and forks are cast and then black anodized to prevent corrosion as well. The wheel halves are die cast aluminum for light weight and superior strength. The T-11D features split rims for ease of mounting and dismounting its 11x6-5 tubeless tire assembly. Specifications: 11 inch pneumatic tire, Overall length of 13.5 inches, Maximum width of this tail wheel with fully splayed arms: 7 inches Overall height: 14 inches, This cast aluminum tail wheel weighs 9.6 pounds. P/N 06-01537 .....**$738.00**

LG

TAILWHEELS



STEEL TAILWHEEL LEAF SPRINGS

Set No.	Spring Width	Hole Dia. Fuselage End	Hole Dia. Tailwheel End	Distance Between Bolt Centers	Original Application	Wt. Lbs.	No. of Springs	Part No.	Price
1	1-1/4”	7/16”	3/8”	12-1/2”	Piper J3, PA11, PA11, PA12, PA14, PA15, PA17	3-1/8	3	06-14200	**$143.75**
2	1-1/2”	3/8”	3/8”	11-1/4”	T-Craft BC-12D	2-3/4	3	06-14300	**$143.75**
3	1-1/2”	3/8”	7/16”	14-1/4”	Aeronca 7AC, 11AC	3-1/2	3	06-14400	**$154.75**
4	1-1/2”	3/8”	3/8”	14-7/8”	Homebuilts	1-3/4	1	06-14500	**$66.75**
5	1-1/4”	5/16”	3/8”	11-3/4”	Luscombe	3-1/2	4	06-14600	**$225.95**
6	1-1/4”		Main Leaf Only	11-3/4”	Luscombe	1-1/2	1	06-14700	**$56.75**
7*	1-1/2”	5/8”	7/16”	13-1/2”	Cessna 120-140	4	4	06-14800*	**$246.95**
8	1-1/2”		Main Leaf Only	13-1/2”	Cessna 120-140	1-1/2	1	06-14900	**$73.95**
9	1-1/2”	5/8”	7/16”	13-1/2”	Cessna 170	5	5	06-15000	**$242.95**
10	1-1/2”		Main Leaf Only	13-1/2”	Cessna 170	1-3/4	1	06-15100	**$106.75**

DISCOUNTS LESS 10% ON 6, 15% ON 10 (ASSORTED) ****P/N 06-14800 has two bends***

LG



MAULE ANTI-SHIMMY CONNECTOR SPRING KITS

A high and low frequency spring is used to upset the natural frequency of the tailwheel. The lighter spring is used on the left side.

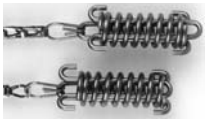
P/N 06-15150 ..... **$78.95**

TENSION TYPE CONNECTOR SPRING KITS



Kit consists of two tension type springs, two chains and two connector links.

Lightweight Spring Kit Scott
P/N 2151 ..... **Ea $70.75**
Connector Links ..... P/N 06-15400 ..... **Ea $2.93**
Chain ..... P/N 06-15500 ..... **Ft $1.14**



COMPRESSION TYPE CONNECTOR SPRING KIT

Replace conventional springs with new compression type. Original tension type springs keep rudder post under continuous tension which wears the hinges. Compression type springs keep rudder neutral - no tension on post. Assures more effective steering action.

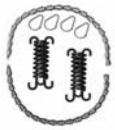
Set of 2 stainless steel springs, (2) 1’ chains, 4 connector clips:
P/N 06-15600 ..... **$33.50**
Springs Only ..... P/N 06-15700 ..... **Ea $8.95**
Connector Clips ..... P/N 06-15400 ..... **Ea $2.93**
Chain ..... P/N 06-15500 ..... **$1.14/Ft**



FAA/PMA TENSION SPRING KIT

Attaches tailspring to tailwheel. Includes 2 springs, 2 connector clips and 2 linkage chains.

P/N 05-11457 ..... **$29.75**



FAA/PMA COMPRESSION SPRING KIT

Keeps rudder neutral - no tension on the post. Complete with 2 springs, 4 connector clips and 2 linkage chains.

P/N 05-11458 ..... **$29.50**



HUSKY TAILSPRING

The Husky Tailspring is now available. The 3-leaf tailspring, mounting bracket & hardware is all included. This is a direct replacement for all of Sky International (Aviat Husky) tailsprings and eligible on all Husky aircraft, the A1, A1-A, A1-B and the new A1-C. ..... P/N 06-01364 ..... **$399.00**



SONEX TAILWHEEL

This sand-cast aluminum cores combine weight, economy and long life with maximum strength. The single-wall construction offers a light yet durable wheel with the ability to absorb impact. Engineered to transmit loads directly to the bearing surface for smoother action.

Diameter & Width:4” x 1-1/2”. Bearing ID or Axle Size: 3/8, 1/2, 5/8, 3/4. Hub Length std. 1-1/2”. Aprox Wt. 1lb. Load Rating: 225. Less Bearing 1-3/8. P/N 06-01665 ..... **$38.50**



TAILWHEEL TIRES

6X2 AERO CLASSIC SOLID TIRE - Used on Scott 2000. Replaces Goodyear 6x2 tire.
P/N 06-01044 ..... **$90.95**

6X2 GENERAL SOLID TIRE - A flexible rubber tire with four knobs on center hole. This is Scott P/N 1879 used on Scott Model 2000 tailwheels and some Scott 3-24B tailwheels. Replaces Goodyear 6x2 (11 knobs) solid tailwheel tire.
P/N 06-15800 ..... **$89.90**

6.50 X 2.50 SOLID TIRE - Maule P/N 23 for Model SFSA tailwheels.
Tire Only ..... P/N 06-00409 ..... **$133.75**
Tire w/ Bearings ..... P/N 06-00410 ..... **$149.65**

2.80/2.50 X4 SPECIALTY PNEUMATIC TIRE - Used on Scott Model 2600 8” wheel assembly.
Tire ..... P/N 06-08000 ..... **$49.75**
Tube ..... P/N 06-08101 ..... **$22.50**

2.80/2.50 X4 AZUSA TIRE
Tire ..... P/N 06-01287 ..... **$9.95**
Tube ..... P/N 06-01288 ..... **$5.65**

10 X 3.50 X 4 SPECIALTY PNEUMATIC TIRE - Used on Scott Model 3450 tailwheel and Scott Model 3245-1 10” wheel assembly.
Tire ..... P/N 06-08100 ..... **$59.75**
Tube ..... P/N 06-08102 ..... **$27.50**

400 X 4 AERO CLASSIC - used on Grove Model 49-1A; Tire: 11.5” Dia. Looks like scaled down 500x5 tire.
Tire ..... P/N 06-00844 ..... **$66.75**
Tube ..... P/N 06-08102 ..... **$27.50**

400X6 AERO CLASSIC - The New Light Sport Tire, 400-6 6 Ply with a Deep Aircraft Type Tread.
Tire ..... P/N 06-00944 ..... **$66.75**
Tube ..... P/N 06-00945 ..... **$16.50**



REPLACEMENT TAILWHEEL FOR VAN’S TAILWHEEL ASSEMBLY

This is a replacement tail wheel for the Van’s tail wheel assembly. The hub is made from 6061-t6 aircraft aluminum with a tire molded from 65 durometer SBR rubber. The design includes precision sealed bearings.5-1/2” Diameter X 1-1/2” tire x 2” hub thickness. P/N 06-01284 ..... **$129.85**

GOOSENECK HOSE COUPLING



Used on high pressure strut pump hose. High pressure connection with a swivel nut and female 1/8" NPT port on other end. P/N 06-11700 ..... **$14.85**
Replacement Seal.....P/N SK2043-5 ..... **$0.44**

STRUT VALVE



AN6287-1 strut valve for operating pressures up to 3000 PSI. Consists of a 3-piece stainless steel body, high-pressure valve core and MS20813-1B cap. P/N 06-00395 ..... **$34.95**

HIGH PRESSURE VALVE CORES



#9914B (Short Type, Length 7/8") Same operating range as #2300HV, but doesn't conform to AN809-1. P/N 06-00396.....**$2.95**

AIRCRAFT TIRE VALVE CORES



P/N 05-11589

Valve Core to replace the existing valve core in tires.

Opening Pressure PSIG	Max Working Pressure PSIG	Temp. Range (°F)	Cup Seal Material	Part No.	Price
60	300	-40 - 225	Nitrile	05-11589	**$0.30**
80	225	-65 - 250	Silicone	6035	**$1.35**

2525 VALVE CAP (MS20813-1B)



A heat-resisting cap designed to withstand high pressure conditions. Has special rubber sealing washer. P/N 2525..... **$3.35 Ea.**

FULL LOTUS FLOATS



Full-Lotus Floats are the most versatile and rugged aircraft floats on the market today. First introduced in 1985, the unique design uses multiple inflatable bladders inside a vinyl outer shell and a protective polycarbonate bottom. The result is a comprehensive float system that can be beached on rocky shores without worry and that can bump most submerged objects at taxiing speed without damage. Many aircraft owners regularly use their Full-Lotus floats on ice and snow - just like skis. There is no other float system like it in the world!
Full-Lotus Floats are now made by Aircraft Floats Manufacturing (AFM) and are available in six different sizes for a full range of aircraft including Light Sport, Amateur-built, Experimental and Ultralight aircraft. Full-Lotus floats work great on fixed wing aircraft, but also on gyro-copters and trikes… New AMPHIBIOUS Full-Lotus floats with integrated main wheels were introduced by AFM in 2014 and are now available in a number of different sizes.
Aircraft Floats Mfg. also offers generic RIGGING KITS for all sizes of Full-Lotus floats. These kits include streamlined spreader bars and struts, top-of-the-line machined aluminum fittings and aircraft-grade hardware.

PLEASE VISIT WWW.AIRCRAFTSPRUCE.COM FOR A COMPLETE LISTING OF LOTUS FLOATS AND PRICING

WHEEL SPEED COVER KIT



U.S. Patented wheel covers enjoying performance improvements you only dreamed about, even better. Kits are available for all serial numbers for Cessna 402C, 414A, 421C Note: You must measure both the right and left side wheel nuts prior to order. Complete kit will install in 2-3 hours! P/N 06-01779 ..... **$1,995.00**

BEECH NOSE GEAR DOOR HINGE UPGRADE KIT



This kit covers the nose gear door hinge bushings for the Beech Bonanza and Baron.
Baron.....P/N 05-15104 ..... **$209.00**
Bonanza .....P/N 05-15137 ..... **$209.00**

MALIBU MIRAGE NOSE GEAR SPRING COMPRESSOR



Aerotar NLG Spring Compressor And Nose Gear Spring Removal Install Tool. For PA-46-350 Malibu Mirage
P/N 08-15782 ..... **$789.99**

NOSE GEAR SPRING FORK NEEDLE BEARING



Nose Gear Spring Fork Needle Bearing. Fits all Cessna 208 models. Two required per aircraft. Save 30%
P/N 05-15144 ..... **$100.75**

TIMKEN TAIL WHEEL FORK BEARING CUPS AND CONES



Wheel Bearing Cups and Cones. FAA-PMA approved Timken wheel bearings for Goodyear, Cleveland, and McCauley wheels. Class 2 aviation grade FAA-PMA bearings (Timken designates these with a -20629 suffix) Tighter tolerance and higher quality control than Class 4 automotive bearings. Save $$
Bearing Cup .....P/N 05-15147 ..... **$27.50**
Bearing Cone .....P/N 05-15148 ..... **$101.95**

TIMKEN NOSE GEAR SHOCK STRUT CUPS AND CONES FOR CARAVAN



Nose Gear Shock Strut Cups and Cones for Caravan. FAA-PMA approved Timken wheel bearings for Goodyear, Cleveland, and McCauley wheels. Class 2 aviation grade FAA-PMA bearings (Timken designates these with a -20629 suffix). Tighter tolerance and higher quality control than Class 4 automotive bearings. Save $$.

Bearing Cup .....P/N 05-15145 ..... **$144.99**
Bearing Cone .....P/N 05-15146 ..... **$206.95**

RV-10 I RV-14 NOSE WHEEL SPACER



This spacer is a part specified by Vans in the RV-10 and RV-14 instruction manual. We CNC machine this part to the specifications set by Vans to give you a perfectly dimensionally accurate part to hold on your nosegear wheel pants. You are probably getting toward the end of your project if you are looking at this part. Go ahead and spend a few hours finishing up some other items on your aircraft and this part can be made for you.
After we CNC machine this part, we also deburr all edges so it is ready to bolt right onto your aircraft. P/N 05-12907 .....**$47.50**

NITROGEN TIRE INFLATION SYSTEM 20CU, 40CU NITROGEN ACCESSORY KIT

NOT FOR STRUT USE



GENTEC® Nitrogen aircraft tire inflation systems allow for easy, cost effective filling of General Aviation aircraft tires with pure Nitrogen. The **GKNAT20-TC** is a 20 cubic foot high pressure nitrogen tank (empty) with stand, ten foot hose; pressure reducing single stage regulator and tire inflator with resettable dial pressure gauge. The **GKNAT40-TC** is a 40 cubic foot high pressure nitrogen tank (empty) with stand, ten foot hose; pressure reducing single stage regulator and tire inflator with resettable dial pressure gauge. ***Visit our website to locate a filling station near you.***

Nitrogen Tire Inflation System 20CU..... P/N 12-01586 ..... **$309.00**
Nitrogen Tire Inflation System CU40..... P/N 12-01587 ..... **$386.00**
Nitrogen Accessory Kit- (This kit is for someone who may already have a nitrogen cylinder and only needs the accessories)
P/N 12-01588 ..... **$174.95**

LG

CARBURETORS



Customer will need to provide core for overhaul in the event that our supplier does not have cores available to overhaul

REPLACEMENT CARBURETORS FROM MARVEL-SCHEBLER

Carburetor exchange program covers all popular Marvel Schebler/Facet general aviation carburetors. The carburetors are overhauled to the strictest industry standards and carry a full 6 month warranty (from date of installation). Most carburetors are available from stock or within a week and are furnished complete with gaskets.

Due to the various configurations of carburetor installations, we suggest you retain your carburetor core until receiving the exchange unit. This will enable you to transfer all external fittings and installation hardware to the new exchange unit. All cores being returned for credit shall be, as removed from the engine, complete and not disassembled. A reduction in core credit is charged for missing or damaged parts.

- Precision Carburetors
- TCM Fuel Systems
- Flow Dividers
- Fast Turn Time on Overhauls
- Unmatched Quality
- 100% calibration of fuel pumps and servos.
- Precision Fuel Servos
- Romec Fuel Pumps
- FAA/PMA Approved Replacement Parts
- Carburetor Overhaul Quick Kits
- Highly skilled/trained technicians

LYCOMING CARBURETORS

Carb. Model	Lycoming P/N	Vendor P/N	Our P/N	Price	Core
MA-3A	61547	10-3103-1	10-03103-1	**$775.00**	**$600.00**
MA-4SPA	69250	10-3678-12	08-06325	**$829.00**	**$600.00**
MA-4SPA	72394	10-3678-32	08-06326	**$829.00**	**$600.00**
MA-4-5	71098	10-3878	08-06372	**$829.00**	**$600.00**
MA-4-5	71710	10-4164-1	08-06373	**$829.00**	**$600.00**
MA-4-5	66458	10-2827	07-01405	**$983.00**	**$600.00**
MA-4-5	66869	10-3323	07-01411	**$769.00**	**$600.00**
MA-4-5	67713	10-3391-1	07-01412	**$769.00**	**$600.00**
MA-3SPA	62830	10-3565-1	07-01413	**$829.00**	**$600.00**
MA-4-5	69540	10-3634	07-01415	**$757.00**	**$600.00**
MA-3SPA	68856	10-3729	07-01416	**$699.00**	**$600.00**
MA-4-5	71546	10-3856-1	07-01417	**$769.00**	**$600.00**
MA-4-5	71685	10-3856-12	07-01418	**$820.00**	**$600.00**
MA-4-5AA	71139	10-4025	07-01419	**$1,126.00**	**$600.00**
MA-4-5AA	71684	10-4025-12	07-01421	**$823.00**	**$600.00**
MA-6AA	72407	10-4218-1	07-01424	**$820.00**	**$600.00**
MA-4-5	72386	10-4329	07-01426	**$769.00**	**$600.00**
MA-4-5	74121	10-4404-1	08-06376	**$829.00**	**$600.00**
MA-6AA	73899	10-4438-1	07-01428	**$876.00**	**$600.00**
MA-4-5AA	73257	10-4495	07-01429	**$769.00**	**$600.00**
MA-5	20671	10-4865	07-01430	**$876.00**	**$600.00**
HA-6	LW-15957	10-5219	08-06394	**$989.00**	**$600.00**
MA-3PA	LW-16073	10-5220	08-06395	**$780.00**	**$600.00**
MA-3PA		10-5220-E	07-01464	**$702.00**	**$600.00**
HA-6	LW-16066	10-5221	07-01465	**$855.00**	**$600.00**
HA-6	LW-15958	10-5224	08-06396	**$953.00**	**$600.00**

Carb. Model	Lycoming P/N	Vendor P/N	Our P/N	Price	Core
MA-4SPA	77279	10-4910	08-06381	**$789.00**	**$600.00**
MA-4SPA	LW-16559	10-4910-1	08-06382	**$789.00**	**$600.00**
MA-3A	77585	10-4953	08-06383	**$889.00**	**$600.00**
MA-6AA	77888	10-4975	07-01434	**$1,185.00**	**$600.00**
MA-3PA	77939	10-4978-1	07-01435	**$967.00**	**$600.00**
MA-4-5	LW-10064	10-5034	08-06385	**$798.00**	**$600.00**
MA-4-5	LW-10196	10-5042	07-01438	**$827.00**	**$600.00**
MA-3PA	LW-10619	10-5050	08-06386	**$780.00**	**$600.00**
MA-4-5	LW-10540	10-5054	08-06387	**$798.00**	**$600.00**
HA-6	LW-12097	10-5092	07-01443	**$995.00**	**$600.00**
MA-3PA	LW-13133	10-5126	08-06388	**$935.00**	**$600.00**
MA-3PA	LW-14016	10-5142	08-06389	**$743.00**	**$600.00**
HA-6	LW-14689	10-5180	07-01446	**$855.00**	**$600.00**
HA-6	LW-13757	10-5189	07-01447	**$1,186.00**	**$600.00**
MA-4-5	LW-15380	10-5193	08-06390	**$829.00**	**$600.00**
HA-6	LW-15504	10-5200	07-01450	**$1,186.00**	**$600.00**
HA-6	LW-15626	10-5206	07-01453	**$855.00**	**$600.00**
HA-6	LW-16062	10-5206-1	07-01457	**$855.00**	**$600.00**
HA-6	LW-16413	10-5206-11	07-01458	**$855.00**	**$600.00**
HA-6	LW-15663	10-5210	07-01459	**$855.00**	**$600.00**
HA-6	LW-15674	10-5211	07-01460	**$1,186.00**	**$600.00**
HA-6	LW-15985	10-5211-1	07-01461	**$855.00**	**$600.00**
MA-4-5	72740	10-4404	08-06375	**$829.00**	**$600.00**
MA-4SPA	78728	10-5009	08-06384	**$829.00**	**$600.00**
MA-4SPA	13659	10-5135	08-13873	**$829.00**	**$600.00**
MA-3A	15496	10-5199	08-06391	**$775.00**	**$600.00**
MA-4SPA	15986	10-5217	08-06392	**$829.00**	**$600.00**
MA-3SAP	0-290-D	10-3346-1	07-00870	**$799.00**	**$600.00**
$600.00	LW-16206	10-5227	07-01467	**$854.00**	**$600.00**
$699.00	LW-15959	10-5230	08-06397	**$975.00**	**$600.00**
HA-6	LW-15960	10-5235	08-06398	**$953.00**	**$600.00**

******NOTE******

Customer will need to provide core for overhaul in the event our supplier does not have cores available to overhaul.
If you do not see your model # here please contact Aircraft Spruce Sales Department for pricing and availability .
****All prices shown are with factory acceptable exchange carburetor.***
Send exchange carburetor core to Aircraft Spruce. Upon factory approval of core, you will be refunded the core charge.
BE CERTAIN ALL FUEL IS REMOVED FROM THE CORE.
If Carburetor is not in stock we can have yours overhauled in 5-7 working days. Please call or email for more information.

CONTINENTAL CARBURETORS

Part No.	Carb. Model	O.E.M. P/N	Our Part No.	Our Price	Core
10-3168	MA-4-5	520120	07-01369	**$769.00**	**$600.00**
4895-T	MA-3SPA	530490	08-06380	**$829.00**	**$600.00**
10-3649-1	MA-4-5	535207	07-01370	**$769.00**	**$600.00**
10-3859-1	MA-4-5	538872	08-06371	**$791.00**	**$600.00**
10-3965-1	MA-4-5	539883	07-01373	**$769.00**	**$600.00**
10-3965-12	MA-4-5	539883	10-03965-12	**$849.00**	**$600.00**
10-4115-1	MA-3SPA	627143	10-04115-1	**$799.00**	**$600.00**
10-4171	MA-4-5	626789	07-01351	**$983.00**	**$600.00**
10-4191	MA-4-5	626859	07-01375	**$758.00**	**$600.00**
10-4233	MA-3SPA	627365	08-06374	**$829.00**	**$600.00**
10-4240	MA-3SPA	627637	07-01377	**$829.00**	**$600.00**
10-44399-1	MA-3SPA	628945	10-04439	**$699.00**	**$600.00**
10-4457	MA-3SPA	629175	07-01378	**$799.00**	**$600.00**
10-4893-1	MA-4-5	641139	08-06378	**$829.00**	**$600.00**
10-4894	MA-3SPA	633028	08-06379	**$829.00**	**$600.00**
10-5067	MA-3SPA	-	07-01381	**$799.00**	**$600.00**
10-5082	MA-3SPA	637035	07-01382	**$799.00**	**$600.00**
10-5128	MA-3SPA	640416	07-01385	**$699.00**	**$600.00**
10-5192	MA-3SPA	641860	07-01386	**$820.00**	**$600.00**
10-5284	MA-4-5	646232	08-06404	**$829.00**	**$600.00**

*All prices shown are with factory acceptable exchange carburetor. Add core charge on all models to each price shown. Send exchange carburetor core to Aircraft Spruce. Upon factory approval of core, you will be refunded the core charge.
BE CERTAIN ALL FUEL IS REMOVED FROM THE CORE.
FRANKLIN ENGINE CARBURETORS ALSO AVAILABLE. ADVISE EXACT ENGINE AND CARBURETORS ALSO AVAILABLE. ADVISE ENGINE AND CARBURETOR MODEL NUMBERS AND REQUEST QUOTATION

MARVEL-SCHEBLER CARBURETORS



MARVEL-SCHEBLER NEW CARBURETORS

Note: Customer will need to provide core for overhaul in the event our supplier does not have cores available to overhaul.

Note: All Rebuilt & Overhauled Carb Purchases will be Charged an Additional $600.00 for Core.

Please check with Aircraft Spruce on availability of cores at Marvel-Schebler.

Carb. Model No.	OEM Part No.	Our Part No.	Our Price	Tempest Carb. Model No.	OEM Part No.	Our Part No.	Our Price
MA-4SPA™	10-3678-12--F	08-06304	**$1,783.00**	MA-4SPA™	10-3678-32--F	08-06305	**$1,749.00**
MA-4-5™	10-3859-1--F	08-06327	**$2,222.00**	MA-4-5™	10-3878--F	08-06306	**$2,222.00**
MA-4-5™	10-4164-1--F	08-06307	**$2,222.00**	MA-3PA™	10-4233--F	08-06328	**$1,732.00**
MA-3SPA™	10-4240-1--F	08-06329	**$1,783.00**	MA-4-5™	10-4404-1--F	08-06308	**$2,223.00**
MA-4-5™	10-4893-1--F	08-06309	**$2,222.00**	MA-3SPA™	10-4894-1--F	08-06311	**$1,789.00**
MA-3SPA™	10-4895-1--F	08-06312	**$1,794.00**	MA-4SPA™	10-4910-1--F	08-06332	**$1,732.00**
MA-4SPA™	10-5009--F	08-06315	**$1,732.00**	MA-4-5™	10-5034--F	08-06335	**$2,222.00**
MA-3PA™	10-5050--F	08-06336	**$1,731.00**	MA-4-5™	10-5054--F	08-06337	**$2,223.00**
MA-3SPA™	10-5082--F	08-06338	**$1,732.00**	MA-3PA™	10-5126--F	08-06339	**$1,731.00**
MA-3PA™	10-5142--F	08-06340	**$1,731.00**	MA-4-5™	10-5193--F	08-06341	**$2,236.00**
MA-3A™	10-5199--F	08-06316	**$1,547.00**	MA-4SPA™	10-5217--F	08-06317	**$1,748.00**
HA-6™	10-5219--F	08-06342	**$2,411.00**	MA-3PA™	10-5220--F	08-06343	**$1,732.00**
HA-6™	10-5224--F	08-06344	**$2,408.00**	HA-6™	10-5230--F	08-06345	**$2,408.00**
HA-6™	10-5235--F	08-06346	**$2,408.00**	HA-6™	10-5253--F	08-06347	**$2,408.00**
HA-6™	10-5255--F	08-06348	**$2,408.00**	MA-3PA™	10-5257--F	08-06349	**$1,731.00**
MA-3PA™	10-5267--F	08-06353	**$1,732.00**	HA-6™	10-5283--F	08-06354	**$2,408.00**
MA-4-5™	10-5284--F	08-06356	**$2,222.00**	MA-4-5™	10-5288--F	08-06357	**$2,222.00**
HA-6™	10-6001--F	08-06358	**$2,408.00**	HA-6™	10-6019--F	08-06359	**$2,408.00**
HA-6™	10-6030-1--F	08-06363	**$2,408.00**	MA-4-5™	10-6035-11--F	08-06365	**$2,598.00**
MA-4-5™	10-6045--F	08-06366	**$2,222.00**	MA-4-5™	10-6050--F	08-06368	**$2,222.00**
MA-4-5™	10-6054--F	08-06369	**$2,117.00**	MA-4-5™	10-6102--F	08-06370	**$2,222.00**

EP

MARVEL-SCHEBLER REBUILT & OVERHAULED CARBURETORS

Model Number	OEM Part No.	Rebuilt P/N	Rebuilt Price	Overhaul P/N	Overhaul Price	Core for Rebuilt / Overhauled
MA-4SPA™	10-3678-12	08-06325-1	**$923.00**	08-06325	**$829.00**	**$600.00**
MA-4SPA™	10-3678-32	08-06326-1	**$949.00**	08-06326	**$829.00**	**$600.00**
MA-4-5™	10-3859-1	08-06371-1	**$1,085.00**	08-06371	**$791.00**	**$600.00**
MA-4-5™	10-3878	08-06372-1	**$1,099.00**	08-06372	**$829.00**	**$600.00**
MA-4-5™	10-4164-1	08-06373-1	**$1,085.00**	08-06373	**$829.00**	**$600.00**
MA-3PA™	10-4233	08-06374-1	**$913.00**	08-06374	**$829.00**	**$600.00**
MA-4-5™	10-4404-1	08-06376-1	**$1,086.00**	08-06376	**$829.00**	**$600.00**
MA-4-5™	10-4404	08-06375-1	**$1,086.00**	08-06375	**$829.00**	**$600.00**
MA-4-5™	10-4893-1	08-06378-1	**$1,119.00**	08-06378	**$829.00**	**$600.00**
MA-3SPA™	10-4894-1	08-06379-1	**$949.00**	08-06379	**$829.00**	**$600.00**
MA-3SPA™	10-4895-1	08-06380-1	**$949.00**	08-06380	**$829.00**	**$600.00**
MA-4SPA™	10-4910-1	08-06382-1	**$919.00**	08-06382	**$789.00**	**$600.00**
MA-4SPA™	10-4910	08-06381-1	**$927.00**	08-06381	**$789.00**	**$600.00**
MA-3A™	10-4953	08-06383-1	**$957.00**	08-06383	**$889.00**	**$600.00**
MA-4SPA™	10-5009	08-06384-1	**$949.00**	08-06384	**$829.00**	**$600.00**
MA-4-5™	10-5034	08-06385-1	**$1,085.00**	08-06385	**$798.00**	**$600.00**
MA-3PA™	10-5050	08-06386-1	**$919.00**	08-06386	**$780.00**	**$600.00**
MA-4-5™	10-5054	08-06387-1	**$1,085.00**	08-06387	**$798.00**	**$600.00**
MA-3PA™	10-5126	08-06388-1	**$1,097.00**	08-06388	**$935.00**	**$600.00**
MA-3PA™	10-5142	08-06389-1	**$923.00**	08-06389	**$743.00**	**$600.00**
MA-4-5™	10-5193	08-06390-1	**$1,125.00**	08-06390	**$829.00**	**$600.00**
MA-3A™	10-5199	08-06391-1	**$808.00**	08-06391	**$775.00**	**$600.00**
MA-4SPA™	10-5217	08-06392-1	**$949.00**	08-06392	**$829.00**	**$600.00**
HA-6™	10-5219	08-06394-1	**$1,125.00**	08-06394	**$989.00**	**$600.00**
MA-3PA™	10-5220	08-06395-1	**$934.00**	08-06395	**$780.00**	**$600.00**
HA-6™	10-5224	08-06396-1	**$1,085.00**	08-06396	**$953.00**	**$600.00**
HA-6™	10-5230	08-06397-1	**$1,085.00**	08-06397	**$975.00**	**$600.00**
HA-6™	10-5235	08-06398-1	**$1,085.00**	08-06398	**$953.00**	**$600.00**
HA-6™	10-5253	08-06399-1	**$1,102.00**	08-06399	**$986.00**	**$600.00**
HA-6™	10-5255	08-06400-1	**$1,086.00**	08-06400	**$966.00**	**$600.00**
MA-3PA™	10-5257	08-06401-1	**$900.00**	08-06401	**$780.00**	**$600.00**
MA-3PA™	10-5267	08-06402-1	**$943.00**	08-06402	**$829.00**	**$600.00**
HA-6™	10-5283	08-06403-1	**$1,086.00**	08-06403	**$986.00**	**$600.00**
MA-4-5™	10-5284	08-06404-1	**$1,111.00**	08-06404	**$829.00**	**$600.00**
MA-4-5™	10-5288	08-06405-1	**$1,085.00**	08-06405	**$790.00**	**$600.00**
HA-6™	10-6001	08-06406-1	**$1,085.00**	08-06406	**$964.00**	**$600.00**
HA-6™	10-6019	08-06407-1	**$1,086.00**	08-06407	**$964.00**	**$600.00**
HA-6™	10-6030-1	08-06408-1	**$1,086.00**	08-06408	**$953.00**	**$600.00**
MA-4-5™	10-6035-11	08-06409-1	**$1,086.00**	08-06409	**$838.00**	**$600.00**
MA-4-5™	10-6054	08-06410-1	**$1,086.00**	08-06410	**$791.00**	**$600.00**



MARVEL-SCHEBLER FLOAT KIT

A new float has been developed for the small MA series carburetors. The new floats are a solid blue epoxy material with a smooth skin.

Small..... P/N 08-06508.....**$119.75**
Large..... P/N 08-06510.....**$139.95**



THROTTLE SHAFT MINOR REPAIR KIT 778-1007-F

Tempest MSA throttle minor repair kit (778-1007--F). All parts contained in this kit are covered under FAA/ PMA PQ0111NM and/or PQ1296CE.

P/N 08-06539.....**$139.75**

CARBURETOR PARTS

REPLACEMENT PARTS FOR MARVEL-SCHEBLER CARBURETORS

Mfg. Ref.	Description	Part No.	Price
16-A39	Gasket	08-06627	$3.35
16-A42	Gasket	08-06628	$3.35
16-A48	Gasket	08-06629	$5.35
16-A56	Gasket	08-06630	$13.60
16-B44	Gasket	08-06635	$4.35
16-B45	Gasket	08-06636	$3.20
16-B85	Gasket	08-06641	$3.70
17-372	Rod	08-06649	$21.80
17-383	Rod	08-06650	$21.80
194-580	Pump Plunger	08-06938	$106.85
194-591	Pump Plunger	08-06939	$104.95
194-593	Pump Plunger	08-06940	$96.75
194-605	Pump Plunger	08-06941	$99.85
233-614	Valve & Seat	08-06971	$92.75
233-615	Float Valve	08-06972	$79.85
24-262	Spring	08-06651	$2.26
24-A10	Spring	08-06655	$3.85
24-A115	Spring	08-06656	$3.85
24-A30	Spring	08-06659	$3.85
24-A33	Spring	08-06660	$3.85
29-182	Clip	08-06669	$14.50
32-32	Shaft	08-06675	$20.85
32-35	Shaft	08-06676	$17.70
34-72	Valve	08-06679	$16.60
34-91	Valve	08-06680	$13.50
44-220	Packing O-Ring	08-06696	$6.50
44-223	Packing O-Ring	08-06699	$7.50
44-224	Packing O-Ring	08-06701	$6.50
44-49	Packing O-Ring	08-06695	$14.50

Mfg. Ref.	Description	Part No.	Price
60-260	Bushing	08-06821	$14.75
60-A160	Bushing	08-06824	$20.75
778-1003	Throttle	08-06535	$163.75
778-1004	Throttle	08-06536	$122.95
15-483	Screw	08-06590	$1.85
15-58	Screw	08-06585	$2.25
15-A23	Screw	08-06598	$2.16
15-B108	Screw	08-06609	$3.65
15-B109	Screw	08-06610	$3.35
15-B98	Screw	08-06607	$5.55
16-222	Gasket	08-06617	$7.50
16-224	Gasket	08-06619	$2.95
16-625	Gasket	08-06413	$77.75
16-646	Gasket	08-06415	$79.75
16-653	Gasket	08-06416	$39.95
16-676	Gasket	08-06417	$38.50
16-696	Gasket	08-06419	$39.75
16-713	Gasket	08-06422	$31.50
16-735	Gasket	08-06425	$31.50
16-A107	Gasket	08-06631	$3.35
16-A108	Gasket	08-06632	$3.20
16-A16	Gasket	08-06621	$3.20
16-A28	Gasket	08-06622	$3.35
16-A30	Gasket	08-06623	$4.35
16-A31	Gasket	08-06624	$5.35
16-A32	Gasket	08-06625	$3.35
16-A36	Gasket	08-06626	$4.45
82-1	Cotter Pin	08-06878	$1.12
82-11	Cotter Pin	08-06880	$1.20
82-14	Cotter Pin	08-06881	$1.25

Mfg. Ref.	Description	Part No.	Price
99-44	Plug	08-06896	$8.65
47-851	Nozzle	07-06697	$133.80
47-852	Nozzle	08-06771	$181.75
778-1005	Throttle Shaft	08-06537	$157.75
778-1006	Throttle Shaft	08-06538	$159.75
778-1007	Throttle Shaft	07-06638	$133.90
778-1008	Throttle Shaft	08-06540	$153.95
78-121	Washer	08-06842	$2.35
78-388	Washer	08-06847	$1.23
78-A109	Washer	08-06853	$3.40
78-A110	Washer	08-06854	$3.40
78-A111	Washer	08-06855	$3.35
78-A40	Washer	08-06851	$2.04
78-A97	Washer	08-06852	$3.35
81-311	Nut	08-06877	$3.75
13-1519	Throttle Shaft	08-06568	$188.95
13-1520	Throttle Shaft	08-06569	$149.85
13-1521	Throttle Shaft	08-06570	$136.75
13-1522	Throttle Shaft	08-06571	$176.75
13-1523	Throttle Shaft	08-06572	$176.75
13-1531	Throttle Shaft	08-06575	$169.85
13-1533	Throttle Shaft	08-06576	$209.95
155-226	Lever	08-06912	$16.50
155-307	Lever	08-06914	$28.50
15-126	Screw	08-06587	$5.80
43-648	Needle	08-06691	$28.90
43-564	Needle	08-06690	$55.75

SEE WWW.AIRCRAFTSPRUCE.COM FOR COMPLETE PARTS LIST.

EP

REPLACEMENT CARBURETOR VENTURI'S (ONE PIECE)

These one piece Venturis replace old type primary and main Venturis in Marvel-Schebler carburetors. Order by new Venturi part number.

Old Main Venturi	New 1-Piece Venturi	Our Price
46-462	46-F7	$113.75

Old Main Venturi	New 1-Piece Venturi	Our Price
46-A2	46-F10	$82.80
46-A65	46-F11	$70.75
46-A70	46-F12	$109.85

FLOAT NEEDLE SEAT DRIVER



This Float Needle Seat Driver is applicable to Marvel-Schebler MA3 and MA4 carburetors and is quality made of alloy steel. It facilitates the easy removal of needle valve seats, prevents damage to the main casting and the new seat during installation, and insures proper torque application. Features 7/16" hex drive fitting. P/N 12-30190..... **$79.75**

BENDIX/PRECISION RSA FUEL SERVOS & FLOW DIVIDERS

- Bendix/Precision (RSA-5, RSA-7da1, RSA-10 Overhaul/Exchange).
- Bendix/Precision (Flow Dividers Overhaul/Exchange.
- TMC Complete Fuel Injection Systems (IO-360, IO-550, L/TSIO-360,TSIO-520, GTSIO-520, TSI Overhaul Exchange).
- TCM Individual Fuel Injection Components Throttle Assemblies, Control Assemblies (without throttle Pumps, Manifold Valves, Pressure Regulators, No Assemblies (cleaning, rejetting, calibrating).
- FAA/PMA Replacement Parts.

Call or visit our website at: www.aircraftspruce.com for more info.



REPLACEMENT FLOAT KITS BY MARVEL-SCHEBLER

Needle and Seats for MA3-4 #233-615
P/N 08-06972.....**$79.85**
Needle and Seats for MA4-5 #233-614
P/N 08-06717.....**$109.85**

REPAIR KITS & PARTS FOR COMMON MARVEL-SCHEBLER CARBURETORS

Lycoming No.	Marvel-Schebler		Major Repair Kit Price
	Kit P/N	Carb P/N	
62289	286-1628	10-3346-1	$561.00
69250	286-1624	10-3678-12	$413.95
62830	286-1630	10-3565-1	$435.00
LW-11222	286-1622	10-5062	$513.00
LA-16907	286-1783	10-5267	$339.00
71098	666-660	10-3878	$219.95
LW-15380	286-1719	08-06466	$512.00

NOTE: Many Marvel-Schebler replacement parts are no longer available from Facet. These are manufactured by Kelly Aerospace.

CARBURETOR HEAT BOX PARTS



Unique Elastomer Bearing Replaces Needle Bearing - McFarlane's elastomer bearing is assembled with tension between the mating surfaces. This tension prevents micro-movement and its related metal erosion. The bearing contact area that transfers vibration motion from the heat box to the butterfly shaft is hundreds of times greater than that of the original needle bearing. This large surface effectively prevents localized metal erosion. • Absorbs shaft and butterfly vibration • Eliminates needle bearing failures • Increases service life of all components • Direct replacement for original parts. ***Proven Design:*** • Tested to over 700,000 cycles while exposed to avgas, heat and vibration without any change in performance • Extremely rugged and wear resistant in high temperature and fuel environments. ***Convenient:*** • Discontinued part numbers through the factory are now manufactured by McFarlane • Also available in kits containing the shaft, arm, bearing housings, monel rivets, and roll pin. ***Shafts and bearings sold separately.***

CESSNA SHAFT Description	Part No.	Price
Cessna Shaft MC0450068-2 Model: FA152 Serial No: FA1520337 thru FA1520425	05-04430	$168.85
Cessna Shaft MC0550180-16 Model: 172B,C Serial No: 17247747 thru 17249544	05-04431	$254.95
Cessna Shaft MC0550180-28 Model: F172D,E,F, G Serial No: F172-0001 thru F172-0319	05-04432	$261.95
Cessna Shaft MC0509068-6 Model: 172Q Serial No: 17275869 thru 17276516	05-04433	$208.95
Cessna Shaft MC1752078-4 Model: 177A,B Serial No: 17701165 thru 17702752	05-04434	$194.75
Cessna Shaft MC0750112 Model: 180* Serial No: 30000 thru 32150	05-04435	$188.75
Cessna Shaft MC0750126-19 Model: 180*, 180A,B Serial No: 32151 thru 50661	05-04436	$183.85
Cessna Shaft MC0750133-8 Model: 175, 175A Serial No: 55001 thru 56777	05-04437	$187.75
Cessna Shaft MC0750173-3 Model: 185, 185A,B, C,D,E/ A185E* Serial No: 185-0001 thru 185-1300	05-04438	$189.75
Cessna Shaft MC0750173-4 Model: A185E* Serial No: 185-1301 thru 18501832	05-04439	$197.80

****Partial model eligibility.***

CESSNA ARM Description	Part No.	Price
Cessna Arm MCS2280-8-00 Model: 152, A152, F152, FA152 Serial No: 15279406 thru 15286033 A152 A1520735 thru A1521049 F152 F15201429 thru F1520198 FA152 FA1520337 thru FA1520425	05-04440	$155.75
Cessna Arm MC0750111-19	05-04441	$171.75
Cessna Arm MCS2280-3-157	05-04442	$196.75

CESSNA BEARING Description	Part No.	Price
Cessna Bearing HSG MC0750113-1 Model: 152 Serial No: MC0750113-1	05-04443	$78.80
Cessna Bearing HSG MC0750113-3 Model: 172Q Serial No:MC0750113-3	05-04444	$80.75

CARBURETOR OVERHAUL QUICK KITS

Marvel-Schebler "Quick Kits" are easy to use, and are designed to save you time and money. Quick Kits include not only the recommended replacement parts used in every overhaul, but the additional parts used by all fuel professionals to insure the job is done right.
Kits include (where applicable): Throttle shaft lever, throttle shaft, throttle adjusting screw, throttle valve screws, inlet strainer screws, throttle body screws, mixture control lever screw, gasket kit, pump connection rod, throttle adjustment spring, throttle opening spring, idle adjustment spring, float lever shaft, pump stem, throttle shaft bushings, inlet strainer washer, pump stem retainer washer, mixture control lever washer, throttle body washers, throttle lever lock nut, float shaft cotter pin, throttle nut cotter pin, pump lever, pump plunger assembly and float valve seat assembly.

10-5282	CF286-11
10-5283	CF286-11
10-5288	CF286-08
10-6014	CF286-11
KIT P/N	**PRICE**
286-00	**$346.00**
286-01	**$487.00**
286-02	**$459.00**
286-03	**$491.00**
286-04	**$439.00**
286-05	**$523.00**
286-06	**$487.00**
286-07	**$512.00**
286-08	**$485.00**
286-09	**$493.00**
286-10	**$556.00**
286-11	**$570.00**
286-12	**$360.00**

See which Part No. is for your application in the charts to the right.

Franklin Carburetors	
P/N	**"Quick Kit" P/N**
10-2971-P	CF286-02
10-3007	CF286-06
10-3063-2	CF286-06
10-3148-1	CF286-06
10-3479	CF286-06
10-5069	CF286-02
10-5093	CF286-00
Continental Carburetors	
P/N	**"Quick Kit" P/N**
10-2848	CF286-02
10-2948	CF286-02
10-3168	CF286-05
10-3237	CF286-03
10-3649-1	CF286-05
10-3759	CF286-05
10-3859	CF286-05
10-3859-1	CF286-05
10-3965	CF286-05
10-3965-1	CF286-05
10-4171	CF286-05
10-4191	CF286-05
10-4233	CF286-02
10-4240	CF286-02
10-4240-1	CF286-02
10-4252	CF286-02

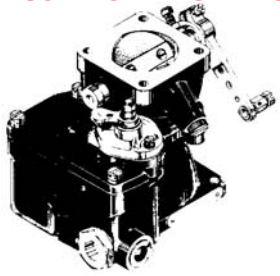
10-4439	CF286-03
Continental Carburetors	
P/N	**"Quick Kit" P/N**
10-4457	CF286-02
10-4893	CF286-05
10-4893-1	CF286-05
10-4894	CF286-02
10-4894-1	CF286-02
10-4895	CF286-03
10-4895-1	CF286-03
10-5067	CF286-02
10-5082	CF286-02
10-5128	CF286-02
10-5192	CF286-05
10-5284	CF286-05
Lycoming Carburetors	
P/N	"Quick Kit" P/N
10-2827	CF286-07
10-2983	CF286-00
10-3103-1	CF286-00
10-3323	CF286-07
10-3346-1	CF286-02
10-3391-1	CF286-06
10-3565-1	CF286-02
10-3634	CF286-06
10-3678-12	CF286-04
10-3678-32	CF286-04

10-3729	CF286-02
10-3856	CF286-06
Lycoming Carburetors	
P/N	**"Quick Kit" P/N**
10-3856-1	CF286-06
10-3856-11	CF286-06
10-3856-12	CF286-06
10-3878	CF286-08
10-4057	CF286-09
10-4057-1	CF286-09
10-4164	CF286-08
10-4164-1	CF286-07
10-4404	CF286-09
10-4404-1	CF286-09
10-4910	CF286-04
10-4910-1	CF286-04
10-4953	CF286-00
10-4978-1	CF286-01
10-5009	CF286-04
10-5009N	CF286-04
10-5034	CF286-07
10-5042	CF286-00
10-5045	CF286-10
10-5045-1	CF286-10
10-5050	CF286-01
10-5054	CF286-09
10-5062	CF286-04

10-5092	CF286-10
10-5126	CF286-01
10-5135	CF286-04
Lycoming Carburetors	
P/N	**"Quick Kit" P/N**
10-5142	CF286-01
10-5180	CF286-10
10-5189	CF286-10
10-5193	CF286-08
10-5199	CF286-00
10-5206	CF286-10
10-5206-1	CF286-10
10-5206-11	CF286-10
10-5210	CF286-10
10-5217	CF286-04
10-5219	CF286-11
10-5220-E	CF286-01
10-5220	CF286-01
10-5221	CF286-12
10-5224	CF286-11
10-5227	CF286-12
10-5230	CF286-11
10-5235	CF286-11
10-5253	CF286-11
10-5255	CF286-11
10-5257	CF286-01
10-5267	CF286-01

EP

BENDIX STROMBERG NA-S3A1 CARBURETOR OVERHAUL PARTS FOR NA-S3A1 CARBURETOR



The NA-S3A1 carburetor is no longer in production. Only the parts listed are carried in stock. Others may be special ordered. Originally used on Cont. A-65, A-75, A-80, C-75, C-85 and C-90 engines.
Gasket & Ring Set (Incl. gaskets for under seat)
P/N 07-02200 .....**$52.75**
P-14222 Steel Needle and P-17247 seat ..... P/N 07-14222 .....**$166.75**
Needle (Delrin) ..... P/N 2523047.....**$329.00**
Metering Jet (C-85) ..... P/N 07-00684 .....**$13.50**
Metering Jet (A-65)..... P/N 07-00685 .....**$12.50**
Washer only - P5329 for Main Discharger Nozzle
P/N 07-05329 .....**$2.70**

Throttle Shaft (Ref. #34 in Manual) not available.

MARVEL-SCHEBLER CARB GASKETS



MC16-A36 GASKET FUEL INLET FAA-PMA - Marvel-Schebler Fuel Inlet Screen Gaskets for many Carbureted Aircraft The copper gaskets should be changed when finger screens are inspected at each annual inspection.
P/N 07-01387.....**$4.80**

Marvel-Schebler / Facet Carburetor Models Eligible for Installation	Eligible Engine Model Series	
	Continental Model Series	Lycoming Model Series
MA-3, MA-3PA, MA-3A, MA-3SPA, MA-4SPA	A-65, A-75, C-85, C-90, O-200, C-125, C-145, O-300	O-235, O-290, O-320



MC16-A108 GASKET FUEL INLET FAA-PMA - Marvel-Schebler Fuel Inlet Screen Gaskets for many Carbureted Aircraft The copper gaskets should be changed when finger screens are inspected at each annual inspection.
P/N 07-01389.....**$3.65**

Marvel-Schebler / Facet Carburetor Models Eligible for Installation	Eligible Engine Model Series	
	Continental Model Series	Lycoming Model Series
MA-4-5, MA-4-5AA, MA-5, MA-6AA, HA-6	GO-300, O-470	O-340, O-360, O-435, O-540



MC16-A48 GASKET FUEL INLET FAA-PMA - Marvel-Schebler Fuel Inlet Screen Gaskets for many Carbureted Aircraft The copper gaskets should be changed when finger screens are inspected at each annual inspection. Sold as a 5 pack.
P/N 07-01388.....**$13.60**

Marvel-Schebler / Facet Carburetor Models Eligible for Installation	Eligible Engine Model Series	
	Continental Model Series	Lycoming Model Series
MA-4-5, MA-5AA, MA-4-5AA, MA-5, MA-6, MA-6AA, HA-6	GO-300, O-470	O-340, O-360, O-435, O-540

BING CARBURETORS



COMPLETE CARBURETORS – TYPE 54

To Order, Specify:

1. Model indicated by engine number 277, 377, 447, 503, or 532.
2. With intake silencer or Without intake silencer.
3. Single Carb or Dual Carb.
4. Hand Choke or Remote Choke.

Model # 54/36/2040

P/N 07-00303 ..... **$419.00**

TYPE 54 REBUILD KIT

#17 Top O Ring #7 Air Screw O Ring
#29 Bowl Gasket #26 Float Needle
#25 Hinge Pin #10 Sieve Sleeve (Screen)
#21 Cable Grommet

P/N 07-00304..... **$46.65**

TYPE 54 FIX-IT KIT

#12 New Spring Cup #56 Jet Needle O Ring
#11 Clip P/N 07-00305 ..... **$16.50**



COMPLETE CARBURETORS – TYPE 84

To Order, Specify:

1. Model indicated by engine number 277, 377, 447, 503, or 532.
2. With intake silencer or Without intake silencer.
3. Single Carb or Dual Carb.
4. Hand Choke or Remote Choke.

Model # 84/32/3437 ..... P/N 07-00306..... **$454.00**

TYPE 84 REBUILD KIT

#17 Top O Ring #7 Air Screw O Ring
#29 Bowl Gasket #26 Float Needle
#25 Hinge Pin #10 Sieve Sleeve (Screen)
#21 Cable Grommet P/N 07-00307 ..... **$46.85**



ROTAX FLOAT CHAMBER 261-010

This Float Chamber replaces a single float bowl. For dual carb applications, order two.

P/N 261-010..... **$136.75**

BING CARBURETOR ACCESSORIES

Bing Remote Choke Kit (w/8' cable) .... P/N 07-00308 .... **$56.00**
Bing Remote Choke Kit (w/o cable) ..... P/N 07-00309 .... **$33.50**
Bing Aircraft Parts manual ..... P/N 07-00310 .... **$15.95**
Bing Plastic Crossover Vent Tube - 280mm long. Used on Bing type 84 carbs..... P/N 07-01360 .... **$12.50**

BING JUNCTION BLOCKS



Bing junction block for dual Carb linkage on any Rotax engine. Three gang outlet can be used dual Carbs or with three way oil injection and dual Carbs. Converts a single throttle line into as many as three lines.

3" Junction Block .....P/N 15-05033..... **$13.85**
4" Junction Block.....P/N 15-05450..... **$11.50**

CARBURETOR SYNCHRONIZATION



CARBMATE - Quick & easy synchronizing by direct comparison of a set of carbs / Fuel Injector throttle bodies. Range adjustable from 2 to 0,05cmHg per LED. Hook up 2 or 5 cylinder with the optional adapter kit.

CarbMate.....P/N 07-19346 ..... **$118.75**

With Rotax 912/914 Accessory Kit...P/N 07-01891 ..... **$187.75**



4-CHANNEL ADAPTER KIT

Converts the SynchroMate or CarbMate into a 4 carb/throttle valve synchronizer. This easy-to-mount & easy-to-use kit allows connection of SynchroMate's or CarbMate 2 channels (tubes) to 4 carbs / throttle valves at once.

PN 07-01267 ..... **$56.75**

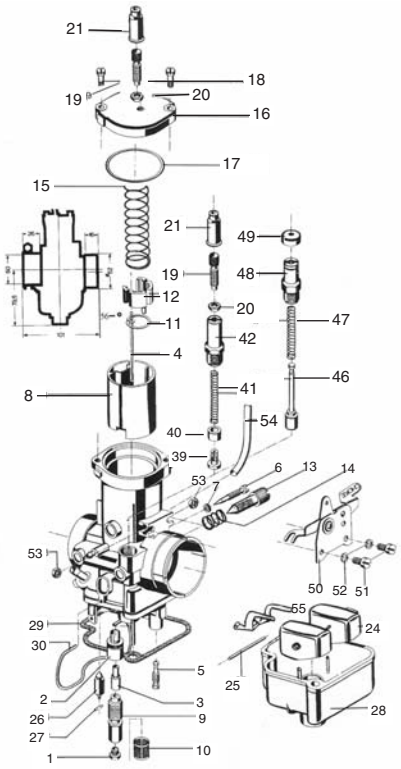
Accessories	Part No.	Price
4-Channek adapter kit TS-220	07-01267	$56.75
Rotax adapter w/ 2X6 ft hose TS-400	07-01889	$61.75
ROTAX ACCESSORY KIT TS-400 KIT	07-01890	$98.00
Rotax black nylon storage case TS-222	07-01893	$32.90
Rota rubber black holster TS-223	07-01894	$8.90
Rotax replacement 6 ft rubber hose	07-01895	$17.50



ROTAX THROTTLE SPRING

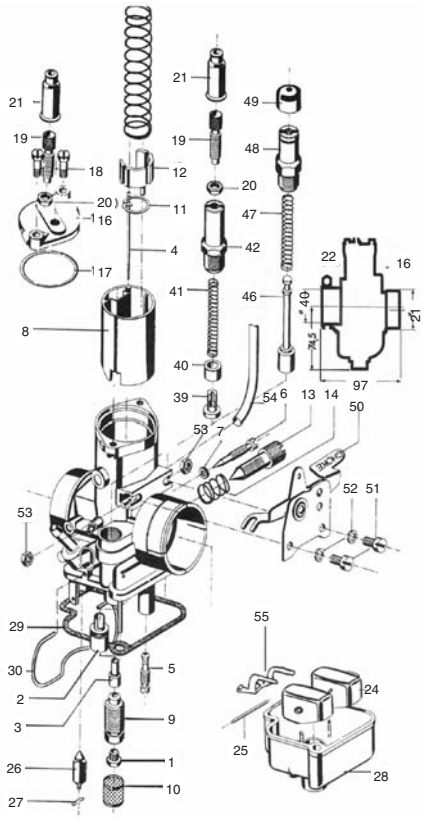
Alternate throttle return spring for Rotax 912/914 series engines. ....P/N 08-06858..... **$2.92**

REPLACEMENT PARTS – TYPE 54



No.	Part No.	Description	Price
1	268-978-998	Main Jet	$10.75
2	251-554	Atomizer	$24.70
3	963-691-699	Needle Jet	$17.60
4	963-711-719	Jet Needle	$16.50
5	963-140-147	Idler Jet	$31.50
6	963-155	Air Screw	$12.50
7	831-710	O Ring	$3.65
8	963-679	Piston	$99.75
9	963-700	Mixing Tube	$21.70
10	261-625	Sieve Sleeve	$9.85
11	963-500	Clip	$7.95
12	827-347	New Style Spring Cup	$8.95
13	963-160	Mix Screw	$9.50
14	938-640	Spring	$3.35
15	938-655	Slide Spring	$6.50
16	963-720	Cover Plate	$26.85
17	831-450	O Ring	$7.70
18	241-430	Screw	$1.60
19	241-440	Adjuster	$4.95
20	942-541	Nut	$1.45
21	260-370	Grommet	$2.80
24	861-181	Indep. Float	$39.85
26	261-705	Float Needle	$39.85
27	261-710	Clip	$1.95
28	261-010	Bowl Kit (bowl,24-27,55) *Float Needle Valve not included	$136.75
29	830-720	Gasket	$9.85
30	963-180	Bowl Clip	$9.90
39	963-740	Piston	$10.95
40	268-850	Sleeve	$4.60
41	661-050	Spring	$2.12
42	963-750	Housing	$15.80
46	268-847	Piston	$26.50
47	239-730	Spring	$4.95
48	261-770	Housing	$12.50
49	260-490	Rubber Cap	$6.85
50	261-755	Choke Lever	$28.50
51	240-791	Screw(51) & Washer(52)	$2.40
52	945-750		
53	261-200	Nut	$1.43
54	256-035	Vent Tube	$12.50
55	861-190	Float Arm	--
56	831-715	Jet Needle O Ring	$1.73

REPLACEMENT PARTS – TYPE 84



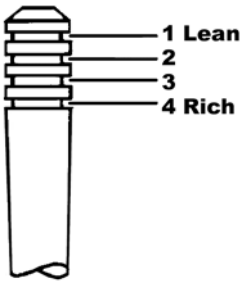
No.	Part No.	Description	Price
1	268-980	Main Jet 135	$11.50
2	261-692	Atomizer	$24.50
3	261-606	Needle Jet 262	$15.50
4	261-643	Jet Needle 8H1	$20.95
5	963-140	Idler Jet 50	$31.50
6	963-155	Air Screw	$12.50
7	831-710	O Ring	$3.65
8	261-635	Piston	$64.75
9	963-130	Jet Stock	$21.70
10	261-625	Screen	$9.85
11	261-650	Holding Plate	$9.50
12	227-635	Spring Cup	$8.65
13	963-160	Mix Screw	$9.50
14	938-640	Spring	$3.35
15	239-700	Slide Spring	$7.70
16	261-660	Cover	$24.65
17	261-670	O Ring	$9.50
18	241-430	Screw	$1.60
19	241-440	Adjust. Screw	$4.95
20	942-541	Nut	$1.45
21	260-370	Grommet	$2.80
26	261-705	Float Needle	$39.85
27	261-710	Clip	$1.95
28	963-170	Bowl	$43.95
29	830-720	Gasket	$9.85
30	963-180	Bowl Clip	$9.90
39	963-740	Piston	$10.95
40	268-850	Sleeve	$4.60
41	661-050	Spring	$2.12
42	963-750	Housing	$15.80
46	268-847	Piston	$26.50
47	239-730	Spring	$4.95
48	261-770	Housing	$12.50
49	260-490	Rubber Cap	$6.85
50	261-750	Lever	$21.50
51	240-791	Screw(51) & Washer(52)	$2.40
52	945-750		
53	261-200	Nut	$1.43
54	256-033	Vent Tube	$12.50

EP

CARBURETOR JETTING CHART FOR ROTAX® UL ENGINES

Use this chart to identify part number you need, then use bottom chart to select correct part number to order.

ROTAX® ENGINE	$11.50 MAIN JET	$29.50 IDLER JET	$15.50 NEEDLE JET	$16.80 JET NEEDLE	CLIP POSITION	AIR SCREW
2771	148	45	2.72	8L2	2	1
2772	140	45	2.72	8L2	2	1
3771	165	45	2.70	8O2	2	.5
3772	155	45	2.70	8O2	2	.5
4471	165	45	2.70	15K2	2	.5
4472	155	45	2.70	15K2	2	.5
447DC1	135	50	2.70	6G1	3	1
447DC3	128	50	2.68	15K2	2	1
503SC1 Up to #3785371	180	45	2.74	8G2	3	.5
503SC2 Up to #3785371	158	45	2.74	6H2	3	.5
503SC1 From #3785372 Up	185	45	2.72	15K2	3	.5
503SC2 From #3785372 Up	165	45	2.70	15K2	3	.5
503DC1	158	45	2.74	8L2	1	.5
503DC3	148	45	2.68	11K2	2	1
532SC1	195	55	2.74	15K2	3	1
532SC3	170	55	2.74	15K2	3	1
532DC1	165	55	2.72	11G2	3	1
532DC3	145	55	2.68	15K2	3	1
5821	165	55	2.72	11G2	3	1
5823	145	55	2.68	15K2	3	1



1 = Without Rotax® intake silencer kit, with K&N RC1200 air filter, with or without Rotax® after muffler kit.

2 = With Rotax® intake silencer kit, with K&N CM0300 air filter, with or without Rotax® after muffler kit.

3 = With Rotax® dual intake silencer kit, with K&N RC1200 air filters, with or without Rotax® after muffler kit.



MAIN JET

125 = Part No. R268-978
128 = Part No. R261-085
130 = Part No. R268-979
135 = Part No. R268-980
138 = Part No. R268-998
140 = Part No. R268-981
145 = Part No. R268-982
148 = Part No. R268-995
150 = Part No. R268-983
155 = Part No. R268-984
158 = Part No. R268-996
160 = Part No. R268-985
162 = Part No. R268-990
165 = Part No. R268-986
170 = Part No. R268-987
175 = Part No. R268-988
180 = Part No. R268-989
185 = Part No. R261-080
190 = Part No. R261-084
195 = Part No. R268-992
200 = Part No. R261-082
205 = Part No. R261-087
220 = Part No. R261-081



IDLER JET

30 = Part No. R963-141
35 = Part No. R963-143
40 = Part No. R963-142
45 = Part No. R963-144
50 = Part No. R963-140
55 = Part No. R963-147
60 = Part No. R963-145
65 = Part No. R963-146



NEEDLE JET

2.62 = Part No. R261-606
2.68 = Part No. R963-691
2.70 = Part No. R963-698
2.72 = Part No. R963-697
2.74 = Part No. R963-699
2.76 = Part No. R963-693
2.78 = Part No. R963-696
2.80 = Part No. R963-695
2.82 = Part No. R963-694
2.94 = Part No. R961-022

JET NEEDLE

2H2 = Part No. R963-717
4E2 = Part No. R963-716
6G1 = Part No. R261-642
6H2 = Part No. R963-719
6P2 = Part No. 15-05029
8G2 = Part No. R963-712
8H1 = Part No. R261-643
8L2 = Part No. R963-714
8O2 = Part No. R963-711
1O = Part No. R961-045
11G2 = Part No. R961-043
11K2 = Part No. R961-044
15K2 = Part No. R963-718

NEEDLE CLIP

P/N 07-00693 ..... **$7.95**

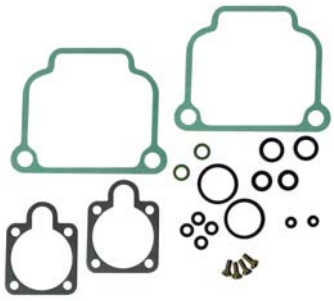
Lower numbers indicate smaller jet size or opening.
Low numbers = lean.
High numbers = rich.
First needle number denotes mixture above half-throttle.
Needle letter denotes mixture below half-throttle.

UNIVERSAL FUEL PRESSURE REGULATOR



If the fuel pump is putting out more than 8 psi, this regulator can be used to keep the fuel pressure within safe limits and avoid the possibility of flooding. • Pressure Range (psi): 4.5-9 • Regulator Style: Non-return • Regulator Location: Inline • Boost/Vacuum Reference Port: No **Gauge Port:** No • Mounting Bracket Included: Yes • Fittings Included: No • Rebuildable: Yes • Inlet Quantity: One • Inlet Attachment: Female threads • Inlet Size: 3/8 in. NPT • Outlet Quantity: Two • Outlet Attachment: Female threads • Outlet Size: 3/8 in. NPT • Regulator Material: Aluminum • Regulator Finish: Chrome plated. • Universal: Yes • Fuel Type: Gasoline • Regulator Usage: Carburetor.

P/N 15-08385 ..... **$48.75**



BING DUAL CARB GASKET KIT ROTAX

Quantity: 2 Carbs. "O" Rings: Biggest - Jet Stock, Next Down - Throttle Shaft, Green - Choke Disk, 4 small - Idle Jet & Idle Air Screw, and Smallest - Jet Needle.
For 912.....P/N 15-09421 ..**$49.95**
For 914.....P/N 15-09422 ..**$62.90**



KWIK TUNE FOR ROTAX ENGINES

The handy Kwik Tune, a timesaving tool launched at Sun 'n Fun. Kwik Tune helps remove and reinstall the aircraft throttle cable, cover, spring, and slide in a Bing carburetor.
P/N 08-05206 ..... **$9.95**

CARB CLEANING BRUSH



3/16" Tube, .005 Nylon, 2" BP, 6" OAL Can be used in the cleaning of internal bores and cylindrical cavities. Good for light duty jobs applying either wet or dry ingredients or cleansers. Sturdy twisted wire handles feature loop for easy grip. P/N 15-08286 ..... **$3.90**



Fuel Pump

MIKUNI FUEL PUMP

Genuine Mikuni fuel pumps. Replace original parts on Rotax®, Hirth, & many other engines.
Single Pump.....P/N 07-00777 ..... **$32.50**
Dual Pump.....P/N 07-00778 ..... **$28.90**



Rebuild Kits

MIKUNI REBUILT KIT FOR SINGLE/DUAL FUEL PUMPS

Single Pump.....P/N 07-01011 ..... **$13.75**
Dual Pump.....P/N 07-01010 ..... **$14.75**



CARB FLANGE

VM38/200 Carb Flange. Bolt Centers: 2.875" 36-38 mm Carbs.....P/N 15-06241 ..... **$29.90**



MIKUNI FLOAT CHAMBER PLUG

Mikuni Float Chamber Plug.
P/N 15-05548 ..... **$4.85**

EP

FUEL INJECTION SERVOS – FLOW DIVIDERS



PRECISION AIRMOTIVE

Precision Airmotive now feature's competitively priced OEM factory overhauled RSA Fuel Injection Servo's & Flow Dividers. As the OEM manufacturer, they ensure 'out of the box' performance of these overhaul units by completing both full flow dynamic and static analysis, verifying fuel delivery performance from idle to full throttle. Since 1988, Precision Airmotive has set the industry standard for fuel injection systems by supporting the general aviation industry with time tested quality products that meet the highest standards.
Note: Aircraft Spruce carries Precision Airmotive replacement parts and accessories, contact us for pricing and availability.

FUEL INJECTION SERVOS

Model No.	Part No.	Engine	Airframe	New Exchange		Rebuilt Exchange		Overhaul Exchange		Core
RSA-5AD1	2576536-2	IO-360-L2A	CesSna 172	07-02770	$3,765.00	07-02772	$1,799.00	07-02773	$1,475.00	$1,000.00
	2524054-11	IO-360/540 & various	Mooney 201& others	07-02775	$3,673.00	07-02776	$1,702.00	07-02777	$1,475.00	$1,000.00
	2576544-3	IO-540-AB1A5	Cessna 182	07-02778	$3,910.00	07-02779	$1,699.00	07-02780	$1,475.00	$1,000.00
	2524450-9	IO-360-AB1/C1C/C1C6	Piper, Arrow, Cherokee, Lake Buccaneer	07-02781	$3,682.00	07-02782	$1,876.00	07-02783	$1,627.00	$1,000.00
RSA-10ED1	2524500-9	LTIO-540-F2BD/J2B/J2BD TIO-540-F2BD/J2B/J2BD	Piper Navajo PA-31-325 Chieftain PA-31-350	07-02784	$4,963.00	07-02785	$1,927.00	07-02786	$1,626.00	$1,000.00
	2524273-12	IO-540-K1A5/K1A5D/K1G5	Piper Saratoga/ Lance	07-02787	$4,950.00	07-02788	$1,927.00	07-02789	$1,626.00	$1,000.00
	2576562-4	TIO-540-AJ1A	Cessna T206	07-02791	$5,239.00	07-02792	$1,926.00	07-02793	$1,625.00	$1,000.00
	2576630-4	IO-540-AE1A5	Robinson R44	07-02794	$5,349.00	07-02795	$1,926.00	07-02796	$1,627.00	$1,000.00



FLOW DIVIDERS

EP

Part No.	Engine	Configuration	New Exchange		Rebuilt Exchange		Overhaul Exchange	
2524232-2	IO-320, IO-360, IO-540	2 psi spring, no vent tube	07-02799	$1,024.00	07-02801	$367.00	07-02983	$299.00
2576526-1	IO-540	4 psi spring, no vent tube	07-02802	$1,097.00	07-02981	$368.00	07-02803	$289.00

FOR TURBO APPLICATIONS, UNLISTED SERVOS, & FLOW DIVIDERS CALL OR EMAIL AIRCRAFT SPRUCE FOR PRICING.

PRECISION AIRMOTIVE OVERHAUL KIT

Overhaul Kit, RSA-10AD1 for 2576630-4 Servo.
P/N 07-18136 .....**$1,008.00**

PRECISION AIRMOTIVE CONVERSION KIT

Conversion kit per Precision Airmotive Service Bulletin PRS-110. Part Number - 2576659 P/N 07-18137 .....**$162.75**



SILVERHAWK EX FUEL INJECTION SYSTEMS

The Silver Hawk EX, non-certified Fuel Injection System is proven technology drawn from decades of fuel metering engineering by Precision Airmotive. Manufactured as experimental, the new Silver Hawk kit provides experimental pilots with precise, dependable, and reliable fuel metering. Just what you'd expect from Precision Airmotive.
At a price that will make you soar. Manufactured using the highest quality materials and components, the Silver Hawk EX features a machined finish with clear coat anodize. Designed for these major engine manufacturer applications: Lycoming 320, 360, & 540 series; Continental 470 series; Superior and others.

- Specifically engineered and built to meet the demands of aviations growing experimental segment.
- Precision Airmotive appointed worldwide network of factory authorized product support centers
- Backed by a Precision warranty program.

TEMPEST FUEL SERVO QUICK KITS

The next time you rebuild your fuel components, don't spend time on the phone chasing parts, just order a "Quick Kit" and take the hassle out of your rebuilt. Quick Kits include the mandatory replacement parts, plus the parts used by fuel professionals to insure the job is done right!

Fuel Servo #	Model No.	Our Part No.	QuickKit#	Price
RSA-5AD1	All Models	07-00563	CFK-5AD1	$720.00
RSA-10DB2	All Models	07-00565	CFK-10DB2	$625.00
RSA-10ED1	All Models	07-00566	CFK-10ED1	$625.00

Model No.	Description	Part No.	Price
EX320-1	Application: Lycoming O-320 and IO-320 engines with 150/160 HP	07-00773	$3,148.00
EX360-1	Application: Lycoming O-360 and IO-360 parallel valve engines with 160/180 HP Superior O-360 and IO-360 parallel valve engines with 180 HP	07-00774	$3,150.00
EX360-2	Application: Lycoming O-360 and IO-360 angle valve engines with 200 HP	07-00775	$3,150.00
EX540-1	Application: Lycoming O-540 and IO-540 parallel valve engines with 235-260 HP Continental O-470 engines	07-00776	$3,140.00



PRECISION O-RING INLET FITTINGS FOR SILVERHAWK EX

Silver Hawk Model Number	Inlet Part Number	Part No.	Price
EX-5VA1	951789 Fitting	07-02977	$1.95
EX-5VA1	953541-10 Filter	07-02978	$1.25
EX-10VA1 (300 HP)	951790 Fitting	07-02979	$2.50
EX-10VA1 (300 HP)	951392 Filter	07-02980	$1.20



TEMPEST REBUILT FUEL SERVOS / EXCHANGE

Available only from the factory. These units are also built to factory new specifications and bench checked on an air-box flow bench to OEM original specifications and drawings. NOTE: A body or a center body may be used in a rebuilt servo; however, these components must meet factory new specifications and drawings.

CF PN	Model No.	PN	Price
2524145-12RSA	-5AD1	07-00403	$1466.00
2524147-13RSA	-5AD1	07-00404	$1234.00
2524189-11RSA	-5AD1	07-00407	$1234.00
2524213-11RSA	-5AD1	07-00408	$1428.00
2524307-10RSA	-5AD1	07-00458	$1521.00
2524335-10RSA	-5AD1	07-00460	$1415.00
2524592-B	RSA-5AD1	07-00470	$1428.00

FUEL PUMPS



LYCOMING & CONTINENTAL FUEL PUMPS

Proven to be a trouble-free mechanical pressure pump. Original equipment on numerous airframe installations and adaptable to most applications with one of 3 dual diaphragm types. Overboard vent of this design provides operating assurance throughout all flights.

Engine Type	Engine Model No.	Our P/N	Lycoming Part No.	Our Price
Lycoming	O-235, O-290, O-320, O-340, O-360, HO-360, GO-480, O-540, VO-540	07-00704	LW15472 41271 (old 40295) 4-6 PSI	**$396.00 (Core $100.00)**
	IO-320, IO-360, AIO-360, HIO-360, IVO-360, IO-540, IGO-540, IO-720	07-00705	LW15473 41234 (old 40296) 25-30 PSI	**$422.00 (Core $100.00)**
Continental	Can be used on A/C who formerly used medium pressure 15 PSI (PS5)	41272 (old 40595) 25-30 PSI	LW15473	**$422.00 (Core $100.00)**
	C-90 (-16F), 0-200	05-19050	AF631391	**$1,197.00**

Lycoming Fuel Pump Gasket For LW15473 ..... P/N 60096 ..... **$1.70**

Adapt pump thread to AN fittings using AC Fuel pump adapters:
P/N 75505 .. Fitting .. **$42.85** or P/N 75505-1 . Fitting & O-Ring . **$43.50**

LYCOMING/AC FUEL PUMP FITTINGS



P/N 07-00783



P/N 07-00782

These fittings are designed to fit mechanical fuel pumps used on Lycoming engines. These fittings feature 3/8" AN flare outlets for connection to aircraft hoses, and are available in straight, 45° and 90° angle versions. Note: These fittings are not certified.



P/N 07-00780



P/N 07-00781

Straight fitting P/N 07-00780... **$2.35**
45° fitting ..... P/N 07-00781... **$8.50**
90° fitting .....P/N07-00782 ... **$7.70**
Tee fitting w/1/8" pipe thread tapping for fuel pressure..P/N 07-00783..... **$16.50**

LYCOMING FUEL PUMP GASKET FOR LW15473



Gasket for Lycoming Gasket LW15473.
P/N 60096.....**$1.70**

LYCOMING FUEL PUMP ADAPTER GASKET



Lycoming fuel pump adapter gasket. 69164. Dimensions (w x l x h): 2.75 in. X 3.19 in. X 0.07 in.
Lycoming.....P/N 07-03552 ..... **$1.12**
Superior.....P/N 08-11839 ..... **$0.72**

ACS FUEL PUMP COOLING SHROUD



Designed to keep the fuel pump cooler in the hot engine compartments, and reduce the risk of fuel vapor lock. The cooling shroud will fit carbureted or fuel injector Lycoming engines using a diaphragm style pump. Made in the U.S.A. P/N 08-06097 .....**$66.75**

FACET POSI-FLO SOLID STATE FUEL PUMPS



• **Fuel Compatibility:** All models of the Facet Posi-Flo Pumps are compatible with gasoline, diesel, biodiesel, blended alcohol fuels and fuel additives.
• **Easy to Install-Easy to Service:** Two bolt installation plus the small size makes installation easy. For best results, mount the pump close to the fluid or fuel tank and below the liquid level.
Not FAA Approved.

Model	Volts	PSI Max-Min	Fitting Size	Lift Min. Dry	Check Valve	Positive Shut Off Valve	Int.-Ext. Fuel Filter	Part No.	Price
60300	12	4-2.5	1/8-27 INT	20	Y	N	EXT.	05-06862	$34.90
60301	12	5-3.5	1/8-27 INT	30	Y	N	EXT.	05-06863	$34.90
60302	12	7-5	1/8-27 INT	32	Y	N	EXT.	05-06864	$34.90



AEROTAR LEFT LYCOMING FUEL MANIFOLD BRACKET

Aerotar Left Lycoming Fuel Manifold Bracket (07A22996).
P/N 08-15786 .....**$449.99**

TEMPEST LYCOMING & TCM FUEL PUMPS



OVERHAULED LYCOMING FUEL PUMPS
All internal parts are replaced with new certified parts. The actuating arms are magnetic particle test inspected; cast parts are inspected for wear, corrosion and cracks. Both the older laminated and newer channel style fuel pumps are overhauled for normally aspirated, pressure carburetor, and fuel injected systems.
Note: Customer will need to provide core for overhaul in the event our supplier does not have cores available to overhaul.

MMO	Description	P/N	Price
Overhauled Lycoming & TCM Diaphragm Fuel Pumps			
40174	Fuel Pump - Overhauled	05-02530	**$524.00**
40296	Fuel Pump - Overhauled	05-02531	**$406.00**
40595	Fuel Pump - Overhauled	05-19015	**$527.00**
41234	Fuel Pump - Overhauled	05-02532	**$409.00**
41270	Fuel Pump - Overhauled	05-02533	**$524.00**
41271	Fuel Pump - Overhauled	05-02534	**$403.00**
41272	Fuel Pump - Overhauled	05-02536	**$524.00**
41452	Fuel Pump - Overhauled	05-02537	**$524.00**
41812	Fuel Pump - Overhauled	05-02539	**$524.00**
75246	Fuel Pump - Overhauled	05-02540	**$454.00**
75247	Fuel Pump - Overhauled	05-02541	**$479.00**
103396-01	Fuel Pump - Overhauled	05-02542	**$982.00**
103586-01	Fuel Pump - Overhauled	05-02543	**$982.00**
LW14282	Fuel Pump - Overhauled	05-02544	**$524.00**
LW15399	Fuel Pump - Overhauled	08-15399	**$406.00**
LW15472	Fuel Pump - Overhauled	05-19000	**$259.00**
LW15473	Fuel Pump - Overhauled	05-19010	**$259.00**
LW16335	Fuel Pump - Overhauled	05-02545	**$299.00**
LW16775	Fuel Pump - Overhauled	05-02546	**$524.00**
LW16947	Fuel Pump - Overhauled	05-02547	**$524.00**
R00253-1	Fuel Pump - Overhauled	05-02549	**$929.00**
R00253-2	Fuel Pump - Overhauled	05-02551	**$929.00**
R00253-501	Fuel Pump - Overhauled	05-02552	**$929.00**
R00253-502	Fuel Pump - Overhauled	05-02554	**$929.00**
AF1572	Fuel Pump - Overhauled	05-19000	**$259.00**
AF15473	Fuel Pump - Overhauled	05-02556-1	**$249.95**
New Lycoming Diaphragm Fuel Pumps			
AF15472	Fuel Pump - New	05-02555	**$308.00**
AF15473	Fuel Pump - New	05-02556	**$308.00**
Overhauled TCM Centurion Fuel Pumps			
4036/9076	Fuel Pump - Overhauled	05-19030	**$839.00**
6861	Fuel Pump - Overhauled	05-19035	**$858.00**
9051/9867	Fuel Pump - Overhauled	05-19025	**$889.00**
40585	Fuel Pump - Overhauled	05-02557	**$859.00**
40695	Fuel Pump - Overhauled	05-02558	**$889.00**
AF40585	Fuel Pump - Overhauled	05-02557	**$859.00**
AF631391	Fuel Pump - Overhauled	05-19050	**$1,197.00**
New TCM Centurion Fuel Pumps			
AF6561	Screen Kit	05-02560	**$104.75**
AF16335	Fuel Pump - New	05-02561	**$388.00**
AF40585	Fuel Pump - New	05-02564	**$1,287.00**
AF40695	Fuel Pump - New	05-02565	**$1,274.00**
AF631391	Fuel Pump - New	05-19050	**$1,197.00**

$100.00 CORE CHARGE ON TEMPEST OVERHAULED FUEL PUMPS.

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FACET FUEL PUMPS



FACET SOLID STATE ELECTRIC FUEL PUMPS

These pumps measure less than 3" in any direction and weigh only 18 oz. Fuel is supplied as soon as the ignition is turned on so the engine will start faster at colder temps. Built-in pressure relief prevents flooding and assures fast re-starts on hottest days. The all-steel plated case is water tight. Mounts with two bolts. For best results, mount the pump close to the fuel tank and below the liquid level. The tank is self-priming to 12" to 36" Lift min dry. Standard 12 V models require only 1 amp at max. delivery. Many models are available, but these are the ones recommended by Rutan Aircraft Factory, Stoddard Hamilton and many other aircraft designers. All of the pumps shown feature the all nylon valve and plunger as specified by Rutan Aircraft in the Canard Pusher newsletter.

Facet No.	Volts	PSI Max-Min	GPH	Fitting Size	Lift Min. Dry	Check Valve	Positive Shut Off Valve	Description	Part No.	Price
40100N	12	7.0-4.0	32	1/8 - 27 INT	12"	N	N	40106 Kit - Nuts, Washers, Bolts, Fittings	05-10771	**$41.50**
40101N	12	4.5-3.0	30	1/8 - 27 INT	12"	N	N	40105 Kit - Nuts, Washers, Bolts, Fittings	05-10772	**$41.50**
40102N	12	4.0-1.5	25	1/8 - 27 INT	12"	N	N	Kit - Nuts, Washers, Bolts, Fittings	05-10773	**$41.50**
40104	12	4.0-1.5	25	1/8 - 27 INT	12"	N	N	Facet Solid State	05-00799	**$39.60**
40105	12	4.5-3.0	30	1/8 - 27 INT	12"	N	N	Facet Solid State	40105	**$39.50**
40106	12	7.0-4.0	32	1/8 - 27 INT	12"	N	N	Facet Solid State	40106	**$39.50**
40108	12	6.0-4.5	32	3/8 FLARE	12"	N	N	Facet Solid State	40108	**$44.75**
40154	24	6.0-4.5	32	3/8 FLARE	12"	N	N	Facet Solid State	40154	**$46.50**
40163	12	2.5-1.5	17	1/8 - 27 INT	24"	Y	N	Facet Solid State	40163	**$48.90**
40164	24	6.0-4.5	32	1/8 - 27 INT	12"	N	N	Facet Solid State	40164	**$44.50**
40171	12	3.5-2.0	15	1/8 - 27 INT	12"	Y	Y	Facet Solid State	05-40171	**$49.95**
40178	12	3.5-2.0	15	1/8 - 27 INT	36"	Y	Y	Facet Solid State	05-10781	**$48.90**
40185	12	11.5-9.0	32	1/8 - 27 INT	36"	Y	N	Facet Solid State	05-10782	**$48.50**
40288	12	4.5-3.0	30	1/8 - 27 INT	36"	Y	N	Facet Solid State	05-06860	**$42.50**
40289	12	7.0 - 4.0	30	1/8 - 27 INT	36"	Y	N	Facet Solid State	05-06861	**$42.50**
40300	12	11.5 - 9	30	1/8 - 27 INT	36"	Y	N	Facet Solid State	05-10802	**$51.75**
FEP-42SV	12	4.0-1.5	25	1/8 - 27 INT	12"	N	N	40104 Kit - Fuel Filter, Fuel Fitting, 2 Bolts & 2 Nuts	05-00809	**$42.70**
40300	12	11.5 - 9	30	1/8 - 27 INT	36"	Y	N	Facet Solid State	05-10802	**$51.75**
FEP-42SV	12	4.0-1.5	25	1/8 - 27 INT	12"	N	N	40104 Kit - Fuel Filter, Fuel Fitting, 2 Bolts & 2 Nuts	05-00809	**$42.70**



FACET DURA-LIFT FUEL PUMPS

• Application: Refrigeration trucks, marine generator sets, diesel filtration systems, industrial applications, and other diesel lift applications. These pumps are rated for diesel fuel, gasoline, blended alcohol fuels, and fuel additives.

• Solid State Reliability: Proven on many original equipment applications No electrical contacts. No bearings or diaphragms to wear out or fatigue. Endurance life almost doubles that of our nearest competitor.

• Easy to Install-Easy to Service: Two bolt mounting makes installations easy. Nothing to adjust. The pump is self-priming to 120 inches (3.0 m). Vertical mounting is preferred to assure maintenance of rated pressures. The transparent housing allows for visual capability to monitor the cleanliness of the stainless steel filter.

• Eliminates Vapor Lock: When properly installed on most vehicles a constant, smooth, dependable supply of fuel under pressure is assured in the hottest weather or in high altitudes.

Facet No.	Volts	PSI Max-Min	GPH	Fitting Size	Lift Min. Dry	Check Valve	Part No.	Price
40222	12	11.5-9.0	33	1/8-27 Int.	120"	Y	05-10884	**$92.75**
40285	12	7.0-4.0	33	1/8-27 Int.	120"	Y	05-10886	**$93.75**



FACET GOLD-FLO INTERRUPTER TYPE PUMPS

Fuel Compatibility: All models of the Facet High Performance Gold-Flo Solid State Fuel Pumps are compatible with gasoline, diesel, biodiesel, blended alcohol fuels and fuel additives.

Reliability: The new Gold-Flo Solid State Fuel Pump is an enhanced version of our Interrupter model. It has Solid State circuitry and will meet or exceed all performance specifications and is totally interchangeable. (These pumps have demonstrated an endurance life almost double that of the nearest competitor, according to our test data).

Easy to Install-Easy to Service: Two bolt mounting makes installations easy. Nothing to adjust. For best results, mount the pump close to the fuel tank and below the fuel level. The pump is self-priming to 24 inches vertical fuel lift. Vertical mounting is preferred to assure maintenance of rated pressures. An installation kit is available for replacement applications. The only service normally required is a simple cleaning of the filter and fuel inlet cavity.

Eliminates Vapor Lock: When properly installed on most vehicles a constant, smooth, dependable supply of fuel under pressure is assured in the hottest weather or in high altitudes.

Facet No.	Volts	PSI Max-Min	GPH	Fitting Size	Lift Min. Dry	Check Valve	Part No.	Price
40007E	12	5.5-4.0	36	1/4"-18 Int.	24"	N	05-10842	**$82.75**
40131E	12	5.5-4.0	34	1/8"-27 Int.	24"	N	480545	**$79.85**
476088	24	5.0-4.0	32	1/8"-27 Int.	24"	N	476088	**$79.95**
480543	12	8.0-6.0	45	1/4"-18 Ext.	24"	N	480543	**$93.95**
476087E	12	5.5-4.0	36	1/8"-27 Int.	24"	N	05-10832	**$79.75**
476459E	12	8.0-6.5	32	1/8"-27 Int.	24"	N	05-10833	**$79.75**
477060E	12	4.0-2.75	34	1/8"-27 Int.	24"	N	05-10835	**$78.75**
478360E	12	5.5-4.0	36	1/8"-27 Int.	24"	N	478360	**$79.95**
480534E	12	8.0-6.0	45	1/4"-18 Int.	24"	N	05-00802	**$81.75**
480564E	24	5.0-4.0	32	1/4"-18 Int.	24"	N	05-01003	**$97.50**
FEP87SV	12	8.0-6.5	32	1/8"-27 Int.	24"	N	05-01250	**$35.90**



FACET POSI-FLO SOLID STATE FUEL PUMPS

• Fuel Compatibility: All models of the Facet Posi-Flo Pumps are compatible with gasoline, diesel, biodiesel, blended alcohol fuels and fuel additives.

• Reliability: Proven on thousands of original equipment applications. No bearings, electrical contacts, or diaphragms to wear out or fatigue. Lasts four to five times longer than many other electric pumps.

• Easy to Install-Easy to Service:Two bolt installation plus the small size makes installation easy. For best results, mount the pump close to the fluid or fuel tank and below the liquid level.

• Eliminates Vapor Lock: When properly installed on most vehicles a constant, smooth, dependable supply of fuel under pressure is assured in the hottest weather or in high altitudes.

Facet No.	Volts	PSI Max-Min	GPH	Fitting Size	Lift Min. Dry	Check Valve	Part No.	Price
60106	12	7.0-4.0	32	1/8 - 27 INT	12"	N	05-10856	**$32.60**
60245	12	4.0-1.5	23	1/8 - 27 INT	12"	N	05-10880	**$34.50**
60300	12	4.0-2.5	20	1/8 - 27 INT	50"	Y	05-06862	**$34.90**
60301	12	5.0-3.5	30	1/8 - 27 INT	50"	Y	05-06863	**$34.90**
60302	12	7.0-5.0	32	1/8 - 27 INT	50"	Y	05-06864	**$34.90**
60303	12	10.0-7.0	34	1/8 - 27 INT	50"	Y	05-10881	**$36.50**
60304	12	2.0-1.0	15	1/8 - 27 INT	24"	Y	05-10882	**$36.50**
FEP04SV	12	4.0-1.5	23	1/8 - 27 INT	12"	N	05-01250	**$35.90**



AEROQUIP FITTING FOR FACET PUMPS

On the recommendation of Rutan Aircraft Factory, we now stock Aeroquip #2071-6-6S fitting which is a steel elbow with a swivel nut which fits the 37 flares on the Facet 40108 and 40154 fuel pumps. This Aeroquip fitting makes installation of the pumps easy & economical.

P/N 04-05800 ..... **$5.35**

EP

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

WELDON FUEL PUMPS

WELDON PMA'D FUEL PUMPS



Weldon's strong commitment to excellence with Made-in-America quality has evolved into a comprehensive line of fuel and hydraulic pumps for general aviation, military aircraft, ground support vehicles and UAVs.

Aircraft Make & Model	Weldon Part No.	OEM Part No.	Description	Part Number	Price
Casa	4049-A	AC520068A	Prop Unfeathering	08-10717	**$2,216.00**
Casa	C4033-E	AC520068A	Prop Unfeathering	08-10718	**$2,216.00**
Cessna	18000-A	C291504-0101	Fuel Boost	08-07082	**$799.00**
Cessna 172R, 172S, 182S/T, T182T	18002-B8	5100-00-4	Fuel Boost	08-10719	**$1,227.00**
Cessna 182	A8160-D	A8160-D	Fuel Boost	08-10720	**$1,270.00**
Cessna 206H	A10056-B	A10056-B	Fuel Boost	08-10721	**$1,270.00**
Cessna 310, 320, 340 & 400 Series	18013-B	4140-00-153	Fuel Boost	08-10722	**$1,227.00**
Cessna 340A, 414, 421B	8150-B	8150-B	Fuel Transfer	08-10723	**$1,270.00**
Cessna 441	C4033-G	9910344-3	Prop Unfeathering	08-10724	**$2,466.67**
Cessna Single-Engine & 337 Aircraft	18000-B	C291504-0201	Fuel Boost	08-07083	**$799.00**
Cessna T182	A8185-B	A8185-B	Fuel Boost	08-10725	**$1,271.00**
Cessna T206H	A10055-B	A10055-B	Fuel Boost	08-10726	**$1,270.00**
CPAC (Commander) 112, 112B	A8120-C	A8120-C	Fuel Boost	08-10727	**$1,166.00**
Daher Socata TBM 700	2022-B	6097727225	Fuel Boost	08-10728	**$2,216.00**
Diamond DA-40, DA-42	18002-B	18002-B	Fuel Boost/Transfer	08-10729	**$799.00**
Enstrom F28-A, 280	A8110-G	A8110-G	Fuel Boost	08-10730	**$1,156.00**
Enstrom F-28C, 280C, F-28F, 280F, 280FX	A10019-D	A10019-D	Fuel Boost	08-10731	**$2,792.59**
Enstrom F-28C, 280C, F-28F, 280F, 280FX	A10019-E	A10019-E	Fuel Boost	08-10732	**$2,216.00**
Gippsland GA8 AirVan	8172-A	8172-A	Fuel Boost	08-10733	**$1,268.00**
Gippsland GA8 AirVan	A8172-A	A8172-A	Fuel Boost	08-10734	**$1,268.00**
Mooney M20J (SN 24-0001 thru 24-2999)	A8163-A	A8163-A	Fuel Boost	07-00785	**$1,217.00**
Mooney M20J (SN 24-3000 and up)	A8163-B	A8163-B	Fuel Boost	08-10735	**$1,269.00**
Mooney M20K Serial #25-001 to 25-0999	10054-A	10054-A	Fuel Boost	08-10736	**$1,227.00**
Mooney M20K Serial #25-1000 & up	10054-B	10054-B	Fuel Boost	08-10737	**$1,227.00**
Mooney M20M	A10051-D	A10051-D	Fuel Boost	08-10738	**$1,269.00**
Mooney M20R, M205	A8152-B	A8152-B	Fuel Boost	08-10739	**$1,269.00**
Moravan (Zin Z-143L)	A8150-B1	A8150-B1	Fuel Boost	08-10740	**$1,269.00**
Moravan (Zin Z-242L)	D8100-F	D8100-F	Fuel Boost	08-10741	**$1,165.00**
PA-23-250, PA-23-235	B8001-G	33959-3	Fuel Boost	08-10742	**$1,166.00**
PA-23-250, PA-23-236, PA-23-160	B8001-H	33959-2	Fuel Boost	08-10743	**$1,166.00**
PA-28R-180, PA-28R-200, PA28R-201, PA28R-201T, PA-28R-201, PA-28RT-201T	8120-G	481-780	Fuel Boost	08-08120	**$1,120.00**
PA-28R-201	B8120-G	461-758	Fuel Boost	08-10744	**$1,166.00**
PA-30, PA-39	C8100-J	763-518	Fuel Boost	08-10745	**$1,902.00**
PA-31-325, PA-31-300	A10014-D44	42113-6	Fuel Boost	08-10746	**$2,216.00**
PA-31-350	A10014-D	53050-2	Fuel Boost	08-10747	**$2,216.00**
PA-31-350, T-1020, PA-31-325, PA-31-300	A10014-D40	42113-5	Fuel Boost	08-10748	**$2,216.00**
PA-31P	B10007-D	48885-2	Fuel Boost	08-10749	**$2,216.00**
PA-32-301T, PA32R-301T, PA-32RT-300T	10080-B	481-807	Fuel Boost	08-10750	**$1,914.00**
PA-32R-301T Serial #'s 3257001 & up	10080-D	461-750	Fuel Boost	08-10751	**$1,914.00**
Pilatus B/N BN2A-2, 2A-3, BN2A-20, 21, BN2B-20, 21	A10050-D	354301024	Fuel Boost	08-10752	**$1,269.00**
Robinson R44	19001-B	19001-B	Fuel Boost	08-10753	**$1,227.00**
Lake (Revo Inc.) Mooney M20E, M20F, M20J S/N thru 24-2999 Mooney M20J S/N thru 24-2999, M20K S/N thru 25-0999	18020-A	18020-A	Fuel Boost	05-11890	**$1,227.00**



WELDON HIGH PRESSURE ELECTRIC FUEL PUMP

The 8150 series high pressure electric fuel pump is a positive displacement cammed vane type used primarily in airborne applications. It features a low pressure relief valve and integral bypass valve. Applications include in-line fuel transfer priming of fuel-injected engines & emergency fuel pump. A permanent-magnet, explosion resistant motor is rated for continuous duty. These self-priming, lightweight (2.6 lbs. max.) pumps have been used for over 15 years by major aircraft manufacturers.

Model No.	Flow GPH	Output	Fluid	Power	Core	Price Ea
8150-B Overhauled*	35 Min.	4.5 PSI	Av Gas	24V DC @ 2A	**$400.00**	**$830.00**
* Customer overhauled only. O/H unit comes with 8130.						
New Fuel Pumps Not FAA approved. For Experimental Aircraft Only!						
8163-A New	35 Min.	21 PSI	Av Gas MIL-G-5572	14V DC @ 5A	**$400.00**	**$1,217.00**
8170-A New	35 Min.	4.5 PSI	Gasoline	12V DC @ 4A	**$300.00**	**$1,150.00**



NEW PMA'D WELDON 18000 FUEL PUMPS

Weldon 18000-A (14Volt) Replaces: Cessna C291504-0101, Dukes 4140-00-17
Weldon 18000-B (28Volt) Replaces: Cessna C291504-0201, Dukes 4140-00-15
18000-A Weldon Pump 14V ..... P/N 08-07082 ..... **$799.00**
18000-A Weldon Pump 28V ..... P/N 08-07083 ..... **$799.00**



MOUNTING BRACKET FOR WELDON FUEL PUMPS

This T-bolt quick release band clamp with mounting bracket fits all Weldon fuel pumps with 2-1/2" diameter motors. Made from certified aerospace quality stainless steel, this bracket offers secure holding power under extreme vibration. The band clamp rotates within the mounting foot to offer easy access to the quick release latch for a variety of mounting positions.

P/N 05-00021 ..... **$44.50 ea.**

WELDON OVERHAULED FUEL PUMPS

Description	Part Number	Price
2003-A OH Pump	08-14394	$1,439.00
2003-B OH Pump	08-14396	$1,439.00
2022-B OH Pump	08-14393	$1,439.00
269A8304-19/OH Pump	08-14235	$782.00
269A8304-21/OH Pump	08-14236	$782.00
3026-A/OH Pump	08-14224	$1,451.00
3026-AA/OH Pump	08-14225	$1,451.00
3027-A/OH Pump	08-14226	$1,451.00
3027-AA OH Pump	08-14227	$1,451.00
3027-B OH Pump	08-14228	$1,451.00
33959-2 OH Pump	08-14233	$782.00
33959-3/OH Pump	08-14234	$782.00
4049-A OH Unfeathering Pump	08-14229	$1,439.00
4049-AM OH Pump	08-14230	$1,439.00
461-758 OH Pump	08-14237	$782.00
481-780/OH Pump	08-14238	$782.00
763-518/OH Pump	08-14239	$1,244.00
8008-C/OH Pump	08-14240	$782.00
8009-A/OH Pump	08-14241	$782.00
8009-B/OH Pump	08-14242	$782.00
8016-B/OH Pump	08-14243	$782.00
8017-A/OH Pump	08-14244	$782.00
8018-A OH Pump	08-14245	$782.00
8115-B/OH Pump	08-14246	$782.00
8116-B OH Pump	08-14247	$978.75
8120-G/OH MAIN Aux Boost Pump	08-14248	$782.00
81250-H OH Pump	08-14249	$782.00
8120-J/OH Pump	08-14250	$782.00
8120-K/OH Pump	08-14251	$782.00
8120-M/OH Pump	08-14252	$778.00
8123-H/OH Pump	08-14253	$782.00
8136-B/OH Pump	08-14254	$782.00
8140-B OH Pump	08-14255	$782.00
8150-B OH AUX Transfer Pump	08-14296	$844.00
8152-B OH Pump	08-14297	$844.00
8153-C OH Pump	08-14298	$844.00
8154-A OH Pump	08-14299	$844.00
8154-B OH Pump	08-14300	$844.00
8157-B OH Pump	08-14301	$844.00
8158-A OH Pump	08-14302	$844.00
8158-B OH Pump	08-14303	$844.00
8159-A OH Pump	08-14304	$844.00
8160-B OH Pump	08-14305	$844.00
8163-A OH Pump	08-14306	$844.00
8163-B OH Pump	08-14307	$844.00
8164-A OH Pump	08-14308	$844.00
8168-A OH Pump	08-14309	$844.00
8169-A OH Pump	08-14310	$844.00
8170-A OH Pump	08-14311	$844.00
8171-B OH Pump	08-14312	$844.00
8172-A OH Pump	08-14313	$844.00
8174-A OH Pump	08-14314	$844.00
8174-B OH Pump	08-14315	$844.00
8175-A OH Pump	08-14316	$844.00
8175-B OH Pump	08-14317	$844.00
8176-B OH Pump	08-14318	$844.00
8177-A OH Pump	08-14319	$844.00
8177-B OH Pump	08-14320	$830.00
8178-A OH Pump	08-14321	$830.00
18024-A OH Fuel Boost Pump	08-16169-1	$893.75
18026-A OH Pump	08-16170-1	$893.75
8178-B OH Pump	08-14322	$844.00
8179-A OH Pump	08-14323	$844.00
8180-B/OH Pump	08-14324	$844.00
8190-B OH Pump	08-14325	$844.00

Description	Part Number	Price
10024-B OH Pump	08-14367	$830.00
10028-A OH Pump	08-14368	$830.00
10054-A OH Pump	08-14356	$869.00
10054-B OH Pump	08-14357	$869.00
10062-B OH Pump	08-14358	$869.00
10080-B OH Pump	08-14386	$1,244.00
10080-D OH Pump	08-14387	$1,244.00
100-828-1106 OH Pump	08-14395	$1,439.00
10084-A OH Pump	08-14388	$1,244.00
10088-A OH Pump	08-14389	$1,244.00
10090-A/OH Pump	08-14390	$1,244.00
18000-A OH MAIN Aux Boost Pump	08-14202	$669.00
18000-B OH MAIN Aux Boost Pump	08-14203	$669.00
18002-B OH MAIN Aux Boost Pump	08-14204	$669.00
18002-B8 OH MAIN Aux Boost Pump	08-14205	$919.00
18004-A8 OH MAIN Aux Boost Pump	08-14206	$919.00
18005-B OH Pump	08-14207	$919.00
18006-A OH Pump	08-14208	$919.00
18006-A8 OH Pump	08-14209	$919.00
18007-A8 OH Pump	08-14210	$919.00
18008-B8 OH Pump	08-14211	$919.00
18010-B8 OH Pump	08-14212	$919.00
18011-B OH Pump	08-14213	$919.00
18013-B OH FUEL Transfer Pump	08-14214	$919.00
18014-B8 OH Pump	08-14215	$919.00
18015-B OH Pump	08-14216	$919.00
18020-A OH MAIN Aux Boost Pump	08-14217	$919.00
18021-A OH MAIN Aux Boost Pump	08-14218	$919.00
18021-A8 OH Pump	08-16168-1	$919.00
18021-B OH MAIN Aux Boost Pump	08-14219	$893.75
18022-B8 OH Pump	08-14220	$919.00
18023-A OH MAIN Aux Boost Pump	08-14221	$919.00
18028-B8 OH Pump	08-14222	$919.00
19001-B OH Pump	08-14397	$817.00
A4033-E OH Pump	08-14231	$1,439.00
A8008-D/OH Pump	08-14256	$782.00
A8009-A/OH Pump	08-14257	$782.00
A8009-B OH Pump	08-14258	$782.00
A8016-B OH Pump	08-14284	$782.00
A8016-B1/OH Pump	08-14259	$782.00
A8017-A/OH Pump	08-14260	$782.00
A8019-A/OH Pump	08-14261	$782.00
A8110-F OH Pump	08-14262	$782.00
A8110-G OH MAIN AUX Pump	08-14263	$782.00
A8120-B OH Pump	08-14291	$782.00
A8120-C OH MAIN AUX Pump	08-14292	$782.00
A8120-D OH Pump	08-14293	$782.00
A8121-B OH Pump	08-14294	$782.00
A8122-A OH Pump	08-14295	$782.00
A8123-H/OH Pump	08-14264	$782.00
A8127-A/OH Pump	08-14265	$782.00
A8127-B OH Pump	08-14266	$782.00
A8136-B OH Pump	08-14267	$782.00
A8148-A OH Pump	08-14268	$782.00
A8148-B OH Pump	08-14269	$782.00
A8150-B OH Pump	08-14326	$844.00
A8150-B1 OH Pump	08-14327	$830.00
A8152-B OH Pump	08-14328	$844.00
A8153-B OH Pump	08-14329	$844.00
A8153-C OH Pump	08-14330	$844.00
A8159-A OH Pump	08-14331	$844.00
A8160-B OH Pump	08-14332	$844.00
A8160-D OH Pump	08-14333	$844.00
A8163-A OH Pump	08-14334	$844.00

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CORE CHARGES APPLY. SEE OUR WEBSITE FOR APPLICATION CHART.

WELDON OVERHAULED FUEL PUMPS

Description	Part Number	Price
A8163-A1 OH Pump	08-14335	**$844.00**
A8163-B OH Pump	08-14336	**$844.00**
A8165-A OH Pump	08-14337	**$844.00**
A8168-A OH Pump	08-14338	**$844.00**
A8170-A OH Pump	08-14339	**$844.00**
A8171-A OH Pump	08-14340	**$844.00**
A8172-A OH Pump	08-14341	**$844.00**
A8174-B OH Pump	08-14342	**$844.00**
A8176-B OH Pump	08-14343	**$844.00**
A8177-A OH Pump	08-14344	**$844.00**
A8177-B OH Pump	08-14345	**$844.00**
A8179-A OH Pump	08-14346	**$844.00**
A8181-A OH Pump	08-14347	**$844.00**
A8183-A OH Pump	08-14348	**$844.00**
A8184-A OH Pump	08-14349	**$844.00**
A8185-B OH Pump	08-14350	**$844.00**
A8186-B OH Pump	08-14351	**$844.00**
A8187-B OH Pump	08-14352	**$812.50**
A8188-B OH Pump	08-14353	**$844.00**
A8189-B OH Pump	08-14354	**$844.00**
A8250-B OH Pump	08-14355	**$844.00**
AA8001-G OH Pump	08-14270	**$782.00**
AA8001-H OH Pump	08-14271	**$782.00**
A10008-F OH Pump	08-14373	**$844.00**
A10009-F OH Pump	08-14374	**$844.00**
A10014-D OH Pump	08-14375	**$907.00**
A10014-D40 OH Pump	08-14376	**$892.00**
A10014-D42 Oh Pump	08-16181	**$892.00**
A10014-D42 OH Pump	08-14377	**$799.00**
A10014-D44 OH Pump	08-14378	**$907.00**
A10017-C OH Pump	08-14379	**$907.00**
A10019-C OH Pump	08-14380	**$907.00**
A10019-E OH Pump	08-14381	**$907.00**
A10050-C OH Pump	08-14359	**$869.00**
A10050-D OH Pump	08-14360	**$869.00**
A10051-D OH Pump	08-14361	**$869.00**
A10053-A OH Pump	08-14362	**$869.00**
A10053-B OH Pump	08-14363	**$869.00**
A10055-B OH Pump	08-14364	**$869.00**
A10056-B OH Pump	08-14365	**$869.00**
A10063-A OH Pump	08-14366	**$869.00**
B8001-G OH AUX Pump	08-14272	**$782.00**
B8001-H OH AUX Pump	08-14273	**$782.00**
B8009-A OH Pump	08-14274	**$782.00**
B8103-F OH Pump	08-14275	**$782.00**
B8110-F OH Pump	08-14276	**$782.00**
B8110-G OH Pump	08-14277	**$782.00**
B8120-G OH MAIN AUX Pump	08-14278	**$782.00**
B8120-H OH Pump	08-14279	**$782.00**
B8120-J OH Pump	08-14280	**$782.00**
B8120-K OH Pump	08-14281	**$782.00**
B10000-F OH Pump	08-14382	**$834.00**
B10007-D OH Pump	08-14383	**$844.00**
B10010-F OH Pump	08-14384	**$2,394.00**
B10014-F OH Pump	08-14385	**$795.00**
C4033-E/OH Unfeathering Pump	08-14232	**$1,439.00**
C8009-B OH Pump	08-14283	**$782.00**
C8100-E OH Pump	08-14285	**$782.00**
C8100-F OH Pump	08-14286	**$782.00**
C8100-J OH MAIN FUEL BOOST Pump	08-14287	**$1,244.00**
C8100-L OH Pump	08-14288	**$1,244.00**
D8100-E OH Pump	08-14289	**$782.00**
D8100-F OH MAIN AUX Pump	08-14290	**$782.00**
T18009-B8 OH Pump	08-14223	**$1,032.00**

WELDON POPPET BODY ASSEMBLIES

Description	Part Number	Price
Weldon 100109 Body Assembly	08-14087	**$500.00**
Weldon 100109-b Body Assembly	08-14091	**$515.00**
Weldon 8206-a Body Assy (W/valve)	08-14175	**$515.00**
Weldon 8210-a Body Assy (W/valve)	08-14176	**$515.00**
Weldon 8211-a Body Assembly	08-14177	**$515.00**
Weldon 8219-a Body Assy (W/valve)	08-14178	**$515.00**
Weldon 8220-a Body Assembly	08-14179	**$515.00**

SEE OR WEBSITE FOR WELDON POPPET, POPPET VALVE COVERS, AND POPPET VALVES.

WELDON MAIN AUX BOOST PUMPS

Core charge applies at check out. Please see Weldon Application Guide prior to placing order and note the guide is for reference only, and cross checking your Overhaul Repair Manual is encouraged.

Description	Part Number	Price
New Main Aux Boost Pump 18021-a	08-14014	**$1,227.00**
New Main Aux Boost Pump 18021-b	08-14015	**$1,301.00**
New Main Aux Boost Pump 18023-a	08-14016	**$1,301.00**
New Main Aux Boost Pump 2000-a	08-14017	**$2,530.86**



TEMPEST REBUILT FUEL PUMP RG-9080J4A/M

Tempest rebuilt fuel pump RG-9080J4A/M for engine model TIO-360-A3B6.

P/N 05-15063.....**$859.00**



TEMPEST REBUILT FUEL PUMP RG17980J

Tempest rebuilt fuel pump RG17980J for engine model: IO-360-B1D, IO-540-A1A5, IO-540-G1D5 , O-540-K1C5, IO-540-K1F5, IO-540-L1A5, TIO-540-A2B, TIO-540-C1A, TIO-540-G1A, TIO-540-H1A.

P/N 07-00277.....**$839.00**

TEMPEST ROMEC / CRANE FUEL PUMP REBUILT QUICK KITS



The next time you rebuilt your fuel components, don't spend time on the phone chasing parts, just order a "Quick Kit" and take the hassle out of your rebuilt. Quick Kits include the mandatory replacement parts, plus the parts used by fuel professionals to insure the job is done right!

Fuel Servo No.	Model No.	Our Part No.	Quick Kit No.	Price
RG-9080	2, F1, F2, G1, G2, J1, J2, J3, J4, J5, J7A, J4A	07-09080-0	CFK-9080-0	**$248.95**
RG-15980	A, B, B1, C, D, E, F ,G ,N, N1, P, P1, R, R1, S, S1	07-15980	CFK-15980	**$93.85**

CORE CHARGES APPLY. SEE OUR WEBSITE FOR APPLICATION CHART.

FUEL PUMPS



CJ AVIATION NEW AND NEW EXCHANGE FUEL PUMPS

New FAA–PMA Direct Replacement Fuel Boost Pumps for Cessna, Beech, Diamond, Navion, Maule, Mooney, Lake and Diamond Aircraft. These certified drop in replacement pumps have a new improved check valve and more efficient motor. There are no Service Bulletins which eliminates the 10 year overhaul requirements. Pumps are warrantied for two years or 300 hours. Exchange pumps are in stock and CJ Aviation, Inc. is willing to drop ship on behalf of Aircraft Spruce for quicker delivery. All pumps come with 8130's and technical support from the manufacturer.

NEW OUTRIGHT FUEL PUMPS

Model No.	OEM No.	Description	Part No.	Price
4140-00-15CJ	4140-00-15	4140-00-15CJ CJ Fuel Pump New	05-07962	**$739.00**
4140-00-17CJ	4140-00-17	4140-00-17CJ CJ Fuel Pump New	05-07974	**$735.00**
5100-00-9CJ	5100-00-9	5100-00-9CJ CJ Fuel Pump New	05-10550	**$798.00**

NEW EXCHANGE FUEL PUMPS

Model No.	OEM No.	Description	Part No.	Price
1184-00-3CJ	1184-00-3	1184-00-3CJ CJ Fuel Pump New Exchange	05-07965	**$1,250.00**
1296-00-1NVCJ	1296-00-1NV	1296-00-1NVCJ CJ Fuel Pump New Exchange	05-07966	**$1,250.00**
1471-00-3CJ	1471-00-3	1471-00-3CJ CJ Fuel Pump New Exchange	05-07967	**$1,250.00**
4140-00-153CJ	4140-00-153	4140-00-153CJ CJ Fuel Pump New Exchange	05-07983	**$1,250.00**
4140-00-15CJ	4140-00-15	4140-00-15CJ CJ Fuel Pump New Exchange	05-07969	**$685.00**
4140-00-17CJ	4140-00-17	4140-00-17CJ CJ Fuel Pump New Exchange	05-07976	**$685.00**
4140-00-17NCJ	4140-00-17N	4140-00-17NCJ CJ Fuel Pump New Exchange	05-07977	**$1,250.00**
4140-00-19ACJ	4140-00-19A	4140-00-19ACJ CJ Fuel Pump New Exchange	05-07978	**$1,250.00**
4140-00-21ACJ	4140-00-21A	4140-00-21ACJ CJ Fuel Pump New Exchange	05-07979	**$1,250.00**
4140-00-39NVCJ	4140-00-39NV	4140-00-39NVCJ CJ Fuel Pump New Exchange	05-07981	**$1,250.00**
4140-00-400CJ	4140-00-400	4140-00-400CJ CJ Fuel Pump New Exchange	05-07986	**$1,250.00**
4140-00-401CJ	4140-00-401	4140-00-401CJ CJ Fuel Pump New Exchange	05-07987	**$1,250.00**
4140-00-57CJ	4140-00-57	4140-00-57CJ CJ Fuel Pump New Exchange	05-07982	**$1,250.00**
4140-00-7NVCJ	4140-00-7NV	4140-00-7NVCJ CJ Fuel Pump New Exchange	05-07968	**$1,250.00**
4258-00-15NVCJ	4258-00-15NV	4258-00-15NVCJ CJ Fuel Pump New Exchange	05-07988	**$1,250.00**
4404-00-7NVCJ	4404-00-7NV	4404-00-7NVCJ CJ Fuel Pump New Exchange	05-07989	**$1,250.00**
4613-00-3NVCJ	4613-00-3NV	4613-00-3NVCJ CJ Fuel Pump New Exchange	05-07991	**$1,250.00**
4613-00-5NVCJ	4613-00-5NV	4613-00-5NVCJ CJ Fuel Pump New Exchange	05-07992	**$1,250.00**
5100-00-4CJ	5100-00-4	5100-00-4CJ CJ Fuel Pump New Exchange	05-07993	**$1,250.00**
5100-00-9CJ	5100-00-9	5100-00-9CJ CJ Fuel Pump New Exchange	05-07994	**$739.00**

NOTE: A CORE CHARGE APPLIES TO ALL EXCHANGE FUEL PUMPS. REFER TO OUR WEBSITE FOR DETAILS ON THE CJ AVIATION CORE POLICY.

OVERHAULED EXCHANGE FUEL PUMPS

Model No.	Description	Part No.	Price
1184-00-3	1184-00-3 Fuel Pump O/H Exchange	05-07997	**$1,186.00**
1296-00-1NV	1296-00-1NV Fuel Pump O/H Exchange	05-07999	**$1,050.00**
1500-00-31	1500-00-31 Fuel Pump O/H Exchange	05-08003	**$1,050.00**
4140-00-11NV	4140-00-11NV Fuel Pump O/H Exchange	05-08007	**$1,050.00**
4140-00-135	4140-00-135 Fuel Pump O/H Exchange	05-08018	**$1,050.00**
4140-00-17	4140-00-17 Fuel Pump O/H Exchange	05-08011	**$1,081.00**
4140-00-184	4140-00-184 Fuel Pump O/H Exchange	05-08019	**$1,050.00**
4140-00-19B	4140-00-19B Fuel Pump O/H Exchange	05-08012	**$1,050.00**
4140-00-1NV	4140-00-1NV Fuel Pump O/H Exchange	05-08006	**$1,050.00**
4140-00-21A	4140-00-21A Fuel Pump O/H Exchange	05-08013	**$1,050.00**
4140-00-218	4140-00-218 Fuel Pump O/H Exchange	05-08021	**$1,050.00**
4140-00-400	4140-00-400 Fuel Pump O/H Exchange	05-08022	**$1,050.00**
4140-00-47	4140-00-47 Fuel Pump O/H Exchange	05-08016	**$1,050.00**
4140-00-57	4140-00-57 Fuel Pump O/H Exchange	05-08017	**$1,050.00**
4404-00-7NV	4404-00-7NV Fuel Pump O/H Exchange	05-08023	**$1,050.00**
4613-00-3NV	4613-00-3NV Fuel Pump O/H Exchange	05-08024	**$1,050.00**
4140-00-39NV	4140-00-39NV Fuel Pump O/H Exchange	05-08014	**$1,050.00**

WELDON PUMP OVERHAUL/EXCHANGES

JC LIP SEAL					
Model	**Part No.**	**Price**	**Model**	**Part No.**	**Price**
8150-B	08-14296	**$844.00**	8163-A	08-14306	**$844.00**
8159-A	08-14304	**$844.00**	8163-B	08-14307	**$844.00**
JC FACE SEAL					
Model	**Part No.**	**Price**	**Model**	**Part No.**	**Price**
A8150-B	08-14326	**$844.00**	A8163-B	08-14366	**$869.00**
A8150-B1	08-14327	**$830.00**	A8164-A	08-14337	**$844.00**
A8163-A	07-00785	**$1,217.00**			
J LIP SEAL					
Model	**Part No.**	**Price**	**Model**	**Part No.**	**Price**
33959-2	08-14233	**$782.00**	A8110-G	08-14263	**$782.00**
33959-3	08-14234	**$782.00**	B8001-G	08-14272	**$782.00**
8120-H	08-14249	**$782.00**	B8001-H	08-14273	**$782.00**
			C8100-E	08-14285	**$782.00**
			C8100-F	08-14286	**$782.00**
J FACE SEAL					
Model	**Part No.**	**Price**	**Model**	**Part No.**	**Price**
B8110-G	08-14277	**$782.00**	B8120-G	08-14278	**$782.00**
			B8120-H	08-14278	**$782.00**
JA SERIES					
Model	**Part No.**	**Price**	**Model**	**Part No.**	**Price**
A8120-C	**Call For Quote**				

EP

REFUELING PUMPS – HARTZELL FUEL PUMPS



These aviation pumps are only intended to be groundbased or vehicle mounted. Do not use or mount in or on the aircraft. For use with aviation gasoline (AVGAS 100LL) and kerosene grade (JET A). User should consult NFPA 407 Standard for aircraft fuel servicing for safety requirements during ground fuel servicing of aircraft using liquid petroleum fuels. This product has no actual or implied compliance with this standard. Warranty is 2 years.



M-150S-AV-PO



M-3025-CB-AV-PO



M-3120-AV-PO



M-3130-AV-PO

PUMPS				
Pumps Model No.	M-150S-AV-PO	M-3025-CB-AV-PO	M-3120-AV-PO	M-3130-AV-PO
Part No.	08-07463	08-07464	08-07465	08-07466
Price	**$363.00**	**$721.00**	**$695.00**	**$1,146.00**
Volt	12-Volt	12-Volt	115-Volt	115/230-Volt
GPM	15 GPM / 57 LPM	25 GPM / 95 LPM	20 GPM / 75 LPM	30 GPM / 114 LPM
Approvals	Motor is U.L. Listed to U.S. and Canadian Standards			
Use With	Gasoline, Gasoline/Ethanol blends at levels designated as "gasohol" (E10 maximum), diesel, kerosene and aviation fuels gasoline (AVGAS 100LL) and kerosene grade (JET A).			

METERS			
Meter Model No. & Part No. Price	08-07464	MR-5-30-G8N, Aviation	**$721.00**
	08-07468	MR-5-30-L8N, Aviation	**$246.95**
Flow Range	5-30 GPM (19-114 LPM)		
Use with	Gasoline, Gasoline/Ethanol blends at levels designated as "gasohol" (E10 maximum), diesel, kerosene, aviation gasoline (AVGAS 100LL) and kerosene grade (JET A).		





COMBOS				
Model No. & Part No. Price	Calibrated in Gallons	08-07469	M-3025CB-AV-PO / MR 5-30-G8N	**$978.00**
		08-07470	M-3120-AV-PO / MR 5-30-G8N	**$914.00**
		08-07471	M-3130-AV-PO / MR 5-30-G8N	**$1,369.00**
	Calibrated in Liters	**Special Order. Please request a quote.**	M-3025CB-AV-PO / MR 5-30-L8N	**Special Order. Please request a quote.**
			M-3120-AV-PO / MR 5-30-L8N	
			M-3130-AV-PO / MR 5-30-L8N	



HARTZELL FUEL PUMPS

FAA/PMA Approved **202F** series Fuel Pumps for Lycoming Engines from Hartzell Engine Technologies.
HET **202F** series are a direct replacement for the Crane/Lear Romec RG9570 series engine driven fuel pumps.
Applicable for use on a wide variety of Lycoming engines. The 202F series fuel pumps include two part numbers covering specific installations:

Description	Lear/romec Replacement	Lycoming Replacement	Beech Replacement	Part No.	Price
202F-1001	RG9570k1, RG9570k1/M	62E22586	Beech 50-389141-1	07-03534	**$2975.00**
202F-1002	RG9570p1, RG9570p1/M	62E22585, LW-19012	--	07-03537	**$2975.00**

The OEM pump on fuel injected Lycoming engines with high flow and pressure requirements. The **201F** series are also available as FAA-PMA approved replacements for the Lear Romec RG17980 series of fuel pumps.
Medium capacity engine driven positive displacement fuel pump Carbon vanes for improved wear characteristics. Tightly toleranced for improved pump performance and low pressure fluctuation.

Description	Lear/romec Replacement	Lycoming Replacement	Part No.	Price
201F-5001	RG17980/M	62D22565	07-01751	**$1,976.00**
201F-5002	RG17980A/M	62D22566	07-01752	**$1,976.00**
201F-5003	RG17980D/M	62D22567	07-01753	**$1,974.00**
201F-5004	RG17980E/M	62D22568	07-01754	**$1,976.00**
201F-5005	RG17980J/M	62D22569	07-01755	**$1,976.00**
201F-5006	RG17980K/M	62D22570	07-01756	**$1,976.00**
201F-5007	RG17980P/M	62D22572	07-01757	**$1,976.00**
201F-5008	RG17980U/M	62D22573	07-01758	**$1,970.00**

The OEM pump on fuel injected Lycoming engines with high flow and pressure requirements. The **200F** series are also available as FAA-PMA approved replacements for the Lear Romec RG9080 series of fuel pumps.
High capacity engine driven positive displacement fuel pump Carbon vanes for improved wear characteristics. Tightly toleranced for improved pump performance and low pressure fluctuation

Description	Lear/romec Replacement	Lycoming Replacement	Part No.	Price
200F-5001	RG9080F2/M	62E22580	07-01746	**$2,057.00**
200F-5002	RG9080J4A/M	62E22581	07-01747	**$2,067.00**
200F-5003	RG9080J6A/M	62E22582	07-01748	**$2,058.00**
200F-5004	RG9080J7A/M	62E22583	07-01749	**$2,058.00**
200F-5005	RG9080J8A/M	62E22584	07-01750	**$2,058.00**

FUEL PUMPS

ANDAIR FUEL BOOST PUMPS



PX375-TC Boost Pump for 3/8" Fuel Lines: • Integral bypass and pressure relief valve • 11-14V DC, 6 amps max • Weight: 460g (16.23 oz) • Fittings: 1/4 NPT input, AN-6 male output • 1/4 NPT to AN-6 adapter included • Suitable for injection engines such as Lycoming IO320, IO360, IO540 etc. It is strongly recommended that a filter is fitted upstream of the pump. The output of this FX375-MK filter can be fitted directly to the input of this pump.

PX500-TC Boost Pump for 1/2" Fuel Lines: • Integral bypass and pressure relief valve • 11-14V DC, 6 amps max • Weight: 470g (16.23 oz) • Fittings: 3/8 NPT input, AN-8 male output • 3/8 NPT to AN-8 adapter included • Suitable for injection engines such as Lycoming IO540 etc. It is strongly recommended that a filter is fitted upstream of the pump. The output of this FX500-MK filter can be fitted directly to the input of this pump.

PX375-TC Pump for 3/8" Fuel Lines .....P/N 05-12559 .....**$769.00**
PX500-TC Pump for 1/2" Fuel Lines .....P/N 07-01334 .....**$763.00**

ANDAIR FILTERS

FX375-MK for 3/8" Lines .....P/N 05-12560 .....**$83.65**
FX500-MK for 1/2" Lines .....P/N 05-12561 .....**$83.65**

ANDAIR FUEL PUMP KITS



Engine Size	Description	Andair PN	Contents	PN	Price
IO320 - IO360	Filter Pump Kit	FPK-360	Boost Pump 3/8", Fuel Filter	07-01352	**$847.00**
IO320 - IO360	Fuel System Deluxe	FS-DE-LUXE-360	Boost Pump 3/8", Fuel Filter, Type 7 Valve, Gas-colator, Bulkhead Fitting	07-01354	**$1,254.00**
IO320 - IO360	Fuel System Super Deluxe	FS-S/DE-LUXE-360	Boost Pump 3/8", Fuel Filter, Type 7 Valve, 2-Gascolators, Bulkhead Fitting	07-01355	**$1,593.00**
IO540 - IO580	Filter Pump Kit	FPK-540	Boost Pump 1/2", Fuel Filter	07-01357	**$849.00**
IO540 - IO580	Fuel System Deluxe	FS-DE-LUXE-540	Boost Pump 1/2", Fuel Filter, Type 7 Valve, Gas-colator, Bulkhead Fitting	07-01358	**$1,272.00**
IO540 - IO580	Fuel System Super Deluxe	FS-S/DE-LUXE-540	Boost Pump 1/2", Fuel Filter, Type 7 Valve, 2-Gascolators, Bulkhead Fitting	07-01359	**$1,437.00**

DUKES OVERHAULED FUEL PUMPS



Dukes Aerospace Fuel Pumps are available on an overhaul exchange basis. All fuel pumps are overhauled in accordance with factory specifications and contain 100% OEM parts.
Attention: There will be an additional Core Charge per order.

Model No.	Part No.	Price
1184-00-1	08-07563	**$970.00**
1296-00-1	08-07565	**$985.00**
1458-00-1	08-07567	**$986.00**
1471-00-3	08-07568	**$1,431.00**
1499-00-21NV	08-07569	**$1,449.00**
1500-00-35	08-07571	**$1,455.00**
1500-00-38	08-07572	**$1,431.00**
1515-00-1	08-07573	**$1,431.00**
1521-00-1	08-07574	**$1,361.00**
1816-00-1NV	08-07575	**$1,461.00**
4140-00-153	08-07576	**$1,431.00**
4140-00-19A	08-07578	**$1,451.00**
4140-00-1	08-07579	**$1,431.00**
4140-0-218	08-07580	**$1,049.00**
4140-00-21A	08-07581	**$1,450.00**
4140-00-39	08-07582	**$1,450.00**
4140-00-57	08-07583	**$1,449.00**
4150-00-1	08-07584	**$1,448.00**
4258-00-15	08-07585	**$1,450.00**
4404-00-404	08-07586	**$1,449.00**
4404-00-7	08-07588	**$1,448.00**
4613-00-5NV	08-07589	**$1,431.00**
5100-00-19	08-07590	**$1,449.00**
5217-00-3	08-07592	**$1,435.00**
1499-00-19	08-07593	**$1,431.00**
1500-00-42	08-07594	**$1,449.00**
4140-00-7	08-07595	**$1,450.00**
4140-00-11	08-07596	**$1,449.00**
4140-00-17	08-07597	**$1,439.00**
4140-00-67	08-07598	**$1,295.00**
4140-00-198	08-07599	**$1,295.00**
4140-00-311	08-07600	**$1,449.00**
4258-00-21	08-07601	**$1,449.00**
4634-00	08-07602	**$1,449.00**
5100-00-9	08-07603	**$1,450.00**
5288-00-1	08-07604	**$1,295.00**
5367-00-1	08-07605	**$1,431.00**
5596-00-1	08-07606	**$1,449.00**

RAPCO DUKES OVERHAULED FUEL PUMPS

Model No.	PN	Price
4140-00	08-13508	**$938.00**
4140-00-103	08-13509	**$938.00**
4140-00-153	08-13510	**$938.00**
4140-00-17	08-13511	**$937.00**
4140-00-191	08-13512	**$938.00**
4140-00-19A	08-13513	**$938.00**
4140-00-1	08-13514	**$938.00**
4140-00-11	08-13515	**$938.00**
4140-00-218	08-13516	**$938.00**
4140-00-21A	08-13517	**$937.00**
4140-00-220	08-13518	**$938.00**
4140-00-301	08-13519	**$938.00**
4140-00-311	08-13520	**$938.00**

Model No.	PN	Price
4140-00-39	08-13521	**$937.00**
4140-00-47	08-13522	**$938.00**
4140-00-57	08-13523	**$938.00**
4140-00-7	08-13524	**$938.00**
4258-00-15	08-13525	**$1,052.00**
4404-00-7	08-13526	**$1,158.00**
4404-00-8	08-13527	**$1,158.00**
4613-00-1	08-13528	**$1,158.00**
4613-00-3	08-13529	**$1,158.00**
4613-00-5	08-13530	**$1,158.00**
1171-00-1	08-13531	**$1,052.00**
1184-00-3	08-13533	**$1,049.00**

Model No.	PN	Price
1420-00-1	08-13535	**$1,131.00**
1429-00-1	08-13536	**$1,131.00**
1458-00-1	08-13537	**$850.00**
1471-00-3	08-13538	**$1,052.00**
1499-00-19	08-13539	**$1,135.00**
1499-00-21	08-13540	**$1,131.00**
1500-00-22	08-13541	**$1,132.00**
1500-00-35	08-13542	**$1,052.00**
1500-00-38	08-13543	**$1,052.00**
1500-00-65	08-13544	**$1,131.00**
1500-00-67	08-13545	**$1,131.00**
1515-00-1	08-13546	**$1,052.00**

FUEL PUMPS – SPRAYING SYSTEMS

ELECTRIC FUEL TRANSFER PUMPS



Heavy Duty Industrial Grade Fuel pumps designed for everyday use in: Agricultural, Construction, Automotive, Industrial, Racing & Boating applications. Rain & Weather proof for tough outdoor use Lightweight, yet strong non corroding Aluminum Die cast construction. With a geared pump design using precision sintered metal gears and sintered geared construction makes this pump more tolerant than plastic gear designs; in addition to offering tremendous suction & minimal noise. This design is such that the motor cannot be switched on without removing nozzle from the nozzle hanger. The low current draw increases usage life from a single charge of battery on DC pump model UL & cUL listed Motor. Duty Cycle: 30 Minutes On / 30 Minutes Off. Recommended Use: Gasoline, Diesel.

12V Electric Gas Pump FPM-12.....P/N 08-07610 .....**$424.00**
115V Electric Gas Pump FPM-11525.....P/N 08-07609 .....**$526.00**

ROTARY FUEL PUMP



Industry Standard for Rotary pumps; these are by far the heaviest duty, for severe outdoor use in extreme weather conditions. Deliver media with a head / lift up to 20' solid cast iron construction, fully CNC machined to close tolerances. Pump handle rotates a high quality sintered powder metal 3 vane rotor inside a highly finished pumping chamber. The graphite veins are self lubricating & non wearing with high quality graphite seal that allows the pump to be used with a wide variety of fluids including diesel with up to 15% ethanol blend. This pump has self priming operation with discharge up to 38 LPM (10 GPM). Also supplied complete with 2" Bung, Telescopic Suction Tube with Strainer for use with 15 gallons (50 litre) – 55 gallons (205 litre) barrels. DO NOT USE With Water Based Media.....P/N 08-07611 .....**$298.00**

SAFETY FLOW FUEL PUMP & CONTAINER



Quickly safely and easily fill your fuels or chemicals with this 5 gpm rotary pump & 7 gallon container. Ideal for Airlines, boaters, Racecars, factories, job shops, auto repair, labs, farms, etc. Pumps: Diesel, gasoline, oil, alcohols, E85, ethanol, nitro, antifreeze, transmission fluid. Tether safety clamp makes for safe transfer of liquids even with one person. Static line included for additional safety. Cart not included

P/N 08-07612 .....**$269.00**

FM RATED & GROUNDED FUEL PUMPS



Stainless steel and carbon steel FM rated pumps. 30% of all calls are for FM rated hand pumps. These are ideal for lower volume users comes with safety straps and clamps.

Carbon Chrome
P/N 08-07613.....**$240.95**

Stainless Steel FM Approved
P/N 08-07614.....**$375.00**

BUNG NUT DRUM WRENCH



Non-Sparking Aluminum Bung Nut Wrench: Use to install or remove large and small drum plugs and install faucets. Accommodates most common bungs also, tightens or loosens drum rings.

P/N 08-07615 .....**$15.85**

WALBRO FUEL PUMP



This WIP-11 include a bracket to mount the pumps in place. This bracket is bolted to a solid surface with two 8-32 coarse thread bolts.

P/N 15-06246 .....**$22.00**

BIG R POWER SPRAYING SYSTEMS



BIGR: All steel construction for durability with large rubber feet for stability and ships fully assembled. Also utilizes a circuit breaker instead of fuses; protecting the operator and eliminating the need to search for fuses. Pressure sensitive switch shuts off pump when you stop spraying, preventing bursting hoses and product separation or damage. This feature can be by-passed with our pressure activated re-circulator. Multiple power options available including: 115vac includes standard 9' power cord, 230vac includes standard 9' power cord, 12vdc includes standard 25' power cord w/ battery clamps.

In the Box:
1 - spray control gun with comfort grip handle and quick connect, open flow fittings
1 - 18" straight brass wand section
1 - 18" curved brass wand section
1 - 1gal. per minute brass fan tip
1 - adjustable brass fan nozzle
100' safety yellow 3/8" chemical resistant hose with quick connect open flow fittings, chemical resistant diaphragm and seals in pump and reel.

115 VAC .....P/N 08-07617 .....**$476.00**
230 VAC .....P/N 08-07618 .....**$1,207.00**
12VDC .....P/N 08-07619 .....**$1,192.00**

7GPM SIPHON PUMP FOR DRUMS



7 gpm bellow action siphon pump includes 4ft. discharge hose and 2" bung, fits 15-30-55 gallon barrels. Pump,Siphon,7 GPM Drum Pump, Siphon, 500 SSU, Outlet Size 1 Inch Outside Diameter, Suction Design Tube, Suction Pipe Size Outside Diameter 1 In, Adapter Type 2 Inch NPT Bung, Fits 15, 30 and 55 Gallon Drums, Piston Polyethylene, Pump Body Material Polyethylene, Max Temp 140 Degree F, Includes Discharge Tubing, Discharge Tubing Material Corrugated Flexible Polyethylene, Internal Parts Material Polyethylene, Overall Length 45 3/4 In, Self Priming, Suction Tube 34 Inches Long.

P/N 08-07616 .....**$16.50**

DOUBLE DIAPHRAGM LEVER PUMP



Steel and aluminum, telescoping intake tube from 22" to 39". 3/4" inlet and outlet delivers approx. 1 gal. per ten strokes. Longwearing. Double-action piston pump for durability. Ideal for dispensing gasoline, diesel fuel, and similar petroleum products.

P/N 08-07622 .....**$199.95**

PISTON PUMP FOR AGGRESSIVE CHEMICALS



Stainless Steel & PTFE Hand Pump 22oz. Stroke T-Handle Pump Stainless and PTFE hand pump ideal for transferring your aggressive chemicals. Includes 2" bung 41" long body,1-1/2" outer body diameter. P/N 08-07623 .....**$98.75**

STAINLESS STEEL ROTARY PUMP



10 GPM Stainless Steel rotary drum pump 40 inch intake tube.Drum Pump, Rotary Chemical, 5000 SSU, Curved Discharge Spout, Outlet Size 3/4 Inch UNF, Suction Design 3 Piece Tube, Tube Material 304 SS, Adapter Type 1 1/2 x 2 Inch NPT Bung, Fits 15, 30 and 55 Gallon Drums, Pump Body Material 304 SS, PTFE Seal, Max Temp 140 Degree F, Includes Suction Tube, GPM 10 @135 RPM, Discharge Tubing Material 304 SS, Internal Parts Material PTFE and 304 SS, Inlet Size 1 Inch FNPT, Overall Length 53 In, Self Priming, Suction Tube 40 Inches Long 14lbs. ship wt.

P/N 08-07624 .....**$495.00**

EP

BENDIX MAGNETOS



OVERHAULED BENDIX MAGNETOS BY KELLY AEROSPACE

Core charges apply to all Overhauled Magnetos.

Model	Part Number	Price
10-51360-29	10-51360-29	$645.00
10-682555-11R DU	10-682555-11R	$2,061.00
10-51360-37R	10-51360-37R	$784.00
10-682555-14R	10-68255-14	$2,102.00
10-349370-4R	10-349370-4R	$715.00
10-349310-1R	10-349310-1R	$579.00
10-682560-11R	07-02976	$2,068.00
10-51360-27	10-51360-27R	$667.00
10-51365-39R	10-51365-39R	$749.00
10-79020-10R	10-79020-10R	$649.00
10-163050-9R	10-16305-9	$586.00
10-51365-47R	10-51365-47R	$730.00
10-51360-28R	10-51360-28R	$669.00
10-600614-1	07-01799	$642.00
10-163005-11R	07-01523	$571.00
10-163005-3R	07-01524	$571.00
10-163010-10R	07-01525	$586.00
10-163010-15R	07-01526	$571.00
10-163010-2R	07-01527	$571.00
10-163010-6R	07-01529	$571.00
10-163010-7R	07-01530	$571.00
10-163015-3R	07-01531	$577.00
10-163020-3R	07-01533	$575.00
10-163020-4R	07-01534	$571.00
10-163030-1R	07-02598	$651.00
10-163045-1R	07-01536	$571.00
10-163045-2R	07-01537	$571.00
10-163045-3R	07-01538	$586.00
10-163045-6R	07-01539	$571.00
10-163045-8R	07-01540	$571.00
10-163050-1R	07-01541	$571.00
10-163050-2R	07-01542	$571.00
10-163050-6R	07-01543	$571.00
10-163050-7R	07-01544	$571.00
10-163050-8R	07-01545	$571.00
10-163055-1R	07-01546	$570.00
10-163060-1R	07-01547	$586.00
10-163060-2R	07-01548	$571.00
10-349220-4R	07-01549	$603.00
10-349220-5R	07-01550	$619.00
10-349235-3R	07-01551	$572.00
10-349260-3R	07-01553	$748.00
10-349260-4R	07-01554	$572.00
10-349260-6DR	07-01555	$317.95
10-349260-6R	07-01556	$599.00
10-349260-7R	07-01557	$603.00
10-349270-7R	07-01558	$572.00
10-349285-1R	07-01559	$748.00
10-349285-5R	07-01560	$572.00
10-349285-7R	07-01561	$748.00
10-349290-17R	07-01562	$722.00
10-349290-1DR	07-01563	$511.00
10-349290-1R	07-01564	$603.00
10-349290-2DR	07-01565	$317.95
10-349290-2R	07-01566	$748.00
10-349290-3DR	07-01567	$511.00
10-3492920-3R	07-01568	$572.00
10-349290-4R	07-01569	$748.00
10-349290-9R	07-01570	$779.00
10-349300-4DR	07-01571	$795.00
10-349300-4R	07-01572	$1,740.00
10-349305-1DR	07-01573	$317.95
10-349305-1R	07-01574	$579.00
10-349305-2R	07-01575	$572.00
10-349305-3R	07-01576	$748.00
10-349305-4R	07-01577	$572.00
10-349310-10R	07-01578	$748.00
10-349310-11R	07-01579	$748.00
10-349310-14R	07-01580	$723.00
10-349310-1DR	07-01581	$317.95
10-349310-2R	07-01582	$572.00
10-349310-3R	07-01583	$572.00
10-349310-4DR	07-01584	$511.00
10-349310-4R	07-01585	$724.00
10-349310-5R	07-01586	$572.00
10-349310-8DR	07-01587	$465.95

Model	Part Number	Price
10-349310-8R	07-01588	$572.00
10-349320-4DR	07-01589	$661.00
10-349320-4R	07-01590	$1,711.00
10-349350-4R	07-01591	$699.00
10-349350-5R	07-01592	$744.00
10-349350-6R	07-01593	$746.00
10-349350-7R	07-01594	$746.00
10-349365-1R	07-01596	$671.00
10-349365-3R	07-01597	$659.00
10-349365-6R	07-01598	$748.00
10-349365-9R	07-02512	$667.00
10-349365-10R	07-01595	$816.00
10-349370-1R	07-01602	$654.00
10-349370-2R	07-01603	$654.00
10-349370-4DR	07-02974	$715.00
10-349370-5R	07-01606	$584.00
10-349370-6R	07-01607	$654.00
10-349420-1R	07-02516	$745.00
10-349420-2R	07-02517	$689.00
10-349460-1DR	07-01609	$519.00
10-349460-1R	07-02518	$814.00
10-349460-2R	07-02519	$805.00
10-349490-1DR	07-01610	$520.00
10-349490-1R	07-02520	$745.00
10-349490-2R	07-01611	$816.00
10-349490-3R	07-01612	$748.00
10-349500-1R	07-01613	$1,970.00
10-349510-1DR	07-01614	$519.00
10-349510-2R	07-01615	$766.00
10-349510-3R	07-01616	$634.00
10-349520-1DR	07-01617	$795.00
10-349520-1R	07-01618	$1,970.00
10-382555-10R DU	07-01619	$1,325.00
10-382555-11R DU	07-01620	$1,325.00
10-382555-12R DU	07-01621	$1,325.00
10-382555-13R DU	07-01622	$1,325.00
10-382555-14R DU	07-01623	$1,348.00
10-382555-151R D	07-01624	$1,325.00
10-382555-15R DU	07-01625	$1,325.00
10-382555-16R DU	07-01626	$1,325.00
10-382560-11R DU	07-01627	$1,325.00
10-382560-13R DU	07-01629	$1,325.00
10-382605-10R DU	07-01630	$1,325.00
10-382605-13R DU	07-01631	$1,325.00
10-382610-11R DU	07-01632	$1,325.00
10-382610-13R DU	07-01633	$1,325.00
10-382610-14R DU	07-01634	$1,325.00
10-382610-221R DU	07-01635	$1,325.00
10-382620-11R DU	07-01636	$1,325.00
10-382910-13R DU	07-01637	$1,325.00
10-382910-18R DU	07-01638	$1,325.00
10-382920-11R DU	07-01639	$1,326.00
10-51360-41R	07-01640	$639.00
10-51360-45R	07-01642	$639.00
10-51360-46R	07-01643	$559.00
10-51360-47R	07-01644	$639.00
10-51360-54R	07-01646	$639.00
10-500556-203R	07-19311	$819.00
10-51360-58R	07-01648	$640.00
.10-51365-32R	07-01650	$639.00
10-51365-33R	07-01651	$639.00
10-51365-34R	07-01652	$690.00
10-51365-35R	07-01653	$639.00
10-51365-40R	07-01654	$621.00
10-51365-43R	07-01655	$735.00
10-51365-44R	07-01656	$639.00
10-51365-45R	07-01657	$639.00
10-51365-46R	07-01658	$639.00
10-51365-48R	07-01659	$691.00
10-51365-57R	07-01660	$664.00
10-51365-9R	07-01661	$639.00
10-52350-22R	07-01664	$639.00
10-500516-4R	07-18140	$676.00
10-500556-3R	07-02548	$659.00
10-500556-101R	07-02546	$679.00
10-500556-103R	07-02547	$659.00

Model	Part Number	Price
10-600606-1R	07-02587	$650.00
10-600616-3R	07-02590	$639.00
10-600616-7R	07-02591	$766.00
10-600616-9R	10-05522	$643.00
10-600644-201R	10-06225	$650.00
10-600646-1R	07-02593	$669.00
10-600646-2R	07-02597	$689.00
10-600646-201R	07-02594	$612.00
10-600656-1R	07-02598	$651.00
10-682555-13R DU	07-01667	$1,981.00
10-682555-15R DU	07-01669	$2,086.00
10-682555-16R DU	07-02607	$1,996.00
10-682555-141R DU	07-02601	$1,996.00
10-682555-151R DU	07-02605	$1,996.00
10-682560-13R DU	07-01671	$1,639.00
10-682605-13R DU	07-01672	$1,989.00
10-682610-13R DU	07-01673	$2,092.00
10-682620-11R	07-01674	$2,352.00
10-682910-13R DU	07-01675	$2,119.00
10-682910-18R DU	07-01676	$2,119.00
10-79020-10R	10-79020-10	$649.00
10-79020-118R	07-01677	$870.00
10-79020-119R	07-01678	$755.00
10-79020-17R	07-01681	$629.00
10-79020-18R	07-01682	$645.00
10-79020-19R	07-01683	$639.00
10-682555-11R	07-02975	$2,061.00
10-682560-11R	07-02976	$2,068.00
10-163020-2R	08-15795	$598.00
10-163030-1R	08-15796	$598.00
10-349350-5R	08-15797	$754.00
10-500514-1R	08-15798	$676.00
10-500514-2R	08-15799	$845.00
10-500514-3R	08-15800	$845.00
10-500514-4R	08-15801	$774.00
10-500514-5R	08-15802	$774.00
10-500514-8R	08-15803	$676.00
10-500514-201R	08-15804	$676.00
10-500516-2R	08-15805	$669.00
10-500516-3R	08-15806	$780.00
10-500516-5R	08-15807	$774.00
10-500516-6R	08-15808	$845.00
10-500516-7R	08-15809	$845.00
10-500516-9R	08-15810	$774.00
10-500516-10R	08-15811	$774.00
10-500556-1R	08-15812	$676.00
10-500556-101R	08-15813	$702.00
10-500556-103R	08-15814	$702.00
10-500556-3R	08-15815	$702.00
10-500556-901R	08-15816	$661.00
10-52350-19R	08-15817	$761.00
10-52350-20R	08-15818	$661.00
10-52350-23R	08-15819	$760.00
10-600604-1R	08-15820	$774.00
10-600606-3R	08-15821	$845.00
10-600614-2R	08-15822	$845.00
10-600614-3R	08-15823	$774.00
10-600616-4R	08-15824	$774.00
10-600616-5R	08-15825	$774.00
10-600616-6R	08-15826	$774.00
10-600616-101R	08-15827	$845.00
10-600644-1R	08-15828	$650.00
10-600644-3R	08-15829	$774.00
10-600644-4R	08-15830	$774.00
10-600644-5R	08-15831	$676.00
10-600644-202R	08-15832	$676.00
10-600646-101R	08-15833	$845.00
10-600646-3R	08-15834	$774.00
10-600646-4R	08-15835	$774.00
10-600654-1R	08-15836	$774.00
10-600656-3R	08-15837	$774.00
10-79020-16R	08-15838	$661.00

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Prices Subject to Change Without Notice

BENDIX MAGNETOS



OVERHAULED BENDIX MAGNETOS

A Bendix magneto is a specific type of aircraft magneto manufactured by Teledyne Continental Motors. There are multiple models of Bendix magnetos, and they can be infinitely overhauled. As a result, the Bendix magneto is more often overhauled than bought new, allowing for efficient, cost-effective use.

Core charges apply to all Overhauled Magnetos.

Description	Part No.	Price
10-163010-10 O/H Bendix Mag	07-01949	$800.00
10-163020-4 O/H Bendix Mag	07-01950	$800.00
10-163060-1r O/H Bendix Mag	07-02392	$749.00
10-349290-9 O/H Bendix Mag	07-01955	$801.00
10-349220-4 O/H Bendix Mag	07-01939	$799.00
10-349220-5 O/H Bendix Mag	07-01935	$799.00
10-349260-6 O/H Bendix Mag	07-01936	$749.00
10-349260-7 O/H Bendix Mag	07-01938	$749.00
10-349285-1 O/H Bendix Mag	07-01975	$799.00
10-349290-17 O/H Bendix Mag	07-01952	$824.00
10-349290-1 O/H Bendix Mag	07-01933	$793.00
10-349290-2 O/H Bendix Mag	07-01953	$799.00
10-349290-3 O/H Bendix Mag	07-01976	$799.00
10-349290-4 O/H Bendix Mag	07-01954	$799.00
10-349293-1 O/H Bendix Mag	07-01977	$675.00
10-349300-4 O/H Bendix Mag	07-01946	$1,424.00
10-349305-1 O/H Bendix Mag	07-01941	$749.00
10-349305-3 O/H Bendix Mag	07-01978	$799.00
10-349310-14 O/H Bendix Mag	07-01979	$749.00
10-349310-1 O/H Bendix Mag	07-01932	$749.00
10-349310-1r O/H Bendix Mag	07-01932	$749.00
10-349310-2 O/H Bendix Mag	07-01980	$749.00
10-349310-4r O/H Bendix Mag	07-02402	$749.00
10-349310-8 O/H Bendix Mag	07-01981	$749.00
10-349320-4 O/H Bendix Mag	07-01982	$1,326.00
10-349350-4 O/H Bendix Mag	07-01931	$749.00
10-349350-5 O/H Bendix Mag	07-01930	$750.00
10-349350-7 O/H Bendix Mag	07-01989	$749.00
10-349365-10 O/H Bendix Mag	07-01957	$749.00
10-349365-1 O/H Bendix Mag	07-01990	$749.00
10-349365-3 O/H Bendix Mag	07-01942	$749.00
10-349365-6 O/H Bendix Mag	07-01958	$749.00
10-349370-1 O/H Bendix Mag	07-01960	$749.00
10-349370-4 O/H Bendix Mag	07-01934	$749.00
10-349420-1 O/H Bendix Mag	07-01961	$935.00
10-349420-2 O/H Bendix Mag	07-01962	$935.00
10-349460-1 O/H Bendix Mag	07-01963	$884.00
10-349460-2 O/H Bendix Mag	07-01991	$883.00
10-349490-2 O/H Bendix Mag	07-01964	$934.00
10-349520-1 O/H Bendix Mag	07-01992	$1,456.00
10-382555-14 O/H Bendix Mag	07-01947	$1,954.00
10-500514-1 O/H Bendix Mag	07-01973	$749.00
10-500516-2 O/H Bendix Mag	07-01974	$749.00
10-500516-3r O/H Bendix Mag	07-02418	$749.00
10-500556-101 O/H Bendix Mag	07-01993	$877.00
10-500556-103 O/H Bendix Mag	07-01927	$877.00
10-500556-1 O/H Bendix Mag	07-01929	$749.00
10-500556-203 O/H Bendix Mag	07-01983	$749.00
10-500556-3 O/H Bendix Mag	07-01924	$727.00
10-500556-901r O/H Bendix Mag	07-02424	$883.00
10-51306-26 O/H Bendix Mag	07-01984	$675.00
10-51360-27R O/H Bendix Mag	07-02549	$749.00
10-51360-28R O/H Bendix Mag	07-02550	$749.00
10-51360-29R O/H Bendix Mag	07-02551	$749.00
10-51360-37 O/H Bendix Mag	07-01943	$750.00
10-51360-41R O/H Bendix Mag	07-02553	$675.00
10-51360-45R O/H Bendix Mag	07-02556	$749.00
10-51360-47R O/H Bendix Mag	07-02557	$749.00
10-51360-48R O/H Bendix Mag	07-02560	$675.00
10-51360-54R O/H Bendix Mag	07-02561	$749.00
10-51360-55R O/H Bendix Mag	07-02562	$749.00
10-51360-58R O/H Bendix Mag	07-02563	$749.00
10-51365-32 O/H Bendix Mag	07-01965	$749.00
10-51365-33 O/H Bendix Mag	07-01966	$749.00
10-51365-34 O/H Bendix Mag	07-01967	$749.00
10-51365-43 O/H Bendix Mag	07-01968	$749.00
10-51365-46 O/H Bendix Mag	07-01969	$749.00
10-51365-47 O/H Bendix Mag	07-01944	$749.00
10-51365-57 O/H Bendix Mag	07-01970	$749.00
10-51365-9R O/H Bendix Mag	07-02581	$749.00
10-51365-35R O/H Bendix Mag	07-02567	$749.00
10-51365-39R O/H Bendix Mag	07-02569	$749.00
10-51365-40R O/H Bendix Mag	07-02570	$749.00
10-51365-44R O/H Bendix Mag	07-02573	$749.00
10-51365-45R O/H Bendix Mag	07-02574	$749.00
10-51365-48R O/H Bendix Mag	07-02579	$749.00
10-52350-20R O/H Bendix Mag	07-02583	$749.00
10-52350-22R O/H Bendix Mag	07-02584	$675.00
10-52350-23R O/H Bendix Mag	07-02586	$675.00
10-600606-1 O/H Bendix Mag	07-01971	$799.00
10-600614-1r O/H Bendix Mag	07-02425	$800.00
10-600616-3R O/H Bendix Mag	07-02589	$795.00
10-600616-7R O/H Bendix Mag	07-02592	$799.00
10-600646-1 O/H Bendix Mag	07-01985	$749.00
10-600646-201 O/H Bendix Mag	07-01925	$749.00
10-600646-2 O/H Bendix Mag	07-01972	$749.00
10-600656-1 O/H Bendix Mag	07-01945	$749.00
10-682610-221r O/H Bendix Mag	07-02439	$1,968.00
10-79020-10 O/H Bendix Mag	07-01940	$749.00
10-79020-16 O/H Bendix Mag	07-01986	$749.00
10-79020-6 O/H Bendix Mag	07-01987	$772.00
10-349350-6 O/H Bendix Mag	07-01988	$749.00

EP

OVERHAULED BENDIX DUAL MAGNETOS

Description	Part No.	Price
10-382555-11r O/H Bendix Dual Mag	07-02405	$1,955.00
10-382555-13r O/H Bendix Dual Mag	07-02406	$1,954.00
10-382555-141r O/H Bendix Dual Mag	07-02407	$1,954.00
10-382555-151r O/H Bendix Dual Mag	07-02409	$1,954.00
10-382555-15r O/H Bendix Dual Mag	07-02408	$1,954.00
10-682555-15r O/H Bendix Dual Mag	07-02429	$1,968.00
10-382555-16r O/H Bendix Dual Mag	07-02411	$1,954.00
10-382560-11r O/H Bendix Dual Mag	07-02412	$1,954.00
10-382560-13r O/H Bendix Dual Mag	07-02413	$1,956.00
10-382610-13r O/H Bendix Dual Mag	07-02414	$1,954.00
10-382610-221r O/H Bendix Dual Mag	07-02415	$1,956.00
10-382910-13r O/H Bendix Dual Mag	07-02416	$1,954.00
10-382910-18r O/H Bendix Dual Mag	07-02417	$1,954.00
10-682555-11r O/H Bendix Dual Mag	07-02426	$1,955.00
10-682555-13r O/H Bendix Dual Mag	07-02427	$1,955.00
10-682555-151r O/H Bendix Dual Mag	07-02430	$1,968.00
10-682555-16r O/H Bendix Dual Mag	07-02431	$1,968.00
10-682560-11r O/H Bendix Dual Mag	07-02432	$1,968.00
10-682560-13r O/H Bendix Dual Mag	07-02433	$1,956.00
10-682605-13r O/H Bendix Dual Mag	07-02434	$1,968.00
10-682610-11r O/H Bendix Dual Mag	07-02435	$1,968.00
10-682610-131r O/H Bendix Dual Mag	07-02438	$1,968.00
10-682610-13r O/H Bendix Dual Mag	07-02437	$1,955.00
10-682620-11r 8cyl O/H Bendix Dual Mag	07-02440	$1,650.00
10-682620-13r O/H Bendix Dual Mag	07-02441	$1,159.00
10-682910-18r O/H Bendix Dual Mag	07-02442	$1,968.00
10-682920-11r 8cyl O/H Bendix Dual Mag	07-02443	$1,159.00

BENDIX-SCINTILLA MAGNETOS

BENDIX MAGNETO ENGINE APPLICATIONS

Engine		Magneto Type	Magneto Replacement	Units per Engine
Make	Model			
Continental	A-65-8, A-75-8,	S4RN-20	10-51360-27 (Rt. Side)	1
	C-75-8, C-85-8 with original crankcase	S4RN-21	10-51360-28 (Lt. Side)	1
	A65-8, A-75-8, C-75-8, C-85-8 with current crank-case castings No. 6794 & No. 6795	S4RN-21	10-51360-28	2
	C-75-12F, C-85-8F,C-85-12F, C-90-12,	S4LN-21	10-51360-26	2
	C-115, C-125-2, C-145-2, C-145-4	S6LN-21	10-51365-39	2
	E-165-2, E-185-2 (above S/N 10111) E-185-3, E-185-9 (above S/N 5937) (above S/N 20922), E-225-4, E-225-8 (all), O-470-7 (above S/N 5937)	S6LN-20	10-51365-43	2
	GO-300A, GO-300B	S6RN-21	10-51365-35	2
	O-470-2, -4, -13, -A, -B, -E, -G, -J, -K, -L, -M, BGSO-526-A	S6RN-25	10-79020-8	2
	O-470-13A	S6LN-23	10-52350-20	2
	PE-150-2, -6 Packette	S6LN-23	10-52350-20	1
	FSO-526-A	S6RN-26	10-85290-2	2
Franklin	6A4-150-B3, 6A4-165-B3	S6RN-21		2
	6V4-178-B3, -B33, O-335-2, -3	S6RN-21	10-51365-48	2

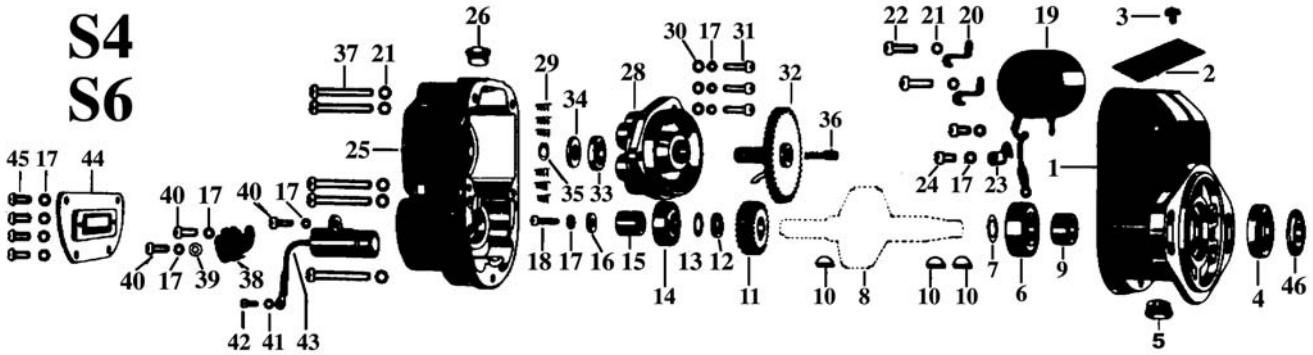
Engine		Magneto Type	Magneto Replacement	Units per Engine
Make	Model			
Franklin	6V4-200-C32, -C33, O-335-2, -3, -5, -6	S6RN-23	10-52350-19	2
	6A4-200-C6	S6RN-23	10-52350-21	2
Lycoming	††O-145-B2, -B3, -C2, -C3, ††O-235-C,	S4LN-20	10-51360-29	1
	O-235-C1, -C1A,	S4LN-21	10-51360-30	1
	O-320-A1A, -A2A, -B1A, -B2A, O-340-A, -A1A,	S4LN-21	10-51360-30 (25° Lag) or	2
	-A2A, -B1A, B2A, O-360-A, -A1A, -A1B , -B1A, -B2A	S4LN-21	10-51360-25 (35° Lag)	2
	O-290-G (single ignition)	S4LN-21	10-51360-25	1
	GO-435-C2, -C2A, -C2B , -C2B2, -C2C, -C2E, GO-480, -B, -B1A6, -B1C,	S6LN-20	10-51365-31	1
	-B1D, -C1A, -C1D6, -C2E6, -F1A6, -F2A6, -F3A6, -F4A6	S6LN-21	10-51360-32	1
	O-435-19, -20, VO-435A, -A1A, -A1B, -A1C, -A1D, GO-480-C1B6, -D1A,	S6LN-20	10-51365-33	1
	-G1B6, GSO-480-A1A6, -A1C6, -B 1A6, -B1B6,-B1C6	S6LN-21	10-51365-34	1
	O-435-6, -6A, -23, -23A,	S6LN-22	10-52350-22	1
	-23B, -A1C (optional), O-480-1	S6LN-23	10-52350-23	1
	O-435-17, GO-435-C2, -C2A, -C2B, -C2D,	S6LN-20	10-51365-44	1
	GO-480-B1, -B1B, -C2C6, -F3B6, -F4B6	S6LN-21	10-51365-45	1
	O-540	S6LN-20	10-51365-46	1
		S6LN-21	10-51365-47	1

*See Listing Below.

**New P/N 10-357584. ***New P/N 10-357586.

EP

PARTS COMMON TO S4N & S6N MAGNETOS



Ref. No.	Part No.	Description	Price Ea.
1	10-50727Y	Housing - Magneto	---
2	10-400012	Plate - Mag Ident	$23.88
3	10-22067	Drive Screw - Ident Plate	---
4	10-357592	Oil Seal - Drive Shaft	$20.63
5	10-157134	Vent - Mag Housing	$4.38
6	10-81806	Bearing - Mag, Drive End	$35.90
7	2-161-1	Shim Washer - .0025"	$3.48
	2-161-2	Shim Washer - .004"	$8.04
	2-161-3	Shim Washer - .005"	$3.23
	2-161-4	Shim Washer - .008"	$3.08
	2-161-5	Shim Washer - .010"	$3.48
	2-161-6	Shim Washer - .012"	$3.23
	-------	(Drive End Bearing)	---
8	— —	Magnet - Rotating	---
9	10-25788	Bushing - Drive Shaft	$33.71
10	10-90788-5	Key - Woodruff	$1.79
11	10-157123Y	Gear-Distrib., Small (S4)	$88.58
11A	10-157120Y	Gear-Distrib., Small (S6)	$55.13
12	10-3503	Spacer-Brkr End Bearing	$2.09
13	2-199-1	Shim Washer - .002"	$2.39
	2-199-2	Shim Washer - .004"	$2.39

Ref. No.	Part No.	Description	Price Ea.
13	2-199-3	Shim Washer - .005"	$2.15
	2-199-4	Shim Washer - .008"	$2.63
	2-199-5	Shim Washer - .010"	$2.15
	2-199-6	Shim Washer - .012"	$2.15
	--------	(Breaker End Bearing)	-------
14	2-202	Bearing-Magnet, Brkr End	$55.75
15	10-88543-1	Cam - Breaker	$20.79
16	10-51354	Washer-Plain (Cam Screw)	$2.18
18	10-35936-10	Screw - Cam	$2.59
19	10-357164	Coil	$199.75
20	10-50765	Clamp - Coil Core	$7.50
21	--------	Washer - Lock	-------
22	10-35937-8	Screw - Coil Core Clamp	$2.68
23	10-5752	Clip - Primary Lead	$5.42
24	10-16479	Screw	— —
25	— —	Housing - Distributor	— —
26	10-157135	Plug - Distributor Housing	$4.38
27	— —	Bushing - Ground Terminal	— —
28	10-52949	Block - Distributor (S4)	$92.95
28A	10-52958	Block - Distributor (S6)	$128.85
29	10-50737	Spring-H.T. Cable Contact	$1.05

Ref. No.	Part No.	Description	Price Ea.
30	-------	Washer - Plain	-------
31	-------	Screw - Distributor Block	-------
32	10-357584	Gear-Distrib., Large (S4)**	$89.95
32A	10-357586	Gear-Distrib., Large (S6)***	$179.90
33	10-50752	Washer - Felt	$0.90
35	10-92815-37	Ring-Retain. (Distrib.,Gear)	$0.90
36	10-9595	Brush - Carbon	$7.45
37	10-157158	Screw	$3.35
38	— —	Breaker Assembly*	— —
39	10-14268	Washer - Plain	$2.05
40	10-157161	Screw	$2.59
41	-------	Washer - Lock	— —
42	-------	Screw - Lead to Breaker	-------
43	10-51676	Condenser	$28.90
44	— —	Cover - Breaker	— —
45	10-157161	Screw - Breaker Cover	$2.59
46	10-51678	Oil Slinger - Drive Shaft	$10.43

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BENDIX-SCINTILLA MAGNETOS

BENDIX
BREAKER ASSEMBLIES

Early S4, S6 Mags

P/N 07-06305 (10-357173) with spring (current production) ..... **$47.90 Ea.**
P/N 07-06306 (10-357174) without spring (current production) ..... **$45.75 Ea.**

All above breaker assemblies used on either Right or Left Magnetos.
Late S4/S6 Mags, S200 Mags*

P/N 10-382584 (LH) ..... **$47.50 Ea.**
P/N 10-382585 (RH)..... **$42.65 Ea.**

Used on many late Lyc. engines.
Note: Specify Bendix mag P/N e.g., 10-51369-29



BENDIX MAGNETO GREASE

#10-27165 - Factory recommended lubricant for bearings in Bendix magnetos.
1 Lb. Can ..... P/N 10-27165 .... **$79.83**
#10-391200 - For use on distributor block bushing. Provides proper shaft lubrication.
8 oz. can ..... P/N 10-391200 .. **$79.95**

REPLACEMENT COILS FOR CONTINENTAL ENGINES PER SERVICE BULLETIN NO. 637

TCM Ignition Systems has issued Service Bulletin No. 637 to retire from service certain older coils and rotating magnets. The Bulletin applies to many S-20, S-200, S-600, and S-1200 series magnetos as identified in this chart. Compliance with this Bulletin is required at the next 100 inspection, annual inspection, or progressive maintenance inspection, whichever comes first. Order by new coil part number.

Magneto Series	Old Coil P/N	Color	New Coil P/N	Color	Our Price
S-20	10-51303 10-76384 10-160886	Opaque amber to Dark Purple	10-357164	Bright Red to Dark Red	**$199.75**
S-20 S-200	10-163172 10-163209 10-160887	Opaque Amber to Dark Purple	10-357165-1	Bright Red to Dark Red	**$267.92**
S-1200	10-349271	Opaque Amber	10-391088-1	Blue to Olive Green to Black	**$249.95**



ALTERNATOR FILTER

Replacement part for existing alternator filters. Wire won't break at the case and its clamp is made from heavy gauge steel. Double the capacitance compared to OEM alternator filters. For stubborn alternator noise, this Alternator filter combined with the Eliminator (P/N 11-08055) can trap a wide frequency range of electronic noise. Both of these filters have been thoroughly tested under a DO 160D and are FAA/PMA approved. P/N 11-08060.....**$69.95**



MAGNETO FILTER

Eliminates ignition noise. Install in primary lead of magneto. Not FAA approved. P/N 07-03200 ... **$122.75 ea**

MAGNETO FILTER FAA APPROVED



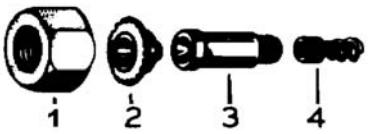
Attenuates both low and high frequencies of noise generated from bendix magneto ignition systems. This filter has been used by avionics shops, OEM aircraft manufacturers, and FBO's, to attenuate and suppress pulsating noise generated by their aircraft's magneto systems. The magneto filter is FAA-PMA approved and is compatible with the bendix series S20, S21, S200, D3000, D4000 magneto. 1000 VDC working voltage, 5000VDC break down voltage. Capacitance: .05 uf-self healing technology. Heavy duty mounting clamp. Temp. range: -35°C to +80°C. Max. current: 20 amps
P/N 07-00713 ..... **$79.95**



BOGERT AVIATION GROMMET STRETCHER TOOL

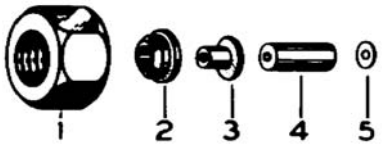
Using the Grommet Stretcher is 2-3x's faster when stretching grommets over fittings and plugs. Improves safety because grommets are continuous. Operating Instructions: 4 Simple Steps Saves time and frustration. Insert grommet over end of Grommet Stretching Tool. Squeeze handle to spread the grommet. Insert cable through grommet and release the squeeze on tool handle. Remove the grommet from tool by sliding grommet off the ends P/N 11-06946..... **$39.95**

GROUND TERMINAL KITS



For S-20 series mags. Kit No. 10-52306 (AN3105).....**$39.75**

Reg. No.	Part No.	No. Req.	Description
1	10-30299	1	NUT - Coupling (Ground Terminal)
2	10-56507	1	CROMMET Assy.(Ground Terminal)
3	10-3383	1	FERRULE - Inner (Ground Wire)
4	10-25725	1	SLEEVE - Insulating (Ground Wire)



For 20 series mags. Kit No. P/N 10-52305 .....**$88.50**

Reg. No.	Part No.	No. Req.	Description
1	10-37669	1	NUT - Coupling (Ground Terminal)
2	10-7030	1	FERRULE - Outer (Ground Wire)
3	10-7029	1	FERRULE - Inner (Ground Wire)
4	10-37668	1	SLEEVE - Insulating (Ground Wire)
5	2-155	1	WASHER - Ground Wire Contact

TCM/BENDIX IMPULSE COUPLINGS

Part No.	Price
10-40307	**$463.70**
10-40309	**$463.70**
10-400313	**$463.70**
10-40314	**$463.70**
10-40315	**$463.70**

$70.00 core charge applies

TCM/BENDIX CAM ASSEMBLIES

Part No.	Price
10-40166-6	**$306.32**
10-40167-4	**$308.50**
10-40167-6	**$306.32**
10-40167-10	**$306.32**

Core charge applies

EP

BOGERT AVIATION P-LEADS

BOGERT AVIATION SLICK STYLE P-LEADS



P-Leads are a critical part of the ignition system and their good condition is vital to safety and airworthiness. P-leads are often overlooked and seldom replaced because replacement p-leads are not available from the aircraft manufacturer and materials to fabricate new p-leads are not commonly available. Because most leads are shielded, mechanics do not have the materials, tooling or the experience to fabricate p-leads.
These p-leads are fabricated using proper materials, genuine terminal kits and additional strain reliefs. Each lead is inspected and tested. It is the responsibility of the installing agency to certify that the p-lead is airworthy and matches the requirements of the aircraft.

Bogert PN	Length	Description	PN	Price
21M-PL030-SS	30	P-lead 30" Slick Style	11-06869	$32.75
21M-PL036-SS	36	P-lead 36" Slick Style	11-06870	$32.95
21M-PL042-SS	42	P-lead 42" Slick Style	11-06871	$34.70
21M-PL048-SS	48	P-lead 48" Slick Style	11-06872	$35.50
21M-PL054-SS	54	P-lead 54" Slick Style	11-06873	$36.50
21M-PL060-SS	60	P-lead 60" Slick Style	11-06874	$37.50
21M-PL066-SS	66	P-lead 66" Slick Style	11-06875	$38.80
21M-PL072-SS	72	P-lead 72" Slick Style	11-06876	$39.85
21M-PL084-SS	84	P-lead 84" Slick Style	11-06877	$42.85
21M-PL096-SS	96	P-lead 96" Slick Style	11-06878	$46.50
21M-PL108-SS	108	P-lead 108" Slick Style	11-06879	$49.65
21M-PL120-SS	120	P-lead 120" Slick Style	11-06880	$49.85
21M-PL132-SS	132	P-lead 132" Slick Style	11-06881	$57.75
21M-PL144-SS	144	P-lead 144" Slick Style	11-06882	$60.75
21M-PL156-SS	156	P-lead 156" Slick Style	11-06883	$64.75
21M-PL168-SS	168	P-lead 168" Slick Style	11-06884	$67.75

BOGERT AVIATION BENDIX ROUND NUT P-LEADS



P-Leads are a critical part of the ignition system and their good condition is vital to safety and airworthiness. P-leads are often overlooked and seldom replaced because replacement p-leads are not available from the aircraft manufacturer and materials to fabricate new p-leads are not commonly available. Because most leads are shielded, mechanics do not have the materials, tooling or the experience to fabricate p-leads.
These p-leads are fabricated using proper materials, genuine terminal kits and additional strain reliefs. Each lead is inspected and tested. It is the responsibility of the installing agency to certify that the p-lead is airworthy and matches the requirements of the aircraft.

Bogert PN	Length	Description	PN	Price
21M-PL030-BR	30	P-lead 30" Bendix Round Nut	11-06891	$69.75
21M-PL036-BR	36	P-lead 36" Bendix Round Nut	11-06892	$72.75
21M-PL042-BR	42	P-lead 42" Bendix Round Nut	11-06893	$73.75
21M-PL048-BR	48	P-lead 48" Bendix Round Nut	11-06894	$74.75
21M-PL054-BR	54	P-lead 54" Bendix Round Nut	11-06895	$76.85
21M-PL060-BR	60	P-lead 60" Bendix Round Nut	11-06896	$76.75
21M-PL066-BR	66	P-lead 66" Bendix Round Nut	11-06897	$78.75
21M-PL072-BR	72	P-lead 72" Bendix Round Nut	11-06898	$79.75
21M-PL084-BR	84	P-lead 84" Bendix Round Nut	11-06899	$82.75
21M-PL096-BR	96	P-lead 96" Bendix Round Nut	11-06901	$85.95
21M-PL108-BR	108	P-lead 108" Bendix Round Nut	11-06902	$89.80
21M-PL120-BR	120	P-lead 120" Bendix Round Nut	11-06903	$92.75
21M-PL132-BR	132	P-lead 132" Bendix Round Nut	11-06904	$99.75
21M-PL144-BR	144	P-lead 144" Bendix Round Nut	11-06905	$99.75
21M-PL156-BR	156	P-lead 156" Bendix Round Nut	11-06906	$103.75
21M-PL168-BR	168	P-lead 168" Bendix Round Nut	11-06907	$107.80

BOGERT AVIATION BENDIX HEX NUT P-LEADS



P-Leads are a critical part of the ignition system and their good condition is vital to safety and airworthiness. P-leads are often overlooked and seldom replaced because replacement p-leads are not available from the aircraft manufacturer and materials to fabricate new p-leads are not commonly available. Because most leads are shielded, mechanics do not have the materials, tooling or the experience to fabricate p-leads.
These p-leads are fabricated using proper materials, genuine terminal kits and additional strain reliefs. Each lead is inspected and tested. It is the responsibility of the installing agency to certify that the p-lead is airworthy and matches the requirements of the aircraft.

Bogert PN	Length	Description	PN	Price
21M-PL030-BH	30	P-lead 30" Bendix Hex Nut	11-06914	$86.75
21M-PL036-BH	36	P-lead 36" Bendix Hex Nut	11-06915	$89.75
21M-PL042-BH	42	P-lead 42" Bendix Hex Nut	11-06916	$89.75
21M-PL048-BH	48	P-lead 48" Bendix Hex Nut	11-06917	$92.50
21M-PL054-BH	54	P-lead 54" Bendix Hex Nu	11-06918	$93.75
21M-PL060-BH	60	P-lead 60" Bendix Hex Nut	11-06919	$93.75
21M-PL066-BH	66	P-lead 66" Bendix Hex Nut	11-06920	$94.90
21M-PL072-BH	72	P-lead 72" Bendix Hex Nut	11-06921	$96.85
21M-PL084-BH	84	P-lead 84" Bendix Hex Nut	11-06922	$99.75
21M-PL096-BH	96	P-lead 96" Bendix Hex Nut	11-06923	$103.75
21M-PL108-BH	108	P-lead 108" Bendix Hex Nut	11-06924	$107.75
21M-PL120-BH	120	P-lead 120" Bendix Hex Nut	11-06925	$110.75
21M-PL132-BH	132	P-lead 132" Bendix Hex Nut	11-06926	$114.80
21M-PL144-BH	144	P-lead 144" Bendix Hex Nut	11-06927	$117.75
21M-PL156-BH	156	P-lead 156" Bendix Hex Nut	11-06928	$122.75
21M-PL168-BH	168	P-lead 168" Bendix Hex Nut	11-06929	$124.75

BOGERT AVIATION D2000 & D3000 P-LEADS BENDIX ROUND NUT



P-Leads are a critical part of the ignition system and their good condition is vital to safety and airworthiness. P-leads are often overlooked and seldom replaced because replacement p-leads are not available from the aircraft manufacturer and materials to fabricate new p-leads are not commonly available. Because most leads are shielded, mechanics do not have the materials, tooling or the experience to fabricate p-leads.
These p-leads are fabricated using proper materials, genuine terminal kits and additional strain reliefs. Each lead is inspected and tested. It is the responsibility of the installing agency to certify that the p-lead is airworthy and matches the requirements of the aircraft.

Bogert PN	Length	Description	PN	Price
21M-PL030-DBR	30	P-lead 30" Bendix Round Nut Short Style	11-13539	$84.00
21M-PL036-DBR	36	P-lead 36" Bendix Round Nut Short Style	11-13540	$86.33
21M-PL042-DBR	42	P-lead 42" Bendix Round Nut Short Style	11-13541	$87.50
21M-PL048-DBR	48	P-lead 48" Bendix Round Nut Short Style	11-13542	$88.67
21M-PL054-DBR	54	P-lead 54" Bendix Round Nut Short Style	11-13543	$89.83
21M-PL060-DBR	60	P-lead 60" Bendix Round Nut Short Style	11-13544	$74.80
21M-PL66-DBR	66	P-lead 66" Bendix Round Nut Short Style	11-13545	$93.33
21M-PL072-DBR	72	P-lead 72" Bendix Round Nut Short Style	11-13546	$94.50
21M-PL084-DBR	84	P-lead 84" Bendix Round Nut Short Style	11-13547	$98.00
21M-PL096-DBR	96	P-lead 96" Bendix Round Nut Short Style	11-13548	$102.67
21M-PL108-DBR	108	P-lead 108" Bendix Round Nut Short Style	11-13549	$107.67
21M-PL120-DBR	120	P-lead 120" Bendix Round Nut Short Style	11-13550	$110.83
21M-PL132-DBR	132	P-lead 132" Bendix Round Nut Short Style	11-13551	$115.50
21M-PL144-DBR	144	P-lead 144" Bendix Round Nut Short Style	11-13552	$119.00
21M-PL156-DBR	156	P-lead 156" Bendix Round Nut Short Style	11-13553	$123.67
21M-PL168-DBR	168	P-lead 168" Bendix Round Nut Short Style	11-13554	$128.33
21M-PL180-DBR	180	P-lead 180" Bendix Round Nut Short Style	11-13555	$131.83
21M-PL192-DBR	192	P-lead 192" Bendix Round Nut Short Style	11-13556	$136.50
21M-PL204-DBR	204	P-lead 204" Bendix Round Nut Short Style	11-13557	$140.00
21M-PL216-DBR	216	P-lead 216" Bendix Round Nut Short Style	11-13558	$144.67
21M-PL228-DBR	228	P-lead 228" Bendix Round Nut Short Style	11-13559	$149.33
21M-PL240-DBR	240	P-lead 240" Bendix Round Nut Short Style	11-13560	$152.83

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Prices Subject to Change Without Notice

BENDIX MAGNETO REPAIR KITS

REPAIR KIT
1 - Contact Assy. Kit (3)
1 - Capacitor
2 - Bearings
1 - Oil Seal
1 - Oil Slinger
3 - Woodruff Keys
1 - Cotter Pin
1 - Cam Screw
1 - Felt Washer
1 - Felt Strip
1 - Snap Ring
1 - Carbon Brush

FROM KELLY AEROSPACE

These magneto repair kits are designed to simplify the Bendix magneto overhaul process by providing all of the commonly needed overhaul parts in one convenient kit. The Repair Kits contain the parts needed for minor repair such as a 500 hour inspection, and the Deluxe Repair Kits contain the parts needed for major repair such as a magneto overhaul. These parts are highest quality direct replacement parts and are approved for installation and use on certificated aircraft. The Repair Kit and Deluxe Repair Kit for the Bendix -200, -201, and -202 series magnetos contain two sets of contact assembly kits. Some parts that may be need replacing during magneto overhaul are not included in these kits.

DELUXE REPAIR KIT
1 - Contact Assy. Kit (3)
1 - Coil Kit
1 - dist. Block Kit
1 - Gear Kit
1 - Capacitor
2 - Bearings
1 - Oil Seal
1 - Oil Slinger
3 - Woodruff Keys
1 - Cotter Pin
1 - Cam Screw

Bendix series	Magneto P/N	Magneto Type	Repair Kit P/N	Kit Price	Deluxe Repair Kit P/N	Kit Price
S-20 & S21	10-51360-1	S4R(L)N -20,21	07-00855	**$172.75**	07-00854	**$499.00**
	10-51360-3					
	10-51360-4					
	10-51360-6					
	10-51360-8					
	10-51360-10	S4R(L)N -20,21	07-00825	**$182.50**	07-00856	**$485.00**
	10-51360-11					
	10-51360-12					
	10-51360-25					
	10-51360-26	S4R(L)N -20,21	07-00855	**$172.75**	07-00854	**$499.00**
	10-51360-27					
	10-51360-28					
	10-51360-29	S4R(L)N -20,21	07-00825	**$182.50**	07-00856	**$485.00**
	10-51360-30					
	10-51360-31	S4R(L)N -20,21	07-00855	**$172.75**	07-00854	**$499.00**
	10-51360-33	S4R(L)N -20,21	07-00825	**$182.50**	07-00856	**$485.00**
	10-51360-37					
	10-51360-40					
	10-51360-41					
	10-51360-45	S4RN-21	07-00860	**$223.95**	07-00859	**$538.00**
	10-51360-46	S4R(L)N -20,21	07-00825	**$182.50**	07-00856	**$485.00**
	10-51360-47	S4RN-21	07-00860	**$223.95**	07-00859	**$538.00**
	10-51360-48	S4RN-21	07-00858	**$224.95**	07-00857	**$549.00**
	10-51360-54	S4R(L)N -20,21	07-00825	**$182.50**	07-00856	**$485.00**
	10-51360-55	S4R(L)N-20, 21	07-00860	**$223.95**	07-00859	**$538.00**
	10-51360-58					
	10-51360-1 up to S.N.238468	S6R(L)N-20, -21	07-00862	**$166.75**	07-00861	**$565.00**
	10-51365-1 up to S.N.238469	S6R(L)N	07-00864	**$182.50**	07-00863	**$584.00**
	10-51365-2	S6R(L)N -20,21	07-00862	**$166.75**	07-00861	**$565.00**
	10-51365-5					
	10-51365-7					
	10-51365-9	S6R(L)N -20,21	07-00864	**$182.50**	07-00863	**$584.00**
	10-51365-13	S6R(L)N -20,21	07-00862	**$166.75**	07-00861	**$565.00**
	10-51365-14	S6R(L)N -20,21	07-00864	**$182.50**	07-00863	**$584.00**
	10-51365-15					
	10-51365-16					
	10-51365-17					
	10-51365-20					
	10-51365-25					
	10-51365-26					
	10-51365-27					
	10-51365-28					
	10-51365-29					
	10-51365-30					
	10-51365-31					
	10-51365-32					
	10-51365-33					
	10-51365-34					
	10-51365-35					
	10-51365-39					
	10-51365-40	S6R(L)N -20,21	07-00862	**$166.75**	07-00861	**$565.00**
	10-51365-41					
	10-51365-42	S6R(L)N -20,21	07-00864	**$182.50**	07-00863	**$584.00**
	10-51365-43					
	10-51365-44					
	10-51365-45					
	10-51365-46					
	10-51365-47					
	10-51365-48	S6R(L)N -20,21	07-00862	**$166.75**	07-00861	**$565.00**
	10-51365-53	S6R(L)N -20,21	07-00864	**$182.50**	07-00863	**$584.00**
	10-51365-54					
	10-51365-57	S6LN -20,21	07-00868	**$244.95**	07-00867	**$651.00**



MAGNETO P-LEAD ADAPTER

This unique design of the P-lead adapter ensures proper spring pressure against the internal contact. It provides secure and stable alignment, and includes a post that prevents the timer leads from falling off. This adapter allows you to connect to the timer leads of all Bendix magnetos with an immediate and positive connection. One pair per package. 1 lbs (0.5Kg) shipping weight.

Magneto P-lead Adapter (Early S2, S4, S20) ..... P/N 12-03522 ..... **$35.95**
Magneto P-lead Adapter (S200, S600,later S2, S4, S20) ..... P/N 12-03523 ..... **$35.95**
Magneto P-lead Adapter (D2000, D3000 Series) ..... P/N 12-03524 ..... **$35.95**
Magneto P-lead Adapter (Complete Set) ..... P/N 12-03525 ..... **$93.75**

BENDIX MAGNETO REPAIR KITS

FROM KELLY AEROSPACE

Bendix Series	Magneto P/N	Magneto Type	Repair Kit P/N	Kit Price	Deluxe Repair Kit P/N	Kit Price
S-24 & S25	10-79020-5 10-79020-6 10-79020-8 10-79020-10	S6R(L)N -24,25	07-00864	**$182.50**	07-00863	**$584.00**
	10-79020-11	S6LN -25	07-00868	**$244.95**	07-00867	**$651.00**
	10-79020-13 10-79020-14 10-79020-16	S6R(L)N -24, -25	07-00864	**$182.50**	07-00863	**$584.00**
	10-79020-17 10-79020-18 10-79020-118	S6LN -25	07-00868	**$244.95**	07-00867	**$651.00**
	10-79020-19 10-79020-119	S6RN-25	07-00866	**$236.95**	07-00865	**$652.00**
S-200	10-163005-1 10-163005-2 10-163005-3 10-163005-4 10-163005-5 10-163005-7 10-163005-10 10-163005-11	S4R(L)N-200*	07-00844	**$263.95**	07-00843	**$583.00**
	10-163015-1 10-163015-2 10-163015-3 10-163015-4	S4R(L)N-201*	07-00844	**$263.95**	07-00843	**$583.00**
	10-163045-1	S4LN -204	07-00757	**$218.95**	07-00847	**$556.00**
	10-163045-2	S4RN -204	07-00846	**$224.95**	07-00845	**$542.00**
	10-163045-3	S4LN -204	07-00757	**$218.95**	07-00847	**$556.00**
	10-163045-4	S4RN -204	07-00846	**$224.95**	07-00845	**$542.00**
	10-163045-6	S4LN -204	07-00757	**$218.95**	07-00847	**$556.00**
	10-163045-7	S4RN -204	07-00846	**$224.95**	07-00845	**$542.00**
	10-163055-1	S4RN -205	07-00846	**$224.95**	07-00845	**$542.00**
	10-163055-2	S4LN -205	07-00757	**$218.95**	07-00847	**$556.00**
	10-163010-1 10-163010-2 10-163010-3 10-163010-4 10-163010-5 10-163010-6 10-163010-7 10-163010-8 10-163010-9 10-163010-10 10-163010-11 10-163010-15 10-163010-17	S6R(L)N -200*	07-00849	**$265.95**	07-00848	**$655.00**
	10-163020-1 10-163020-2 10-163020-3 10-163020-4	S6R(L)N-201*	07-00849	**$265.95**	07-00848	**$655.00**
	10-163030-1 10-163030-4	S6R(L)N-204	07-00849	**$265.95**	07-00848	**$655.00**
	10-163050-1 10-163050-2 10-163050-3 10-163050-5	S6LN-204	07-00853	**$218.95**	07-00852	**$687.00**
	10-163050-6 10-163050-7 10-163050-8	S6RN -204	07-00851	**$224.95**	07-00850	**$622.00**
	10-163050-9	S6LN -204	07-00853	**$218.95**	07-00852	**$687.00**
	10-163060-1	S6RN -205	07-00851	**$224.95**	07-00850	**$622.00**
	10-163060-2	S6RN -205	07-00853	**$218.95**	07-00852	**$687.00**
	10-163070-1 10-163070-3	S6RN -206	07-00853	**$218.95**	07-00852	**$687.00**

The Repair Kit and Deluxe Repair Kit for the Bendix -200, -201, and -202 Series Magnetos contain two sets of Contact Assembly Kits.

REPLACEMENT PARTS FOR BENDIX MAGNETOS FROM KELLY AEROSPACE

P/N	Description	Price
07-06301	Bearing	**$20.55**
10-357078	Bushing	**$27.50**
10-357164	Coil	**$199.75**
10-357165-1	Coil	**$267.92**
10-35717-3	Breaker Points	**$59.90**
10-35717-4	Breaker Points	**$57.85**
07-06308	Capacitor	**$95.75**
10-52949	Distributor Block	**$92.95**
07-06311	Breaker Points	**$107.75**
10-382584	Breaker Points	**$47.50**
07-06313	Coil	**$231.95**
07-06314	Breaker Points	**$84.75**
07-06315	Breaker Points	**$93.75**
07-06316	Capacitor	**$95.80**
07-06317	Washer	**$5.35**
07-02453	Washer for Slick Mag	**$0.58**
07-06318	Coil	**$267.95**
07-06319	Capacitor	**$107.75**
07-06320	Gasket	**$67.75**
07-06321	Bushing	**$43.70**
10-391088-1	Coil	**$249.95**
07-06323	Gasket	**$44.50**
07-06324	Gasket	**$27.50**
07-06325	Distributor Block	**$106.75**
07-06326	Distributor Block	**$94.75**
07-06327	Vent	**$26.80**
10-50737	Spring	**$1.05**
07-06329	Felt Washer	**$0.90**
07-06330	Plug	**$9.60**
10-51676	Capacitor	**$28.90**
07-06332	Washer	**$0.60**
07-06333	Washer	**$1.89**
07-06334	Distributor Block	**$269.95**
07-06335	Distributor Block	**$298.95**
07-06336	Bearing	**$35.90**
07-06325	Ring	**$0.90**
07-06338	Ring	**$1.59**
07-06339	Bearing	**$55.75**
07-06341	Bushing	**$6.50**
10-160844	Brush	**$5.50**
07-06344	Bushing	**$85.75**
07-06345	Felt Strip	**$0.84**
07-06346	Packing	**$1.21**
07-06347	Capacitor	**$76.50**
07-06348	Washer	**$5.35**
07-06350	Breaker Points	**$47.00**
07-06351	Bearing	**$24.50**
08-12204	MF3A Ignition Filter Cap	**$142.75**
08-14664	ES10-382618 Nut	**$17.80**
08-14665	ES10-17050 Washer	**$16.10**
08-14666	ES10-35937 Screw	**$2.73**
08-14667	KA10-682024 Screw	**$6.99**
08-14668	ES10-400166-4	**$296.95**
08-14669	ES10-400166-5	**$296.95**
08-14670	ES10-400167-8	**$296.95**
08-15840	AM-3015 Screw	**$1.39**
08-15841	AM-3020 Screw	**$1.07**
08-15842	AM-3183-1 Nut	**$0.40**
08-15843	AM-3183-2 Washer	**$0.40**
08-15844	AB-92815-37 Snap Ring	**$1.09**
08-15845	ES10-163048 Bushing	**$76.75**
08-15846	ES10-349219 Wedge	**$10.99**
08-15847	ES10-349248 Slinger, Oil	**$27.50**
08-15848	ES10-349392-1 Flange	**$123.75**
08-15849	ES10-349392-2 Flange	**$176.75**
08-15850	ES10-349392-3 Flange	**$158.75**
08-15851	ES10-349392-4 Flange	**$170.75**
08-15852	ES10-349392-5 Flange	**$192.90**
08-15853	ES10-349392-6 Flange	**$171.75**
08-15854	ES10-349970 Breaker Points	**$55.75**
08-15855	ES10-349971 Breaker Points	**$53.75**
08-15856	ES10-35935-5 Screw	**$3.35**
08-15857	ES10-3793 Washer	**$5.35**
08-15862	ES10-382785 Connector Strip	**$23.80**
08-15863	ES10-382787 Bearing Retainer Plate	**$103.75**
08-15864	ES10-382931 Coil Retention Spring	**$22.50**
08-15867	ES10-391389 Gasket	**$34.50**
08-15907	ES10-4093 Washer	**$0.92**
08-15910	ES10-682014 Gear Assembly	**$169.75**
08-15911	ES10-682016 Gear Assy	**$169.75**
08-15912	ES10-685548 Washer	**$0.67**
08-15915	KA10-16092 Washer	**$1.84**
08-15916	KA10-35937-12 Screw	**$6.50**
08-15917	KA10-361639 Bushing	**$34.55**
08-15918	KA10-382568 Strip	**$2.50**
08-15919	109-2 3/4 Nut	**$15.75**
08-15920	113-2 5/8 Nut	**$14.70**
08-15921	148A Insulator	**$6.70**
08-15922	148B Brass Retainer	**$5.70**
08-15923	2391 Insulator & Retainer Assy	**$8.50**
08-15924	2392 Insulator	**$7.75**
08-15925	2446-2 3/4 Elbow Assy	**$25.50**
08-15926	2463-2 5/8 Elbow Assy	**$25.50**
08-15927	70043 Ferrule	**$13.50**
08-15928	70044 Ferrule	**$13.65**
08-15929	70046 Ferrule	**$9.50**

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Prices Subject to Change Without Notice

SLICK MAGNETOS



NEW 4300 AND 6300 SERIES SLICK MAGNETOS

These new lightweight aircraft magnetos are being used by many new equipment manufacturers. Weigh only 3-3/4 lbs. compared to 6-1/4 lbs. for typical old style magnetos. All units carry a One Year warranty after delivery to the user. These new model magnetos are completely rebuildable. The old 4000/4100 magnetos may not be returned as an exchange unit for a new magneto of the same model. Most other Magnetos may be returned for core credit. Drive gears are not included. *When purchasing slick magnetos separately gaskets are not included.

IF NO CORE IS RETURNED, ADD $150 TO THE PRICE OF A NEW MAGNETO.

4300 SERIES

Magneto	ROT.	LAG	Weight	Type	Part No.	Price	Application
4309	LEFT	0	4	DD	08-01338	**$1,144.00**	Cont. IO-240-B
4310	LEFT	30	4	RB	08-01339	**$1,225.00**	Cont. IO-240-B
4333	RIGHT	25	4.8	IC	08-04333	**$1,370.00**	Cont. A-65-1, A-65-3, A-65-6, A-65-6J, A-65-7 A-65-8, A-65-8F, A-65-8FJ A-75-3, A-75-6, A-75-6J, A-75-8, A-75-8F, A-75-8FJ, A-75-8J, C-75-8, C-75-8F, C-75-8FH C-75-8FHJ, C-75-8FJ, C-75-8J, C-85-8, C-85-8F C-85-8FHJ, C-85-8FJ, C-85-8J, C-90-8F, C-90-8FJ
4345	LEFT	15	4	RB	08-01345	**$1,289.00**	Lyc. AEIO-360-A1A, AEIO-360-A1A, HIO-360-D1A, IO-360-A1A IO-360-A1C, IO-360-A2A, IO-360-A2C, IO-360-C1A IO-360-C1B, IO-360-D1A
4347	LEFT	25	4	RB	08-04347	**$1,177.00**	Lyc. AEIO-360-A1A, AEIO-360-A1A, AEIO-360-B1B, HO-360-C1A IO-320-B1D, IO-360-B1B, IO-360-B1D, IO-360-E1A O-235-C1B, O-235-F1B, O-320-A2C, O-320-A3C O-320-B1A , O-320-B1B, O-320-B2C, O-320-B2D O-320-B3C, O-320-D2B, O-320-D2B, O-320-E2B O-360-A1D, O-360-A2D, O-360-C1C, O-360-C2C
4372	LEFT	15	4.8	IC	08-43720	**$1,175.00**	Lyc. AEIO-360-A1B, AEIO-360-A1B6, AEIO-360-A1D, AEIO-360-A1D AEIO-360-A1E, AIO-360-A1A, AIO-360-A1B, AIO-360-B1B IO-360-A1B, IO-360-A1B6, IO-360-A1D, IO-360-A1D6 IO-360-A2B, IO-360-C1C, IO-360-C1C6, IO-360-C1D6 IO-360-C1E6, IO-360-C1F, IO-360-K2A , O-235-K2A, O-235-K2B, O-235-K2C, O-235-L2A, O-235-M1, O-235-M2C O-235-N2A, O-235-N2C, O-235-P1, O-235-P2A, O-290-D2
4381	LEFT	5	4.8	IC	4281	**$1,147.00**	O-235-L2C, O-235-N2C

Abbreviations: DD (Direct Drive), IC (Impulse Coupled), RB (Retard Breaker), TD (Tachometer Drive), P (Pressurized)
Weight does not include harness cap or magneto drive gear, and are provided for reference only.

4300 SERIES

Model No.	Part No.	Price
4302	08-01337	**$1,119.00**
4309	08-01338	**$1,144.00**
4310	08-01339	**$1,225.00**
4316	4316	**$1,342.00**
4330	4330	**$1,222.00**
4333	4333	**$1,370.00**
4342	08-01343	**$1,182.00**
4344	08-01344	**$1,181.00**
4345	08-01345	**$1,289.00**
4347	4347	**$1,177.00**
4348	08-01346	**$1,396.00**
4353	08-01347	**$1,226.00**
4354	08-01348	**$1,396.00**
4370	4370	**$1,018.00**
4371	4371	**$1,164.00**
4372	4372	**$1,175.00**
4373	4373	**$1,164.00**
4374	08-01349	**$1,172.00**
4381	08-14585	**$1,147.00**
4392	08-01350	**$1,370.00**

6300 SERIES

Model No.	Part No.	Price
6309	6309	**$1,396.00**
6310	6310	**$1,075.00**
6313	6313	**$1,319.00**
6314	6314	**$1,350.00**
6320	6320	**$1,168.00**
6324	6324	**$1,258.00**
6350	6350	**$1,034.00**
6351	6351	**$1,168.00**
6355	6355	**$1,329.00**
6360	6360	**$1,217.00**
6361	6361	**$1,189.00**
6363	6363	**$1,296.00**
6364	6364	**$1,317.00**
6367	6367	**$1,352.00**
6371	6371	**$1,200.00**
6377	6377	**$1,396.00**
6379	6379	**$1,396.00**
6380	6380	**$1,396.00**
6382	6382	**$1,396.00**
6393	6393	**$1,198.00**
6399	6399	**$1,371.00**



CONTINENTAL MAGNETO DRIVE GEARS

Used on Continental Engines.

Engine Eligibility	Magneto Gear No.	Part No.	Price
O-200; C90-12, 14, 16; C85-12, 14, 15; C75-12, 15; IO-240-A, B	655845	36066	**$759.00**
O-200; C90-12, 14, 16; C85-12, 14, 15; C75-12, 15; IO-240-A, B	SA36066		
C-125, C-145, O-300	530603	07-02003	**$1,767.26**
O/IO-470, 520 Sancast	641728	07-02005	**$1,235.03**
520-550 Permold	641742	07-02006	**$1,725.78**
GTSIO-520	632797	07-02007	**$1,503.36**
GTSIO-520	632799	07-02008	**$1,956.23**



LYCOMING MAGNETO DRIVE GEARS

Used on Lycoming Engines.

Engine Eligibility	Magneto Gear No.	Part No.	Price
O-235, 320, 360 Impulse Magneto	61665	07-02010	**$473.80**
O-235,320, 360 Impulse Magneto	SL61665	07-02010	**$473.80**
O-235,320, 360 Direct Drive Magneto	68C19622	07-02011	**$364.96**
320, 360, "76"Series	LW-15659	07-02012	**$294.95**
O/IO-360 Dual Magneto	LW-13643	07-02013	**$1,673.35**
O/IO/LTIO/TIO-540	LW-19096	07-02014	**$1,435.65**
O/IO/LTIO/TIO-540	LW-19102*	07-02015	**$1,369.00**
O/IO/LTIO/TIO-540 Dual Magneto	LW-13899	07-02016	**$1,829.91**

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SLICK MAGNETOS

NEW 6300 SERIES MAGNETOS

Magneto	ROT.	LAG	Weight	Type	Part No.	Price	Application
6310	RIGHT	30	4.9	IC	08-06310	**$1,075.00**	Cont. IO-470-A, IO-470-C, IO-470-D, IO-470-E, IO-470-F, IO-470-G, IO-470-H, IO-470-J, IO-470-K, IO-470-L, IO-470-LO, IO-470-M, IO-470-N, IO-470-P, IO-470-R, IO-470-S, IO-470-T, IO-470-U, IO-470-V, IO-470-VO, IO-520-A, IO-520-B, IO-520-BA, IO-520-BB, IO-520-C, IO-520-CB, IO-520-D IO-520-E, IO-520-F, IO-520-J, IO-520-K, IO-520-L IO-520-M, IO-520-MB, IO-520-N, IO-520-NB, IO-550-A IO-550-B, IO-550-C, IO-550-D, IO-550-F, IO-550-L O-470-A , O-470-B, O-470-B-C1, O-470-E, O-470-G, O-470-G-C1, O-470-H, O-470-J, O-470-K, O-470-K-C1 O-470-L, O-470-L-C1, O-470-M, O-470-M-C1, O-470-N O-470-P, O-470-R, O-470-S, O-470-T, O-470-U TSIO-520-A, TSIO-520-B, TSIO-520-BB, TSIO-520-C, TSIO-520-D TSIO-520-DB, TSIO-520-E, TSIO-520-EB, TSIO-520-G, TSIO-520-H TSIO-520-J, TSIO-520-JB, TSIO-520-K, TSIO-520-KB, TSIO-520-L TSIO-520-LB, TSIO-520-M, TSIO-520-N, TSIO-520-NB, TSIO-520-P TSIO-520-R, TSIO-520-T, TSIO-520-U, TSIO-520-UB, TSIO-520-VB TSIO-520-WB
6320	RIGHT	30	4.9	ICP	08-01353	**$1,168.00**	Cont. LTSIO-360-E, LTSIO-360-EB, LTSIO-360-KB, LTSIO-360-RB TSIO-520-A, TSIO-520-AE, TSIO-520-AF, TSIO-520-B, TSIO-520-BB TSIO-520-C, TSIO-520-CE, TSIO-520-D, TSIO-520-DB, TSIO-520-E, TSIO-520-EB, TSIO-520-G, TSIO-520-H, TSIO-520-J, TSIO-520-JB, TSIO-520-K, TSIO-520-KB, TSIO-520-L, TSIO-520-LB, TSIO-520-M TSIO-520-N, TSIO-520-NB, TSIO-520-P, TSIO-520-R, TSIO-520-T TSIO-520-U, TSIO-520-UB, TSIO-520-VB, TSIO-520-WB, TSIO-550-A, TSIO-550-B, TSIO-550-C, TSIO-550-E, TSIO-520-BE,
6350	LEFT	0	4	DD	08-06350	**$1,034.00**	Lyc. AEIO-540-D4A5, AEIO-540-D4B5, AEIO-540-L1B5, IO-540-A1A5, IO-540-B1A5, IO-540-B1C5, IO-540-C1B5, IO-540-C1C5, IO-540-C2C IO-540-C4B5, IO-540-C4C5, IO-540-D4A5, IO-540-D4C5, IO-540-E1A5 IO-540-E1B5, IO-540-G1A5, IO-540-G1B5, IO-540-G1C5, IO-540-G1E5 iO-540-J4A5IO-540-K1A5, IO-540-K1B5, IO-540-K1D5, IO-540-K1F5 IO-540-K1G5, IO-540-K1H5, IO-540-K1J5, IO-540-K1K5, IO-540-L1A5 IO-540-L1C5, IO-540-M1A5, IO-540-N1A5, IO-540-P1A5, IO-540-R1A5 IO-540-S1A5, O-540-A1A , O-540-A1B5, O-540-A1C5, O-540-A1D O-540-A1D5, O-540-A2B, O-540-A3D5, O-540-A4A5, O-540-A4B5 O-540-A4D5, O-540-B1A5, O-540-B2A5, O-540-D1A5, O-540-E4A5 O-540-E4B5, O-540-E4B5-wd, O-540-G1A5, O-540-G1A5-wd, O-540-G2A5, O-540-G2A5-wd, O-540-J3A5, IO-540-AA1A5
6351	LEFT	35	4.8	IC	08-06351	**$1,168.00**	Lyc. AEIO-540-D4B5, AEIO-540-L1B5, IO-540-AB1A5, IO-540-AC1A5 IO-540-G1C5, IO-540-G1D5, IO-540-G1F5, IO-540-K1A5, IO-540-K1B5 IO-540-K1C5, IO-540-K1E5, IO-540-K1G5, IO-540-K1H5, IO-540-K1K5 IO-540-L1A5, IO-540-L1C5, O-540-B2C5, O-540-E4C5, O-540-G1A5 O-540-G1A5-wd, O-540-G2A5, O-540-G2A5-wd, O-540-J3A5 IO-540-D4B5
6355	LEFT	45	4.8	IC	08-06355	**$1,329.00**	Lyc. IO-540-C2C, O-540-A1A, O-540-A1A5, O-540-A1B5, O-540-A1C5 O-540-A1D5, O-540-A2B, O-540-A4A5, O-540-A4B5, O-540-B2B5 O-540-B2B5-wd, O-540-B2C5-wd, O-540-B4B5, O-540-B4B5-wd, O-540-E4B5-wd, O-540-H2A5, O-540-E4B5
6363	LEFT	30	4	RBP	08-01356	**$1,296.00**	Lyc. TIO-540-A2B, TIO-540-A2C, TIO-540-J2B
6371	LEFT	0	4	TD	08-01358	**$1,200.00**	Lyc. AEIO-540-D4B5, IO-540-G1D5, IO-540-G1E5, IO-540-K1B5 O-540-E4C5, IO-540-S1A5
6393	LEFT	37	4	RBP	08-06393	**$1,198.00**	Lyc. AEIO-540-D4A5, AEIO-540-D4B5, AEIO-540-L1B5, IO-540-A1A5 IO-540-B1A5, IO-540-B1C5, IO-540-C1B5, IO-540-C1C5, IO-540-C4B5 iO-540-C4C5, IO-540-D4A5, IO-540-D4C5, IO-540-E1A5, IO-540-E1B5 IO-540-G1A5, IO-540-G1B5, IO-540-J4A5, IO-540-K1C5, IO-540-K1D5 IO-540-K1F5, IO-540-K1J5, IO-540-M1A5, IO-540-N1A5, IO-540-P1A5 IO-540-R1A5, IO-540-S1A5, O-540-A1B5, O-540-A1D, O-540-A1D5 O-540-A3D5, O-540-A4D5, O-540-B1A5, O-540-B2A5, O-540-D1A5 O-540-E4A5, O-540-E4C5, IO-540-AA1A5
6399	RIGHT	35	4.9	IC	08-01366	**$1,371.00**	Franklin 6A-350-C1, 6A-350-C1A, 6A-350-C2, 6A-350-C2A, 6A-350-D1 6A-350-D1A, 6A-350-D1B, 6A4-150-B3, 6A4-150-B31, 6A4-150-B4 6A4-165-B3, 6A4-165-B4, 6A4-165-B6

Abbreviations: DD (Direct Drive), IC (Impulse Coupled), RB (Retard Breaker), TD (Tachometer Drive), P (Pressurized)
Weight does not include harness cap or magneto drive gear, and are provided for reference only.

EP

SLICK MAGNETOS



OVERHAULED SLICK MAGNETOS

NOTE: Please remove drive gears before returning Magneto cores for "Core Credit."
These lightweight aircraft magnetos are being used by many new equipment manufacturers. Weigh only 3-3/4 lbs. compared to 6-1/4 lbs. for typical old style magnetos.
In early 1988, Slick discontinued the sale of re-manufactured magnetos to offer new units only.
All units carry a six-month warranty after delivery to the user. 4000/4100/6200 series magnetos may not be returned as exchange units for a new magneto of the same model. Only 4300 and 6300 series Slick Magnetos may be returned for core credit.
Drive gears are not included. *When purchasing slick magneto separately gaskets are not included.
4300 series is a direct replacement for previous 4200 series Magnetos.

4300 SERIES

Model No.	Part No.	Price
4301R	08-13699	**$674.00**
4302R	08-13700	**$637.00**
4309R	08-13701	**$637.00**
4310R	08-13702	**$721.00**
4316R	08-13703	**$755.00**
4330R	08-13704	**$725.00**
4333R	08-13705	**$757.00**
4342R	08-13706	**$673.00**
4344R	08-13707	**$675.00**
4345R	08-13708	**$721.00**
4347R	08-13709	**$674.00**
4348R	08-13710	**$757.00**
4353R	08-13711	**$665.00**
4354R	08-13712	**$757.00**
4370R	08-13713	**$584.00**
4371R	08-13714	**$669.00**
4372R	08-13715	**$648.00**
4373R	08-13716	**$669.00**
4374R	05-15839	**$693.00**
4381R	08-13718	**$674.00**
4392R	08-13719	**$757.00**

6300 SERIES

Model No.	Part No.	Price
6309R	08-13720	**$757.00**
6310R	08-13721	**$659.00**
6313R	08-13722	**$757.00**
6320R	08-13724	**$674.00**
6324R	08-13725	**$721.00**
6331R	08-13726	**$757.00**
6340R	08-13727	**$673.00**
6350R	08-13728	**$597.00**
6351R	08-13729	**$669.00**
6355R	08-13730	**$765.00**
6360R	08-13731	**$649.00**
6361R	08-13732	**$1,250.00**
6362R	08-13733	**$757.00**
6363R	08-13734	**$721.00**
6364R	08-13735	**$724.00**
6365R	08-13736	**$757.00**
6367R	08-13737	**$757.00**
6377R	08-13739	**$757.00**
6380R	08-13743	**$757.00**
6382R	08-13744	**$757.00**
6390R	08-13745	**$673.00**
6391R	08-13746	**$759.00**
6393R	08-13747	**$669.00**
6394R	08-13748	**$673.00**
6399R	08-13749	**$757.00**

EP



CHAMPION REBUILT SLICK MAGNETO

4300 SERIES

Description	PN	Price
4301R Champion Rebuilt Slick Mag Imp Coupled	08-13927	**$854.00**
4309R Champion Rebuilt Slick Mag Non/Imp	08-13930	**$793.00**
4310R Champion Oh Slick Mag Non/Imp	08-13931	**$848.00**
4370R Champion Rebuilt Slick Mag Non Impulsed	08-13916	**$794.00**
4371R Champion Rebuilt Slick Mag Impulsed	08-13915	**$848.00**
4372R Champion Rebuilt Slick Mag Impulsed	08-13928	**$854.00**
4373R Champion Rebuilt Slick Mag Impulsed	08-13921	**$854.00**
4381R Champion Oh Slick Mag Impulsed	08-13918	**$854.00**

6300 SERIES

Description	PN	Price
6310R Champion Rebuilt Slick Mag Impulsed	08-13917	**$853.00**
6351R Champion Rebuilt Slick Mag Impulsed	08-13919	**$859.00**
6320R Champion Rebuilt Slick Mag Impulsed	08-13920	**$928.00**
6324R Champion Rebuilt Slick Mag Impulsed	08-13922	**$928.00**
6361R Champion Rebuilt Slick Mag Impulsed	08-13925	**$928.00**
6350R Champion Rebuilt Slick Mag Non/imp	08-13923	**$794.00**
6393R Champion Rebuilt Slick Mag Non/imp	08-13926	**$854.00**
6360R Champion Rebuilt Slick Mag Non/imp	08-13929	**$872.00**

CHAMPION SLICK MAGNETO MAINTENANCE KITS



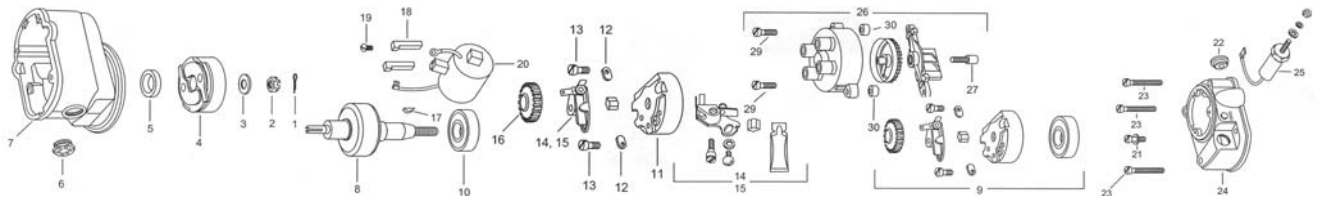
Inspection and maintenance are simpler and more convenient than ever before. Champion also incorporated mechanic-endorsed features to improve performance and service life. Lift-off housing –Internal timing is not disturbed during inspections. Simplified internal timing –Improved internal markings and unique Slick T-150 E-gap tool make timing easier and more accurate. Fully sealed bearings –Keeps contaminants out and grease in for smoother operation and less maintenance. Lower EMI Levels –Housing improves sealing and results in less radio noise. OEM Approved –Models are available for more than 225,000 engines –all compatible with existing Slick Ignition Harnesses.

Description	Where Kit Used	Mag Models Used	PN	Price
MK401 Kit	All IC or DD 4cyl. Magnetos	4301, 4302, 4303, 4309, 4316, 4330, 4331, 4333, 4370, 4371, 4372, 4373, 4374, 4381, 4392	08-14592	**$634.00**
MK402 Kit	All IC RB or TD 4cyl. Magnetos Excluding 4342 & 4344	4310, 4345, 4347, 4348, 4353, 4354	08-14593	**$635.00**
MK403 Kit	4342 & 4344 TD 4cyl. Magnetos	4342, 4344	08-14594	**$635.00**
MK601 Kit	All 6cyl. IC & DD Magnetos with small shaft	6310, 6313, 6314, 6320, 6324, 6362, 6364, 6367, 6377, 6379, 6380, 6382, 6399	08-14595	**$625.00**
MK602 Kit	All 6cyl. RB Magnetos with small shaft	6309	08-14596	**$636.00**
MK603 Kit	6390	6390	08-14597	**$635.00**
MK604 Kit	All 6cyl. IC & DD Magnetos with large shaft	6331, 6340, 6350, 6351, 6355, 6360, 6361	08-14632	**$635.00**
MK605 Kit	All 6cyl. RB & TD Magnetos with large shaft except 6390	6363, 6365, 6371, 6391, 6393, 6394	08-14633	**$635.00**

CHAMPION SLICK MAGNETO 500 HOUR INSPECTION KITS

Description	Mag Models Used	PN	Price
MK431	4301, 4302, 4303, 4309, 4316, 4330, 4331, 4333, 4370, 4371, 4372, 4373, 4374, 4381, 4392	08-15951	**$285.95**
MK432	4310, 4345, 4347, 4348, 4353, 4354	08-15952	**$342.00**
MK433	4342, 4344	08-15953	**$355.00**
MK631	6310, 6313, 6314, 6320, 6324, 6362, 6364, 6367, 6377, 6379, 6380, 6382, 6399	08-15954	**$285.95**
MK632	6309, 6363, 6365, 6371, 6391, 6393, 6394	08-15955	**$342.00**
MK633	6390	08-15956	**$355.00**

SLICK MAGNETO PARTS



4300 SERVICE PARTS LIST												
No.	Description	4301	4302	4303	4316	4330	4331	4342	4344	4345	Qty	Price/ea.
1	Cotter pin	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	1	$1.20
2	Nut	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	1	$7.50
3	Washer	M3172	M3172	M3172	M3172	M3172	M3172	M3172	M3172	M3172	1	$6.50
4	Impulse Coupling Assy.	M3007	-	-	M3076	M3068	-	-	-	-	1	$486.00
5	Oil Seal	M3062	M3062	M3062	M3062	M3062	M3062	M3062	M3062	M3062	1	$13.50
6	Air Vent	M1077	M1077	M1077	M1077	M1077	M1077	M1077	M1077	M1077	1	$6.80
7	Frame	M3859	M3900	M3859	M3888	M3888	M3900	M3900	M3900	M3900	1	$333.00
8	Rotor	M3073	M3518	M3338	M3047	M3065	M3065	M3548	M3513	M3548	1	$365.00
9	Bearing Kit	K3318-4	K3318-4	K3318-4	K3318-4	K3318-4	K3318-4	K3301	K3301	K3301	1	$281.95
10	Ball Bearing	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	1	$48.50
12	Bearing Cap Clamp	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	2	$1.95
13	Screw	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	2	$16.50
14	Contact Point Kit-Primary	M3081	M3081	M3081	M3081	M3081	M3081	M3637	M3637	M3637	1	---
15	Contact Point Kit-Secondary	-	-	-	-	-	-	M3740	M3740	M3637	1	$104.75
16	Rotor Gear	M3827	M3827	M3827	M3827	M3827	M3827	M3827	M3827	M3827	1	---
17	Woodruff Key	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	1	$1.25
18	Coil Wedge	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	2	$13.50
19	Screw	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	1	---
20	Coil*(see below)	K3975	K3975	K3975	K3975	K3975	K3975	K3975	K3975	K3975	1	$412.00
21	Screw	M2555	M2555	M2555	M2555	M2555	M2555	M2555	M2555	M2555	1	$1.57
22	Air Vent w/Hood	M3084	M3084	M3084	M3084	M3084	M3084	M3084	M3084	M3084	1	$24.60
23	Screw	M3015	M3015	M3015	M3015	M3015	M3015	M3015	M3015	M3015	3	$1.73
24	Housing, Dist.	M3902	M3902	M3902	M3902	M3902	M3902	M3874	M3874	M3832	1	$210.95
25	Capacitor	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	1	$145.75
27	Carbon Brush	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	1	$13.50
--	Washer	M2532	M2532	M2532	M2532	M2532	M2532	M2532	M2532	M2532	1	$0.64
29	Screw	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	2	$1.26
30	Spacer	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	2	$3.85

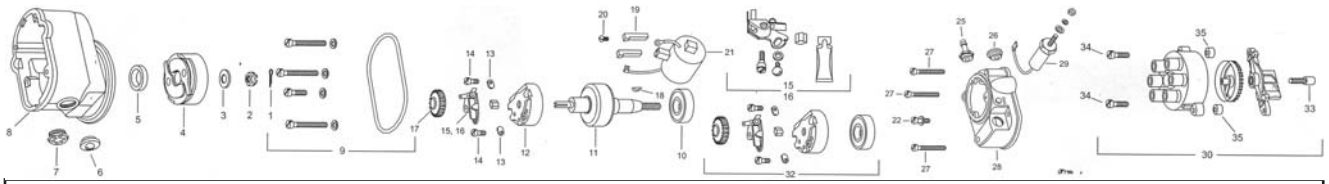
No.	Description	4347	4348	4353	4354	4370	4371	4372	4373	4374	4381	Qty	Price/ea.
1	Cotter pin	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	1	$1.20
2	Nut	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	1	$7.50
3	Washer	M3172	M3172	M3172	M3172	M3172	M3172	M3172	M3172	M3172	M3172	1	$6.50
4	Impulse Coupling Assy.	-	-	-	M3529	-	M3163	M3100	M3529	M3689	M3007	1	$486.00
5	Oil Seal	M3062	M3062	M3062	M3062	M3062	M3062	M3062	M3062	M3062	M3062	1	$13.50
6	Air Vent	M1077	M1077	M1077	M1077	M1077	M1077	M1077	M1077	M1077	M1077	1	$6.80
7	Frame	M3900	M3900	M3900	M3859	M3900	M3859	M3859	M3859	M3888	M3859	1	$333.00
8	Rotor	M3548	M3513	M3548	M3158	M3548	M3158	M3158	M3158	M3065	M3158	1	$365.00
9	Bearing Kit	K3301	K3301	K3301	K3301	K3318-4	K3318-4	K3318-4	K3318-4	K3318-4	K3318-4	1	$281.95
10	Ball Bearing	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	1	$48.50
12	Bearing Cap Clamp	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	2	$1.95
13	Screw	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	2	$16.50
14	Contact Point Kit-Primary	M3637	M3637	M3637	M3637	M3081	M3081	M3081	M3081	M3081	M3081	1	---
15	Contact Point Kit-Secondary	M3637	M3637	M3637	M3637	-	-	-	-	-	-	1	$104.75
16	Rotor Gear	M3827	M3827	M3827	M3827	M3827	M3827	M3827	M3827	M3827	M3827	1	---
17	Woodruff Key	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	1	$1.25
18	Coil Wedge	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	2	$13.50
19	Screw	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	1	---
20	Coil*(see below)	K3975	K3975	K3975	K3975	K3975	K3975	K3975	K3975	K3975	K3975	1	$412.00
21	Screw	M2555	M2555	M2555	M2555	M2555	M2555	M2555	M2555	M2555	M2555	1	$1.57
22	Air Vent w/Hood	M3084	M3084	M3084	M3084	M3084	M3084	M3084	M3084	M3084	M3084	1	$24.60
23	Screw	M3015	M3015	M3015	M3015	M3015	M3015	M3015	M3015	M3015	M3015	3	$1.73
24	Housing, Dist.	M3832	M3832	M3832	M3832	M3902	M3902	M3902	M3902	M3902	M3902	1	$210.95
25	Capacitor	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	1	$145.75
27	Carbon Brush	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	1	$13.50
--	Washer	M2532	M2532	M2532	M2532	M2532	M2532	M2532	M2532	M2532	M2532	1	$0.64
29	Screw	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	2	$1.26
30	Spacer	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	2	$3.85

Replaces M3525 Coil

Slick Gasket M3426 .....P/N 08-05247 .....**$16.60**

Slick T153 Cam And Rotor Set .....P/N 12-01449 .....**$52.75**

SLICK MAGNETO PARTS



6300 SERVICE PARTS LIST

No.	Description	6310	6314	6320	6324	6331	6340	6350	6351	6355	6360	Qty.	Price ea
1	Cotter pin	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	1	$1.20
2	Nut, Impulse Coupling	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	1	$7.50
3	Washer	M3172	M3172	M3172	M3172	-	-	-	-	-	-	1	$6.50
4	Impulse Coupling Ass.	M3050	M3089	M3050	M3089	M3800	-	-	M3333	M3635	-	1	$486.00
5	Oil Seal	M3062	M3062	M3062	M3062	M3331	M3331	M3331	M3331	M3331	M3331	1	$13.50
6	Pressure Vent Plug	-	-	M3179	M3179	M3179	M3179	-	-	-	M3179	1	$6.90
7	Air Vent	M1077	M1077	-	-	-	-	M1077	M1077	M1077	-	1	$6.80
8	Frame	M3837	M3847	M3837	M3847	M3888	M3900	M3900	M3859	M3859	M3900	1	$385.00
9	Gasket Pressure Kit	-	-	K3307	K3307	K3307	K3307	-	-	-	K3307	1	$87.75
10	Ball Bearing	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	1	$48.50
11	Rotor	M3047	M3093	M3047	M3093	M3792	M3801	M3117	M3327	M3416	M3117	1	$399.00
13	Bearing Cap Clamp	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	2	$1.95
14	Screw	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	2	$16.50
15	Contact Pt. Kit-Primary	M3081	M3081	M3081	M3081	M3081	M3081	M3081	M3081	M3081	M3081	1	---
16	Contact Pt. Kit-Secondary	-	-	-	-	-	-	-	-	-	-	1	$104.75
17	Rotor Gear	M3828	M3828	M3828	M3828	M3828	M3828	M3828	M3828	M3828	M3828	1	---
18	Woodruff Key	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	1	$1.25
19	Coil Wedge	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	2	$13.50
20	Screw	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	1	---
21	Coil	M3975	M3975	M3975	M3975	M3975	M3975	M3975	M3975	M3975	M3975	1	$412.00
22	Screw	M2555	M2555	-	-	-	-	M2555	M2555	M2555	-	1	$1.57
24	Screw	-	-	-	-	-	-	-	-	-	-	3	$1.57
25	Pressure Tube Fitting	-	-	M3180	M3180	M1280	M1280	-	-	-	M1280	1	$14.50
26	Air Vent with Hood	M3084	M3084	-	-	-	-	M3084	M3084	M3084	-	1	$24.60
27	Screw	M3015	M3015	-	-	-	-	M3015	M3015	M3015	-	3	$1.73
28	Housing, Distributor	M3902	M3902	M3902	M3902	M3902	M3902	M3902	M3902	M3902	M3902	1	$210.95
29	Capacitor	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	1	$145.75
31	Washer	M2532	M2532	-	-	-	-	M2532	M2532	M2532	-	1	$0.64
32	Bearing Kit	K3320	K3320	K3320	K3320	K3319	K3319	K3319	K3319	K3319	K3319	1	$224.95
33	Carbon Brush	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	1	$13.50
34	Screw	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	2	$1.26
35--	Spacer	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	2	$3.85

No.	Description	6361	6362	6363	6364	6365	6367	6371	6380	6382	6390	Qty.	Price ea
1	Cotter pin	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	1	$1.20
2	Nut, Impulse Coupling	M3019	M3019	M3019	M3492	M3019	M3492	M3019	M3019	M3019	M3019	1	$7.50
3	Washer	-	M3172	-	-	-	-	-	M3172	M3172	-	1	$6.50
4	Impulse Coupling Ass.	M3333	M3050	-	M3590	-	M3524	-	M3050	M3050	-	1	$486.00
5	Oil Seal	M3331	M3062	M3331	M3062	M3331	M3062	M3331	M3062	M3062	M3331	1	$13.50
6	Pressure Vent Plug	M3179	-	M3179	-	M3179	-	-	-	-	-	1	$6.90
7	Air Vent	-	M1077	-	M1077	-	M1077	M1077	M1968	M1968	M1077	1	$6.80
8	Frame	M3859	M3837	M3900	M3853	M3900	M3856	M3900	M3850	M3850	M3900	1	$385.00
9	Gasket Pressure Kit	K3307	-	K3307	-	K3307	-	-	-	-	-	1	$87.75
10	Ball Bearing	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	1	$48.50
11	Rotor	M3327	M3047	M3117	M3496	M3117	M3499	M3117	M3047	M3047	M3117	1	$399.00
13	Bearing Cap Clamp	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	2	$1.95
14	Screw	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	2	$16.50
15	Contact Pt. Kit-Primary	M3081	M3081	M3637	M3081	M3637	M3081	M3637	M3081	M3081	M3637	1	---
16	Contact Pt. Kit-Secondary	-	-	M3637	-	M3637	-	M3637	-	-	M3740	1	$104.75
17	Rotor Gear	M3828	M3828	M3828	M3828	M3828	M3828	M3828	M3828	M3828	M3828	1	---
18	Woodruff Key	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	1	$1.25
19	Coil Wedge	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	2	$13.50
20	Screw	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	1	---
21	Coil	M3975	M3975	M3975	M3975	M3975	M3975	M3975	M3975	M3975	M3975	1	$412.00
22	Screw	-	M2555	-	M2555	-	M2555	M2555	M2555	M2555	M2555	1	$1.57
24	Screw	-	M3125	-	-	-	-	-	-	M3125	-	3	$1.57
25	Pressure Tube Fitting	M1280	-	M1280	-	M1280	-	-	-	-	-	1	$14.50
26	Air Vent with Hood	-	M3084	-	M3084	-	M3084	M3084	M3084	M3084	M3084	1	$24.60
27	Screw	-	M3015	-	M3015	-	M3015	M3015	M3015	M3015	M3015	3	$1.73
28	Housing, Distributor	M3902	M3902	M3832	M3902	M3832	M3902	M3832	M3902	M3902	M3874	1	$210.95
29	Capacitor	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	1	$145.75
31	Washer	-	M2532	-	M2532	-	M2532	M2532	M2532	M2532	M2532	1	$0.64
32	Bearing Kit	K3319	K3320	K3302	K3320	K3302	K3320	K3302	K3320	K3320	K3302	1	$224.95
33	Carbon Brush	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	1	$13.50
34	Screw	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	2	$1.26
35--	Spacer	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	2	$3.85

SLICK IGNITION KITS



SLICK IGNITION KITS

We offer complete Slick factory upgrade/conversion kits for virtually all general aviation aircraft. These kits include two factory new Slick magnetos, a complete Slick ignition harness, and conversion information. Add **$500.00** core charge to the kit prices which is refundable upon return of the two old magnetos to Aircraft Spruce. Specify aircraft and engine make and model when ordering.

Part Numbers listed are Gray. Other colors available are: Blue, Yellow, and Red.

Slick Kit Part No.	Engine Application 4 Cyl. Single Impulse 2 Mags & 1 Set Ignition Harness	Spark Plug Size	Gray Part No. & Plug No.	Price Add $500.00 Core Charge to all kits
K4516	Lycoming: 0-235-C1A, C1C, C2C, E1, E2B, F1, G2B, H2C, J2B 0-320-A1A, A2D, C1A, D1D, D2G, D2H, D3G, E1J, E2D, E2E, E2G, E3D10-320-B1B, E1B, E2B, A2B, AE10-320-E1B, E2B 0-360-A1NG, A2H, A4K, A4M, B1A, C1E, C1F, C2B, C2E, D1A 10-360-B1FG A10-360-A2B AE10-360-A2B, B1F6, B2F6, H1A	5/8" PLUGS INCLUDED	08-07737 (-40)	$2,392.00
			08-07734 (-37B4)	$2,396.00
K4315	Lycoming: 0-235-C1C, C2C, E2B, F1, G2B, J2B, N2C, 0-320-A1A, B1A, B2A, C1A, C2A, C2B, C2C, C3A, C3B, C3C, D1D, D2G, D2H, D3G, E1J, E2D, E2E, E2G, E3D, 0-320-B1B, E1B, A10-320-A2B, AE10-320-E1B, E2B 0-360-A1NG, A2H, A4K, B1A, C1E,C1F,C2B,C2E,D1A 10-360-B1F6 A10-360-A2B AE10-360-A2B, B1F6, B2F6, H1A	3/4" PLUGS INCLUDED	08-07716 (-38)	$2,449.00
			08-07718 (-40)	$2,595.00
Slick Kit Part No.	**Engine Application 4 Cyl. Single Impulse**	**Spark Plug Size**	**Gray Part No. & Plug No.**	**Price Add $500.00 Core Charge to all kits**
K4517	Lycoming: 0-235-C1, C2A, E2A, F2A; G1, G2A, J2A 0-290-D 0-320-A1B, A2A, A2B, A3A, A3B B1A, B1B, B2A, B2B, B3A, B3B, C2A, C2B, C2C, C3A, C3B, C3C, D1A, E1A, E2A, E2H 10-320-B1C, B2A, E1A, E2A, AE10-320-E1A, E2A 0-360-A1AWD, A2A, A1H, A3A, A4A, A4J, B2A, C1A, C1G, C2A, D2A 10-360-A1B, B4A, AE10-360-A1D, B4A	5/8" PLUGS INCLUDED	08-07739 (-38)	$2,397.00
			08-07741 (-40)	$2,392.00
K4317	Lycoming: 0-235-C1, C2A, C2B, E2A, F2A, F2B; G1, G2A, J2A 0-290-D 0-320-A1B, A2A, A2B, A3A, A3B, B2B, B3A, B3B, D1A, D1C, D1F, D2A, D2C, E1A, E2A, E2H, E3H 10-320-B1C, B2A, D1A, DIB, E1A, E2A A10-320-AIB, B1B, C1B AE10-320-DIB, D2B, E1A, E2A 0-360-A1A, A1AWD, A1FG, A1G, A1G6, A1H, A2A, A2F A2G, A3A, A4A, AHG, A4J, B2A, C1A, C2A, D2A 10-360-A1B, B4A, C1D6, F1A AE10-360-B4A	3/4" PLUGS INCLUDED	08-07740 (-40)	$3,214.00
			08-07722 (-38)	$2,595.00
K4520	Continental:C-75-12, 15 C-85-14, 15, C-90-12, 14, 16, 16F 0-200-A, B, C	5/8"	08-07746 (-40)	$3,158.00
K4335	Consists of 4333 AMAG + One Drive Gear	N/A	K4335	$1,525.00
K4334	A-65 All, A-75 All (Except -12,-15) C-85 All (Except-12, 14, & 15) Includes Drive Gears	5/8"	08-07732 (-40)	$2,699.00
Slick Kit Part No.	**Engine Application 6 Cyl. Single Impulse**	**Spark Plug Size**	**Gray Part No. & Plug No.**	**Price Add $500.00 Core Charge to all kits**
K6520	0-470, B-C1, C, E, G,	5/8"	08-07711 (-38)	$299.00
			08-07913 (-40)	$2,784.00
K6320	G-C1, H, J, K, K-C1, L, L-C1,M, M-C1, N, P, R, S, U 10-470-A, C, D, E, F, G, H, J, K, L, LO, M, N, P, R, S, T, U, V, VO10-520-A, B, BA, BB, C, CB, D, E, F, G, H, J, K, L, M, MB, N, NB	3/4" PLUGS INCLUDED	08-07872 (-36S)	$3,761.00
			08-07875 (-40)	$2,628.00

Add **$500.00** core charge to all kit prices (refundable with return of old Magnetos) Request quotation for kits for unlisted engines.
* Plugs included.

The following information will aid you in selecting the correct magneto, upgrade kit, or ignition harness:

1. Engine Manufacturer: _____

2. Engine Model Number: _____

3. Engine Type (4 or 6 Cylinder): _____

4. Current Ignition System Manufacturer: _ _____

a) Number of impulse coupled magnetos (1 or 2): _____

Magneto Shaft Rotation (Right or Left) - See dataplate on current magneto _____
Lag Angle _____

b) Number of Direct Drive (Non-Impulse) Magnetos _____

c) Number of Retard Breaker Magnetos ___
d) Are the magnetos pressurized ? _____

e) Spark plug size (5/8" or 3/4") _____

5. Do you want to upgrade from a single impulse to a dual impulse system? _____

If yes, an additional drive gear and/or adapter purchase may be required.

6. Are you upgrading from a 600 Series to a 6200 Series magneto? _____

If yes, you will need to purchase an M3154 Adapter or a magneto equipped with an M3154 Adapter to be able to reuse the existing harness. Alternately, purchase a new harness configured for 6200 Series magnetos.

7. Are you upgrading a complete engine form a TCM/ Bendix to a Slick system ? _____

If yes, purchase a complete Engine Upgrade Kit.

Prices Subject to Change Without Notice

SLICK IGNITION HARNESSES BY CHAMPION

AIRCRAFT ENGINE APPLICATION CHART

Engine	Engine Models	Magneto	5/8" X 24 Spark Plug Termination	3/4" X 20 Spark Plug Termination
	Textron Lycoming			
O-235	C	S4-1200	M2365	M2235
O-235	C	S4-20, S4-200	M2364	M2360
O-235	C1,C1B,C2A,C2C,E1,H2C,J2A,J2B,K2C,L2A,L2C,M1,N2A,N2C,P1,P2A	S4-1200	M2365	M2235
O-235	C1,C1B,C2A,C2C,E1,H2C,J2A,J2B,K2C,L2A,L2C,M1,N2A,N2C,P1,P2A	S4-20, S4-200	M2364	M2360
O-235	C1,C1B,C2A,J2A,L2A,M1,N2A,P1,P2A	**4200, 4300**	**M4004**	**M2508**
O-235	C2C,E1,H2C,J2B,K2C,L2C,N2C	**4200, 4300**	**M4001**	**M2508**
O-290	D,D2	**4200, 4300**	**M4004**	**M2508**
O-290	D,D2,D2A,D2C	S4-20, S4-200	M2364	M2360
AEIO-320	D1B,D2B	**4200, 4300**	**M4005**	**M2508**
AEIO-320	D1B,D2B,E1A,E2B	S4-1200	M2365	M2235
AEIO-320	D1B,D2B,E1A,E2B	S4-20, S4-200	M2364	M2360
AEIO-320	E1A	**4200, 4300**	**M4004**	**M2508**
AEIO-320	E2B	**4200, 4300**	**M4001**	**M2508**
AIO-320	B1B	**4200, 4300**	**M4005**	**M2508**
AIO-320	B1B	S4-1200	M2365	M2235
AIO-320	B1B	S4-20, S4-200	M2364	M2360
IO-320	B1A,B1C,B1D,B2A,B2B,C1A,C1C,D1A,D1B,E1A,E2A,E2B,F1A	S4-1200	M2365	M2235
IO-320	B1A,B1C,B1D,B2A,B2B,C1A,D1A,D1B,E1A,E2A,E2B,F1A	S4-20, S4-200	M2364	M2360
IO-320	B1A,C1A,F1A	**4200, 4300**	**M4000**	**M2508**
IO-320	B1C,B2A,E1A,E2A	**4200, 4300**	**M4004**	**M2508**
IO-320	B1D	**4200, 4300**	**M4007**	**M2508**
IO-320	C1C	S4-20, S4-200	M2112	M2360
IO-320	D1A,D1B	**4200, 4300**	**M4005**	**M2508**
IO-320	E2B	**4200, 4300**	**M4001**	**M2508**
LIO-320	B1A,C1A	**4200, 4300**	**M4000**	**M2508**
LIO-320	B1A,C1A	S4-1200	M2365	M2235
LIO-320	B1A,C1A	S4-20, S4-200	M2112	M2360
O-320	A1A,A1B,A2A,A2C,A2D,A3A,A3B,B1A,B2A,B2B,B2D,B3A,B3B,B3C,C1A, C1B,C3A,C3B,D1A,D1B,D1F,D2A,D2B,D2J,D3G,E1A,E1B,E1C,E1F,E2A,E2C, E2D,E2E,E2F,E2G,E2H,E3D,E3H	S4-1200	M2365	M2235
O-320	A1A,A1B,A2A,A2D,A3A,A3B,B1A,B1B,B2A,B2B,B3A,B3B,C1A,C1B,C3A, C3B,D1A,D1B,D2A,D2B,D2J,D3G,E1A,E1B,E1C,E1F,E2A,E2C,E2D,E2E,E2F, E2G,E2H,E3D,E3H	S4-20, S4-200	M2364	M2360
O-320	A1A,A2D,C1A,C3A,D3G,E2D,E2E,E2G,E3D	**4200, 4300**	**M4001**	**M2508**
O-320	A1B,A2A,A2B,A2C,A3A,A3B,B1A,B1B,B2A,B2B,B2C,B2D,B3A,B3B,B3C, C1B,C3B,D1A,D2B,E1A,E2A,E2H	**4200, 4300**	**M4004**	**M2508**
O-320	A2B,A2C,B2C,B2D,B3C	S4-20, S4-200	M2402	M2360
O-320	D1F	S4-20, S4-200	M2363	M2360
O-320	D1F,D2A,E1C,E1F,E2F,E3H	**4200, 4300**	**M4005**	**M2508**
O-320	D2J	**4200, 4300**	**M4002**	**M2508**
O-320	E2C	**4200, 4300**	**M4007**	**M2508**
O-320	H2AD	DUAL		M2917
O-340	A1A	S4-20, S4-200	M2364	M2360
AEIO-360	A1A,A1B,A1B6,A1D,B1F,B1G6,B2F,B2F6,B4A,H1A	S4-1200	M2365	M2235
AEIO-360	A1A,A1B,A1B6,A1D,B1F,B1G6,B2F,B2F6,B4A,H1A	S4-20, S4-200	M2364	M2360
AEIO-360	A1A,A1D,B4A	**4200, 4300**	**M4004**	**M4029**
AEIO-360	A1B,A1B6	**4200, 4300**	**M4012**	**M4029**
AEIO-360	B1F,B2F	**4200, 4300**	**M4005**	**M2508**
AEIO-360	B1G6,B2F6,H1A	**4200, 4300**	**M4001**	**M2508**
AIO-360	A1A,A1B	**4200, 4300**		**M4029**
AIO-360	A1A,A1B	S4-20, S4-200	M2364	M2360
AIO-360	A1A,A1B,B1B	S4-1200	M2365	M2235
AIO-360	A1B,B1B	**4200, 4300**	**M4001**	**M4029**
AIO-360	B1B	S4-1200		M2492
HIO-360	A1A	S4-20, S4-200	M2817	M2859
HIO-360	B1A,C1A	S4-20, S4-200	M2795	M2856
HIO-360	D1A	**4200, 4300**	**M4007**	
HIO-360	D1A	S4-1200	M2655	
HIO-360	E1AD,E1BD,F1AD	DUAL		M2944
HO-360	A1A,B1A,B1BB	S4-20, S4-200	M2364	M2360
IO-360	A1A,A1B,A1B6,A1C,A1D6,A2A,A2B,B1A,B1B,B1D,B1E,B1F,B1F6,B2End, B2Ewd,B2F6,C1A,C1C6,C1D6,D1A,K2A	S4-20, S4-200	M2364	M2360
IO-360	A1A,A1B,A1C,A2A,A2B,B1A,B1B,B1D,B1F,B1F6,B2End,B2Ewd,B2F6, C1A,C1D6,K2A	S4-1200	M2365	M2235
IO-360	A1A,A2A,B1B,B1D,C1A,K2A	**4200, 4300**	**M4004**	**M2508**
IO-360	A1B,A1B6,A1C,A1D6,C1B,C1D6	**4200, 4300**	**M4012**	**M2508**
IO-360	A1B6	S4-1200	M2420	M2641
IO-360	A1B6D,J1A6D	DUAL		M2915
IO-360	A1D6	S4-1200	M2420	M2235
IO-360	A2B,B1E,B2End	**4200, 4300**	**M4006**	**M2508**
IO-360	A3B6D	DUAL		M2916
IO-360	B1E	S4-1200	M2423	M2235
IO-360	B1F,B2Ewd,B2F6	**4200, 4300**	**M4005**	**M2508**
IO-360	B1F6	**4200, 4300**	**M4001**	**M2508**
IO-360	C1B,D1A	S4-1200	M2365	M2616
IO-360	C1C,C1C6,C1E6	**4200, 4300**	**M4027**	**M2508**
IO-360	C1C,C1E6,C1F	S4-1200	M2423	M2616
IO-360	C1C,C1E6,C1F	S4-20, S4-200	M2658	M2661
IO-360	C1C6	S4-1200	M2423	
IO-360	C1F,D1A	**4200, 4300**	**M4007**	**M2508**
IVO-360	A1A	S4-20, S4-200	M2364	M4033
LIO-360	B1A,C1A	S4-20, S4-200	M2364	M2360
LIO-360	C1E6	**4200, 4300**	**M4027**	

FOR A COMPLETE APPLICATION GUIDE AND PART NUMBERS PLEASE VISIT WWW.AIRCRAFTSPRUCE.COM

SLICK START – BENDIX KITS



SLICKSTART

Improve your engine starting hot or cold Slick Start™ unleashes a firestorm of ignition energy to get your engine started and get you off the ground. SlickSTART is so effective, even sub-optimal fuel mixtures and seriously fouled plugs won't stop the capacitive discharge output from providing the ignition boost your engine needs for reliable starts every time. SlickSTART's sure starting power...
Delivers up to 340% more spark energy to your plugs. Overcomes poor engine priming. Reduces costly electrical stress to your battery and starter. Requires no maintenance. Is approved for use with Slick magnetos.
Plus, it's inexpensive and easy to install. Just add SlickSTART to your impulse coupled magnetos or replace your antiquated starting. The FAA-PMA approved SlickSTART™ magneto booster system integrates solid state electronics with conventional ignition hardware to deliver optimum spark energy for improved engine starting under all operating conditions.

SS1001 SlickStart for Slick ..... P/N 08-01000 ..... **$864.00**
SS1002 SlickStart for Bendix ..... P/N 08-01005 ..... **$864.00**



SLICK MAGNETO ASSEMBLY & TIMING KIT

T-100 Assembly and Timing Kit for field-repairable Slick 4300/6300 Series Magnetos.

P/N 07-00788 ..... **$726.00**



M3064 SLICK CAPACITOR

Slick Capacitor (M3064).

P/N 08-05220 ..... **$276.95**

T-200 SLICK® IGNITION HARNESS TOOL KIT



The Slick® Assembly Tool Kit is required to install all Slick Ignition Harness Leads on all magneto harness caps and spark plug termination ends. The complete kit includes: Pressing Tool, #72 Drill Bit, Pin Vise, Stripping Tool, Spring Assembly Tool, and Shield Stripper. Complete instructions for the use of this kit can be found in the Unison Industries L-1178 Service Manual.

P/N 12-00720 ..... **$289.95**



SLICK IMPULSE COUPLING INSPECTION GAUGE

T-155 Impulse Coupling Inspection Gauge for Slick.

P/N 12-01450 ..... **$63.95**

EP

SLICK MAGNETO REPLACEMENT PARTS BY KELLY AEROSPACE

Magneto replacement parts manufactured by Aero Accessories Inc. are made to specifications dictated by Federal Aviation Administration parts manufacturing approvals. They are highest quality, direct replacement parts, approved for installation and use on certified aircraft.
Note: Always refer to the parts and service manual of the original equipment manufacturer or to Aircraft Type Certificate Data Sheets or other FAA-approved data to determine eligibility of a part or component for use in any application.
*Kit Includes: A13081, A13081-1, -2, & AM3611
**Includes: AM3183, AM3182-1, & -2

Model No.	Description	Champion PN	Part No.	Price
A-13081-8	Contact Lube		07-01081	**$1.45**
AM-3183-1	Nut		07-02452	**$0.58**
AM-3183-2	Washer		07-02453	**$0.58**
AM3611	Cam		07-02456	**$0.84**
ES3307	Pressure Gasket Kit	K3307	07-19939	**$93.75**
ES1077	Air Vent	M1077	07-19931	**$6.50**
AM-2536	Woodruff Key	M2536	07-02446	**$1.02**
AM-2540	Cotter Pin	M2540	07-02447	**$0.65**
AM-3006	Ball Bearing	M3006	07-02448	**$41.90**
AM-3015	Screw	M3015	08-15840	**$1.39**
ES3018	Bearing Cap Clamp	M3018	07-19932	**$1.81**
ES3019	Nut	M3019	07-19933	**$7.80**
AM-3020	Screw	M3020	08-15841	**$1.07**
AM-3021	Screw	M3021	07-02449	**$0.93**
ES3040	Coil Wedge	M3040	07-19934	**$11.50**
AM-3062	Oil Seal	M3062	07-01089	**$10.85**

Model No.	Description	Champion PN	Part No.	Price
A-13081	Contact Assy Kit*	M3081	07-02445	**$52.95**
ES3084	Air Vent w/ Hood	M3084	07-19935	**$26.60**
ES3172	Washer	M3172	07-19936	**$5.65**
ES3179	Vent Plug	M3179	07-19937	**$7.50**
ES3180	Tube Fitting	M3180	07-19938	**$12.50**
AM-3183	Capacitor Assy**	M3183	07-02451	**$122.75**
AM-3215	Brush & Spring	M3215	07-02454	**$9.50**
ES3331	Oil Seal	M3331	07-19940	**$15.50**
AM-3485	Bearing & Cap Assy	M3485	07-02455	**$85.99**
ES3637	Contact Point	M3637	07-19941	**$118.75**
ES3740	Contact Point	M3740	07-19942	**$197.75**
ES3826	Spacer	M3826	07-19943	**$3.35**
ES3827	Rotor Gear	M3827	07-19945	**$11.85**
ES3828	Rotor Gear	M3828	07-19946	**$12.95**
A-13009	Coil	M3975	07-02444	**$319.00**
ES917	Impulse Spring	M917	07-19944	**$26.70**

BENDIX SERIES MAGNETO REPAIR KITS FROM KELLY AEROSPACE

These magneto repair kits and deluxe repair kits are designed to simplify the Bendix magneto overhaul process by providing all of the commonly needed overhaul parts in one convenient kit. The Repair Kits contain the parts needed for minor repair such as a 500 hour inspection, and the Deluxe Repair Kits contain the parts needed for major repair such as a magneto overhaul. These parts are highest quality direct replacement parts and are approved for installation and use on certificated aircraft. AB-200445SC-D and AB-200445SC-R kits contain two sets of contact assembly kits. Some parts that may be need replacing during magneto overhaul are not included in these kits.

4 CYLINDER KITS

Repair Kit Type	Tempest Kit P/N	Part No.	Price
MINOR	AB-484SC-R	10-04844	**$229.95**
MINOR	AB-485SC-R	10-04845	**$222.95**
MINOR	AB-200445SC-R	10-04849	**$266.95**
DELUXE	AB-484SC-D	10-04851	**$577.00**
DELUXE	AB-485SC-D	10-04852	**$570.00**
DELUXE	AB-200445SC-D	10-04855	**$576.00**

6 CYLINDER KITS

Repair Kit Type	Tempest Kit P/N	Part No.	Price
MINOR	AB-684SC-R	10-04847	**$225.95**
MINOR	AB-685SC-R	10-04848	**$219.85**
MINOR	AB-200645SC-R	10-04850	**$259.95**
DELUXE	AB-684SC-D	10-04853	**$616.00**
DELUXE	AB-685SC-D	10-04854	**$625.00**
DELUXE	AB-200645SC-D	10-04856	**$654.00**

SEE WWW.AIRCRAFTSPRUCE.COM FOR MAGNETO KIT ELIGIBILITY AND CONTENTS.

KELLY AEROSPACE IGNITION HARNESSES



PLATED STEEL NUT: Steel nuts offer superior strength compared to aluminum nuts and reduce the potential for galling during installation FAA/PMA APPROVED FOR: - Franklin - Teledyne Continental Motors - Textron Lycoming .ABRASION AND HEAT RESISTANT: The abrasion resistant red polymer cover has been engineered specifically for the high-temperature environment of reciprocating engines. UNIQUE SPRING DESIGN: Hartzell ignition harnesses incorporate a negative-pitch spring design (the tip of the coil spring extends inward) allowing the coil spring tip to lie flat against the spark plug electrode, providing 360 contact. Ignition energy is maximized and flashover is reduced to a minimum. REPLACEABLE CONTACT SPRINGS: Replacement springs are available separately saving you time and money when a field repair is necessary. STRAIGHT AND CLOCKABLE 90 DEGREE STEEL ELBOW LEADS AVAILABLE: You have the option of using straight or clockable 90 elbow leads to make the installation neat and easy. PERFORMANCE - Plus: Using a tinned-copper, nickel plated braid shielding substantially reduces EMI and combined with a very flexible 19 strand conductor of stainless steel wire provides the ultimate in wire conductivity and ease of installation.

NOTE: PART NUMBERING SYSTEM and CROSS REFERENCE: The part numbering system is "user Friendly" for quickly cross-referencing to both Champion and Unison Harnesses. The "KA1"prefix is equivalent to the Champion "CH1" or the Unison"M" with the balance of the part number remaining the same. Add the suffix "E"to the part number to designate the 90 degree steel elbow terminations whenever ordering an "Elbow" harness. (EXAMPLE: KA12121E).

P/N	BEND	SLICK	4 CYL	6CYL	ELBOW	STRAIGHT	Blue P/N	Red P/N	Price
KA11480		X		X		X	08-13301	08-01095	**$492.00**
KA11480E		X		X	X		08-13302	08-01096	**$620.00**
KA1730	X			X		X	08-13409	08-01098	**$475.00**
KA11730E	X			X	X		08-13410	08-01099	**$603.00**
KA11740	X			X		X	08-13411	08-01101	**$476.00**
KA11740E	X			X	X		08-13412	08-01102	**$603.00**
KA11780		X	X			X	08-13303	08-01103	**$331.00**
KA11780E		X	X		X		08-13304	08-01104	**$428.00**
KA11878		X		X		X	08-13305	08-01105	**$491.00**
KA11878E		X		X	X		08-13306	08-01106	**$619.00**
KA11884		X		X		X	08-13307	08-01107	**$491.00**
KA11884E		X		X	X		08-13308	08-01108	**$619.00**
KA11950	X			X		X	08-13309	08-01109	**$475.00**
KA11950E	X			X	X		08-13310	08-01110	**$603.00**
KA11978	X			X		X	08-13419	08-01111	**$449.00**
KA11978E	X			X	X		08-13311	08-01112	**$577.00**
KA12007	X		X			X	08-13312	08-01113	**$340.00**
KA12007E	X		X		X		08-13413	08-01114	**$439.00**
KA12015	X			X		X	08-13313	08-01115	**$476.00**
KA12015E	X			X	X		08-13314	08-01116	**$603.00**
KA12037	X			X		X	08-13315	08-01117	**$436.00**
KA12037E	X			X	X		08-13316	08-01118	**$559.00**
KA12112	X		X			X	08-13317	08-01119	**$343.00**
KA12112E	X		X		X		08-13318	08-01120	**$440.00**
KA12120	X			X		X	08-13414	08-01121	**$491.00**
KA12120E	X			X	X		08-13319	08-01122	**$619.00**
KA12121	X			X		X	08-13320	08-01123	**$475.00**
KA12121E	X			X	X		08-13321	08-01124	**$603.00**
KA12130	X			X		X	08-13322	08-01125	**$456.00**
KA12130E	X			X	X		08-13323	08-01126	**$581.00**
KA12154	X			X		X	08-13324	08-01127	**$434.00**
KA12154E	X			X	X		08-13325	08-01128	**$559.00**
KA12157	X			X		X	08-13326	08-01129	**$440.00**
KA12157E	X			X	X		08-13327	08-01130	**$559.00**
KA12176	X			X		X	08-13328	08-01131	**$493.00**
KA12176E	X			X	X		08-13415	08-01132	**$619.00**
KA12216	X			X		X	08-13329	08-01133	**$491.00**
KA12216E	X			X	X		08-13330	08-01153	**$619.00**
KA12235	X		X			X	08-13331	08-01134	**$315.00**
KA12235E	X		X		X		08-13332	08-01135	**$411.00**
KA12244	X			X		X	08-13333	08-01155	**$491.00**
KA12244E	X			X	X		08-13334	08-01156	**$619.00**
KA12247	X			X		X	08-13335	08-01157	**$491.00**
KA12247E	X			X	X		08-13336	08-01158	**$619.00**
KA12259	X			X		X	08-13337	08-01159	**$491.00**
KA12259E	X			X	X		08-13460	08-01160	**$619.00**
KA12318		X		X		X	08-13339	08-01161	**$491.00**
KA12318E		X		X	X		08-13340	08-01162	**$619.00**
KA12339	X			X		X	08-13886	08-01163	**$490.00**
KA12339E	X			X	X		08-13341	08-01154	**$619.00**
KA12360	X		X			X	08-13342	08-01136	**$345.00**
KA12360E	X		X		X		08-13343	08-01137	**$440.00**
KA12364	X		X			X	08-13344	08-01138	**$331.00**
KA12364E	X		X		X		08-13345	08-01139	**$429.00**
KA12365	X		X			X	08-13407	08-01082	**$343.00**
KA12365E	X		X		X		08-13346	08-01141	**$440.00**
KA12381		X		X		X	08-13347	08-01142	**$434.00**
KA12381E		X		X	X		08-13348	08-01143	**$559.00**
KA12423	X		X			X	08-13349	08-01144	**$346.00**
KA12423E	X		X		X		08-13350	08-01164	**$440.00**
KA12447	X			X		X	08-13351	08-01165	**$491.00**
KA12447E	X			X	X		08-13455	08-12199	**$619.00**
KA12474	X			X		X	08-13352	08-01167	**$491.00**
KA12474E	X			X	X		08-13354	08-01168	**$619.00**
KA12508		X	X			X	08-13416	08-01145	**$332.00**
KA12508E		X	X		X		08-13355	08-01169	**$428.00**
KA12616	X		X			X	08-13356	08-01170	**$343.00**

P/N	BEND	SLICK	4 CYL	6CYL	ELBOW	STRAIGHT	Blue P/N	Red P/N	Price
KA12616E	X		X		X		08-13357	08-01171	**$440.00**
KA12628	X			X		X	08-13358	08-01172	**$491.00**
KA12628E	X			X	X		08-13359	08-01173	**$619.00**
KA12709	X			X		X	08-13360	08-01174	**$453.00**
KA12709E	X			X	X		08-13362	08-01175	**$581.00**
KA12712	X			X		X	08-13363	08-01176	**$491.00**
KA12712E	X			X	X		08-13364	08-01177	**$619.00**
KA12742	X			X		X	08-13365	08-01178	**$491.00**
KA12745	X			X		X	08-13366	08-01180	**$491.00**
KA12745E	X			X	X		08-13367	08-01181	**$619.00**
KA12778		X		X		X	08-13368	08-01146	**$475.00**
KA12778E		X		X	X		08-13369	08-01182	**$603.00**
KA12790	X			X		X	08-13370	08-01183	**$491.00**
KA12790E	X			X	X		08-13371	08-01184	**$619.00**
KA12828		X		X		X	08-13372	08-01185	**$491.00**
KA12828E		X		X	X		08-13373	08-01186	**$619.00**
KA12851	X			X		X	08-13374	08-01188	**$491.00**
KA12851E	X			X	X		08-13375	08-01189	**$619.00**
KA12854	X			X		X	08-13376	08-01190	**$483.00**
KA12854E	X			X	X		08-13377	08-01191	**$619.00**
KA12865	X			X		X	08-13378	08-01192	**$491.00**
KA12865E	X			X	X		08-13379	08-01193	**$619.00**
KA12890	X			X		X	08-13380	08-01194	**$491.00**
KA12890E	X			X	X		08-13381	08-01195	**$619.00**
KA12932		X		X		X	08-13382	08-01147	**$475.00**
KA12932E		X		X	X		08-13383	08-01196	**$603.00**
KA14001		X	X			X	08-13384	08-01148	**$336.00**
KA14001E		X	X		X		08-13408	08-01086	**$428.00**
KA14002		X	X			X	08-13385	08-01150	**$336.00**
KA14002E		X	X		X		08-13458	08-12203	**$428.00**
KA14004		X	X			X	08-13386	08-01152	**$334.00**
KA14004E		X	X		X		08-13387	08-01197	**$428.00**
KA14033	X		X			X	08-13389	08-01198	**$320.00**
KA14033E	X		X		X		08-13390	08-01199	**$408.00**
KA17001	X			X		X	08-13391	08-01202	**$490.00**
KA17001E	X			X	X		08-13393	08-01203	**$618.00**
KA17002	X			X		X	08-13394	08-01204	**$490.00**
KA17002E	X			X	X		08-13395	08-01205	**$618.00**
KA17005	X		X			X	08-13396	08-01206	**$332.00**
KA17005E	X		X		X		08-13397	08-01207	**$428.00**
KA17006	X		X			X	08-13398	08-01208	**$332.00**
KA17006E	X		X		X		08-13399	08-01209	**$428.00**
KA17007	X		X			X	08-13400	08-01210	**$332.00**
KA17007E	X		X		X		08-13401	08-01211	**$428.00**
KA17008	X		X			X	08-13402	08-01212	**$332.00**
KA17008E	X		X		X		08-13403	08-01213	**$428.00**
KA17011		X	X			X	08-13404	08-01214	**$332.00**
KA17011E		X	X		X		08-13405	08-01215	**$428.00**
KA12365	X		X			X	08-13407	08-01082	**$343.00**
KA11730	X			X		X	08-13409	08-01098	**$475.00**
KA11730E	X			X	X		08-13410	08-01099	**$603.00**
KA11740	X			X		X	08-13411	08-01101	**$476.00**
KA11740E	X			X	X		08-13412	08-01102	**$603.00**
KA12007E	X		X		X		08-13413	08-01114	**$439.00**
KA12120	X		X			X	08-13414	08-01121	**$491.00**
KA12176E	X			X	X		08-13415	08-01132	**$619.00**
KA12508		X	X			X	08-13416	08-01145	**$332.00**
KA17012	X		X			X	08-13417	08-01216	**$784.00**
KA17012E	X		X		X		08-13418	08-01217	**$976.00**
KA11978	--	--	--	X	--	--	08-13419	08-01111	**$449.00**
KA12045E	--	X	X	--	X	--	08-13420	08-12156	**$440.00**
KA12351	X	--	X	--	--	X	08-13421	08-12158	**$336.00**
KA12351E	X	--	X	--	X	--	08-13422	08-12159	**$440.00**
KA12402	X	--	X	--	--	X	08-13423	08-12160	**$305.00**

FOR A COMPLETE APPLICATION CHART PLEASE VISIT WWW.AIRCRAFTSPRUCE.COM

KELLY AEROSPACE INDIVIDUAL HARNESS LEADS



The leads are made with our industry leading Kelly Aerospace red ignition harness wire cut 72 inches in length with available 5/8 or 3/4 spark plug termination. Also shipping with the leads is an attachment kit with magneto attachment hardware for both Slick and Bendix/CMI magnetos. Trim to fit.

Kelly E100-72 Trim To Fit Lead 72" 3/4 Lead Assy W/ Elbow ..... P/N 08-13222 ..... **$119.75**
Kelly E200-72 Trim To Fit 72" 5/8 Lead Assy W/ Elbow ..... P/N 08-13223 ..... **$107.75**
Kelly S100-72 72" 3/4 Lead Assy Straight ..... P/N 08-13224 ..... **$97.80**
Kelly S200-72 72" 5/8 Lead Assy Straight ..... P/N 08-13225 ..... **$97.80**

IGNITION SYSTEMS

E-MAG ELECTRONIC IGNITION



Note: New installation requires a harness, and possibly a gear, depending on the application (See Accessories). Verify requirements before ordering.

Of all the E-MAG innovations, the self-powering capability of the "P" Model is the most significant. It solves the largest single issue faced by all electronic ignitions - their need for an uninterruptible power supply.

Power back-up strategies that a) compromise ignition effectiveness, b) solve only half the problem, or c) require additional maintenance are less than ideal. Next-Generation ignitions need a better solution. So what does a next-generation electrical back-up need to do?

Above all, it has to be reliable. When it's needed, it has to work - period. It should operate for as long as needed. Whether it's the last 10 minutes of a Sunday pleasure flight, or you're crossing the Atlantic. It should be maintenance-free. Benign neglect should not prevent it from working. On the rare occasion it's needed, it should automatically engage without operator intervention. A simple and convenient pre-flight check should confirm it's working properly. This P model ignition has an internal three phase brushless alternator that produce enough power to sustain the ignition when the engine is turning 800 rpm, or more. If the aircraft buss voltage goes off-line, the ignition has an internal alternator. With this arrangement, dual electronic ignitions can be run "clean". No back-up batteries and no back-up magnetos.

The P Model Built-In Alternator adds no (zero) mechanical contact/wear parts to the system. Adds only a few ounces of weight. Requires no additional hardware to install. Will operate as long as the engine is turning



E-MAG Aircraft Harness

Description	Part No.	Price
"P" Model (P-MAG) Ignition - Lycoming (and like) engines.	07-01292	$1,395.00
E-Mag P Model Ignition with Alternator 4C Continental - Ignition compatible with 4 cylinder Continental O-200 Engines.	07-01311	$1,245.00
E-Mag Gear Adapter Kit C 200	07-01805	$135.00
E-Mag Spark Plug Adapters w/o Gaskets (4 pk) Short Reach	08-06753	$85.00
E-Mag Spark Plug Adapters w/ Gaskets (4 pk) Short Reach	08-06753-1	$63.75
E-Mag Spark Plug Adapters w/ Gaskets (4 pk) Long Reach	08-07608	$85.00

E-MAG IGNITION KITS



Auto style custom fit kits. Include low-resistance spiral wound lead wire, end fittings, and tool. Auto style harness with terminals and boots installed on both ends. Same wire used in their custom trim-to-fit kit.

E-MAG Auto Harness - 4 Lead Kit without adapter	07-02716	$80.00
E-MAG Spark plug adapters - 4 pk.	08-06753	$85.00

EP

E-MAG IGNITION DRIVE GEARS



Lycoming 68C19622	07-02011	$364.96
Superior SL68C19622	08-11837	$290.95

ELECTROAIR IGNITION SYSTEMS



EIS-2 KIT



EIS-3 KIT

The Electroair EIS fires the spark plugs directly from the coils, not through a distributor. This is accomplished by using multiple coils, each with two spark terminals. The coil terminals are connected to the spark plugs, allowing one cylinder to fire on compression while its companion cylinder fires simultaneously on exhaust. Open spark gaps in the rotor and cap are eliminated, making wear and moisture problems a thing of the past.

The EIS Controller includes dual digital microprocessors using patented spark algorithms, which takes the electrical signal from the crankshaft (or mag timing housing) sensor, identifies top-dead center and then keeps track of the remaining rotation. The EIS determines engine speed and computes the spark advance using the settings pre-set at the factory for the engine as a base-line. Settings from the factory are preset for the engine's certified placarded timing. Additionally, the EIS receives engine manifold pressure information and advances the ignition to compensate for altitude and throttle position.

EIS-1 KIT	Part No.	Price
4-cylinder Electronic Ignition System comes with: Coil Pack, Controller, Mag Timing Housing, MAP Sensor, spark plug wires, instruction manual. Specify engine make and model	08-05953	$1,924.00
EIS-2-MT	**Part No.**	**Price**
6-cylinder Electronic Ignition System with MTH (Mag Time Housing) comes with: Coil Pack, Controller, Crankshaft Timing Wheel, MAP Sensor, spark plug wires, instruction manual. Specify engine make and model	08-14584	$2,735.00
EIS-61000-5M	**Part No.**	**Price**
The EIS-61000 Electronic Ignition Kit is a fully STC'd kit for Lycoming 540 series, non-turbo'd, series engines, installed on single engine aircraft.	08-15630	$5,500.00
EIS-61000-5M	**Part No.**	**Price**
The EA-12000 replaces the impulse-coupled magneto found on most Lycoming engines. This unit provides the EA-7000 Controller with the engine position and RPM information needed to drive the electronic ignition system. Installation is very easy - much like a magneto.	08-15631	$1,695.00
EA-10000	**Part No.**	**Price**
The EA-10000 replaces the magneto found on most Continenta9l engines. This unit provides the EA-7000 Controller with the engine position and RPM information needed to drive the electronic ignition system. Installation is very easy - much like a magneto. Engine to TDC on #1 cylinder, lock-pin in the MTH and then drop it in the mag hole. Tighten the hold down clamps and pull the lock pin.	08-16208	$1,695.00
EIS-2-CSTW	**Part No.**	**Price**
EIS-2-CSTW 6-cylinder Electronic Ignition System Trigger Wheel Kit. Used with dual magneto Lycomings and Continental models.	08-16213	$2,045.00

KITS ABOVE ARE 14V. FOR 24V KITS ADD -24 TO THE PART NUMBERS LISTED.

ELECTROAIR IGNITION SWITCHES WITH PANELS



The EA-13000 is approved ignition switch panel to control both the Electroair electronic ignition system (EIS) and the magneto.

Horizontal ..... P/N 08-14693 ..... **$269.00**
Vertical..... P/N 08-14694 ..... **$269.00**

ELECTROAIR – IGNITION HARNESSES

ELECTROAIR 4 CYLINDER ELECTRONIC IGNITION KITS



The EIS-41000 Series Electronic Ignition Kit is a fully STC'd kit for most Lycoming 4cyl engines. Replacing one magneto with the EIS-41000 will typically improve fuel economy on average by 10-15% (many operators have reported consistent fuel savings of 1gph or greater). Additionally, there will be an improvement in horsepower, smoother engine operation, and improved high altitude performance. Used on either 12V or 24V systems. Kit includes: all the required parts to replace the direct drive magneto (typically, the right hand mag), or the Impulse Coupled Magneto (typically left handed) in most 4cyl Lycoming engines. (Please refer to the FAA approved model list to verify the system can be installed on your engine - Note: engines are being added regularly).

Description	Part No.	Price
EIS-41000 Direct Drive (non-impulse coupled)	08-07272	$3,570.00
EIS-41000IC Impulse Coupled	08-07505	$3,570.00
EIS-41000T Twin Engine Aircraft; Lycoming 4cyl Engines. Standard Rotation, Direct Drive (non-impulse coupled) Magneto Replacement	08-07667	$3,570.00
EIS-41000TIC Twin Engine Aircraft; Lycoming 4cyl Engines. Standard Rotation Impulse Coupled Magneto Replacement	08-07668	$3,570.00
EIS-41000TLH Twin Engine Aircraft; Lycoming 4cyl Engines. Counter-Rotating, Direct Drive (non-impulse coupled) Magneto Replacement	08-07669	$3,570.00
EIS-41000TLHIC Twin Engine Aircraft; Lycoming 4cyl Engines. Counter Rotating, Impulse Coupled Magneto Replacement	08-07670	$3,570.00
EIS-61000-T5M 6 Cylinder EIS Lycoming Normal ASP MAG Timing Housing	08-16206	$4,950.00

ELECTROAIR 6 CYLINDER ELECTRONIC IGNITION KITS



The EIS-61000 Electronic Ignition Kit is a fully STC'd kit for Continental 470 & 520, non-turbo'd, series engines, installed on single engine aircraft. Replacing one magneto with the EIS-61000 will typically improve fuel economy. This kit can be used on either 12V or 24V systems. Kit includes: all the required parts to replace one magneto.

Description	Part No.	Price
EIS 61000-1C Electroair Cont. 6 Cyl.	08-12237	$4,795.00
EIS 6100-T1C Electroair Cont. 6 Cyl.	08-13155	$4,795.00
EIS-61000-1M for Continental 360, 470, 520, &550 non turbo series engines on single engine aircraft.	08-13696	$5,500.00
EIS-61000-T1M for Continental 360, 470, 520, &550 non turbo series engines on twin engine aircraft.	08-13759	$5,500.00
EIS-61000-5C for Lycoming 540 non turbo series engines on single engine aircraft.	08-13760	$4,795.00
EIS-61000-T5C for Lycoming 540 non turbo series engines on twin engine aircraft.	08-13761	$4,795.00
Note: The following are replacement units for the EIS systems.		
EA-6000/EA-6000TP the brains of the Electroair Electronic Ignition System. This replacement unit if for 6cyl engines. This unit can be used in either a 12V or 24V application.	08-13157	$2,525.00
EA-11000 Crank Shaft Trigger Wheel kit mounts on the bare spot of the crank shaft just behind the propeller flange. NOTE: Minimum clearance of 0.650" between the front of the engine case and propeller studs is REQUIRED. Please check this dimension before starting installation ordering the kit.	08-13158	$995.00
EA-8000 is the 6cyl Coil Pack used in the EIS-61000 Electronic Ignition System. This unit can be used in either a 12V or 24V application.	08-13159	$755.00
The EA-3000 replaces the direct drive magneto found on most 4cyl Lycoming engines. This unit provides the EA-1000 Controller with the engine position and RPM information needed to drive the electronic ignition system.	08-07671	$1,610.00

ELECTROAIR SPARK PLUGS



Electroair partnered with Tempest to produce its new HE spark plug line. The HE plugs are STC'd and PMA'd for use with the Electroair electronic ignition systems. The plugs are approved for all aircraft, and installations approved for use with the Electroair electronic ignition systems. Electroair's "HE" plug line include a massive electrode with extended reach outer electrodes has a gap of 0.032. This optimal gap accommodates the high energy output of 70,000 volts delivered by the Electroair system.

EAREM37HE.....P/N 08-07714 .....$40.25
EAREM38HE.....P/N 08-07715 .....$102.50
EARHB32E.....P/N 08-16212 .....$40.25

SEE WWW.AIRCRAFTSPRUCE.COM FOR ELECTROAIR TIMING KITS AND PARTS.

LIGHTWEIGHT HIGH TEMPERATURE SHIELDED IGNITION HARNESSES

MFG. BY ACS PRODUCTS CO.



New production ignition harnesses at remarkably low prices. Late type 5MM wire constructed of 16 strands of tightly braided copper wire impregnated with scuff resistant white silicone. All strands must fracture before a complete open circuit type failure occurs thus extending lead life. Lead flexibility is retained from -65° to 400° F. Moisture and cleaning solvent penetration is eliminated by the impregnated silicone coating. This extremely flexible wire lends itself to sharp bends thereby eliminating the need for old style harness elbows. No soldered joints in the grounding circuit. Custom made for most 4 cylinder and 6 cylinder engines using Bendix or Eisemann magnetos and 4 cylinder engines using Slick magnetos. Cable outlet plates are not furnished for Bendix and Eisemann mags as these are already installed on the magnetos in service. They must be purchased separately for new magneto installations. Harnesses for Slick magnetos are furnished with the backplates installed. Standard harnesses for the Bendix S4/S6 mags are fitted with a male nut which screws into the threaded outlet plate on the back of the mag. Harnesses for old style Bendix SF4 and SF6 magnetos are fitted with female nuts.

HARNESSES FOR BENDIX AND EISEMANN MAGNETOS

All 4-Cylinder Harnesses (8 wires).....**$171.00**
All 6-Cylinder Harnesses (12 wires).....**$230.95**
(Not Available for Bendix S1200 Magnetos)
Replacement Leads to 48" (Specify Length).....**Call For Quote**
(Bendix & Eisemann only)

HARNESSES FOR SLICK MAGNETOS

For 4000, 4200 & 4300 Series Mags (4 Cyl.) Only.....**$177.00**

All Harnesses Furnished with Cable Ties and Clamps
For plugs with 5/8-24 barrel size only.

BENDIX MAGNETOS

Engine/Magneto	Part No.
Cont. A-65/S4	12301-02
C-85/S4	12301-05
C-90/S4	12301-06
0-200/S4	12301-05
LYC. 0-100/S4	12301-21
0-235/S4	12301-21
0-290/S4	12301-21
0-320/S4	12301-22
0-360/S4	12301-22
Cont. A-65/SF4	12302-02
A-75/SF4	12302-03
Lyc. 0-100/SF4	12302-20
0-235/SF4	12302-20
0-290/SF4	12302-20
Cont. E-185/S6	12305-10
E-225/S6	12305-11
O-470/S6	12305-13
C-145/S6	12305-09
O-300/S6	12305-09
Lyc. 0-540/S6	12305-22
IO-540/S6	12305-22
Franklin165/S6	12305-41
Cont.C-125-SF6	12307-08
Lyc.0-435/SF6	12307-23

SLICK MAGNETOS

Engine/Magneto	Part No.
VW (M2266) *	12304-32
Lyc 0-235 (M2363)	12304-33
0-290 (M2363)	12304-33
0-320,0-360 (M2363)	12304-33
Cont. 0-200 (1780)	12304-31
C-75 (1780)	12304-31
C-85 (1780)	12304-31
C-90 (1780)	12304-31

EISEMANN MAGNETOS

Engine/Magneto	Part No.
Cont A65/LA-4	12303-04
A75/LA-4	12303-04
C-85/LA-4	12303-07
E-185/LA-6	12306-12
Franklin 150/LA-6	12306-40
Continental C90/LA4	12303-08
Continental E-185/LA6	12306-12
Franklin 150/LA6	12306-40

***This harness only comes with 4-leads.**
ACS Products ignition harnesses can be used on experimental aircraft or on certified aircraft with field approval (FAA Form 337). If FAA/PMA harness is mandatory or if for use with 3/4" spark plugs, use Slick Bendix, Aero-Lite or Champion harnesses.

EP

ELECTRONIC IGNITION SYSTEMS

FLYEFII DUAL SYSTEM32 ENGINE MANAGEMENT SYSTEM



The FlyEFii System32 Engine Management System Hardware is the first electronic engine management system ever designed specifically for the needs of experimental aviation. System32 is a state of the art, high speed, fully redundant system that represents the fulfillment of a ten year wish list of functionality. Dual 32 bit high speed ECUs and a sunlight readable graphical LCD Cockpit Controller combine for seamless power and efficiency in managing your engine's electronic fuel injection and electronic ignition functions. System32 will be offered in ignition only and full ignition + injection versions.

Engine Computer:

- •Advanced 32-bit microprocessor
- •EMI Filtering on all inputs
- •Operates down to 3.5 volts
- •Live Telemetry Interface
- •Integrated ADI Control
- •Up to 12 individually trimmable injector outputs
- •Onboard SD Card enables easy field updates, loading and saving map files, and data logging
- •Supports up to three O2 sensors
- •Integrated Boost Control
- •Lightning strike protection
- •Full 3D mapping of your ignition timing and fuel delivery
- •Compatible with standard left-right-both ignition switch.

Cockpit Controller:

- •Color LCD 1000-NIT sunlight readable display
- •Integral rolling tape Air Fuel Ratio display
- •Convenient full size SD card enables easy field updates, loading and saving map files, and data logging
- •Seamlessly interfaces with two ECUs
- •Effortless tuning – enter your engine size and compression ratio to instantly set fuel and ignition base maps
- •Fits in standard 3-1/8" aircraft instrument hole
- •Annunciator display for ECU power, fuel pump power, and two battery voltages
- •Multi-function knob and buttons provide intuitive access to functions.

Description	Part No.	Price
4 Cylinder Ignition Only	07-19978	**$2,750.00**
4 Cylinder Ignition & Injection	07-19980	**$6,195.00**
6 Cylinder Ignition Only	07-19979	**$3,395.00**
6 Cylinder Ignition & Injection	07-19981	**$7,695.00**

EFII LIGHTWEIGHT FLYWHEELS



EFII compatible lightweight flywheels are available with or without the alternator belt pully. 149 tooth ring gear for late model starter motors. Available for O-320 engines (5/8" diameter bushing hole). Available for O-360 and larger engines (3/4" diameter bushing hole). Pulley version is 1.5 lbs lighter than stock. (4.94 lbs). No pulley version is 2.1 lbs lighter than stock. (4.34 lbs). All lightweight Flywheels have EFII trigger magnets pre-installed.

Description	Part No.	Price
Lightweight Flywheel W/ Alternator Belt Pulley+	07-19983	**$725.00**
Lightweight Flywheel No Pulley	07-19984	**$750.00**
Lightweight Flywheel W/ Alternator Belt Pullet	07-19985	**$725.00**
Lf320 Lightweight Flywheel No Pulley	07-19986	**$750.00**

EFII THROTTLE BODY FLANGE ADAPTER KIT





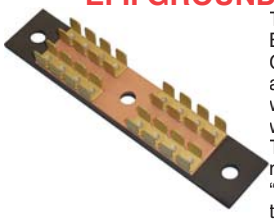
The EFII Throttle Body Flange Adapter kit provides a convenient method to join a Van's Filtered Air Box or other flat surface interface to the EFII throttle body which is included in all EFII electronic fuel injection kits.
The EFII throttle body has a 3 1/4" rounded snout at its inlet. the TBFA kit includes a high quality silicone hose coupler which fits onto the EFII throttle body snout. The other end of the silicone coupler has a 3" ID which fits the included 3" aluminum flange adapter. Stainless steel hose clamps are included to complete the assembly of the TBFA.
The aluminum flange adapter can be riveted, bolted, welded or bonded to your air filter box or air inlet. P/N 07-19987 ..... **$40.00**

EFII FUEL FLOW INTERFACE



Required when Dynon or Garmin engine monitors are used with the EFII electronic fuel injection system. The EFII electronic fuel injection system does not require a mechanical fuel flow sensor to display fuel flow on your engine monitor. However, you will need our Fuel Flow Interface to translate the EFII Fuel Flow signal to the FloScan type signal required by Dynon and Garmin engine monitors. Grand Rapids and MGL engine monitors do not require this interface. The Fuel Flow Interface enclosure measures approx. 2" x 1.37" x 0.75".
P/N 07-19988 ..... **$115.00**

EFII GROUND BUS



The EFII Ground Bus, part number GB-1, Is a great addition to a well designed wiring system. The GB-1 is a nicely designed "forest of tabs" type grounding junction that can clean up and organize all your avionics and system ground wires. Many people use two of these devices to lay out their grounding scheme. One for avionics or small signal grounds, and one for higher current grounds, such as lighting, strobes, pitot heat, etc. P/N 07-19993 ..... **$35.00**

EFIS SPARK PLUG ADAPTERS



If you are going to run an electronic ignition on your aircraft engine, you will need a set of these to adapt the 18mm spark plug threads in your aircraft cylinder head to 14mm threads for use of automotive spark spark plugs. These are the highest quality adapters you will find.
18mm to 14mm Long Reach 4 Pack
P/N 07-19992 ..... **$74.00**

BUS MANAGER



This Bus Manager is an important safety device for aircraft that have critical electronics that require a protected essential bus. This would include aircraft that are running electronic fuel injection, electronic ignition, electric fuel pumps, or critical instrumentation. Provides a triple redundant essential bus for all critical electronic equipment. This redundancy is crucial for engines that rely on uninterrupted +12V power to critical items. The end user no longer has to attempt to come up with a home brew bus system for their plane. The Bus Manager has been professionally designed and over-built to faithfully provide extreme reliability.
P/N 07-01852 ..... **$595.00**

BUS MANAGER ACCESSORY KIT



The Accessory Kit for the Bus Manager consists of all the parts necessary to setup a Bus Manager based electrical distribution system for experimental aircraft.
P/N 07-01853 ..... **$145.00**

ELECTRIC BOOST PUMP MODULE



The EFII Boost Pump Module (BPM) brings a new level of installation simplicity and functionality to the fuel system of your aircraft equipped with Bendix, AFP or Precision Airmotive type mechanical fuel injection. The BPM reduces a time consuming and frustrating plumbing job to a simple and clean, easy to set up installation. It is used to supply a steady source of 30PSI fuel to your engine during take-off, landing, priming, or emergency situations. The BPM has integral back flow prevention and pressure regulation valving.
Standard ..... P/N 07-01854 ..... **$687.00**
w/ 90° fitting ..... P/N 07-02461 ..... **$687.00**

LIGHT SPEED ENGINEERING PLASMA IGNITION SYSTEM

Light Speed Engineering, LLC (LSE) is a pioneer in the design and production of ignition systems for experimental aircraft. 22 years of research and development have been invested in producing the PLASMA CDI (Capacitive Discharge Ignition) system product line. LSE's PLASMA CD systems are the ideal replacement for yesterday's magneto technology. You can replace one mag with a PLASMA CDI or, for maximum performance, replace both magnetos with these state of the art systems. The Plasma CDI is a solid-state, high performance ignition system intended for today's home built aircraft. Light Speed Engineering currently offers two Capacitive Discharge Ignition Systems: the PLASMA II PLUS and the PLASMA III. Standard Plasma CDI kits include: direct crank sensor assembly, high tension leads, harness, spark plugs, spark plug adapters, and ignition coils with mounting bracket. One or two systems can be used.

PLASMA II PLUS CDI





The Plasma II is Light Speed Engineering's basic electronic ignition system for aircraft. It is a lightweight, high-energy capacitor discharge system containing all of the essential Plasma CDI features. Its smaller size and lighter weight sets it apart from any other ignition source.

Like all LSE ignition systems it features automatic ignition advance based on engine load and RPM, auto retard for starting and a standard pulse tachometer output. The Plasma II was designed to provide a high tech ignition source at the cost of magnetos.

PLASMA III CDI

Light Speed Engineering has introduced a new ignition system to its line of products. The new Plasma III Capacitor Discharge System is the latest high performance ignition for all 4-cyl and 6-cyl aircraft engines. Its long duration spark and optimized timing curve makes more horsepower and improves fuel efficiency- at all altitudes. Other benefits include quick starts, reduced maintenance, light weight, lower EGT's and up to 20% more range. As with all LSE ignitions, RPM and manifold pressure inputs are used for our proprietary timing curves. The Plasma III is also capable of displaying the current timing advance, manifold pressure and rpm on an optional lightweight LCD display. The Plasma III can easily replace one or both magnetos, making your engine run better under all conditions.

PLASMA CAPACITIVE DISCHARGE IGNITION SYSTEMS

All Plasma CDI systems include: high tension leads, harness, spark plugs, spark plug adapters, ignition coils with mounting bracket, and Hall Effect Sensor module OR Direct Crank Sensor assembly.

Description	Part No.	Price
Plasma II Plus: 4 Cylinder Direct Crank Sensor	08-06294	**$1,328.00**
Plasma II Plus: 4 Cylinder Hall Effect Module	08-06295	**$1,460.00**
Plasma II Plus: 4 Cylinder with Mini DC Sensor	08-12135	**$1,250.00**
Plasma III: 4 Cylinder Direct Crank Sensor	08-00675	**$1,363.00**
Plasma III: 4 Cylinder Hall Effect Module	08-00676	**$1,675.00**
Plasma III: 6 Cylinder Direct Crank Sensor	08-00677	**$1,450.00**
Plasma III: 4 Cylinder with Mini DC Sensor	08-12136	**$1,460.00**
Plasma III: 6 Cylinder with Mini DC Sensor	08-12137	**$1,610.00**
Dual Plasma CDI Systems		
Dual Plasma II Plus: 4 Cylinder Direct Crank Sensor	08-06296	**$2,487.00**
Dual Plasma II Plus: 4 Cylinder Hall Effect Module	08-06297	**$2,865.00**
Dual Plasma II Plus: 4 Cylinder with Mini DC Sensor	08-12138	**$2,450.00**
Dual Plasma III: 4 Cylinder Direct Crank Sensor	08-06298	**$2,895.00**
Dual Plasma III: 4 Cylinder Hall Effect Module	08-06299	**$3,235.00**
Dual Plasma III: 6 Cylinder Direct Crank Sensor	08-06300	**$2,895.00**
Dual Plasma III: 4 Cylinder with Mini DC Sensor	08-12139	**$2,865.00**
Dual Plasma III: 6 Cylinder with Mini DC Sensor	08-12140	**$3,135.00**
Options		
On all Turbo and Super-Charged ignition systems add $124.95	08-06301	**$124.95**
On all Franklin and Continental engine ignition systems add $194.99	08-06302	**$194.99**



S.5 SPARK PLUG ADAPTER FOR 14MM SPARK PLUGS

RECOMMENDED BY KLAUS SAVIER OF LSE

Auto plug adapters allow for an easy conversion of 18mm (standard engine plug thread) to 14mm (common auto plug thread). Both short reach and long reach adapters are available. The Spark Plug Adapter allows you to use: High performance 14mm automotive plugs, that offer an almost unlimited variety of heat ranges, & electrode styles, designed specifically to take advantage of electronic ignitions - see ignition manufacturer documentation for recommendations (note: not all plugs are equally suited). Shorter plugs with 90° silicon boots provides greater clearance for sleeker cowls and less drag.

Some kits include 4 adapter gaskets.

Set of 4 without gaskets - Short Reach .....P/N 08-06753 ..... **$85.00**
Set of 4 with gaskets - Short Reach .....P/N 08-06753-1 ..... **$63.75**
Set of 4 without gaskets - Long Reach .....P/N 08-07608 ..... **$85.00**



LSE DUAL OUTPUT IGNITION COIL

Ignition coils are typically mounted on the top center of the engine. They can also be mounted on the motor mount tubes using Adel clamps or on the firewall to a piece of angle aluminum. Ignition coils should be mounted so that spark plug lead length will be kept to a minimum for maximum spark energy and minimum noise. It is important that each coil connects to opposing cylinders, i.e. one coil fires cylinders 1 and 2 and the other coil fires 3 and 4.

Ignition Coil .....P/N 08-14012 ..... **$97.75**
Mounting Bracket.....P/N 08-14013 ..... **$14.75**



LSE ALUMINUM BRONZE REACH SPARK PLUG ADAPTERS

Light Speed Engineering's standard issue spark plugs are pictured to the left. Single ground electrode with a short body make these a durable option for most applications. W27EMR-C: Used on standard and high compression engines. The standard reach (1/2") spark plug adaptor is also pictured here (08-14009). This adaptor is used when converting aircraft engines using 1/2" reach aircraft spark plugs to 14mm plugs. Light Speed Engineering's spark plug adaptors are made of high strength aluminum bronze. *These plugs and adaptors are included with ignition kit purchase for those with 1/2" reach.

1/2" Reach Spark Plug Adapter .....P/N 08-14009 ..... **$18.65**
3/4" Reach Spark Plug Adapter .....P/N 08-14010 ..... **$23.75**
HHP Long Reach Spark Plug Adapter .....P/N 08-14011 ..... **$23.75**



L2E LIGHT SPEED TO EFIS ADAPTER

The L2e allows you to display the parameters of your Light Speed ignition module directly on your EFIS during flight. Your EFIS can record these parameters for download and diagnosis.

P/N 10-06222 ..... **$95.50**



WIRE TERMINAL CLIP

For 7 MM unshielded harnesses.

P/N 07-03500 ..... **$0.45**



HIGH TENSION CABLE

Unshielded 7MM ignition cable consists of tinned conductor, rubber insulation, reinforced glass braid and Hypalon jacket that resists sun, weather, heat, chemicals and oxidation by ozone. Temperature range -65° to 250°F. P/N 07-03700 ..... **$1.25 Ft.**



P/N 526



M2376

ENGINE BAFFLE IGNITION WIRE SEALS

Seal Type	Part No.	Each
5mm Wire Seal One-Wire	526	**$6.50**
5mm Wire Seal Three-Wire	376	**$6.50**
5mm Wire Seal Slick 3-Wire	M2376	**$26.50**
5mm Wire Seal Slick 2-Wire	M2375	**$23.99**
5mm Wire clamp Slick 2-Wire	M2755	**$4.85**

EP

TEMPEST AVIATION SPARK PLUG APPLICATION CHART

EP

FAA-PMA Approved Engine Applications	Massive Electrode								Fine-Wire Electrode			
	5/8"-24 thread				3/4"- 20 thread				5/8"-24 thread		3/4"- 20 thread			
Textron Lycoming	UREB37E	UREM37BY	UREM38E	UREM40E	URHB32E	URHB37E	URHM38E	URHM40E	UREB36S	UREM38S	URHB32S	URHB36S	URHM38S
AEIO-320: D1B, D2B, E1A, E1B, E2A, E2B		x	x	x			x	x		x			x
AEIO-360: A2A, A2C	x	x	x	x			x	x	x	x			x
AEIO-360: A2B	x	x	x	x		x	x	x	x	x			x
AEIO-360: A1D, A1E	x	x	x			x	x		x	x			x
AEIO-360: B1D, B1F6, B2F6, H1A		x	x	x			x	x	x	x			x
AEIO-360: B1H									x	x			x
AEIO-360: A1C	x	x	x	x			x	x		x			x
AEIO-360: A1A, A1B, A1B6	x	x	x			x	x			x			x
AEIO-360: A1E6		x	x	x			x	x		x			
AEIO-360: B1B, B1F, B1G6, B2F, B4A, H1B		x	x	x			x	x		x			x
AEIO-540: D4B5			x	x			x	x	x	x			x
AEIO-540: D4A5, D4C5, D4D5, L1B5, L1B5D			x	x			x	x		x			x
AEIO-540: L1D5										x			x
AIO-320: A1B, A2A, A2B, B1B, C1B		x	x	x			x	x		x			x
AIO-320: A1A							x	x					
AIO-360: A1A, A1B, A2A, A2B		x	x	x			x	x		x			x
AIO-360: B1B		x	x	x			x	x					x
GO-435: C2, C2A, C2A2, C2B, C2B1, C2B2, C2C, C2D, C2E, D1		x	x	x			x	x		x			x
GO-480: G1A6	x				x	x					x	x	
GO-480: B, B1A6, B1B, B1C, B1D, C1B6, C1D6, C2C6, C2D6, C2E6, C3A6, D1A, F1A6, F2A6, F2D6, F3A6, F3B6, F4A6, F4B6, F6			x	x			x	x		x			x
GO-480: G1B6, G1D6, G1H6, G1J6, G2D6, G2F6			x				x				x	x	
GO-480: E1A6										x			x
GSO-480: A1C6, A2A6			x				x			x			x
GSO-480: B1A6, B1B3, B1B6, B1C6, B1E6, B1G6, B1J6, B2C6, B2D6, B2G6, B2H6			x				x						
GSO-480: A1A6										x			x
HIO-360: E1BD					x	x			x		x		
HIO-360: A1A, A1B, B1A, B1B		x	x	x			x	x		x			x
HIO-360: C1A, C1B, D1A			x				x			x			x
HIO-360: E1AD, F1AD					x	x					x		
HO-360: A1A, C1A		x	x				x			x			x
HO-360: B1A, B1B			x				x			x			x
IGO-480: A1A6, A1B6											x	x	
IGO-540: A1A, A1B, A1C, B1A, B1B, B1C	x				x	x				x	x	x	x
IGSO-480: 13/16" reach cyl.	x				x	x					x	x	
IGSO-480: 1/2" reach cyl.			x				x			x			x
IGSO-540: B1A, B1C	x				x	x				x	x		x
IGSO-540: A1A, A1C, A1D, A1E, A1F, A1H	x				x	x					x		
IO-320: F1A	x					x			x	x			x
IO-320: C1B		x	x	x			x	x	x	x			x
IO-320: A1A, A2A, B1A, B1B, B1C, B1D, B1E, B2A, D1A, D1B, D1C		x	x	x			x	x		x			x
IO-320: E1A, E1B, E2A, E2B		x		x			x	x		x			x
IO-320: 1/2" reach cyl.				x				x		x			x
IO-320: 13/16" reach cyl.						x							
IO-360: C1A	x					x			x	x			x
IO-360: F1A	x			x		x			x	x			x
IO-360: A1B6		x	x				x		x	x			x
IO-360: A1B6D	x					x				x			x
IO-360: A1A, A1B, A1C, A1D, A1D6, A1D6D, A2A, A2B, A2C, A3B6, A3D6D, C1B, C1C, C1C6, C1D6, C1E6, C1E6D, C1F, D1A, J1A6D, J1AD		x	x				x			x			x
IO-360: B1A, B1B, B1C, B1D, B1E, B1F, B1F6, B1G6, B2E-nd, B2E-wd, B2F, B2F6, B4A, E1A		x	x	x			x	x		x			x
IO-360: A3B6D		x	x				x			x			x
IO-360: K2A, L2A			x	x			x	x		x			x
IO-360: M1A				x						x			x
IO-360: C1G6													x
IO-540: P1A5, R1A5	x				x	x			x	x	x	x	x
IO-540: K1A5, K1A5D, K1B5D, K1G5D, K1H5, K1J5, K2A5			x	x			x	x	x	x	x	x	x
IO-540: K1C5, K1D5, K1E5D, K1F5, K1F5D, K1G5, K1J5D, K1K5			x	x			x	x	x	x			x
IO-540: E1A5, E1B5, E1C5, K1B5					x	x			x	x	x	x	x
IO-540: J4A5					x	x			x	x		x	x
IO-540: K1E5					x	x			x	x			x
IO-540: S1A5, U1A5D, U1B5D	x				x	x				x	x	x	x
IO-540: N1A5	x				x	x				x	x		x
IO-540: M1A5, M1A5D, M1B5D, M1C5, M2A5D	x				x	x				x			x
IO-540: AA1A5, AA1B5	x				x	x					x	x	
IO-540: G1A5, G1B5, G1C5, G1D5, G1E5, G1F5			x	x			x	x		x	x	x	x
IO-540: A1A5, AC1A5, B1A5, B1B5, B1C5, C1B5, C1C5, C2C, C4B5, C4C5, C4D5, C4D5D, D4A5, D4B5, D4C5, L1A5, L1A5D, L1B5D, L1C5, T4A5D, T4B5, T4B5D, T4C5D, V4A5D			x	x			x	x		x			x
IO-540: AB1A5, W1A5, W1A5D, W3A5D			x	x			x	x					
IO-540: C4B5D										x			x
IO-720: 13/16" reach cyl.	x				x	x					x	x	
IO-720: 1/2" reach cyl.			x				x			x			x
IVO-360: A1A	x				x	x					x	x	
IVO-540: A1A	x					x							
LHIO-360: C1A, C1B			x				x						
LHIO-360: F1AD					x	x							
LIO-320: C1A	x					x				x			x
LIO-320: B1A		x	x	x			x	x		x			x
LIO-360: C1E6		x	x				x			x			x
LO-360: A1G6D, A1H6		x	x	x			x	x		x			x
LO-360: E1A6D, E1AD, E2AD, E2BD			x	x			x	x		x			x
LTIO-540: F2BD, J2B, J2BD, N2BD, R2AD					x	x					x	x	
LTIO-540: K1AD, U2A, V2AD, W2A					x	x							
LTO-360: E1A6D	x				x	x					x	x	
LTO-360: A1A6D	x				x	x					x		
O-235: C1, C1A, C1B, C1C, C2A, C2B, C2C, E1, E1B, E2A, E2B, F1, F1B, F2A, F2B, G1, G1B, G2A, G2B, H2C, J2A, J2B, K2A, K2B, K2C, L2A, L2C, M1, M2C, M3C, N2A, N2C, P1, P2A, P2C, P3C		x	x	x			x	x		x			x
O-290: A, AP, B, C, CP, D2A, D2B, D2C		x	x	x			x	x		x			x
O-290: D, D2				x				x		x			x
O-320: D1A, D1B, D1C, D1D, D1F, D2A, D2B, D2C, D2F, D2G, D2H, D2J, D3G, E2A, E2C		x	x	x			x	x		x			x
O-320: A1A, A1B, A2A, A2B, A2C, A2D, A3A, A3B, A3C, B1A, B1B, B2A, B2C, B2D, B3A, B3B, B3C, C1A, C1B, C2A, C2B, C2C, C3A, C3B, C3C, E1A, E1B, E1C, E1F, E1J, E2B, E2D, E2F, E2G, E2H, E3D, E3H		x	x	x			x	x		x			x

Not a complete list. To find the right Tempest Aviation Spark Plugs for your engine, see our complete application guide & engine cross reference at http://tempestplus.com

FAA-PMA Approved Engine Applications	Massive Electrode								Fine-Wire Electrode			
	5/8"-24 thread				3/4"- 20 thread				5/8"-24 thread		3/4"- 20 thread			
Textron Lycoming	UREB37E	UREM37BY	UREM38E	UREM40E	URHB32E	URHB37E	URHM38E	URHM40E	UREB36S	UREM38S	URHB32S	URHB36S	URHM38S
O-320: H1AD, H1BD, H2AD, H2BD, H3AD, H3BD			x	x			x	x		x			x
O-320: B2B										x			x
O-340: A1A, A2A, B1A			x	x			x	x		x			x
O-360: A1A-nd, A1A-wd, A1AD, A1C, A1D, A1F, A1F6, A1F6D, A1G, A1G6, A1G6D, A1H, A1H6, A1LD, A1P, A2A, A2D, A2E, A2F, A2G, A2H, A3A, A3AD, A3D, A4A, A4AD, A4D, A4G, A4J, A4K, A4M, A4N, A4P, A5AD, B1A, B1B, B2A, B2B, B2C, C1A, C1C, C1E, C1F, C1G, C2A, C2B, C2C, C2D, C2E, C4F, C4P, D1A, D2A, D2B, F1A6		x	x	x			x	x		x			x
O-360: E1A6D, E1AD, E1BD, E2AD, E2BD, G1A6, J2A			x	x			x	x		x			x
O-435: A, A2, C2			x	x			x	x		x			x
O-435: C, C1, K, K1			x				x			x			x
O-435: B										x			x
O-435: 1/2" reach cyl., 25											x		
O-540: L3C5D	x					x				x			x
O-540: A1A, A1A5, A1B5, A1C5, A1D, A1D5, A2B, A3D5, A4A5, A4B5, A4C5, A4D5, B1A5, B1B5, B1D5, B2A5, B2B5, B2B5-wd, B2C5, B2C5-wd, B4A5, B4B5, B4B5-wd, E4A5, E4B5, E4B5-wd, E4C5, F1A5, F1B5, G1A5, G1A5-wd, G2A5, G2A5-wd, H1A5, H1A5D, H1B5D, H2A5, H2A5D, H2B5D, J1A5D, J1B5D, J1C5D, J1D5D, J2A5D, J2B5D, J2C5D, J2D5D, J3A5, J3A5D, J3C5D			x	x			x	x		x			x
O-540: D1A5										x			x
R-680: 2, 5, 6, B2, B4, B4B, B4C, B4D, B4E, B5, B6, D5, D6, E1, E2, E3, E3A, E3B				x				x		x			x
R-680: 4				x				x					
TIGO-541: B1A, C1A, D1A, D1B, E1A, G1AD					x								
TIO-360: A1A, A1B, A3B6, C1A6D	x					x							
TIO-540: A1A, A1B, A1C, A2A, A2B, A2C, C1A, E1A, F2BD, G1A, H1A, J2B, J2BD, K1AD, N2BD, R2AD, S1AD, T2AD, V2AD					x	x					x	x	
TIO-540: AA1AD, AB1AD, AB1BD, AE2A, AF1A, AF1B, AG1A, AH1A, AJ1A, W2A					x	x							
TIO-541: A1A, E1A4, E1B4, E1C4, E1D4	x				x	x							
TIVO-540: A2A					x	x					x		
TO-360: C1A6D, E1A6D, F1A6D	x				x	x					x	x	
TO-360: A1A6D	x				x	x					x		
TVO-435: A1A, C1A, D1A, E1A, F1A, G1A, G1B	x				x	x				x	x	x	x
TVO-435: B1B, D1B	x				x	x				x	x		x
TVO-435: 13/16" reach cyl.	x				x	x					x	x	
TVO-435: 1/2" reach cyl.			x				x			x			x
VO-360: A1A, A1B, B1A		x	x	x			x	x		x			x
VO-435: 13/16" reach cyl.	x				x	x					x	x	
VO-435: 1/2" reach cyl.			x				x			x			x
VO-540: A1A, A2A, B1A, B1B, B1B3, B1C, B1D, B1E, B1F, B1H3, B2A, B2C, B2D, B2E, B2G, C1A, C1B, C1C3, C2A, C2B, C2C							x			x			x
VO-540-A, B, C Series (Long Reach)	x					x			x			x	
IIO-540-A, AA, AB, AE, AF,AG, AH, AJ,AK, C, E, F, G, H, J, K, N, R, S, T, U, V, W Series					x	x					x	x	
Teledyne Continental Motors (TCM)													
A-65: 12, 12F, 12FJ, 12J, 14, 14F, 14FJ, 14J, 8FJ, 9, 9F, 9FJ, 9J		x						x		x			x
A-65: 1, 3, 6, 6J, 7, 8, 8F, 8J										x			x
A-75: 3, 6, 6J, 8, 8F, 8FJ, 8J, 9, 9J										x			x
C-115: 1, 2		x						x		x			x
C-125: 1, 2		x						x		x			x
C-145: 2, 2H, 2HP		x	x	x			x	x		x			x
C-75: 12, 12F, 12FH, 12FHJ, 12FJ, 12J, 15, 15F		x	x	x			x	x		x			x
C-75: 8, 8F, 8FH, 8FHJ, 8FJ, 8J				x						x			x
C-85: 14		x	x	x			x	x		x			x
C-85: 12, 12F, 12FH, 12FHJ, 12FJ, 12J, 14F, 15, 15F, 8, 8F, 8FHJ, 8FJ, 8J				x						x			x
C-90: 12F, 12FH, 12FJ, 12FP, 14F, 14FH, 14FJ, 16F, 8F, 8FJ				x						x			x
E-165: 2, 3, 4		x	x	x			x	x		x			x
E-185: 1, 10, 11, 2, 3, 5, 8, 9		x	x	x			x	x		x			x
E-225: 2, 4, 8, 9		x	x	x			x	x		x			x
FSO-470: A			x				x						
GIO-470: A					x								
GO-300: A, B, C, D, E, F		x	x	x			x	x		x			x
GTSIO-520: E					x						x		
GTSIO-520: C, D, F, H, K, L, M, N					x						x	x	
IO-240: A, B			x				x			x			x
IO-346: A, B			x	x	x		x	x		x			x
IO-360: B			x	x			x	x		x			x
IO-360: DB			x				x			x			
IO-360: A, AB, C, CB, D, E, ES, G, GB, H, HB, J, JB, K, KB			x				x			x			x
IO-470: A, C, G, J, K, P, R, T			x	x			x	x		x			x
IO-470: LO, VO					x						x		
IO-470: D, E, F, H, L, M, N, S, U, V					x						x	x	
IO-520: A, B, BA, BB, C, CB, D, E, F, J, K, L, M, MB, N, NB					x						x	x	
IO-550: D, E, F, G, L, N					x								
IO-550: A, B, C					x						x	x	
IOF-240: B			x				x						
IOF-550: B, C, D, E, F, L, N, P, R					x								
LIO-470: A			x	x			x	x		x			x
LIO-520: P					x								
LTSIO-360: E, EB, KB, RB			x				x			x			x
LTSIO-520: AE					x						x	x	
O-200: A, B, C				x						x			x
O-300: A, B, C, D, E		x	x	x			x	x		x			x
O-470: 11, 13, 13A, 15, 4		x	x	x			x	x		x			x
O-470: B, G, H, M, N, P, R, S			x	x			x	x		x			x
O-470: 2			x				x			x			x
O-470: B-C1, G-C1, K-C1, L-C1, M-C1			x	x			x	x					
O-470: 11-C1, 11B, 11B-C1, A, E, J, K, L				x				x		x			x
O-470: T, U					x						x	x	
R-670: 11, 11A, 3, 4, 5, 8, A, B, C, D, E, F, G, H		x		x				x					
R-9: A	x					x							
TSIO-360: A, AB, B, C, D, DB, E, EB, F, FB, G, GB, H, HB, JB, KB, LB, MB			x				x			x			x
TSIO-360: BB, CB, NB, PB, RB, SB			x				x						
TSIO-470: B, C, D					x						x	x	
TSIO-520: LB					x								
TSIO-520: A, AF, BB, BE					x						x		
TSIO-520: AE, B, C, CE, D, DB, E, EB, G, H, J, JB, K, KB, L, M, N, NB, P, R, T, U, UB, VB, WB					x						x	x	
TSIO-550: A, B, C, E					x								
W-670: 16, 23, 24, 6A, 6N, K, M		x		x				x		x			x

WWW.AIRCRAFTSPRUCE.COM

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AVIATION SPARK PLUGS

TEMPEST AVIATION SPARK PLUGS



Made in USA. Copper, co-extruded inside a nickel alloy sleeve ensures outstanding heat and electrical conductivity while the nickel sleeve offers high resistance to corrosive combustion gases. High Alumina Ceramic Insulator. "V" tip focuses heat to reduce fouling and enhance heat range control. Proprietary Glass Center Seal, and resistor design, eliminating resistor degradation causing misfire. Environmentally preferable electrolytic nickel provides outstanding durable finish, superior corrosion protection, and extreme wear resistance. Aviation grade nickel electrode design focuses on minimizing sparking voltage requirements. Harness Wire Contact is a smooth, uninterrupted, oxide treated spring contact surface.

MASSIVE ELECTRODE

Model	Part No.	Price
UREM38E	08-00046	**$25.85**
URHM38E	08-00047	**$25.85**
UREM40E	08-00048	**$25.85**
URHM40E	08-00049	**$25.85**
URHB32E	08-00245	**$25.85**
UREB37E	08-00246	**$25.85**
URHB37E	08-00247	**$25.85**
UREM37BY	08-00248	**$25.85**

FINE WIRE

Model	Part No.	Price
URHB32S	08-07213	**$79.95**
URHB36S	08-01230	**$79.95**
URHM38S	08-01232	**$79.95**
UREB36S	08-01233	**$81.75**
UREM38S	08-01234	**$79.95**

BOXES OF 12 SPARK PLUGS ARE AVAILABLE FOR EACH MODEL. CALL OR VISIT OUR WEBSITE FOR PRICING.

NGK SPARK PLUGS



Note: The spark plugs listed are not for aircraft application

Size	Description	Part No.	Price
10mm	CR5HSB	08-06263	**$2.25**
12 mm	DCPR7E	08-00504	**$3.65**
12 mm	DCPR8E (Removable Terminal Nut)	08-01228	**$3.65**
12 mm	DCPR8E (Solid Terminal Nut)	08-07044	**$3.65**
12 mm	DR8EA	08-00693	**$2.55**
14 mm	BR8EIX	08-00650	**$9.50**
14 mm	B8ES (Solid Terminal Nut)	08-00730	**$2.65**
14 mm	BR8ES	08-00736	**$2.50**
14 mm	B7ES	08-07039	**$2.35**
14 mm	B9ES	08-07040	**$2.35**
14 mm	BR7ES	08-07041	**$2.50**
14 mm	BR9ES	08-07042	**$2.65**
14 mm	BR7EIX	08-07045	**$9.50**
14 mm	BR9EIX	08-07046	**$8.75**
12mm	DP9EA-9	15-05219	**$2.55**
14mm	IK24	15-05204	**$11.50**



HELI-COIL INSERTS

18mm long Heli-Coil aviation grade spark plug inserts.
Heli-coil Insert 18mm X 13/16 "..... P/N 08-13858 .... **$10.70**
Heli-coil Insert 18mm X 1/2 "..... P/N 08-13859 ..... **$8.95**

SILICONE HEAT TRANSFER COMPOUND



A thermally conductive grease based on zinc oxide and silicone oil that provides good thermal conductivity across a wide operating temperature range. Non-conductive, non-capacitive, and non-corrosive, it is used to improve the thermal conductivity between irregular metal surfaces. It is widely used to improve heat flow between heat sinks and heat generating electronic components such as CPU's, GPU's, and power components. Silicone thermal greases are preferred in high operating temperature applications where silicone migration is not a concern. 4 Gram / 1.7 mL Pouch. P/N 09-05316 ..... **$3.35**

SPARK PLUG TYPE DESIGNATION SYSTEM



In the early 1900s, small planes flew with single ignition systems powered by adapted automobile engines using Champion-brand automotive spark plugs. By the 1920s, the company had developed innovative spark plugs designed specifically for the aviation industry. Champion Aerospace designs and manufactures Champion-brand piston-engine ignition components for both OEM and aftermarket for general aviation aircraft applications. Every spark plug manufactured has built-in design advantages that assure longer life and greater reliability. A typical spark plug number with symbol explanation.

A TYPICAL SPARK PLUG NUMBER WITH SYMBOL EXPLANATION

R — Push-wire—90° to Center

R H B 37 E
① ② ③ ④ ⑤

1. RESISTOR
None — No Resistor R — Mil-Spec. Resistor - Erosion protection

2. BARREL STYLE
None — Unshielded E — Shielded 5/8"-24 Thread
H — Shielded 3/4"-20 Thread (All Weather Plug)

3. MOUNTING THREAD—REACH—HEX SIZE

B - 18mm	13/16"/2.06cm	7/8"/2.22cm	M— 18mm	1/2"/1.27cm	7/8"/2.22cm
J - 14mm	3/8"/0.95cm	13/16/2.06cm	L — 14mm	1/2"/1.27cm	13/16/2.06cm
U - 18mm	1-1/8"/2.85cm	13/16/2.06cm			

4. HEAT RATING POSITION
Low number—cold High number—hot

5. ELECTRODE DESIGN
None—Conventional single E — Two prong massive N — Four prong massive
P—Fine wire (Platinum) W — Fine wire (Iridium) B —2 prong massive, Tangent to Center

CHAMPION SPARK PLUGS

SHIELDED – MASSIVE ELECTRODES			
5/8-24*	**Price**	**3/4-20***	**Price**
REJ38 (14MM)	**$54.75**	RHM38E	**$31.80**
REL37B (14MM)	**$55.75**	RHM40E	**$31.80**
REB37E	**$34.50**	RHU27E	**$70.75**
REM37BY	**$31.80**	RHB32E	**$31.80**
REM38E	**$31.80**		
REM40E	**$31.80**		
REB32E	**$34.50**		
*SHIELDED – IRIDIUM ELECTRODES***			
5/8-24*	**Price**	**3/4-20***	**Price**
REM38S	**$106.95**	RHB32S	**$106.95**
REB-36S	**$106.75**	RHB36S	**$106.95**
		RHM38S	**$106.95**
UNSHIELDED			
5/8-24*	**Price**	**3/4-20***	**Price**
M41E (18MM)	**$37.95**		

* Shielded barrel thread size. Check barrel size - 5/8x24 or 3/4x20 threads before ordering and select proper plug number.

SEE PREVIOUS PAGE FOR SPARKPLUG APPLICATION TABLE.

**The "Iridium S" sparkplugs replace the Platinum and "W" Iridium types. Increased bore diameter improves scavenging action. Greater clearance volume can accept more combustion deposits. Single Iridium electrode offers greater resistance to lead attack. Easy to clean Easy to gap



CHAMPION RVL38S SPARK PLUGS

Used on M14 YAK
P/N 08-06280..... **$127.95**

NOTE: Spark plugs are shipped in factory sealed plastic cases. Opened spark plug cases make the spark plugs non-returnable. Please do not open any spark plug until you are sure you have received the correct spark plugs for your application.

SPARK PLUG PARTS – IGNITERS – EXCITERS



CHAMPION SPARK PLUG ANTI-SEIZE

Apply sparingly to second and third threads. Do not contact electrodes as it could short out the plug. Do not apply to shielding barrel threads. Unbreakable 4oz. bottle with applicator brush top.....P/N 2612 ..... **$10.95**



TEMPEST SPARK PLUG THREAD LUBRICANT & ANTI-SEIZE COMPOUND

Comes packaged with a brush that applies the lubricant to the threads with a smooth even flow, doesn't drip, and more importantly, won't inadvertently run down on the firing end of the spark plug potentially causing an environment conducive to fouling or even pre-ignition. It stays where you put it and covers like a blanket on the first pass! P/N 12-00709..... **$8.65**



ATS2612 SPARK PLUG THREAD LUBRICANT

A high-temperature, graphite lubricant that is applied to spark plug threads prior to installation to prevent galling and seizure. Non-hazardous compound.

P/N 12-02946.....**$10.90**

TEMPEST COPPER SPARKPLUG GASKET



AN4027-1, 18MM P/N M673. These are the AN4027-1 18mm copper spark plug gaskets. Model U674. Made of solid copper to current aircraft standards.Box of 100 P/N 07-01798 . **$47.50**

COPPER SPARK PLUG GASKETS



Made of solid copper to current aircraft standards. Available in 14 MM and 18 MM sizes.

AN4027-2, 14MM..... P/N 07-01261.....**$0.49 ea**
AN4027-1, 18MM..... P/N 07-00877.....**$0.37 ea**

CHAMPION M674 SPARK PLUG GASKET



M674 - Gasket: Spark Plug, 18mm. Made of solid copper to current aircraft standards. Box of 100. 1 in. X 1 in. X 0.063 in..... P/N 07-03425..... **$66.75**

SURPLUS SPARK PLUG BARGAINS



New surplus 18MM longreach, shielded, 3/4-20 barrel. FAA approved for Continental IO-470, GIO-470, TSIO-470, IO-520 & GTSIO-520. Not for 0-470, which uses short reach plugs.

P/N 08-03699 ..... **$9.65 ea**

SEE TOOL SECTION FOR FULL LINE OF CHAMPION SPARK PLUG TOOLS



AN4062-1 DEHYDRATOR PLUGS 18MM

These plugs are used to prevent rust and corrosion in engines while in storage. Contain silica gel which turns from blue to pink when moisture is absorbed. Reusable & refillable. The pink silica gel may be reactivated (after removing from reservoir) by heating for 16 hours at 250°F.

AN4062-1 (18MM)..... **$8.80 ea**
SILICA GEL. Indicating type, for refilling plugs.
1/4 Lb. Bag..... P/N 07-00731..... **$6.50**
1 Lb. Can ..... P/N 07-03400..... **$24.95**



SPARK PLUG HOLE PROTECTIVE CAPS

#9721 Spark Plug Hole Caps. Seal your Spark plug hole openings with these inexpensive tapered fit plastic caps. Prevent debris from accidentally entering ports and creating damage or mischief. Ideal for sealing for winter storage, preventing moisture from corroding internal engine parts. Also can be used to seal ports for leak testing, an important procedure that locates potential air leaks before they cause costly engine damage. Tapered fit provides positive seal for either vacuum or pressure testing, Tapers from 0.482" to 0.526". P/N 15-06003 ..... **$0.23**



CHAMPION IGNITERS

The research and development team at Champion Aerospace has pioneered the use of exotic materials to extend the life and enhance performance of turbine Igniters.

The patented Champion Series 21™ Igniter and lead incorporate numerous design benefits that improve performance, installation, and maintenance. Variable immersion depth allows it to be used in multiple engine platforms. The self-centering conical contact virtually eliminates flashover and arcing.

Description	Part No.	Price
CH31547C Champion Igniter	07-03236	**$377.00**
CH31621A Champion Igniter	07-03237	**$1,020.00**
CH31815 Champion Igniter	07-03238	**$1,486.00**
CH31815-2 Champion Igniter	07-03239	**$1,336.00**
CH34016-1 Champion Igniter	07-03240	**$510.00**
CH34055 Champion Igniter	07-03241	**$257.95**
CH34269 Champion Igniter	07-03243	**$789.00**
CH34419 Champion Igniter	07-19263	**$1,316.00**
CH34659-3 Champion Igniter	07-03244	**$899.00**
CH34682 Champion Igniter	07-03245	**$1,049.00**
CH34745 Champion Igniter	07-03246	**$1,094.00**
CH34804-3 Champion Igniter	07-03247	**$1,054.00**
CH34817 Champion Igniter	07-19370	**$542.00**
FHE146-7A Champion Igniter	07-03287	**$620.00**
FHE164E Champion Igniter	07-03288	**$2,680.00**
FHE246-4 Champion Igniter	07-03289	**$451.00**
CH31487A Champion Igniter	07-03492	**$355.00**
Y183-5 Champion Igniter	07-03548	**$2,445.00**
CH53399-06 Turbine Ignition Lead	07-03250	**$627.00**
CH3442-3 Turbine Ignition Lead	07-18032	**$1,095.00**

CHAMPION EXCITERS



Champion Aerospace manufactures a broad range of high performance ignition exciters. From pioneering designs in solid-state technology, to the new, patented PPT exciter, the first true high-tension solid-state exciter, Champion combines the reliability and performance critical to aviation applications.

The Champion solid state ignition exciters are significantly lighter and more compact than any existing product on the market. PPT combines the technologies of both solid-state and spark-gap technology, but suffers none of the drawbacks.

Part No.	Description	Price
08-13063	CHJ92015-1 Champion Exchange Exciter Box	**$4,997.00**
08-13063-C	Core Charge For CH92015-1	**$930.00**
07-03549	Champion 305012-2 Exciter Box Exchange	**$4,367.00**
07-03549-C	Core Charge For 305012-2	**$824.00**
08-13063	CH92106-1 Champion Exchange Exciter Box	**$4,997.00**
08-13063-C	Core Charge For CH92106-1	**$930.00**

CHAMPION IGNITION LEADS



Champion Aerospace designs and manufactures a full range of aerospace ignition leads for turbine engine applications. New ignition leads from Champion Aerospace are available for a wide range of turbine engines, from small turbine APU applications to the large GE and PW turbofan engines, including the new Rolls Royce Trent 900 engines for A380 aircraft.

53067-21 Ignition Lead JT15D..... P/N 07-03542..... **$979.00**
53067-38.5 Ignition Lead JT15D..... P/N 07-03543..... **$990.00**
53399-09 Ignition Lead..... P/N 07-03546..... **$533.00**
53399-06 Ignition Lead..... P/N 07-03250..... **$627.00**
53442-3 Ignition Lead..... P/N 07-18032..... **$1,095.00**
53247 Ignition Lead..... P/N 07-18000..... **$1,110.00**

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REGULATORS - ALTERNATORS

LAMAR (ELECTRODELTA) VOLTAGE REGULATORS

Mfg P/N	Description	Replacement for	Part Number	Price
VR500-0101	27.7V Voltage Regulator	Cessna C11004-0101, C611002-0102, -0105	07-00912	**$225.95**
VR500-0102	28.8V Voltage Regulator	Cessna C611004-0102	07-00913	**$225.95**
VR515F	28V Voltage Regulator	Cessna C611501-0102	07-00914	**$354.00**
VR515GA	28V Voltage Regulator	Cessna C611005-0103,-0102	07-00915	**$326.00**
VR580	28V Voltage Regulator	Cessna C611008-0101	07-00916	**$472.00**
VR801	28V Alternator Control	Cessna C611007-0101	07-00919	**$763.00**
VR415F	14V Voltage Regulator	Zeftronic R15300	07-00910	**$506.00**
VSF7203A	12V Voltage Regulator	Zeftronic R1510N	07-00921	**$347.00**
VR2000-28-2	28V Voltage Regulator	N/A	07-00895	**$779.00**
VSF7403A	24V Voltage Regulator	Voltage Regulator VSF7403A	07-00922	**$347.00**
VR200A	14V Voltage Regulator	Piper 484121	07-00896	**$263.95**
VR300-14-20	14V Voltage Regulator	Delco-Remy 1118736, E,1118904, 1119226	07-00899	**$304.00**
VR300-14-35	14V Voltage Regulator	Delco-Remy 1118704	07-00901	**$297.95**
VR300-14-50	14V Voltage Regulator	Delco-Remy 1118713, 1118884, 1119224C	07-00902	**$303.00**
VR300-28-25	28V Voltage Regulator	Delco-Remy 1118951, 1118975, 1119218C	07-00905	**$302.00**
VR300-28-40	28V Voltage Regulator	Delco-Remy 1119237,1119656	07-00906	**$309.00**
Hartzell (Electrodelta) Voltage Regulators (Factory Overhauled)				
Mfg. P/N	**Description**	**Replacement for**	**Part Number**	**Price**
-	14V Voltage Regulator	Zeftronic R1510L	07-00623	**$179.95**
VR515G-2	28V Voltage Regulator	Schweitzer Aircraft Corp 269A4985	07-01108	**$419.00**
Hartzell (Electrodelta) Voltage Sensors & Monitors (Factory New)				
Mfg. P/N	**Description**	**Replacement for**	**Part Number**	**Price**
GPM-001	28V Ground Power Motor	Cessna C593005-0101	07-01275	**$280.95**
OS60	14V Overvoltage Sensor	Cessna C5930001-0101	07-00890	**$166.75**
OS100-0101	28V Overvoltage Sensor	Cessna C593003-0101	07-00887	**$286.95**
OS75-14	14V Overvoltage Sensor	Zeftronic V1510A	07-00891	**$205.95**
OS75-28	28V Overvoltage Sensor	Zeftronic V2510A	07-00892	**$287.95**

**** For complete application chart please visit our website at www.aircraftspruce.com***

EP

OVERHAULED COMPONENTS

Alternators, generators, and starters which are remanufactured for installation in general aviation aircraft. Fully FAA approved.

EXPERIMENTAL ALTERNATORS

Part No.	Volt/Amp	Price
ES-6012	14V60A	**CALL**
ES-6024	28V60A	**CALL**
ES-6212	13.8V60A	**CALL**
ES-6224	28V60A	**CALL**
ES-7024	28V70A	**CALL**
ES-10024	28V100A	**CALL**
1100715R	12V70A	**CALL**
1100716R	12V52A	**CALL**
1100717R	12V70A	**CALL**
1100718R	24V50A	**CALL**
1100723R	24V50A	**CALL**
1100747R	24V50A	**CALL**
1100753R	24V65A	**CALL**
1100792R	24V65A	**CALL**

DELCO- GENERATORS

Part No.	Volt/Amp	Price
DEL1101876	12V12A	**$309.00**
DEL1101877	12V26A	**$308.00**
DEL1101878	12V13A	**$309.00**
DEL1101879	12V25A	**$309.00**
DEL1101880	12V26A	**$308.00**
DEL1101881	12V13A	**$309.00**
DEL1101882	12V26A	**$309.00**
DEL1101887	12V35A	**$309.00**
DEL1101888	12V50A	**$309.00**
DEL1101890	12V20A	**$308.00**
DEL1101892	12V35A	**$308.00**
DEL1101897	12V35A	**$309.00**
DEL1101898	12V35A	**$309.00**
DEL1101899	12V20A	**$309.00**
DEL1101900	12V35A	**$308.00**
DEL1101901	24V26A	**$308.00**
DEL1101904	24V25A	**$309.00**
DEL1101905	24V25A	**$309.00**
DEL1101906	24V25A	**$309.00**
DEL1101908	12V50A	**CALL**
DEL1101909	12V50A	**$308.00**
DEL1101910	12V20A	**$309.00**
DEL1101911	24V25A	**$309.00**
DEL1101912	12V50A	**$308.00**
DEL1101913	12V35A	**$309.00**
DEL1101914	12V35A	**$307.00**
DEL1101915	12V50A	**$308.00**
DEL1101917	12V35A	**$309.00**

Part No.	Volt/Amp	Price
DEL1101918	12V35A	**$309.00**
DEL1101923	12V50A	**$309.00**
DEL1105052	24V40A	**CALL**
DEL1105053	24V40A	**CALL**
DEL1105054	24V50A	**$356.00**
DEL1105055	24V50A	**$337.00**
DEL1105052	24V/50A	**CALL**
DEL1105056	24V40A	**$336.00**
DEL1105057	24V50A	**$343.00**
DEL1101876	12V13A	**$309.00**
DEL1101877	12V26A	**$308.00**
DEL1101878	12V13A	**$309.00**
DEL1101909	12V50A	**$308.00**
DEL1105055	24V50A	**$337.00**

DELCO STARTERS

Part No.	Volt/Amp	Price
DEL1108234	24V	**$436.00**
1108249R	12V	**CALL**
1109511R	12V	**CALL**
1109517R	24V	**CALL**
1109511R	12V	**CALL**
1109518R	24V	**CALL**
1109511R	12V	**CALL**
1109511R	12V	**CALL**
1109514R	12V	**CALL**
1109651R	12V	**CALL**
DEL1109652	12V	**$261.95**
1109656R	12V	**CALL**

Part No.	Volt/Amp	Price
1109657R	12V	**CALL**
1109660R	12V	**CALL**
1109662R	24V	**CALL**
1109678R	12V	**CALL**
1109689R	12V	**CALL**
1109687R	24V	**CALL**
1109677R	12V	**CALL**
1109678R	12V	**CALL**
1109519R	12V	**CALL**
1109518R	24V	**CALL**
1109678R	12V	**CALL**
1109681	12V	**CALL**

Minimum Core Charge on Delco Alt. and Starters $200.00

*Drive not included (DEL 1971890). For price see listing for drives.

**Drive not included (DEL 1940969). For price see listing for drives.



LAMAR 14V VOLTAGE REGULATOR

Lamar Voltage Regulator DGR6-1 fits Cessna 150 thru Cessna 210 series aircraft. DGR6-1 is the PMA replacement for DGR6, C611001-0101, C611001-0102, C611001-0201, and VR600. Manufactured in the USA.
P/N 07-01897.....**$189.95**



LAMAR 28V ALTERNATOR CONTROL

Lamar Alternator Control DGR3-1 fits Cessna 150 thru Cessna 210 series aircraft. DGR3-1 is the PMA replacement for DGR3, C611005-0103, C611501-0102, and VR15F. Manufactured in the USA.
P/N 07-01896.....**$236.95**

HARTZELL ENGINE TECH. ALTERNATORS



HARTZELL ENGINE TECHNOLOGIES ALTERNATORS

The most popular alternators in use on Cessna and Beech aircraft are of Ford manufacture. Chrysler alternators are usually found on Piper aircraft. These units are manufactured to aircraft specifications and are not available through automotive parts stores. Note: Core charge is billed on all exchange units & credited upon receipt of acceptable core.

ALTERNATOR PRODUCT INFORMATION

If Unit Begins With:	Then Unit Is:
ALE-	12V / 40A
ALH-	12V / 55A
ALM-	12V / 30A
ALT-	24V / 50A
ALU-	24V / 70A
ALV-	24V / 100A
ALX-	12V / 70A
ALY-	12V / 60A
ALZ-	12V / 50A
ANG-	24V / 60A

If First Digit After (-) Is:	Then Unit Is:
6	Belt Driven / No Blast Tube
8	Belt Driven / Blast Tube
9	Gear Driven

If Unit Ends With:	Then Unit Is:
LS	New Unit - No Pulley
RS	Factory Rebuilt/Over-hauled- No Pulley
G	Ground Strap Attached
R	Factory Rebuilt/Over-hauled
None	Factory New- Various Applications

CHRYSLER ALTERNATORS - FACTORY OVERHAULED

Model No.	Description	Part No.	Price
4111810R	12V/60A BD	07-06402	$543.00

FORD ALTERNATORS - FACTORY OVERHAULED

Model No.	Description	Part No.	Price
DOFF10300BR	28V/60A BD	07-06413	$539.00
DOFF10300DR	28V/60A GD	07-06418	$714.00
DOFF10300ER	28V/38A GD	07-06414	$714.00
DOFF10300FR	15V/60A GD	07-06415	$738.00
DOFF10300JR	15V/60A BD	07-06416	$535.00
E3FF10300AAR	28V/95A BD	07-06417	$609.00
E3FF10300BAR	28V/60A BD	07-03254	$655.00
EOFF10300AAR	12V/95A BD	08-07036	$659.00
EOFF10300BAR	28V/60A BD	07-06419	$676.00

EP



HARTZELL ENGINE TECH. OVERHAULED AL SERIES ALTERNATORS

Aircraft Spruce carries the full line of alternators, and starters which are remanufactured by Hartzell for installation in general aviation aircraft. Fully FAA approved. All prices shown are exchange prices. Core charges are billed when unit is shipped. Core credit is issued upon return of acceptable like model core to Aircraft Spruce West in Corona, CA. NOTE: If core is not in stock at factory, customer must send core to Aircraft Spruce at time of order to have the core overhauled.

Hartzell Part No.	Volt/Amp	Drive	Replaces	PN	Price
ALE-6520R	12V/40A	Belt	ALE-6420, Lyc LW-14302	08-07005	$575.00
ALE-8520R	12V/40A	Belt	ALE-8420, Lyc LW-14300	08-07006	$613.00
ALE-8521R	24V/70A	Belt	--	08-07007	$610.00
ALT-8520R	24V/50A	Belt	ALT-8420, CMI 652486	07-06404	$460.00
ALT-8521R	24V/50A	Belt	ALT-8421	08-07008	$588.00
ALT-8521RLS	24/50A	--	--	08-15660	$1,020.00
ALT-9522R	24V/50A	Direct	ALT-9422, CMI 641668	07-06405	$466.00
ALU-6521RS	24V/70A	No Pully/Belt	ALU-6421LS, Lyc LW-14329	08-07009	$586.00
ALU-8521R	24V/70A	Belt	ALU-8421	07-06406	$596.00
ALU-8521RS	24V/70A	No Pully/Belt	ALU-8421LS, Lyc LW-14326	07-06407	$580.00
ALU-8532RLS	8V/75A	--	--	08-15661	$570.00
ALU-9522R	24V/70A	Direct	--	08-07010	$631.00
ALV-8511R	24V/100A	--	--	08-07011	$832.00
ALV-8512R	24V/100A	--	--	08-07012	$811.00
ALX-6523R	12V/70A	Belt	--	08-07013	$596.00
ALX-8521R	12V/70A	Belt	--	07-06421	$611.00
ALX-8521RS	12V/70A	No Pully/Belt	--	08-07014	$572.00
ALX-9522R	12V/70A	Direct	--	08-07015	$612.00
ALX-9524R	12V/70A	Direct	CMI 641670	08-07016	$487.00
ALX-9525BR	12V/70A	Belt	CMI 643008	07-06410	$489.00
ALY-6520R	12V/60A	Belt	Lyc LW-14333	08-07017	$570.00
ALY-6520RLS	12V/60A	--	--	08-15662	$559.00
ALY-6521R	12V/60A	Belt	--	07-06411	$456.00
ALY-6522R	12V/60A	Belt	--	08-07018	$456.00
ALY-6527R	12V/60A	Belt	Lyc LW-14315	08-07019	$592.00
ALY-8520R	12V/60A	Belt	--	07-06412	$556.00
ALY-8520RS	12V/60A	No Pully/Belt	Lyc LW-14313	08-07020	$558.00
ALZ-8523	12V/50A	--	--	08-15663	$602.00
ALY-8524R	12V/60A	Belt	--	08-07021	$538.00
ALY-8526R	12V/60A	Belt	Lyc LW-14312	08-07022	$557.00



HARTZELL ENGINE TECHNOLOGIES ES4020 SERIES OVERHAULED ALTERNATORS

Chrysler Style - FAA/PMA Approved Proven, Tested, & Trusted. As the OEM, Hartzell Engine Technologies offers factory new alternators engineered specifically to meet the challenges and increased demands of today's aircraft electrical systems. Each unit is aviation designed & developed, no automotive parts used. For decades these alternators have been powering Lycoming/ Continental engines with unmatched performance and reliability.

Volts/Amps	Description	Model No.	Part No.	Price
24V/85A	Belt Driven	ES-4024LPR	08-15664	$755.00
24V/85A	Belt Driven	ES-4029R	08-15665	$602.00

TCM ALTERNATORS - OVERHAULED

Model No.	Volt/Amp	Part No.	Price
642056R	-	08-07024	$980.00
646490R	-	08-07025	$565.00
Part No.	**Volt/Amp**		**Price**
649280R	28V70A	08-07027	$963.00

ES4000 SERIES ALTERNATORS - OVERHAULED

Model No.	Volt/Amp	Part No.	Price
ES4019RS	28V130A	08-07118	$937.00
ES-4020R	14V60A	08-07120	$662.00

PLEASE VISIT OUR WEBSITE OR CALL FOR DETAILS ON THE Hartzell CORE RETURN POLICY.



HARTZELL ENGINE TECHNOLOGIES ES4020 SERIES ALTERNATORS - FACTORY NEW

Chrysler Style - FAA/PMA Approved Proven, Tested, & Trusted. As the OEM, Hartzell Engine Technologies offers factory new alternators engineered specifically to meet the challenges and increased demands of today's aircraft electrical systems. Each unit is aviation designed & developed, no automotive parts used. For decades these alternators have been powering Lycoming/ Continental engines with unmatched performance and reliability.

Volts/Amps	Description	Model No.	Part No.	Price
24V/85A	Belt Driven	ES4024	08-15656	**$952.00**
24V/85A	Belt Driven	ES4024	08-15657	**$952.00**
24V/85A	Belt Driven	ES4024	08-15658	**$952.00**



HARTZELL ENGINE TECHNOLOGIES ES-6012-6 ALTERNATOR - FACTORY NEW

ES-6012-6 - 12V/60A Belt Driven alternator created for six-cylinder Continental engines. This unit is based on the highly reliable, field proven 100A ES-10024 and extensive certification testing has demonstrated a marked increase in efficiency and performance compared to the legacy Continental Crittenden unit it replaces. Aside from the improvement in reliability, two additional advantages offered by this alternator is that owner/pilots will really appreciate are improvements both in cut-in and idle speed performance – with over double the power output at idle!

Benefits of the new HET ES-6012-6 alternator include:

- Dramatically increased reliability and estimated MTBF compared to legacy Crittenden alternators
- Overall efficiency increased by six to 10% over the entire operating range, resulting in lower operating temperatures

P/N 08-15659 ..... **$790.00**



HARTZELL ENGINE TECHNOLOGIES ES-6024D ALTERNATOR

This unit is based on the highly reliable, field proven 100A ES-10024 and extensive certification testing has demonstrated a marked increase in efficiency and performance compared to the legacy Continental Crittenden unit it replaces. Aside from the improvement in reliability, two additional advantages offered by this alternator is that owner/pilots will really appreciate are improvements both in cut-in and idle speed performance – with over double the power output at idle!

Benefits of the new HET ES-6024D alternator include:

- Dramatically increased reliability and estimated MTBF compared to legacy Crittenden alternators
- Overall efficiency increased by six to 10% over the entire operating range, resulting in lower operating temperatures
- Output at engine idle speed more than doubled to ~23A.

The ES-6024D alternator has been FAA PMA certified as a direct replacement for the 60A Continental Crittenden alternator on Continental -520 and -550 series engines. It replaces Continental alternator models 646843, 646490 and 642055 found on various twin Cessnas, Beechcraft Bonanzas and Barons, early pre-glass panel Cirrus SR-22s, and the Cessna TTx-series aircraft including early Corvalis and Columbia models.

P/N 07-18097 ..... **$1,139.00**

EP



HARTZELL ENGINE TECHNOLOGIES ES-10024 AIRCRAFT ALTERNATOR - FACTORY NEW

Introducing the brand new ES-10024 28volt / 100amp aircraft alternator. The ES-10024 alternator is a direct replacement for TCM part number 656802. The ES-10024 is a field proven design that has been in use for over 5 years with thousands of alternators operating on the world's top selling aircraft. Prestolite Style - FAA/PMA Approved. Lightweight, cost effective, 2 yr. warranty.

Model Number	Volt/Amp	Drive	Replaces	Part Number	Price
ES-10024V-2	24V/100A	--	--	08-15651	**$1,472.00**
ES-10024B-6	24V/100A	Belt Driven	Piper 651-756	08-15652	**$1,428.00**

HARTZELL BRUSH HOLDER ASSEMBLY



Hartzell has designed a new two piece brush holder which is superior in construction and designed to ease both installation and removal during routine maintenance. These new brush holders are offered as a product improvement and are considered an alternate but will supersede the current brush holder assembly as field stock is depleted.

Recommended Alternators: Any aircraft utilizing ALE, ALH, ALT, ALU, ALX, ALY and ALZ series alternators. P/N 08-13833 ..... **$102.75**



ALE-1013AS FAA/PMA BRUSH SET

Brush set. ALE-1013AS FAA/PMA approval.

P/N 07-00963 ..... **$19.50**

ALTERNATOR DRIVE COUPLINGS



Overhauled alternator drive couplings for the gear driven TCM alternators.

Additional core charge added to purchase at time of checkout

Part No. 646655R
Applicable to engine models:
IO-520, TS10-520, 10-550, GTS10-520
P/N 07-00641.....**$575.00**

Part No. 635796R
Applicable to engine models:
C-75, C-85, C-90, C-115, C-125, C-145, E-165, E-185, E-225, O-200, O-300, GO-300, GIO-300, IO-240, IO-360, TS10-360, & LTS10-360
P/N 07-00642.....**$575.00**

HARTZELL ENGINE TECH. ALTERNATORS



AL Series



ES4000 Series



ES4020 Series

HARTZELL ENGINE TECH. NEW ALTERNATORS

As the OEM, Hartzell offers factory new alternators engineered specifically to meet the challenges and increased demands of today's aircraft electrical systems. Each unit is aviation designed & developed, no automotive parts used. For decades our alternators have been powering Lycoming/Continental engines with unmatched performance and reliability. No Core charges.

AL SERIES ALTERNATOR - Prestolite Style - FAA/PMA Approved.

Model No.	Volts/Amps	Description	Part No.	Price
ALT8520	24V/50A	Belt Driven	08-07122	$734.00
ALT8521	24V/50A	Belt Driven	08-07123	$773.00
ALT8521LS	24V/50A	Belt Driven	08-07124	$773.00
ALT9522	24V/50A	Gear Driven	08-07125	$754.00
ALU-6526	24V/60A	Belt Driven	07-19276	$709.00
ALX-6526	12V/70A	Belt Driven	07-19277	$753.00
ALU6521 LS	24V/70A	Belt Driven	08-07126	$754.00
ALU8521	24V/70A	Belt Driven	08-07127	$775.00
ALU8521 LS	24V/70A	Belt Driven	08-07128	$779.00
ALU8532 LS	24V/70A	Belt Driven	08-07129	$824.00
ALX8521	12V/70A	Belt Driven	08-07130	$770.00
ALX8521LS	12V/70A	Belt Driven	08-07131	$768.00
ALX8523	12V/70A	Belt Driven	08-07132	$772.00
ALU-6536-3	25V/175A	--	08-15649	$1,033.00
ALU-6539-4	25V/175A	--	08-15650	$1,060.00
ALX9524	12V/70A	Gear Driven	08-07133	$763.00
ALX9525B	12V/70A	Gear Driven	08-07134	$773.00
ALY9524	12V/60A	Belt Driven	08-07135	$769.00
ALY6527	12V/60A	Belt Driven	08-07136	$793.00
ALU-6526	24V/60A	Belt Driven	07-19276	$709.00
ALX-6526	12V/70A	Belt Driven	07-19277	$753.00
ALY8520	12V/60A	Belt Driven	08-07137	$769.00
ALY8520LS	12V/60A	Belt Driven	08-07138	$753.00

ES4000 SERIES ALTERNATOR - Ford Style - FAA/PMA Approved

Model No.	Volts/Amps	Description	Part No.	Price
ES4000	15V/60A	Belt Driven	08-07139	$651.00
ES400LS	15V/60A	Belt Driven	08-07140	$541.00
ES4001	15V/60A	Gear Driven	08-07141	$766.00
ES4002	15V/80A	Gear Driven	08-07142	$876.00
ES4003	15V/95A	Belt Driven	08-07143	$862.00
ES4004	28V/38A	Gear Driven	08-07144	$824.00
ES4006	28V/60A	Gear Driven	08-07145	$811.00
ES4008	28V/70A	Gear Driven	08-07146	$924.00
ES4009	28V/70A	Belt Driven	08-07147	$700.00
ES4011	28V/95A	Belt Driven	08-07148	$825.00
ES4019LS	28V/130A	Belt Driven	08-07149	$1,146.00
ES4017	28V/90A	Belt Driven	08-15654	$629.00
ES4011LS	15V/80A	Belt Driven	08-15653	$863.00
ES40193LS	28V/130A	Belt Driven	08-15655	$1,059.00

ES4020 SERIES ALTERNATOR - Chrysler Style - FAA/PMA Approved

Model No.	Volts/Amps	Description	Part No.	Price
ES4020	14V/90A	Belt Driven	08-07150	$726.00
ES4029	28V/70A	Gear Driven	08-07151	$895.00

HARTZELL ALV-9610 ALTERNATOR



Lighter, Tougher, and Proven! Introducing the brand new ALV-9610. The ALV-9610 alternator is a direct replacement for gear driven heavyweight alternators on the Continental 520 & 550 engines. Weighing under 13 lbs., the ALV-9610 is up to 9 lbs. lighter than current heavyweight options. The ALV-9610 is a field proven design that has been in use for over 5 years with thousands of alternators operating on the world's top selling aircraft. FAA/PMA Approved.

See Service Bulletin Document on our website regarding coupling SB11-3

Features:
- Up to 9.6 lbs. weight savings (per engine)
- OEM Direct Replacement
- More power at engine cruise
- Built in noise cancellation
- Rugged design for extreme conditions
- More economical than overhauled units
- Two year warranty

Specifications:
- 28 Volt / 100 Amp Prestolite Style
- Max Continuous Oper. Speed: 10000 rpm
- Type Drive: Gear
- Min. Speed for Regulation: 2400 rpm
- Max. Operating Altitude: 35000 rpm
- Weight: 12 lbs.
- Rotation: Bi-Directional
- Replaces TCM part numbers: 642056, 646491, 646842, 649304, as well as ALV-..... 9510.

P/N 08-07442..... **$966.00**

HARTZELL ES7024-14 ALTERNATOR



Hartzell Lightweight Alternator ES7024-14, for experimental use. 28 Volt, 70 Amps. Weight: 7 lbs.

Replaces TCM part number 657199.

Features:
- All aircraft quality parts, no automotive parts
- High altitude brushes
- High speed bearings
- High temperature varnish on rotor and stator
- No modifications necessary for Retro-fit into any existing Ford style applications
- Two year warranty

P/N 08-07444..... **$782.00**

HARTZELL ES10024 ALTERNATOR



Introducing the brand new ES-10024 28volt / 100amp aircraft alternator. The ES-10024 alternator is a direct replacement for TCM part number 656802.

The ES-10024 is a field proven design that has been in use for over 5 years with thousands of alternators operating on the world's top selling aircraft.

Prestolite Style - FAA/PMA Approved.

Lightweight, cost effective, 2 yr. warranty.

Features:
- Up to 9.6 lbs. weight savings (per engine)
- OEM Direct Replacement
- More power at engine cruise
- Built in noise cancellation
- Rugged design for extreme conditions
- More economical than overhauled units
- Two year warranty

Specifications
- 28 Volt / 100 Amp Prestolite Style
- Replaces TCM part number 656802

P/N 08-07443.....**$1,214.00**

EP

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

HARTZELL ENGINE TECH. ASG ALTERNATORS



NEW HARTZELL ASG SERIES ALTERNATOR

ASG Series alternators were originally developed by Aero Electric and are OEM on several Cessna applications and PMA replacements for out-of-production 24V Ford alternators. The ASG aircraft alternator designs incorporated several improvements over the Ford alternators they replaced.

Model Number	Product & Application Information	Part Number	Price
ASG10001-13-PMA	60A/28V, Small Frame Ford mount eligible to replace Cessna/Ford alternators used on several legacy 28V single engine Cessnas, including 152, 172, 177, 180, 128, 206 and 207. Replaces Ford DOFF10300B (Cessna P/N C611503-0101 and -0102).	07-18003	**$722.00**
ASG10001-17-PMA	60A/28V, Small Frame Ford mount used on Cessna 172R, 172S, 182S and 182T, as well as being eligible to replace Cessna/Ford alternators on legacy 28V, 188 and 207 model Cessnas. Replaces Ford DOFF10300B (Cessna P/N 1570213-7) and Cessna P/N 9910591-5 and -11	07-18004	**$632.00**
ASG10001-18-PMA	60A/28V, Small Frame Ford mount used on Cessna 206H, T206H. Replaces Cessna P/N 9910591-6 and -12	07-18005	**$650.00**
ASG12000-1-PMA	95A/28V, Large Frame Ford mount is eligible on many 28V legacy piston engine Cessnas, including: 182, R182, T182, TR182, A188, T188, U206, TU206, 207, T207, 210, T210, P210, and T303. Replaces Ford E3FF10300AA (Cessna P/N C611505-0102) and Cessna P/N 9910592-1.	07-18006	**$877.00**
ASG12000-2-PMA	95A/28V, Large Frame Ford mount used on all Cessna 208s. Replaces Cessna P/N C611505-0201 and 9910592-2.	07-18007	**$940.00**
ASG12000-3-PMA	95A/28V, Large Frame Ford mount used on Cessna 182S, 182T, T182T, 206H, T206H with 95A option. Replaces Cessna P/N 9910592-3.	07-18008	**$852.00**



OVERHAULED HARTZELL ASG SERIES ALTERNATOR

ASG Series alternators were originally developed by Aero Electric and are OEM on several Cessna applications and PMA replacements for out-of-production 24V Ford alternators. The ASG aircraft alternator designs incorporated several improvements over the Ford alternators they replaced.

Additional core charge added to purchase at time of purchase.

Model Number	Product & Application Information	Acceptable Cores	Part Number	Price
ASG10001-13R	60A/28V, Small Frame Ford mount eligible to replace Cessna/Ford alternators used on several legacy 28V single engine Cessnas, including 152, 172, 177, 180, 128, 206 and 207. Replaces Ford DOFF10300B (Cessna P/N C611503-0101 and -0102).	C611503-0101 & -0102	07-18003-1	**$395.00**
ASG10001-17R	60A/28V, Small Frame Ford mount used on Cessna 172R, 172S, 182S and 182T, as well as being eligible to replace Cessna/Ford alternators on legacy 28V, 188 and 207 model Cessnas. Replaces Ford DOFF10300B (Cessna P/N 1570213-7) and Cessna P/N 9910591-5 and -11	1570213-7, 9910591-5 & -11	07-18004-1	**$373.00**
ASG10001-18R	60A/28V, Small Frame Ford mount used on Cessna 206H, T206H. Replaces Cessna P/N 9910591-6 and -12	99105916 & -12	07-18005-1	**$395.00**
ASG12000-1R-PMA	95A/28V, Large Frame Ford mount is eligible on many 28V legacy piston engine Cessnas, including: 182, R182, T182, TR182, A188, T188, U206, TU206, 207, T207, 210, T210, P210, and T303. Replaces Ford E3F-F10300AA (Cessna P/N C611505-0102) and Cessna P/N 9910592-1.	C611505-0102 & 9910592-1	07-18006-1	**$710.00**
ASG12000-2R-PMA	95A/28V, Large Frame Ford mount used on all Cessna 208s. Replaces Cessna P/N C611505-0201 and 9910592-2.	C611505-0201 & 9910592-2	07-18007-1	**$735.00**
ASG12000-3R-PMA	95A/28V, Large Frame Ford mount used on Cessna 182S, 182T, T182T, 206H, T206H with 95A option. Replaces Cessna P/N 9910592-3.	9910592-3	07-18008-1	**$668.00**

HARTZELL REPLACEMENT PARTS

For a complete listing of Hartzell Starters, Alternators, Turbochargers, Brush Sets, Bolts, Rotors, O-Rings, Bearings, Housings, Screws, Washers, Nuts, Seals, and other replacement parts, please see our website at

WWW.AIRCRAFTSPRUCE.COM

HARTZELL TURBOCHARGERS/ALTERNATOR KITS

Hartzell (HET) is constantly expanding their product lines to meet the ever changing needs of the aviation industry. Their purchase of the RAJAY and Garrett turbochargers, pressure relief valves, wastegates, and controllers makes the your best choice for both new and rebuilt turbocharging systems for all the general aviation aircraft flying today. Factory New, OEM Approved. Rebuilt to Factory New Tolerances. Performance alloys that resist cracking 18 month unlimited hours warranty

HARTZELL TURBOCHARGER

FACTORY NEW TURBOCHARGERS			
Model	Description	Part No.	Price
406610-0005	Turbocharger Assembly; Replaces Cessna C295001-0101	07-02644	$3,329.00
406610-0018	Turbocharger Assembly; Replaces Cessna C295001-0103	07-18099	$2,750.00
406610-0019	Turbocharger Assembly; Replaces CMI 632729-10	07-18100	$3,097.00
406610-0020	Turbocharger Assembly; Replaces Lyc LW-12689	07-18101	$3,135.00
406610-0021	Turbocharger Assembly; Replaces Lyc LW-12950	07-02646	$3,441.00
406610-0025	Turbocharger Assembly; Replaces CMI 632729-11	07-18102	$3,111.00
406610-0026	Turbocharger Assembly; Replaces Lyc LW-15749	07-18103	$3,142.00
406610-0028	Turbocharger Assembly; Replaces CMI 632729-12	07-02380	$3,329.00
406610-0029	Turbocharger Assembly; Replaces CMI 632729-13	07-02381	$3,329.00
406610-0030	Turbocharger Assembly; Replaces Cessna C295001-0501	07-18104	$3,112.00
406610-0031	Turbocharger Assembly; Replaces Lyc LW-19330	07-02654	$3,329.00
407810-0001	Turbocharger Assembly; Replaces CMI 635630	07-18105	$3,275.00
409170-0001	Turbocharger Assembly; Replaces Lyc LW-12463	07-18106	$3,331.00
409680-0011	Turbocharger Assembly; Replaces CMI 640327-11	07-02383	$4,269.00
465292-0004	Turbocharger Assembly; Replaces CMI 642518-4	07-18107	$2,145.00
465680-0004	Turbocharger Assembly; Replaces Cessna C295001-0202	07-02387	$4,165.00
465930-0002	Turbocharger Assembly; Replaces CMI 641672-2	07-18108	$3,535.00
465930-0003	Turbocharger Assembly; Replaces CMI 641672-3	07-18109	$3,434.00
466011-0002	Turbocharger Assembly; Replaces Lyc 46C19836	07-02261	$848.00
466304-0003	Turbocharger Assembly; Replaces CMI 646677	07-18110	$2,969.00
466642-0001	Turbocharger Assembly; Replaces CMI 649151-1	07-18111	$2,462.00
466642-0002	Turbocharger Assembly; Replaces CMI 649151-2	07-18112	$2,314.00
466642-0005	Turbocharger Assembly; Replaces Lyc 46C19839	07-02664	$3,013.00
466642-0006	Turbocharger Assembly; Replaces Lyc 46C22924	07-18113	$2,949.00

SEE OUR WEBSITE FOR A COMPLETE LIST OF TURBOCHARGERS

FACTORY NEW TURBOCHARGERS CONT.			
466881-0001	Turbocharger Assembly; Replaces Lyc 46P22250	07-18114	$3,983.00
CF600572-0000	Turbocharger Assembly; Replaces Roto-Master 600572-0000	07-02386	$4,098.00
CF600573-0000	Turbocharger Assembly; Replaces Roto-Master 600573-0000, CMI 646396	07-02385	$4,141.00
CF600574-0001	Turbocharger Assembly; Replaces Roto-Master 600574-0001	07-18115	$3,412.00
CF600574-0002	Turbocharger Assembly; Replaces Roto-Master 600574-0002	07-18116	$2,512.00
CF600575-0001	Turbocharger Assembly; Replaces Roto-Master 600575-0000	07-18117	$3,306.00
CF600575-0002	Turbocharger Assembly; Replaces Roto-Master 600575-0002	07-18118	$3,306.00
CF600576-0000	Turbocharger Assembly; Replaces Roto-Master 600576-0000	07-18119	$3,812.00

HARTZELL WASTEGATES AND VALVE ASSEMBLIES

Description	Part Number	Price
470842-9003 Hartzell Wastegate	07-02676	$1,899.00
470944-9022 Hartzell Valve Assembly	07-02678	$769.00
470944-9029 Hartzell Valve Assembly	07-02679	$1,325.00
470944-9034 Hartzell Valve Assembly	07-02680	$869.00

HARTZELL TURBO REPLACEMENT PARTS

Description	Part Number	Price
400705-0000 Hartz Pin Spring	07-02683	$1.60
400805-0205 Hartz Bolt Hex Head	07-02684	$0.86
400806-0203 Hartz Bolt	07-02685	$11.80
407169-0006 Hartz Turbine Housing	07-02689	$1,452.00
408049-0002 Piston Ring	07-02690	$6.80
408994-0005 Hartz Comp Wheel - Gar	07-02691	$607.00
409752-0064 Hartz Turbine Housing	07-02692	$1,159.00
441083-0001 Hartz Lockplate	07-02694	$10.50
441977-0025 Hartz Center Housing	07-02695	$2,727.00
442273-0022 Hartz Turbo Housing	07-02696	$1,017.00
443136-0001 Hartz Clamp	07-02697	$4.40
444205-0001 Hartz Nut	07-02698	$3.75
712494-0001 Hartz Thrust Bearing	07-02699	$47.95
CF600385-0000 Hartz Pipe Plug	07-02702	$34.95
CF600511-0006 Hartz Turbine Housing	07-02706	$1,045.00
92203 18mm Grommet	08-92203	$13.75
Bendix Pin	07-01222	$2.85

HARTZELL OVERHAULED ALTERNATOR KITS

Model No.	Description	Part No.	Price
90-3032	For ALE-6406,G; ALE-6420,G; ALE-6520; ALE-8105A; ALE-8406,G; ALE-8408; ALE-8420,G; ALE-8421; ALE-8520; ALE-8521	07-01684	$290.95
90-3035	For ALT-8403; ALT-8404; ALT-8404LS; ALT-8407; ALT-8420; ALT-8421; ALT-8421LS; ALT-8520; ALT-8521; ALT-8521LS	07-01687	$212.95
90-3036	For ALT-9405; ALT-9422; ALT-9522	07-01688	$186.90
90-3037	For ALU-6421LS; ALU-6521LS; ALU-8403; ALU-8403LS; ALU-8421LS; ALU-8521; ALU-8521LS	07-01689	$208.95
90-3038	For ALU-9404L; ALU-9422L; ALU-9522	07-01690	$192.75
90-3039	For ALV-6403LS; ALV-8402,L; ALV-8511; ALV-8512	07-01691	$336.00
90-3040	For ALV-9401; ALV-9401L; ALV-9405L; ALV-9407, S	07-01692	$203.95
90-3042	For ALV-9510	07-01694	$326.00
90-3044	For ALX-8403,G,R,RG; ALX-8403LS,RS,LSG,RSG; ALX-8421,G,R,RG; ALX-8421LS,RS,LSG,RSG; ALX-8521; ALX-8521LS	07-01696	$208.95
90-3045	For ALX-9402	07-01697	$179.80
90-3046	For ALX-9404L,LG,R,RG; ALX-9422L,LG,R,RG; ALX-9424; ALX-9522; ALX-9524	07-01493	$194.75
90-3048	For ALY-6403,G; ALY-6406,G; ALY-6420,G; ALY-6427,G; ALY-6520,G; ALY-6520LS; ALY-6527,G; ALY-8403,G; ALY-8403LS,G; ALY-8410; ALY-8420,G; ALY-8420LS, G; ALY-8423; ALY-8520; ALY-8520LS	07-01495	$209.95
90-3049	For ALY-6408; ALY-6409; ALY-6412; ALY-6421; ALY-6422; ALY-6425; ALY-6521; ALY-6522; ALY-6525; ALY-8402; ALY-8405,G; ALY-8411; ALY-8424; ALY-8426,G; ALY-8523; ALY-8524; ALY-8526	07-01496	$179.75
90-3052	For ES4020	07-01498	$280.95
90-3053	For ES4000; ES4000LS; ES4005; ES4005-2; ES4007; ES4009; ES4009LS; ES4013; ES4013LS; ES4017; ES4018; ES4018LS; ES4023; ES4024; ES4030; ES4031; ES4040	07-01499	$144.99
90-3054	For ES4021; ES4024L; ES4024LP	07-01501	$146.75
90-3055	ES4003; ES4003LS; ES4011; ES4011LS; ES4011-1; ES4011-1LS; ES4014; ES4016; ES4019; ES4019LS; ES4019-2LS; ES4022	07-01502	$421.00
90-3056	For ES4001; ES4002; ES4004; ES4006; ES4008; ES4028; ES4029	07-01503	$125.75
90-3057	For 4111810R	07-01504	$228.95
90-3058	For DOFF10300B; DOFF10300J; EOFF10300BA; E3FF10300BA	07-01505	$125.75
90-3059	For DOFF1030D; DOFF10300E; DOFF10300F	07-01506	$130.75
90-3060	For EOFF10300AA; E3FF10300AA	07-01507	$197.75

Prices Subject to Change Without Notice

HARTZELL STARTER OVERHAUL KITS



HARTZELL STARTER OVERHAUL KITS

After consulting with industry operators, owners and flight schools, it was recognized that downtime is critical in this economy and there is a need to minimize downtime and costs when repairing or replacing Lycoming and Continental starters.

These overhaul kits include all parts necessary for a normal major overhaul, as well as any special tools, lubricants, and thread compounds. In addition, a complete digital Overhaul and Parts manual is included.

The model specific kits cover all starters manufactured by Lamar Technologies/Hartzell in eight different kits. The overhaul manual has been rewritten to highlight tear down and assembly with detailed drawings and instructions. The manual covers all aspects of the rebuild in easily understood steps with tech support just a call or email away. Average time to do a complete overhaul can be accomplished in less than an hour reducing downtime and increase revenue, as well as maintain the quality standards of the maintenance organization.

Description	Part No.	Price
PM1201-OHK - Fits all PM1201/1202 starters	07-01269-1	**$293.95**
PM1203-OHK - Fits all PM1203 starters	07-01270-1	**$302.00**
PM1204-OHK - Fits all PM1204 starters	08-06007-1	**$302.00**
PM2401-OHK - Fits all PM2401/2402 starters	07-01272-1	**$287.95**
PM2403-OHK - Fits all PM2403 starters	07-01273-1	**$296.95**
PM2404-OHK - Fits all PM2404 starters	08-06009-1	**$309.00**
LT-EBB-131A Starter Drive Kit, Lycoming 149T fits all 01 starters	07-01180	**$101.85**
LT-EBB-124A Starter Drive Kit, Lycoming 122T fits all 03 starters	07-01858	**$112.75**
LT-EBB-142A Starter Drive Kit, Lycoming 149T, left hand Rotation fits all 04 starters	07-01899	**$115.75**
OHK-0001 Kit , Tools, OHK, Lycoming fits all OH kits	07-01901	**$41.50**
OHK-0002 Kit, Planetary Gears, 3 ea. Fits all Lycoming starters	07-01902	**$36.50**
OHK-003 Kit, Thru Bolt and Anchor Ring #10 fits all Lycoming starters	07-01903	**$124.75**
OHK-0004 Kit, Brush Assembly, 12V pos. fits all 12 volt starters	07-01904	**$167.75**
OHK-0005 Kit, Brush Assembly, 12V neg fits all 12 volt starters	07-01905	**$165.75**
OHK-0006 Kit, Brush Assembly, 24V pos. fits all 24 volt starters	07-01906	**$164.75**
OHK-0007 Kit, Brush Assembly, 24V neg fits all 24 volt starters	07-01907	**$165.90**
OHK-0008 Kit, Brush Bracket & Spring fits all starters	07-01908	**$23.50**
OHK-0009 Kit, Hardware, Starter, Lycoming	07-01909	**$25.50**
OHK-0010 Kit, Fasteners, Starter, Lycoming	07-01910	**$20.65**
Accessories		
Description	**Part No.**	**Price**
2305002 Armature, 12V, Lycoming	07-01911	**$148.75**
5005001 Assy, Starter Nose	07-01914	**$310.00**
9301004-F 12/24V Starter Bearing OH Kit	07-01183	**$106.95**
5101002 Support, Intermediate, Shaft	07-01915	**$70.75**
5201003 Case, Motor, Lycoming	07-01916	**$82.00**
5301001 End Bell	07-01917	**$38.85**
5401001 Shield Grease	07-01918	**$9.95**
6301003 Label, Starter Drive Maintenance	07-01919	**$2.57**
7801008 Washer, Wave	07-01920	**$4.40**
9005001 Assy, Flux Ring, Lycoming, Complete	07-01921	**$348.00**



FALCON CHRYSLER ALTERNATORS

Chrysler series 12 volt alternators are available in 37, 40 and 60 amp versions. Common part numbers are 2642996, 2642997, 3656623, 3656624, and 4111810.

Model No.	Description	Part Number	Price
2098615	12V/37A B	08-10682	**$293.95**
2098640	12V/37A B	08-10683	**$294.95**
2642197	12V/60A B	08-10684	**$293.95**
2642210	12V/60A B	08-10685	**$294.95**
2642995	12V/37A B	08-10686	**$296.95**
2642997	12V/60A B	08-10687	**$295.00**
4111810	12V/60A B	08-10689	**$299.95**

PLANE POWER LIGHTWEIGHT ALTERNATORS

PMA APPROVED ALTERNATOR REPLACEMENTS



Plane-Power Certified Alternators are PMA certified to replace any existing alternator in the aircraft and engine applications listed below. No STC paperwork required. All Plane-Power PMA alternators produce up to 70 amps. Your airframe/application may use only a portion of the available output as limited by the aircraft electrical system components and design. Every Plane-Power alternator is tested to exceed all quality and performance specifications. Plane-Power PowerFlex Voltage Regulators are also available separately.

Model	Brackets included	Part No.	Price
AL12-F60	No	07-00998	**$515.00**
AL24-F60	Yes	07-00999	**$529.00**
AL12-F60C	No	07-01256	**$495.00**
AL24-F60C	No	07-01257	**$529.00**
AL24-FS60	No	07-01491	**$597.00**
AL12-P70	No	07-01001	**$529.00**
AL24-P70	No	07-01002	**$549.00**
AL12-70	Yes	07-01258	**$619.00**
AL24-70	Yes	07-01259	**$609.00**
C28-150	N/A	07-01838	**$1,417.00**

American Champion	OEM Part #	Model #
7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	ALY-8420	AL12-P70
Beechcraft	**OEM Part #**	**Model #**
19A, B19, M19A, 23, A23-19, A23-24, B23, C23, A24, A24R, B24R, C24R	33-380009-1	AL12-F60
19A, B19, M19A, 23, A23-19, A23-24, B23, C23, A24, A24R, B24R, C24R	ALE-8105A / ALE-8406	AL12-P70
76 Duchess, 77Skipper	ALY-8420	AL12-P70
76 Duchess	ALU-8421	AL24-P70
B19, C19, C24R	ALU-8421R	AL24-P70
Cessna	**OEM Part #**	**Model #**
177, 177A, 177B	C611501-0101	AL12-F60
172I, K, L, M, N, P, 177, 177A, 177B, 177RG	C611501-0102	AL12-F60
P206A, P206B, P206C, P206D, P206E, U206, U206A, U206B, U206C, U206D, U206E, TP206A, TP206B, TP206C, TP206D, TP206E, TU206B, TU206C, TU206E, 207, T207, 210B, 210C, 210D, 210E, 210F, T210F, T210G, T210H, T210J	C611501-0101	AL12-F60C
180H, 180J, 180K, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 185E, A185E, A185F, 188, P206C, U206C, U206D, U206E, U206F, U206G, TP206C, TU206B, TU206C, TU206E, TU206F, TU206G, 207, T207	C611501-0102	AL12-F60C
180H, 182G, 182H, 185D, 210E	0750217-1	AL12-F60C
188, A188, A188A, A188B, 210K, T210K, 210G, 210H	1570213-6	AL12-F60C
152, A152, 172M, 172N, 172P, 172Q, 172RG, 177B, 177RG, R182, TR182	C611503-0102	AL24-F60
180J, 180K, 182P, 182Q, 182R, T182, U206E, U206F, U206G, TU206E, TU206F, TU206G, 207, T207, 210K, 210L, 210M, 210N, 210R, P210N, P210R, T210K, T210L, T210M, T210N, T210R, A185F, 207A, T207A	C611503-0102	AL24-F60C
188, 188A, 188B, A188, A188A, A188B, T188C, 207, T207	1570213-7	AL24-F60C
172R, 172S, 182S*, 182T*, T182T*	9910591-5	AL24-FS60
*S/N182001(1997) through 18281197(2004)	9910591-11	
Commander	**OEM Part #**	**Model #**
112, 112B, 112TC, 112TCA, 114, 114A, 114B, 114TC	LW14316	AL12-P70

Twin Commander Aircraft Corporation	OEM Part #	Model #
500-S	78314	AL24-P70
Diamond Aircraft Industries GmbH	**OEM Part #**	**Model #**
DA-40	ALU-8421LS	AL24-70*
Grumman (Gulfstream, Tiger)	**OEM Part #**	**Model #**
AA-1, AA-1A, AA-1B, AA-1C	ALE-6420 / ALY-6420 LW-14310	AL12-P70
AA-5, AA-5A, AA-5B, AG-5B, GA-7	DOFF-10300J	AL12-F60
AG-5B	ALU8421LS	AL24-P70
Mooney	**OEM Part #**	**Model #**
M20C, M20E, M20F, M20G, M20J	ALY-8420 / ALX-8403	AL12-P70
Mooney (cont.)	**OEM Part #**	**Model #**
M20J	ALU6421LS	AL24-P70
M20M (Single alternator installations only)	ES-4009LS	AL24-P70
Piper (Without Airconditioning)	**OEM Part #**	**Model #**
PA-44-180, PA-44-180T	751 346	AL12-P70
PA-28-151, PA-32R-301 (SP), PA-32-301T, PA-32R, 301(HP), PA-32R-301T (SP), PA-32-301, PA-34-200, PA-38-112	551-984	AL12-P70
PA-24-260	ALX8403	AL12-70
PA-23-235, PA-23-250	ALX8403	AL12-P70
PA-23-235, PA-23-250	ALU-8403	AL24-P70
PA-44-180, PA-44-180T	ALX8421LS	AL12-P70
PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-180, PA-28-235, PA-28R-180, PA-28R-200, PA-32-260, PA-32-300, PA-32R-300	69670-00 (60 amp)	AL12-C60
PA-28-140, PA-28-151, PA-28-161, PA-28-180, PA-28-235, PA-28R-200, PA-32-300, PA-32R-300	69670-03 (60 amp)	AL12-C60
PA-28-151, PA-28-161, PA-28-181, PA-28-236, PA-28R-201, PA-28RT-201, PA-32-300, PA-32R-300, PA-32RT-300, PA-32RT-300T	69670-04 (60 amp)	AL12-C60
Vulcanair, S.P.A	**OEM Part #**	**Model #**
P68, P68B, P68C, P68C-TC, P68 "OBSERVER", P68TC "OBSERVER", P68 "OBSERVER 2"	ALU-8421LS	AL24-P70

EP

For Lycoming engines 235, 320, 360, 540, 720 and Superior engines O-360, IO-360, Plane-Power alternators AL12-P70, AL12-70*, and AL24-70* replace Lycoming and Superior certified 70amp alternators: LW14300, LW14302, LW14308, LW14310, LW14316, LW14319, LW14322, LW14324. *Comes with all new Plane-Power mounting brackets and hardware.

PLANE POWER LIGHTWEIGHT C14-100 ALTERNATOR



The Plane Power alternator can produce all 100 amps if proper size wiring, ammeter and circuit breaker are installed and approved. PMA replacement, requires only a log book entry. Aircraft electrical system will be limited by existing wiring and output circuit breaker. Weight: 13 Pounds. Warranty: 2-Year Limited. 14 volt, 100 amp alternator. Replaces Hartzell/Kelly, Crittenden, TCM 50 – 100amp alternators on TCM 520 and 550 Series engines. See www.aircraftspruce.com for complete application chart. P/N 07-01948 ..... **$1,391.00**

ALT FLX UNIVERSAL LIGHTWEIGHT STC ALTERNATOR



The ALT FLX 100 Amps (14V)/150 Amps (28 V) at 12.5 pounds is precision balanced with dual internal cooling fans, built in noise filter and provides 70 Amps at engine idle speeds. This externally regulated alternator is a direct DOFF series alternator replacement and the STC allows for generator to alternator conversion. It is available for STC installation on most aircraft and helicopters. Optional Lycoming and Continental mounting kits are available along with multi-groove and v-belt pulleys.

Accessories/Options	Part No.	Price
Plane-power Flx Lyc Case Mount Install Kit	07-02462	**$141.75**
Accessories/Options	**Part No.**	**Price**
Plane-power Flx Lyc Boss Mount Install Kit	07-02463	**$151.90**
Plane-power Flx Cont Install Kit	07-02464	**$347.00**

Plane-power Flx Install Kit Multi-groove	07-02688	**$139.95**
Plane-Power Lightweight Alternator Bracket	07-17782	**$39.50**

PMA CONTINENTAL ALTERNATOR REPLACEMENT



The C28-150 is PMA FAA eligible on most Continental 520 and 550 Series engines with front mounted gear driven alternators. This Spectacular alternator in addition to providing a continuous 150A at X RPM will deliver 60A at 1000 RPM and weighing only 12.6 lbs! Also available without debris shield sold as model C28-150S. ..... P/N 07-01838 ..... **$1,417.00**

LIGHTWEIGHT EXPERMENTAL ALTERNATORS

Unlike automotive alternators, all Plane-Power Experimental Alternators are specifically engineered for Airplane Engines and have Dual Internal Fans designed for Airplane Engine Rotation the same as our Certified Alternators. 2 year warranty,



The ***AL12-EI60*** kit comes with an internally regulated ultra compact lightweight AIRCRAFT alternator (6.9 lbs.) with an exclusive internal crowbar over-voltage protection circuit. The alternator is fully pilot controllable through unique internal wiring. The dual internal fans are designed for aircraft engine rotation for maximum cooling. The AL12-EI60 kit includes the tension arm, mounting brackets, required AN hardware. 10 lb. 70amp also available. Also available 70 amp version only 2 additional lbs.

The ***AL12-EI60-L*** , Plane Power's 60A LSA alternator which must be installed in combination with Sky-Tec LSA starter, provides the industry's lightest charging/starting package at 13.2 lbs. for Lycoming's O-233, O-235, O-290, O-320 engines. Sky-tec starter to be purchased separately. Fits engines with 122 tooth ring gear and case mount engines.



The ***EX14-50*** 12/14 volt, 50 amp, internally regulated alternator with built-in Over-Voltage protection for use in EXPERIMENTAL Aircraft with small block Continental Engines. Includes Pre-Wired Enable Plug and Gaskets. Note: Overall Diameter: 4.4", Overall Length: 6". Use your existing drive gear and coupling. New gear and coupling also available separately. Warranty: 2-Year Limited Weight: 6.8 Pounds.



The ***FS1-14 Fly Safe*** back up alternator, internally regulated (13.6 volt +-0.3) with built-in overvoltage protection. Designed for use in experimental aircraft. FS1-14. Features a 30A continuous output, precision internal voltage regulator, fail-safe Over Voltage Protection, Shear Coupling Assembly, 6lbs installed weight, higher level of safety. 2-Year Limited Warranty. Weight: 6 Pounds. 12 volt/30 amp. Also available as a primary unit sold as model FS1-14B.

Model	Output	Voltage	Part No.	Price
AL12-EI60/B (Boss Mount)	60	12	07-01313	**$489.00**
AL12-EI60/C (Case Mount)	60	12	07-01313-1	**$500.00**
AL12-EI70/B (Boss Mount)	70	12	07-01414	**$504.00**
AL12-EI70/C (Case Mount)	70	12	07-01414-1	**$504.00**
AL12-EE70/B (Boss Mount)	70	12	07-01005	**$567.00**
AL24-EE70/B (Boss Mount)	70	24	07-01006	**$570.00**

Model	Output	Voltage	Part No.	Price
AL12-EE70/C (Case Mount)	70	12	07-01005-1	**$569.00**
AL24-EE70/C (Case Mount)	70	24	07-01006-1	**$560.00**
EX14-50	50	12	07-01268	**$665.00**
AL12-EI60-L	60	12	07-01839	**$484.00**
FS1-14 Fly Safe	30	12	07-01857	**$829.00**
FS1-14B	30	14.2	07-01883	**$823.00**

PLANE POWER CONVERSION KITS

BELT DRIVEN GENERATOR CONVERSIONS

Aircraft Parts & Development	Plane-Power
Intermountain (Callair) A, A-2, A-4, A-5, A-5T, A-9, A-9B	SAL12-70
Alexandria Aircraft, L.L.C.	
Bellanca 14-19-2, 14-19-3, 14-19-3A	SAL12-70C
Cessna Aircraft Co.	
180, 180A, 180B, 180C, 180D, 180E, 180F, 180G,	SAL12-70C
182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H,	SAL12-70C
185, 185A, 185B, 185C, 185D	SAL12-70C
210, 210A, 210-5 (205), 210-5A (205A)	SAL12-70C
206, P206	SAL12-70C
Cessna 310, 310A, 310B, 310C*, 310D*, 310E*, 310F*, 310G, 310H, 310I, 310J, 310K *10-9006 kit may be required for installation. View installation instructions online for further information	TAL24-70C
Fred Garcia	
Camair 480	TAL24-70C
FS 2003 Corporation (Piper)	
Piper PA-12, PA-12S	SAL12-70
Hawker Beechcraft Co.	
Beech H35, J35, K35, M35, N35, P35, 35-33, 35-A33, 35-B33, 35-C33	SAL12-70C
23	SAL12-70
Beech Baron 95-55, 95-A55, 95-B55, 95-B55A	TAL24-70C
Beech Travelair 95, B95, B95A, D95A, E95	TAL24-70
Helio Aircraft, LLC	
Helio H-250	SAL12-70
Helio 500	TAL12-70
KWAD Co.	
Super-V	TAL12-70
Latinoamerican De Aviacion	
Piper PA-25, PA-25-235, PA-35-260	SAL12-70
Lockheed Aircraft Corp.	
402-2	SAL12-70C
Mooney Airplane Company	
M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G	SAL12-70
Piper Aircraft, Inc.	
Piper PA-16, PA-16S	SAL12-70
Piper PA-18, PA-18S, PA-18 “105” (SPECIAL), PA-19S	SAL12-70
PIPER PA-18A, PA-18 “125” (Army L-21A), PA18S “125”, PA-18AS “125”, PA-18 “135” (Army L-21B), PA18A “135”, PA-18S “135”, PA-18AS “135”, PA-18 “150”, PA-18A “150”, PA18S “150”, PA-18AS ‘150”, PA-19 (Army L-18C), PA-20, PA-20S, PA-20-“135”, PA-22, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160 (When modified with FAA Approved rear mounted oil cooler)	SAL12-70
Piper PA-20-“115”, PA-205-“115”	SAL12-70
Piper PA-22-108	SAL12-70
Piper PA-24, PA-24-250, PA-24-260, PA-24-400	SAL12-70
Piper PA-28-140, PA-28-150, PA-28-160, PA-28-180, PA-28-235, PA-28S-160, PA-28S-180	SAL12-70
Piper PA-23, PA-23-160, PA-23-235, PA-23-250, PA-E23-250	TAL12-70
Piper PA -30	TAL12-70
Prop-Jets Inc.	
Meyers 200, 200A, 200B, 200C, 200D	SAL12-70C
Raytheon Aircraft Co.	
35, A35, B35, C35, D35, E35, F35, G35, 35R, modified by STC conversion to O-470 or IO-470 engine.	SAL12-70C
Revo, Inc.	
Colonial C1, Colonial C2, Lake LA-4, LA-4A, LA-4P	SAL12-70
Sierra Hotel Aero, Inc.	
Navion D, E, F,G, H, and Navion (L-17A), Navion A (L-17-B & L-17C), B modified by STC conversion to O-470 or IO-470	SAL12-70C
Twin Commander Aircraft Corporation	
500A	TAL24-70C
500, 500-B, 500-U	TAL24-70

GEAR DRIVEN GENERATOR CONVERSIONS

Ad Aerospace	Plane-Power
T-211	ER14-50
Aerodifusion	
D-1190S	ER14-50
Aeromca (Burl A. Rogers)	
15AC, S15AC	ER14-50
Aircraft Parts & Development	
A-3	ER14-50
All American	
10A	ER14-50
American Champion	
402, 7EC, 7ECA, 7FC, 7JC, S7EC	ER14-50
Hawker Beechcraft	
35, 35R, 45 (YT-34), A35, B35, C35*, D35*, E35*,F35*, G35*, (*When equipped with E225-8 Engine)	ER14-50
Cessna	
120, 140, 140A, 150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, 150M, A150M, 170, 170A, 170B, 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H	ER14-50
Commonwealth Aircraft	
185	ER14-50
Edward Scott Kerns	
Trojan A-2	ER14-50
FA 2001	
J5A (Army L-4F) (when equipped with C75-12 Engine)	ER14-50
Swift Museum Foundation	
GC-1A, GC-1B	ER14-50
Goodyear	
GA-22A	ER14-50
Helio Aircraft	
15A (when equipped with C145-2 Engine)	ER14-50
Avion Jodel	
150, D-1190, DR-1050 ER14-50	ER14-50
The Don Luscombe Aviation History Foundation	
8E, 8F, T-8F	ER14-50
Maule Aircraft Company	
BEE DEE M-4, M-4, M-4C, M-14S, M4T, M-4-210, C, S, T, M-5-210C	ER14-50
Thomas H. McClish	
B85C	ER14-50
Micco Aircraft Company	
MAC-125C. MC-145	ER14-50
S.O.C.A.T.A	
(Ralley) Series 100S, Rallye Series MS 880B, Rallye Series	ER14-50
Navion	
(Army L-4),(Army L-17B and L-17C)	ER14-50
Piper	
J3C-35* (Army L-4), L-4A*, L-4B (Navy NE-1*), L-4H*, L-4J*(Navy NE-2*)), J3C-65S*, -4A**, J4E* (Army L-4E), PA-18, PA-19, PA-18S***, PA-19S*** (When equipped with (*C75-12)(**C85-12)(***C90-12F)Engine) PA-28-201T, PA-28R-201T, PA-28RT-201T, PA-34-200T, PA-34-220T	ER14-50
Quartz Mountain Aerospace	
11A	ER14-50
Superior	
(Culver) V, (Culver) V-2	ER14-50
Taylorcraft Aviation	
BC-12D-4-85, BCS12D-4-85	ER14-50
Univair Aircraft	
(Alon) A-2, (Alon) A-2A, (Forney) F-1, (Forney) F-1A, (Mooney) M10, ERCO 415-C*, ERCO 415-CD*, ERCo 415-D, ERCO E, ERCO G, (*When equipped with C75-12, C75-12F, C85-12 or C85-12F Engine)	ER14-50

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PLANE POWER CONVERSIONS & REGULATORS

PLANE-POWER LIGHTWEIGHT STC GENERATOR TO ALTERNATOR CONVERSIONS



BELT DRIVEN - Include hardware and brackets to replace your existing generator and regulator. Plane-Power STC Belt Driven Generator Conversions allow for increasing the size of the output wire and circuit breaker to allow for a maximum of 70 amps of output. All Plane-Power alternators feature dual internal fans specially designed for aircraft engine rotation to maximize cooling. Models available for both 12 and 24 volt as well as for both Lycoming and Continental installations.

Model	Output	Voltage	Part No.	Price
SAL12-70	70 (max)	12	07-01301	**$784.00**
SAL12-70C	70 (max)	12	07-01299	**$833.00**
TAL12-70	70 (max)	12	07-01302	**$1,620.00**

Model	Output	Voltage	Part No.	Price
TAL24-70	70 (max)	24	07-01304	**$1,673.00**
TAL24-70C	70 (max)	24	07-01303	**$2,095.00**
Mounting Kit for SAL12-70C.....			P/N 07-03577.....	**$333.00**

GEAR DRIVEN - Plane-Power Gear Driven Generator to Alternator Conversion Kits replace your existing generator with an alternator which will provide higher output at lower rpm and allow for increasing the size of the output wire and circuit breaker to allow for a maximum of 50 amps of output. The ER14-50 uses your existing gear assembly. The entire gear assembly (ER14-GR) may be purchased separately. Some older generators have larger diameter (5/8") shafts and require the gear support kit (G-Pack). Please call for details. The ER14-50 weighs 6.9 lbs and comes with a pre-wired enable plug, 50 amp gear driven alternator, alternator inoperative lamp, Seals and R1224B Power-Flex voltage regulator.

Model	Output	Voltage	Part No.	Price
ER14-50	50 (max)	12	07-01321	**$759.00**
Accessories				
Gear Drive designed for use with the ER14-50			07-01348	**$97.85**



PLANE-POWER ALTERNATOR VOLTAGE REGULATORS



R1224

Plane-Power Power-Flex Voltage Regulators are FAA-PMA Approved. Available for most certified aircraft. Solid-state voltage regulators with over-voltage protection, field short (over current) protection, and reverse battery protection. Plane-Power Power-Flex voltage regulators also support precision load sharing for twin applications and an alternator inoperative lamp. Power-Flex voltage regulators are designed to be setup in the field for 14 or 24 volt operation by a simple placement of the two internal jumpers. For smaller mounting placement on the R1224, installation aid 12-1021 may be used.



R1224B

Model	Description	Voltage	Part No.	Price
R1224	Replaces many Ford, Electrodelta, Prestolite, Interav, Wico, and FVR voltage regulators.	14V or 28V	07-01305	**$184.75**
R1224B	Replaces voltage regulators on twin Cessnas, Beechcraft, and Vulcanair .	14V	07-01306	**$184.75**
12-1021	Adapter Plate - Visit our website for a list of common aircraft in need of this adapter.	---	07-03532	**$28.70**

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AMBER LIGHT INDICATORS FOR THE HARTZELL ER14-50



14V.....P/N 08-14616..... **$49.95**
28V.....P/N 08-14617..... **$58.75**

GEAR ADAPTER KIT G-PACK



Required for use with the existing drive gear when the generator shaft is over 0.5" in diameter. Uses existing gear from replaced generator.

Description	Part No.	Price
Gear Adapter Kit # G-Pack	07-01348	**$97.85**

REPLACEMENT SEAL FOR HARTZELL ER14-50

ER14-50.....P/N 08-14618..... **$34.50**

PLANE POWER ALTERNATORS ONLY - WITHOUT MOUNTING KIT



Plane-Power alternators are FAA PMA certified to replace the vast majority of popular general aviation alternators. Plane-Power also manufactures an alternator kit for experimental aircraft applications that comes complete with required brackets, spacers, internal cooling, voltage regulation (choice of internal or external), and over-voltage protection. Plane-Power alternators are warrantied for 2-years against component failures.

Volts/Amps	Model	PN	Price
12/70	AL12-70, AL12-P70	07-17755	**$453.00**
12/70	AL12-C60, SAL12-70, TAL12-70	07-17756	**$439.00**
12/70	AL12-F60	07-17757	**$439.00**
12/70	AL12-F60C, SAL12-70C	07-17758	**$439.00**
12/70	AL12-EI60-L, AL12-EI60/B, AL12-EI60/C	07-18016	**$526.00**
24/70	AL24-70P, AL24-70	07-17759	**$458.00**
24/70	AL24-F60	07-17760	**$439.00**
24/70	AL24-FS60	07-17761	**$445.00**
24/70	AL24-F60C, TAL24-70C	07-17762	**$439.00**
24/70	AL12-70, AL12-P70	07-18054	**$439.00**
12/50	ER14-50	07-19404	**$531.00**

PLANE POWER REBUILT FLX ALTERNATOR



Description	Part Number	Price
ALT-FLX-1-FR	07-19187	**$1,376.00**
ALT-FLX-2-FR	07-19188	**$1,698.00**
ALT-FLX-3-FR	07-19189	**$1,528.00**
ALT-FLX-4-FR	07-19190	**$1,563.00**
ALT-FLX-5-FR	07-19191	**$1,392.00**
ALT-FLX-6-FR	07-19192	**$1,655.00**
ALT-FLX-7-FR	07-19193	**$1,528.00**
ALT-FLX-8-FR	07-19194	**$1,393.00**
ALT-FLX-9-FR	07-19195	**$1,291.00**

HARTZELL 10-4099 ALTERNATOR MOUNTING KIT - Hartzell 10-4099 mounting kit for Al12-F60 & Al24-F60 alternators. P/N 07-19371 ....**$160.75**

PLANE POWER LIGHTWEIGHT ALTERNATOR BRACKET 10-1099 - Plane Power Lightweight Alternator Bracket. P/N 07-19416 ....**$173.75**

PLANE POWER C28-150 ALTERNATORS



- Dual cooling fans ensure effective cooling and unmatched durability even in low engine RPM/high output installations.
- Compact size simplifies installation and ongoing inspections.
- FAA-PMA approved, no STC required for installation.

Plane-Power C28-150 line of FAA-PMA certified, 28V/150 Amp high output, gear-driven alternators. These factory-rebuilt units will carry the same two-year warranty offered on every new Plane-Power alternator.

The Plane-Power C28-150 gear-driven alternators deliver more continuous power at lower engine RPMs than any other aircraft alternator. Aircraft owners with high electrical demand during ground operations; such as those with sophisticated avionics suites or electrically-driven air conditioning systems, will appreciate the abundant electrical power they will get at idle with these Plane-Power alternators.

C28-150-FR With Debris Shield .....P/N 07-18127 ..... **$1,484.00**
C28-150S-FR without Debris Shield.....P/N 07-18128 ..... **$1,445.00**

PLANE POWER C14-100 ALTERNATORS



- Dual cooling fans ensure effective cooling and unmatched durability even in low engine RPM/high output installations.
- Compact size simplifies installation and ongoing inspections.
- FAA-PMA approved, no STC required for installation.

Plane-Power C14-100 line of FAA-PMA certified, 24V/150 Amp high output, gear-driven alternators. These factory-rebuilt units will carry the same two-year warranty offered on every new Plane-Power alternator.

The Plane-Power C14-100 gear-driven alternators deliver more continuous power at lower engine RPMs than any other aircraft alternator. Aircraft owners with high electrical demand during ground operations; such as those with sophisticated avionics suites or electrically-driven air conditioning systems, will appreciate the abundant electrical power they will get at idle with these Plane-Power alternators.

C14-100-FR With Debris Shield .....P/N 07-18125 ..... **$1,439.00**
C14-100S-FR without Debris Shield.....P/N 07-18126 ..... **$1,445.00**

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

AEROTECH OVERHAULED ALTERNATORS



Aerotech of Louisville specializes in the overhaul, repair and distribution of general, corporate and military aviation charging and starting system accessories.

AEROTECH CESSNA OVERHAULED ALTERNATORS

Mfr. PN	Volts	Amps	Drive	Part No.	Price	Core
9910591-1	28V	60A	Belt	08-14718	**$369.00**	**$200.00**
9910591-7	28V	60A	Belt	08-14719	**$288.95**	**$200.00**
9910591-11	28V	60A	Belt	08-14720	**$288.95**	**$200.00**
9910591-12	28V	60A	Belt	08-14721	**$287.95**	**$200.00**
9910591-13	28V	60A	Belt	08-14722	**$287.95**	**$200.00**
9910592-1	28V	95A	Belt	08-14723	**$425.00**	**$300.00**
9910592-2	28V	95A	Belt	08-14725	**$426.00**	**$300.00**

AEROTECH TCM OVERHAULED ALTERNATORS

Mfr. PN	Volts	Amps	Drive	Part No.	Price	Core
642055	24V	60A	Gear	08-14726	**$714.00**	**$450.00**
642056	24V	100A	Gear	08-14727	**$714.00**	**$425.00**
646490	24V	60A	Gear	08-14728	**$714.00**	**$450.00**
646491	24V	100A	Gear	08-14729	**$714.00**	**$425.00**
646842	24V	100A	Gear	08-14730	**$714.00**	**$425.00**
649283	24V	70A	Belt	08-14731	**$425.00**	**$200.00**
649304	24V	100A	Gear	08-14732	**$714.00**	**$425.00**
653344	24V	70A	Gear	08-14733	**$483.00**	**$300.00**

AEROTECH CHRYSLER OVERHAULED ALTERNATORS

Mfr. PN	Volts	Amps	Drive	Part No.	Price	Core
2098615	12V	37A	Belt	08-14734	**$337.00**	**$200.00**
2098640	12V	37A	Belt	08-14735	**$337.00**	**$150.00**
2642197	12V	60A	Belt	08-14738	**$337.00**	**$200.00**
2642210	12V	60A	Belt	08-14739	**$432.00**	**$150.00**
2642995	12V	37A	Belt	08-14740	**$337.00**	**$200.00**
2642996	12V	37A	Belt	08-14741	**$337.00**	**$200.00**
3656623	12V	40A	**Belt**	08-14742	**$337.00**	**$200.00**
2642997	12V	60A	**Belt**	08-07034	**$433.00**	**$200.00**

AEROTECH DELCO REMY OVERHAULED ALTERNATORS

Mfr. PN	Volts	Amps	Drive	Part No.	Price	Core
1100652	12V	52A	**Gear**	08-14743	**$337.00**	**$175.00**
1100660	12V	70A	**Belt**	08-14744	**$337.00**	**$175.00**
1100667	12V	70A	**Gear**	08-14745	**$337.00**	**$175.00**
1100715	12V	70A	**Gear**	08-14746	**$338.00**	**$175.00**
1100716	12V	52A	**Gear**	08-14747	**$337.00**	**$175.00**
1100717	12V	70A	**Belt**	08-14748	**$337.00**	**$175.00**
1100718	24V	**50A**	**Belt**	08-14749	**$338.00**	**$175.00**
1100723	24V	**50A**	**Gear**	08-14751	**$337.00**	**$175.00**
1100747	24V	**50A**	**Belt**	**08-14752**	**$432.00**	**$175.00**
1100753	24V	**65A**	**Gear**	**08-14753**	**$432.00**	**$175.00**
1100792	24V	**65A**	**Belt**	**08-14754**	**$432.00**	**$175.00**

AEROTECH ELECTROSYSTEMS OVERHAULED ALTERNATORS

Mfr. PN	Volts	Amps	Drive	Part No.	Price	Core
ALH-5520	12V	55A	Belt	08-14755	**$522.00**	**$175.00**
ALU-8539LS	28V	75A	Belt	08-14756	**$556.00**	**$200.00**
ALY-8523R	12V	60A	Belt	08-14757	**$509.00**	**$225.00**
ALY-8524R	12V	60A	Belt	08-14758	**$508.00**	**$225.00**
ALY-8526R	12V	60A	Belt	08-14760	**$508.00**	**$225.00**
ALZ-8523R	12V	50A	Belt	08-14761	**$508.00**	**$225.00**

AEROTECH FORD OVERHAULED ALTERNATORS

Mfr. PN	Volts	Amps	Drive	Part Number	Price	Core
C6115030103	28V	60A	Belt	08-14763	**$287.95**	**$150.00**
DOFF10300AA	28V	95A	Belt	08-14764	**$544.00**	**$300.00**
DOFF10300A	28V	60A	Belt	08-14765	**$287.95**	**$150.00**
DOFF10300C	28V	60A	Gear	08-14766	**$357.00**	**$200.00**
DOFF10300G	28V	38A	Gear	08-14767	**$357.00**	**$200.00**
DOFF10300H	14V	60A	Gear	08-14768	**$356.00**	**$200.00**
DOFF10300M	14V	60A	Belt	08-14769	**$288.95**	**$150.00**

AEROTECH PRESTOLITE OVERHAULED ALTERNATORS

Mfr. PN	Volts	Amps	Drive	Part Number	Price	Core
ALV-6403	24V	100A	Belt	08-14770	**$815.00**	**$1500.00**
ALV-8402	24V	100A	Belt	08-14771	**$815.00**	**$1500.00**
ALV-8511	24V	100A	Belt	08-14772	**$815.00**	**$1500.00**
ALV-8512	24V	100A	Belt	08-14774	**$815.00**	**$1500.00**
ALV-9401	24V	100A	Gear	08-14773	**$693.00**	**$475.00**
ALV-9405	24V	100A	Gear	08-14775	**$693.00**	**$475.00**
ALV-9406	24V	100A	Gear	08-14776	**$693.00**	**$475.00**
ALV-9407	24V	100A	Gear	08-14777	**$693.00**	**$475.00**
ALV-9510	24V	100A	Gear	08-14779	**$693.00**	**$475.00**

NOTE:
Exchange prices are shown.
Core charges apply to all units.

EP

AEROTECH OVERHAULED GENERATORS



Delco Generators are overhauled using only FAA approved components. In stock or have the capability to overhaul almost every 12 or 24 volt Declo-Remy Aircraft Generator. Each unit is tested to manufacturer's original operating specs before it leaves our facility.
Shipments will include domestic 8130 form.
Attention: Should a core unit not be available in stock with factory; at time of order customer must ship in core to be overhauled.
Ship to: 225 Airport Circle, Corona Ca. 92880

AEROTECH DELCO OVERHAULED GENERATORS

Model No.	Volts	Amps	Drive	Part No.	Price	Core
1101881	12V	13A	Gear	08-14780	**$279.95**	**$125.00**
1101884	24V	15A	Belt	08-14781	**$278.95**	**$150.00**
1101885	12V	36A	Gear	08-14782	**$278.95**	**$200.00**
1101886	12V	26A	Gear	08-14783	**$278.95**	**$200.00**
1101887	12V	35A	Gear	08-14784	**$278.95**	**$200.00**
1101889	24V	15A	Belt	08-14785	**$278.95**	**$150.00**
1101890	12V	20A	Gear	08-14786	**$278.95**	**$200.00**
1101893	24V	15A	Belt	08-14787	**$278.95**	**$150.00**
1101895	12V	50A	Belt	08-14788	**$297.95**	**$150.00**
1101896	12V	20A	Belt	08-14789	**$278.95**	**$150.00**
1101903	24V	15A	Belt	08-14790	**$297.95**	**$150.00**
1101907	24V	25A	Belt	08-14791	**$297.95**	**$175.00**
1101908	12V	50A	Gear	08-14792	**$297.95**	**$200.00**
1101909	12V	50A	Belt	08-14793	**$297.95**	**$150.00**
1101916	24V	15A	Belt	08-14794	**$297.95**	**$150.00**
1101919	12V	20A	Gear	08-14795	**$278.95**	**$200.00**
1101920	24V	25A	Belt	08-14796	**$297.95**	**$150.00**
1101921	24V	15A	Belt	08-14797	**$297.95**	**$150.00**
1101923	15V	50A	Belt	08-14798	**$297.95**	**$150.00**
1105052	24V	40A	Belt	08-14799	**$366.00**	**$250.00**

AEROTECH PRESTOLITE OVERHAULED STARTERS

Model No.	Voltage	Part No.	Price	Core
MCL-6502	12	08-14838	**$519.00**	**$250.00**
MCL-6503	12	08-14839	**$405.00**	**$250.00**
MDB-6101	24	08-14840	**$405.00**	**$200.00**
MHB-4001	24	08-14841	**$405.00**	**$175.00**
MHB-4002	24	08-14842	**$405.00**	**$175.00**
MHB-4003	24	08-14843	**$405.00**	**$175.00**
MHB-4015	24	08-14844	**$385.00**	**$200.00**
MHB-4019A	24	08-14845	**$405.00**	**$175.00**
MHB-4019R	24	08-14846	**$405.00**	**$175.00**
MHB-4020	24	08-14847	**$405.00**	**$175.00**
MHJ-4002	24	08-14848	**$323.00**	**$200.00**
MZ-4203	12	08-14849	**$307.00**	**$175.00**
MZ-4204	12	08-14850	**$307.00**	**$150.00**
MZ-4205	12	08-14851	**$357.00**	**$175.00**
MZ-4206/4222	12	08-14852	**$357.00**	**$175.00**
MZ-4207	12	08-14853	**$357.00**	**$175.00**
MZ-4216	12	08-14854	**$357.00**	**$175.00**
MZ-4217	12	08-14855	**$357.00**	**$175.00**
MZ-4218	12	08-14856	**$357.00**	**$175.00**
MZ-4219	12	08-14857	**$357.00**	**$175.00**
MZ-4223	12	08-14858	**$358.00**	**$175.00**
MZ-4224	12	08-14859	**$357.00**	**$175.00**

DELCO OVERHAULED STARTERS

Delco ID	Voltage	Part No.	Price	Core
1108234	24	07-00131	**$436.00**	**$150.00**
1108249	12	07-00132	**$436.00**	**$150.00**
1109514	12	07-00142	**$285.95**	**$200.00**
1109519	12	07-00145	**$322.00**	**$250.00**
1109652	12	07-00147	**$261.95**	**$200.00**
1109656	12	07-00148	**$305.00**	**$200.00**
1109681	12	07-03115	**$568.00**	**$200.00**
1108234	24	08-14802	**$278.95**	**$150.00**
1109504	12	08-14803	**$323.00**	**$175.00**
1109505	24	08-14804	**$283.95**	**$175.00**
1109506	12	08-14805	**$323.00**	**$175.00**
1109509	24	08-14806	**$390.00**	**$175.00**
1109511	12	08-14807	**$323.00**	**$175.00**
1109512	12	08-14808	**$323.00**	**$175.00**
1109517	24	08-14809	**$390.00**	**$175.00**
1109518	24	08-14810	**$390.00**	**$175.00**
1109651	12	08-14811	**$254.95**	**$125.00**
1109657	12	08-14812	**$254.95**	**$125.00**
1109658	12	08-14813	**$278.95**	**$125.00**
1109660	12	08-14814	**$278.95**	**$125.00**
1109665	24	08-14816	**$390.00**	**$175.00**
1109668	12	08-14817	**$263.95**	**$125.00**
1109669	24	08-14818	**$390.00**	**$175.00**
1109673	12	08-14819	**$334.00**	**$150.00**
1109675	24	08-14820	**$390.00**	**$175.00**
1109677	12	08-14821	**$357.00**	**$125.00**
1109678	12	08-14822	**$278.95**	**$125.00**
1109679	12	08-14823	**$323.00**	**$150.00**
1109680	24	08-14824	**$390.00**	**$175.00**
1109681	12	08-14825	**$278.95**	**$125.00**
1109684	12	08-14826	**$278.95**	**$125.00**
1109687	24	08-14827	**$390.00**	**$175.00**
1109688	12	08-14828	**$323.00**	**$150.00**
1109689	12	08-14829	**$334.00**	**$150.00**
1109690	24	08-14830	**$390.00**	**$175.00**
1109694	12	08-14831	**$279.95**	**$125.00**
1109695	12	08-14832	**$323.00**	**$175.00**
1109696	24	08-14833	**$390.00**	**$175.00**
1109768	12	08-14834	**$263.95**	**$150.00**
1109909	24	08-14835	**$278.95**	**$150.00**
1109926	12	08-14836	**$278.95**	**$150.00**
1113471	12	08-14837	**$605.00**	**$400.00**

AEROTECH TCM OVERHAULED STARTERS

Mfr. PN	PN	Price	Core
646238	**08-14800**	**$339.00**	**$225.00**
646275	**08-14801**	**$339.00**	**$225.00**

NOTE:
Exchange prices are shown. Core charges apply to all units.

FALCON OVERHAULED ALTERNATORS



FALCON ES4000 SERIES OVERHAULED ALTERNATORS

Factory Overhauled ES4000 Series Alternators.

Model Number	Volts/Amps	Description	Part No.	Price
ES4000	15V/60A	Belt Driven	07-19049	**$300.95**
ES4000LS	15V/60A	Belt Driven	07-19050	**$300.95**
ES4005	28V/60A	Belt Driven	07-19051	**$300.95**
ES4005-2	28V/60A	Belt Driven	07-19052	**$300.95**
ES4007	28V/60A	Belt Driven	07-19053	**$300.95**
ES4009	28V/70A	Belt Driven	07-19054	**$338.00**
ES4009LS	28V/70A	Belt Driven	07-19055	**$338.00**
ES4013	28V/80A	Belt Driven	07-19056	**$363.00**
ES4013LS	28V/80A	Belt Driven	07-19057	**$363.00**
ES4017	15V/80A	Belt Driven	07-19058	**$363.00**
ES4018	28V/70A	Belt Driven	07-19059	**$300.95**
ES4018LS	28V/70A	Belt Driven	07-19060	**$300.95**
ES4021	28V/70A	Belt Driven	07-19061	**$300.95**
ES4023	28V/80A	Belt Driven	07-19062	**$363.00**
ES4024	28V/85A	Belt Driven	07-19063	**$369.00**
ES4024L	28V/85A	Belt Driven	07-19064	**$369.00**
ES4024LP	28V/85A	Belt Driven	07-19065	**$369.00**
ES4030	28V/70A	Belt Driven	07-19066	**$338.00**
ES4031	28V/85A	Belt Driven	07-19067	**$369.00**
ES4040	15V/85A	Belt Driven	07-19068	**$363.00**
ES4003	15V/95A	Belt Driven	07-19069	**$388.00**
ES4003LS	15V/95A	Belt Driven	07-19070	**$388.00**
ES4011	28V/95A	Belt Driven	07-19071	**$388.00**
ES4011LS	28V/95A	Belt Driven	07-19072	**$388.00**
ES4011-1	28V/95A	Belt Driven	07-19073	**$388.00**
ES4011-1LS	28V/95A	Belt Driven	07-19074	**$388.00**
ES4014	28V/90A	Belt Driven	07-19075	**$388.00**
ES4016	12V/90A	Belt Driven	07-19076	**$388.00**
ES4019	28V/130A	Belt Driven	07-19077	**$413.00**
ES4019LS	28V/130A	Belt Driven	07-19078	**$413.00**
ES4019-2LS	28V/130A	Belt Driven	07-19079	**$413.00**
ES4022	12V/130A	Belt Driven	07-19080	**$413.00**
ES4001	15V/60A	Gear Driven	07-19081	**$325.00**
ES4002	15V/80A	Gear Driven	07-19082	**$344.00**
ES4004	28V/38A	Gear Driven	07-19083	**$325.00**
ES4006	28V/60A	Gear Driven	07-19084	**$325.00**
ES4008	28V/70A	Gear Driven	07-19085	**$338.00**
ES4028	15V/85A	Gear Driven	07-19086	**$357.00**
ES4029	28V/70A	Gear Driven	07-19087	**$338.00**



FALCON TCM OVERHAULED ALTERNATORS

Factory Overhauled TCM Alternators.

Model Number	Description	Part No.	Price
642055	24V/60A	07-19043	**$757.00**
646843	24V/60A	07-19047	**$757.00**
646490	24V/60A	07-19045	**$757.00**
642056	24V/100A	07-19044	**$869.00**
646491	24V/100A	07-19046	**$869.00**



FORD OVERHAULED ALTERNATORS

Factory Overhauled Ford Alternators.

Model Number	Description	Part No.	Price
DOFF10300F	15V/60A	07-19038	**$325.00**
DOFF10300J	15V/60A	07-19041	**$300.95**
DOFF10300M	15V/60A	07-19042	**$300.95**
EOFF10300AA	15V/95A	07-19031	**$388.00**
DOFF10300E	28V/38A	07-19037	**$325.00**
DOFF10300G	28V/38A	07-19039	**$325.00**
C6115050102	28V/95A	07-19028	**$388.00**
D7FF10300AA	28V/95A	07-19029	**$388.00**
DOFF10300A	28V/95A	07-19033	**$300.95**
DOFF10300B	28V/95A	07-19034	**$299.00**
DOFF10300C	28V/95A	07-19035	**$325.00**
DOFF10300D	28V/95A	07-19036	**$325.00**
E3FF10300AA	28V/95A	07-19030	**$388.00**
EOFF10300BA	28V/95A	07-19032	**$325.00**



FALCON OVERHAUL CHRYSLER ALTERNATORS

Overhaul Chrysler alternator Pulley Driven.

Model Number	Description	Part No.	Price
2098615	12V/37A	07-19022	**$293.95**
2098640	12V/37A	07-19023	**$293.95**
2642995	12V/37A	07-19025	**$293.95**
2642210	12V/60A	07-19024	**$293.95**
3656624R	12V/60A	07-06401	**$295.00**

NOTE:
Core charges apply to all overhauled units.

EP

FALCON OVERHAULED ALTERNATORS



FALCON OVERHAULED ALTERNATORS

Falcon Overhauled Alternators.

Model Number	Volts/Amps	Description	Part No.	Price
ALE-6520	12V/40A	--	07-19145	**$250.95**
ALE-8520	12V/40A	--	07-19146	**$250.95**
ALE-8521	12V/40A	--	07-19147	**$250.95**
ALY-6520	12V/60A	--	07-19171	**$300.95**
ALY-6521	12V/60A	--	07-19172	**$299.95**
ALY-6522	12V/60A	--	07-19173	**$300.95**
ALY-6527	12V/60A	--	07-19174	**$300.95**
ALY-8521	12V/60A	--	07-19175	**$300.95**
ALY-8520	12V/60A	--	07-19176	**$300.95**
ALY-8523	12V/60A	--	07-19177	**$300.95**
ALY-8524	12V/60A	--	07-19178	**$300.95**
ALY-8526	12V/60A	--	07-19179	**$300.95**
ALX-6523	12V/70A	--	07-19165	**$300.95**
ALX-8521	12V/70A	--	07-19166	**$300.95**
ALX-8523	12V/70A	--	07-19167	**$300.95**
ALX-9522	12V/70A	--	07-19168	**$325.00**
ALX-9524	12V/70A	--	07-19169	**$325.00**
ALT-8520	24V/50A	--	07-19148	**$300.95**
ALT-8521	24V/50A	--	07-19149	**$300.95**
ALT-9522	24V/50A	--	07-19150	**$325.00**
ALU-6521	24V/70A	--	07-19151	**$300.95**
ALU-8521	24V/70A	--	07-19152	**$288.95**
ALU-9522	24V/70A	--	07-19153	**$325.00**
ALV-6403	24V/100A	Belt Driven	07-19154	**$869.00**
ALV-8402	24V/100A	Belt Driven	07-19155	**$869.00**
ALV-8511	24V/100A	Belt Driven	07-19156	**$869.00**
ALV-8512	24V/100A	Belt Driven	07-19157	**$869.00**
ALV-9401	24V/100A	Gear Driven	07-19158	**$869.00**
ALV-9405	24V/100A	Gear Driven	07-19159	**$869.00**
ALV-9406	24V/100A	Gear Driven	07-19160	**$869.00**
ALV-9407	24V/100A	Gear Driven	07-19161	**$869.00**
ALV-8511	24V/100A	--	07-19162	**$869.00**
ALV-8512	24V/100A	--	07-19163	**$869.00**
ALV-9510	24V/100A	Gear Driven	07-19164	**$869.00**

FALCON DELCO OVERHAULED GENERATORS



Falcon Delco Overhauled Generators.

Model Number	Volts/Amps	Description	Part No.	Price
1101891	12V/20A	--	07-19090	**$300.95**
1101895	12V/35A	Belt Driven	07-19091	**$300.95**
1101908	12V/50A	Gear Driven	07-19092	**$300.95**
1101909	12V/50A	Belt Driven	07-19093	**$300.95**
1105053	24V/40A	--	07-19094	**$344.00**

NOTE:
Core charges apply to all overhauled units.

FALCON OVERHAULED STARTERS



Falcon Overhauled Starters.

Model Number	Description	Part No.	Price
ES646238-1	12V	07-19095	**$300.95**
ES646238-2	12V	07-19096	**$300.95**
ES646238-3	12V	07-19097	**$300.95**
MCL-6501	12V	07-19100	**$300.95**
MCL-6502	12V	07-19101	**$300.95**
MCL-6503	12V	07-19102	**$300.95**
MZ-4203	12V	07-19127	**$344.00**
MZ-4204	12V	07-19128	**$344.00**
MZ-4205	12V	07-19129	**$344.00**
MZ-4206	12V	07-19130	**$344.00**
MZ-4207	12V	07-19131	**$344.00**
MZ-4208	12V	07-19132	**$344.00**
MZ-4214	12V	07-19133	**$313.00**
MZ-4216	12V	07-19134	**$344.00**
MZ-4217	12V	07-19135	**$344.00**
MZ-4218	12V	07-19136	**$344.00**
MZ-4219	12V	07-19137	**$344.00**
MZ-4220	12V	07-19138	**$344.00**
MZ-4221	12V	07-19139	**$344.00**
MZ-4222	12V	07-19140	**$344.00**
MZ-4223	12V	07-19141	**$344.00**
MZ-4224	12V	07-19142	**$344.00**
MZ-4225	12V	07-19143	**$344.00**
MZ-4226	12V	07-19144	**$344.00**
ES646275	24V	07-19098	**$325.00**
ES646275-1	24V	07-19099	**$325.00**
MHB-4001	24V	07-19103	**$344.00**
MHB-4002	24V	07-19104	**$344.00**
MHB-4003	24V	07-19105	**$344.00**
MHB-4004	24V	07-19106	**$407.00**
MHB-4005	24V	07-19107	**$375.00**
MHB-4006	24V	07-19108	**$344.00**
MHB-4008	24V	07-19109	**$344.00**
MHB-4009	24V	07-19110	**$344.00**
MHB-4010	24V	07-19111	**$344.00**
MHB-4011	24V	07-19112	**$344.00**
MHB-4012	24V	07-19113	**$344.00**
MHB-4013	24V	07-19114	**$344.00**
MHB-4014	24V	07-19115	**$344.00**
MHB-4016	24V	07-19116	**$344.00**
MHB-4017	24V	07-19117	**$344.00**
MHB-4018	24V	07-19118	**$344.00**
MHB-4019	24V	07-19119	**$344.00**
MHB-4019A	24V	07-19120	**$344.00**
MHB-4020	24V	07-19121	**$344.00**
MHJ-4002	24V	07-19122	**$325.00**
MHJ-4003	24V	07-19123	**$325.00**
MHJ-4004	24V	07-19124	**$325.00**
MHJ-4005	24V	07-19125	**$325.00**
MMU-4001	24V	07-19126	**$344.00**

FALCON TCM OVERHAULED GENERATORS



Falcon TCM Overhauled Starters.

Model Number	Description	Part No.	Price
646238	12V	07-19088	**$299.00**
646275	24V	07-19089	**$325.00**

EP

B & C LIGHTWEIGHT ALTERNATORS



L-40 ALTERNATOR

The L-40 is a high-performance belt-driven 40 amp alternator for Lycoming engines. Designed to meet the rigorous demands of weight-sensitive homebuilt designs, without sacrificing reliability, the L-40 alternator features a precision-balanced rotor, sealed heavy-duty ball-bearings and 2 internal cooling fans. Weighs 6.1 lbs. and measures 3.9" (diameter) x 5.6" (length). Also includes mounting hardware, belt tension arm, and belt. Applicable to Lycoming O-235 through IO-720 engines.

L-40 Boss Mount (Wide Deck engine) P/N 07-06815 .....**$378.00**
L-40 Case Mount (Narrow Deck engine), w/ B&C Starter
P/N 07-06810 .....**$498.00**

L-40 requires an external voltage regulator – see BELOW

L-40 alternators require external regulators – use: P/N 07-06742 (LR3C) for 14V, P/N 07-06786 (LS1A) for 28V



BC433-H GEAR DRIVEN ALTERNATOR WITH PMR3A

The BC433-H is a 30 amp 14V gear-drive alternator for Continental engines (C-75 through O-300). Featuring a unique brushless design, with a billet aluminum mounting flange and heavy-duty ball bearings, the BC433-H is an ideal choice for a variety of homebuilt designs. Weighs 4.4 lbs. and measures 4.1" (diameter) x 3.75" (length). Also includes a matching PMR3A Regulator and 505-1 Over-Voltage Protection kit. Sold without the Continental drive gear assembly (customer supplied), and requires the latest revision of the Hub (P/N 07-01327) and Retainer (P/N 07-01328). B&C has a limited supply of used drive gear assemblies, available at additional cost.

BC433-H Alternator ..... P/N 07-00771 ..... **$674.00**

ACCESSORIES

Generator Coupling (Cont. P/N: 653983).. P/N 07-01327..... **$369.85**
Generator Retainer (Cont. P/N: 653982) . P/N 07-01328..... **$25.43**

SD-8 ALTERNATOR & REGULATOR



The SD-8 is a lightweight, spline-driven 14V alternator system for aircraft with an available vacuum pump drive pad. Features an ultra-reliable, brushless design, with a billet aluminum mounting flange and sealed heavy-duty ball bearings. With a nominal output of 8 amps, the SD-8 alternator is adequate for many day-VFR applications, and may be used as a backup power source on a variety of homebuilt aircraft. The SD-8 is a long-time favorite of top aerobatic pilots around the world. Weighs 2.9 lbs. and measures 3.5" (diameter) x 4.6" (length). Also includes a matching PMR1C Regulator, MS9134-01 gasket, and 504-1 Over-Voltage Protection kit.

P /N 07-06770 .....**$544.00**

LR3C AND LS-1A LINEAR CONTROLLERS (REGULATORS)



P/N 07-06742

The LR3C and LS-1A are more than your typical regulators; more accurately, they are alternator controllers. Each device combines 3 essential functions in one physical container—linear ("quiet") regulation, solid-state over-voltage protection, and low-voltage monitoring and warning. This makes possible sophisticated, space-saving, and cost-effective alternator control for homebuilt aircraft, while also improving safety of flight. The LR3C-14 may be used with 14 volt externally regulated alternators, while the LR3C-28 may be used with OEM-type, 28 volt externally regulated alternators. The LS-1A permits the use of B&C alternators in a 28 volt electrical system. The LR3C and the LS-1A weigh approximately 9 ounces each, and are intended for circuit type "B" (one field lead grounded directly) alternator systems.

LR3C-14 Regulator/Controller (14V) .....P/N 07-06742 ..... **$179.95**
LR3C-28 Regulator/Controller (28V, OEM alternator)
P/N 07-06748 ..... **$179.95**
LS-1A Regulator Controller (28V, B&C alternator)
P/N 07-06786 ..... **$179.95**
Battery Temperature Sensor .....P/N 07-06744 ..... **$105.95**



BC460-H ALTERNATORS

Introducing the "Next Generation" 60 amp Alternator that saves both weight AND money – without sacrificing performance or reliability. The BC460-H features heavy-duty sealed ball bearings, two internal cooling fans, and a precision dynamically-balanced rotor (rare in the industry, but standard on every B&C!). Additionally, it has three attachment points for stable mounting, and we uniquely modify the BC460-H for use with a more sophisticated, aircraft style, external voltage regulator with over-voltage protection The BC460-H may be used in either a 14 volt or 28 volt electrical system, and includes your choice of Boss (Wide Deck) or Case (Narrow Deck) mounting brackets, attachment hardware, belt tension arm, high-performance belt, and pre-wired field connector assembly. Weight: 7.1 lbs.

Alternator Boss Mount ..... P/N 07-17981 ...**$529.00**
BC460-H Alt. Case Mount For B&C Starter ..... P/N 07-17982 ...**$529.00**
BC460-H Alt. Case Mount For Non B&c Starter .... P/N 07-17983 ...**$529.00**



B & C BC462-H ALTERNATOR

The high-performance spline-driven alternator from the company that pioneered the spline-driven alternator over 20 years ago! The BC462-H mounts on a standard AND20000-spec accessory pad, and offers robust performance with a rated output of 35 to 45 amps @ cruise RPM. Every BC462-H features a CNC machined billet aluminum mounting flange for superior durability, heavy-duty sealed ball bearings, two internal cooling fans, a precision dynamically-balanced rotor (a B&C quality essential), and a special "shear section" drive coupling. Suitable for 14 volt or 28 volt applications, the BC462-H is designed for aircraft-style external control, and may be used as either a Primary or a Standby Alternator, depending on the electrical system configuration (see note below). Includes mounting gasket and pre-wired field connector assembly. Weight: 6.75 lbs.... P/N 07-17985 ....**$699.00**

NOTE: L-40, BC460-H, BC410-H, and BC462-H alternators require external regulators - use: P/N 07-06742 (LR3C) for 14V Primary, P/N 07-06786 (LS-1A) for 28V Primary, P/N 07-03461 (SB1B-14) for 14V Standby, and P/N 07-03462 (SB1B-28) for 28V Standby.



BC410-H ALTERNATOR

The BC410-H is the original high-performance spline-driven alternator that mounts on a standard vacuum pump accessory pad. It may be used either as a primary or a stand-by alternator for a nominal output of 20 to 30 amps, depending on engine RPM. Designed for many hours durable service, the BC410-H features a dynamically balanced rotor, heavy-duty sealed ball-bearings, 2 internal cooling fans, and a special "shear section" designed into the drive coupling. The BC410-H is externally-regulated, and may be used in either 14 and 28 volt homebuilt aircraft using our LR3C-14 (14V), LS-1A (28V), or SB1B (14V or 28V) Controllers. Measures 4.6" (diameter) and 6.0" (length), and weighs 5.75lbs. The BC410-H will clear a stock tachometer cable on Lycoming engines, as well as B&C Oil Filter Adapters.

P/N 07-06771 .....**$494.00**



200G ALTERNATOR & REGULATOR

The 200G is a 12 amp 14V gear-drive alternator for Continental engines (C-75 through O-300). Features a ultra-reliable, brushless design, with a billet aluminum mounting flange and heavy-duty ball-bearings. Used in the prototype Vari-Eze, as well as many Cassuts, Q-200s, and other homebuilt aircraft, the 200G has been in production for over 30 years, with many systems still in service. With a nominal output of 12 amps, the 200G will support a modest night-VFR-night system. Measures 4.4" (diameter) and 3.8" (length), and weighs 3.4 lbs. Also includes a matching PMR1C Regulator and 504-1 Over-Voltage Protection kit. Sold without the Continental drive gear assembly (customer supplied; or purchased at additional cost). Gear assembly must be installed by B&C – send to Aircraft Spruce for installation.

200G Alternator .....P/N 07-06575 ..... **$540.00**
New Drive Gear.....P/N 07-06500 ..... **$1,017.00**

B&C PERMANENT MAGNET ALTERNATOR OVER-VOLTAGE (PM/OV) KITS



The PM/OV Kit is designed to provide over-voltage protection to homebuilt aircraft electrical systems using a permanent magnet alternator. Features a solid-state "crowbar" over-voltage protection module, relay, filter capacitor, panel-mount warning lamp, and wire terminals. Included with all new B&C Permanent Magnet Alternator systems.

504-1 20A PM/OV Kit (14 Volt).....P/N 08-00658 ..... **$67.75**
504-2 20A PM/OV Kit (28 Volt).....P/N 07-00708 ..... **$64.99**
505-1 40A PM/OV Kit (14 Volt).....P/N 07-03488 ..... **$76.75**

EP

IGHTWEIGHT STARTERS FOR LYCOMINGS



eight Starter for Lycoming engines. Weighing only ; Starter was designed to meet rigorous demands of ircraft designs, without sacrificing reliability or performance. Introduced over 25 years ago, this same design has provided dependable service for thousands of satisfied customers. Every B&C Starter features heavy-duty sealed ball-bearings, all metal gears, electro-mechanical pinion engagement (no Bendix drive), and an efficient series-wound motor. Cantilevered pinion gear mounting requires no forward shaft support bearing, thus eliminating cowl interference or on-going maintenance. If battery failure precedes engine starting, a positive spring retraction system insures pinion gear disengagement. Both STC/ PMA and Homebuilt versions are available in 14 volt and 28 volt configurations. FAA-approved for any of the following series of Lycoming engines: • O-235 • O-290-D • O-320 • IO-320 • AIO-320 • AEIO-320 • LIO-320 • O-360 • HO-360 • LO-360 • IO-360 • HIO-360 • AIO-360 • AEIO-360 • TIO-360 • LTIO-360 • O-540 • IO-540 • HIO-540 • AEIO-540 • TIO-540 • LTIO-540 • IO-720

FOR CERTIFICATED AIRCRAFT APPLICATIONS					
Part No.	**Model No.**	**Pinion Gear Pitch**	**Teeth on Ring Gear**	**Battery Voltage**	**Price**
07-06700	BC315-100-1	10/12	122	12	**$624.00**
07-06705	BC315-100-2	12/14	149	12	**$625.00**
07-06710	BC315-100-3	10/12	122	24	**$650.00**
07-06715	BC315-100-4	12/14	149	24	**$665.00**
FOR EXPERIMENTAL AIRCRAFT APPLICATIONS					
Part No.	**Model No.**	**Pinion Gear Pitch**	**Teeth on Ring Gear**	**Battery Voltage**	**Price**
07-06720	BCS206-122-12	10/12	122	12	**$594.00**
07-06725	BCS206-149-12	12/14	149	12	**$594.00**
07-06730	BCS206-122-24	10/12	122	24	**$620.00**
07-06735	BCS206-149-24	12/14	149	24	**$628.00**

EP

B & C LIGHTWEIGHT STARTERS FOR CONTINENTALS



With an innovative, patented design, the BC320 Starter for Continental engines solves all the problems that other starter designs have had—from worn-out clutches and broken pinions, to nagging oil leaks and catastrophic failure modes. Weighing only 10.3 lbs., it is also 4.3 to 5.2 lbs. lighter depending on your current starter configuration. Built for reliable service, the BC320 features a billet aluminum end bell, heavy-duty sealed ball-bearings, all metal gears, electro-mechanical pinion engagement, and an efficient series-wound motor. Cantilevered pinion gear mounting requires no forward shaft support bearing. The BC320 is a complete starter, ready to install, and includes an installation kit to convert from an existing pull-type starter, or an existing key-type starter. Both STC/ PMA and Homebuilt versions are available. FAA-approved for the following Continental engines: • C-75 • C-85 • C-90 • O-200 • C145-2 • IO-240 • O-300 • GO-300-A/B/C

FOR CERTIFICATED AIRCRAFT APPLICATIONS				
Part No.	**Model No.**	**Installation Kit**	**Battery Voltage**	**Price**
07-06716-1	BC320-1	Existing Key-Type (501-1)	12	**$618.00**
07-06716-3	BC320-1	Existing Pull-Type (501-3)	12	**$618.00**

BC320-1 Starter Only .....P/N 07-06716 ..... **$598.00**

FOR HOMEBUILT AIRCRAFT APPLICATIONS				
Part No.	**Model No.**	**Installation Kit**	**Battery Voltage**	**Price**
07-06737-1	BC320-H	Existing Key-Type (501-1)	12	**$608.00**
07-06737-3	BC320-H	Existing Pull-Type (501-3)	12	**$618.00**

BC320-H Starter Only .....P/N 07-06737 ..... **$598.00**

ACCESSORIES

501-1 .....Installation Kit (key type)..... P/N 07-06752 ..... **$24.95**
If you are replacing an existing key-type starter, a needle bearing will need to be removed from your engine before installing the BC320. A special tool kit is available to aid in removing this needle bearing. If you do not care to keep this kit, you may return it and be refunded $80.00.
501-2 Needle Bearing Removal Tool Kit..... P/N 07-06753 ..... **$105.90**
501-3 .....Installation Kit (pull cable)..... P/N 07-06754 ..... **$62.85**

LS-1A VOLTAGE REGULATOR



The LS-1A Controller offers linear voltage regulation, integral over-voltage protection, and low-voltage monitoring and warning. It has been specially designed, however, to permit the use L-40 & L-60 alternators in a 28v electrical system. The LS-1A weighs approximately 9 ounces, may be mounted on the cockpit side of the firewall, and is available with an optional battery temperature sensor for colder climates. Select a location for mounting that will protect unit from heat, vibration, and water. The pilot side of the firewall, or inside the cabin near the instrument panel, is recommended.
For Experimental Aircraft ONLY .....P/N 07-06786 ..... **$179.95**

JASCO GEAR DRIVEN ALTERNATOR KITS



The Jasco alternator is STC'd for many aircraft including the early Cessna 150, 172, and 175 series as well as Beech Model 35's with early E series Continental engines. Applicable to Continental C-90, 0-200 and 0-300 engines. Well-proven over many years of use in a variety of aircraft. Kit variants include alternator, voltage regulator, and over-voltage control.

Volts	**Amps**	**Drive**	**Alt. P/N**	**Kit P/N**	**Price**
New Alternators Only					
12	50	4 Stud, 6 Spline, Square Pad	6555T	07-01863	**$1,099.00**
12	50	Round Pad, Like Delco	6560T	07-01865	**$1,099.00**
12	50	6 Stud, 16 Spline, Round Pad	6565T	07-01866	**$1,199.00**
24	50	4 Stud, 6 Spline, Square Pad	7555T	07-00735	**$1,099.00**
24	50	6 Stud, 16 Spline, Round Pad	7565T	07-01868	**$1,199.00**
24	70	4 Stud, 6 Spline, Square Pad	7655T	07-00703	**$1,199.00**
24	70	Hiller Uh12e, Round Pad	7555H-72D	07-00702	**$1,749.00**
Alternator Kits					
12	50	4 Stud, 6 Spline, Square Pad	6555-1	6555-1	**$1,369.00**
12	50	Round Pad, Like Delco	6560-1	07-06900	**$1,369.00**
12	50	6 Stud, 16 Spline, Round Pad	6565-1	6565-1	**$1,469.00**
24	50	4 Stud, 6 Spline, Square Pad	7555-1	7555-1	**$1,389.00**
24	50	6 Stud, 16 Spline, Round Pad	7565-1	07-75651	**$1,489.00**
24	70	4 Stud, 6 Spline, Square Pad	7655-1	07-20060	**$1,489.00**
Accessories					
12		Voltage Controller	J12M20SP	07-00697	**$294.95**
24		Voltage Controller	J12M24SP	07-00696	**$294.95**
24		150 Ohm Resistor	17-10	07-01710	**$20.00**
24		75 Ohm Resistor	17-1	07-00699	**$20.00**
		Terminal Conversion Kit	ESC-2	07-00701	**$131.75**

TURBO STAND-BY ALTERNATOR



The Basic BAE-14/28 Auxiliary Power Supply is a manually deployed, air driven, emergency electric supply for small aircraft. Capable of supplying electric power to drive a basic complement of flight critical instruments. If a primary electrical system failure should occur, the pilot deploys the miniature turboalternator. The appropriate installation kit is included to reduce installation time and cost. The BAE-14/28 is currently STC'd for seven aircraft models: Cessna 210, 206, 182, Piper PA-32, PA-28, Bonanza, and Mooney. One Cardinal installation is flying on a 337.
BPE-14 Turbo Alternator.....P/N 10-00747 ..... **$999.95**
BAE-14/28 Auxiliary Power Supply.....P/N 10-00748 ..... **$2,622.00**

KELLY AEROSPACE DUAL ALTERNATOR KIT



The kit includes a duplicate 95 amp alternator to the original equipment, along with all the pulleys, belts, brackets and hardware for installation on the Lycoming IO-540 series engines. All system controls are panel mounted and the backup system is activated with a flip of a switch. STC Approved for Cessna 182, 182T, 182S.

Alternator Kit Cessna 182/182T .....P/N 07-01490 ..... **$5,255.00**
Dual Alternator Kit Cessna 182S.....P/N 07-01804 ..... **$5,155.00**

CHRYSLER ALTERNATORS - FACTORY OVERHAULED

2098615R	12V/37A BD	08-07032	**$515.00**
2642996R	12V/37A BD	08-07033	**$295.00**
2642997R	12V/60A BD	08-07034	**$433.00**
3656623R	12V/41A BD	08-07035	**$296.95**
3656624R	12V/60A BD	07-01344	**$395.00**
3659924R	12V/60A BD	07-06401	**$295.00**

ALTERNATOR & GENERATOR BELTS

LYCOMING ALTERNATOR

37A19773-376 ..... **$79.95**

LYCOMING GENERATOR BELTS

37B19774-374 ..... **$98.75**
37B19774-325 ..... **$75.75**

CONTINENTAL

539547-31.19..... **$37.36**

Prices Subject to Change Without Notice

HARTZELL ENGINE TECHNOLOGIES STARTERS

X-DRIVE STARTERS FROM HARTZELL ENGINE TECHNOLOGIES



- Weight 7.6 lbs.
- Perfect spin » Sweet spot engine starts, doesn't drain your power like other starters
- Start efficiency » Lowest inrush & operating current draw in the industry
- No mechanical Bendix
- Electromechanical solid-state solenoid
- Powerful permanent magnet » Performance
- Easy installation » Left or right mount
- FAA/PMA approved
- 2 Year Unlimited Hours Warranty *

The X-Drive aircraft starter is one of the most popular models because of its awesome power and compact size. Targeted toward Lycoming users that want one of the industries lightest but most powerful starter on the market, the X-Drive delivers the same high torque, low current draw, and superior duty cycle that had previously been available only to E-Drive customers. The introduction of the X-Drive starter allows Hartzell Engine Technologies to service virtually all OEM and aftermarket Lycoming applications.* Kick-backs not covered

Only 7.6 lbs.
Lightest Starter Available

APPLICATION DATA GUIDE

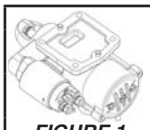


FIGURE 1

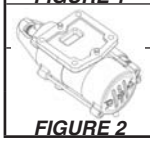


FIGURE 2

Solenoid to the Left: (X-Drive series: see figure 1)	
SRZ-9021 (12 Volt - 149 tooth)	SRZ-9022 (12 Volt - 122 tooth)
SRB-9021 (24 Volt - 149 tooth)	SRB-9022 (24 Volt - 122 tooth)
Solenoid to the Right: (X-Drive series: see figure 2)	
SRZ-9031 (12 Volt - 149 tooth)	SRZ-9032 (12 Volt - 122 tooth)
SRB-9031 (24 Volt - 149 tooth)	SRB-9032 (24 Volt - 122 tooth)
(12/14 pitch works on a 149 tooth ring gear & 10/12 pitch works on a 122 tooth ring gear.)	

Description	Part No	Price
Hartzell X-Drive Starter SRB-9022	08-06272	**$618.00**
Hartzell X-Drive Starter SRB-9031	08-06273	**$618.00**
Hartzell X-Drive Starter SRB-9032	08-06274	**$618.00**
Hartzell X-Drive Starter SRZ-9021	08-06275	**$585.00**
Hartzell X-Drive Starter SRZ-9022	08-06276	**$570.00**

CROSS-REFERENCE CHART

Sky-Tec P/N	X-Drive P/N
122-12LS	SRZ-9022
122-12PM	SRZ-9032
122-24LS	SRB-9022
122-24PM	SRB-9032
149-12LS	SRZ-9021

Sky-Tec P/N	X-Drive P/N
149-12PM	SRZ-9031
149-24HT	SRB-9021
149-24LS	SRB-9021
149-24PM	SRB-9031

EP

HARTZELL ENGINE TECHNOLOGIES E-DRIVE STARTERS



- Lightweight neodymium permanent magnet motor
- In line design
- Self-resetting torque limiter for kickback protection
- Internal solenoid engagement
- Drive pinion supported by bearings on both ends

E-Drive aircraft starters offer industry-leading, robust, high duty cycle starters in a lightweight package. By utilizing a powerful neodymium permanent motor driven though a self-resetting negative torque-sensing device, the E-Drives provides unparalleled kickback protection, preventing hours of down time and replacement costs. The E-Drive aircraft starter is solenoid engaged, eliminating the need for a Bendix drive. Its low current draw helps maintain good battery life.



- High Performance Armature
- Increased commutator bar length
- Thin laminations
- High quality magnetic alloy
- 12 & 24 volt winding configuration
- Redesigned Brush Holder
- Metal construction for heat sinking
- Offset brush position for increased brush contact area
- Robust spring design
- High performance field housing
- Rare earth neodymium magnets
- Small package
- Stronger flux field
- Improved temperature stability
- 9.5 lbs.

APPLICATION CHART

E-Drive Number - Approved Alternative for the following:

ERB-8011	ERB-8012	ERZ-8011	ERZ-8012
MHB-4001	MHB-4015	MZ-4205	MZ-4204
MHB-4002	MHB-4002	MZ-4206	MZ-6204
MHB-4003	MHB-6001	MZ-4207	
MHB-4005		MZ-4217	
MHB-4007		MZ-4218	
MHB-4010		MZ-4219	
MHB-4012		MZ-4221	
MHB-4013		MZ-4224	
MHB-4014		MZ-4222	
MHB-4016		MZ-4223	
MHB-4017		MZ-4225	
MHB-4019		MZ-6222	
MHB-4020		MZ-6224	

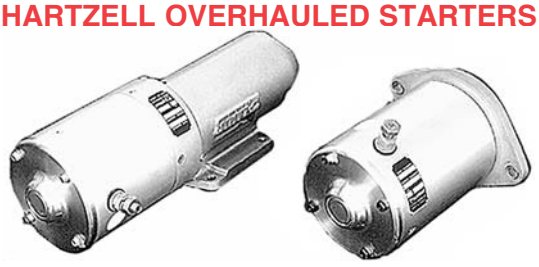


- Starter system designed for maximum performance.
- Drive assembly integrates proprietary pinion gear, clutch, torque limiter, and actuator in one complete module.
- Available for coarse and fine pitch ring gears, clockwise and counterclockwise rotation.
- No periodic service or recurring maintenance required.
- 9.5 lbs.

Model	Description	Lycoming Engine	Replaces	Part No.	Price
ERZ-8011	Clockwise rotation, 12 Volt, 149 tooth - 12/14 Pitch Gear	235, 290, 320, 340, 360, 540	Lycoming 31A21198, Sky-Tec 149-NL,149-12PM, LS, Lamar PM1201, PM1204, MZ-4205 thru -4207,-4217 thru -4219,-4221 thru -4226,-6222,-6224	07-01102	**$734.00**
ERZ-8012	Clockwise rotation, 12 Volt, 122 tooth - 12/12 Pitch Gear	235, 290, 320, 360, 540	Lycoming 31A21210, Sky-Tec 122-NL,122-12PM, LS, Lamar PM1203, MZ-4204,-6204	07-01103	**$735.00**
ERB-8011	Clockwise rotation, 24 Volt, 149 tooth - 12/14 Pitch Gear	235, 320, 340, 360, 540	Lycoming 31B21064, Sky-Tec 149-NL, 149-NL/ec, 149-24, Lamar PM2401, MHB-4010,-4016 thru -4020,-6014,-6016,-6018	07-01099	**$734.00**
ERB-8012	Clockwise rotation, 24 Volt, 122 tooth - 10/12 Pitch Gear	235, 290, 320, 340, 360, 540	Lycoming 31B21211, Sky-Tec 122-NL/ec,122-24PM, LS, Lamar PM2403, MHB-4015,-6001, MMU-4001,-6001, Delco 1109669	07-01101	**$728.00**
ELB-8011*	Reverse/Counter rotation, 24 Volt, 12/14 Pitch Gear	LTIO-540, LTIGO-540	Lycoming 14214, Sky-Tec 149-NLR/ec*, Lamar PM2404, MHB-4014, MHB-6014	07-02665	**$832.00**
ELZ-8021*	Reverse/Counter rotation, 12 Volt, 12/14 Pitch Gear	LIO-320, LO-360, LTO-360, LIO-360	Lycoming 14215, Sky-Tec 149-NLR, Lamar PM1204, MZ-4220, MZ-6220	07-02666	**$831.00**

HARTZELL ENGINE TECHNOLOGIES STARTERS

HARTZELL OVERHAULED STARTERS



In addition to the factory new Lamar starters listed above, Aircraft Spruce also stocks overhauled Lamar starters. The PM1201 starter is ideal for the Lycoming O-320 & O-360 series engines and the PM2401 is applicable to the Lycoming O- 540 series engines.
Like the new Lamar starters, these overhauled starters are FAA/PMA approved, fully bench tested, provide superior cold weather performance, utilize a patented permanent magnet design, use a planetary gear reduction for optimum speed and torque (110 RPM), and draw less amperage than lightweights to help lengthen battery life.
Overhauled PM2404H starter.....P/N 08-06015.....**$319.95**

TCM ENERGIZER STARTERS

FACTORY NEW				
Model	**Volt/Amp**	**Core**	**Part No.**	**Price**
ES646238-2	12V	**$150.00**	CALL	**CALL**
ES646275-1	24V	**$190.00**	CALL	**CALL**
FACTORY OVERHAULED				
Model	**Volt/Amp**	**Core**	**Part No.**	**Price**
646238-2R	12V	**$150.00**	07-02650	**$395.00**
646275-1R	24V	**$190.00**	07-06502	**$396.00**

HARTZELL ENGINE TECHNOLOGIES FACTORY OVERHAULED STARTERS

If No Cores are Available at factory, we will require your core for overhaul.





Mfg. Ref.	P/N	Core	Price
MC-6501	07-06503	$150.00	**$439.00**
MHB-4004R	08-06206	$175.00	**$760.00**
MHB-4005R	08-06207	$235.00	**$760.00**
MHB-4017R	08-06211	$200.00	**$524.00**
MHB-4020R	CALL	$200.00	**CALL**
MHJ-4003SR	07-06505	$190.00	**$437.00**
MHJ-4004R	08-06204	$185.00	**$837.00**
MHJ-4005R	08-06205	$300.00	**$798.00**
MZ-4204R	CALL	$165.00	**CALL**
MZ-4208R	08-06208	$124.00	**$375.00**
MZ-4219R	CALL	$200.00	**CALL**
MZ-4220R	08-06198	$200.00	**$504.00**
MZ-4224R	CALL	$200.00	**CALL**
MZ-4225R	08-06201	$200.00	**$426.95**
MZ-4226R	08-06202	$200.00	**$426.95**
646238-2R	07-02650	$150.00	**$395.00**

HARTZELL STARTER OVERHAUL KITS



Lamar Technologies overhaul kits include all parts necessary for a normal major overhaul, as well as any special tools, lubricants, and thread compounds. The model specific kits cover all starters manufactured by Lamar Technologies in eight different kits. The overhaul manual has been rewritten to highlight tear down and assembly with detailed drawings and instructions. The manual covers all aspects of the rebuild in easily understood steps with tech support just a call or email away. (See Documents Tab) Average time to do a complete overhaul can be accomplished in less than an hour reducing downtime and increase revenue, as well as maintain the quality standards of the maintenance organization.

Description	Part No.	Price
PM1201-OHK - Fits all PM1201/1202 starters	07-01269-1	**$293.95**
PM1203-OHK - Fits all PM1203 starters	07-01270-1	**$302.00**
PM1204-OHK - Fits all PM1204 starters	08-06007-1	**$302.00**
PM2401-OHK - Fits all PM2401/2402 starters	07-01272-1	**$287.95**
PM2403-OHK - Fits all PM2403 starters	07-01273-1	**$296.95**
PM2404-OHK - Fits all PM2404 starters	08-06009-1	**$309.00**

HARTZELL ENGINE TECH. NEW STARTERS

Description	Volt/Amp	Part No.	Price
MHJ-4003S New Hartzell Starter	24V	08-06180	**$439.00**
MHB-4014 New Hartzell Starter	24V	08-06182	**$776.00**



HARTZELL ENGINE TECH. STARTER DRIVES

Designed to fit prestolite starters. Shipping Weight: all units, 2 Lbs.

Description	Part No.	Price
EBB75A MZ series 4205 thru 4207, 4217 thru 4219. MHB series 4001 thru 4007 & 4010 thru 4013	07-06515	**$129.85**
EBB124A MHJ series-All, MMU series-All, MZ4204, MHB4015	07-06510	**$133.75**
EBB131A MZ series 4221 thru 4223, MHB 4016 thru 4019	07-06511	**$110.75**
EBB142A STARTER DRIVE ES	07-06512	**$132.75**
Lamar 9301001-F 01 OVERHAUL KIT PM1201 & 2401 Series Starters includes shear pin	07-01180	**$101.85**

QUALITY AIRCRAFT OVERHAULED STARTER ADAPTERS



Description	Part No.	Price
642083A12	07-19956	**$1,295.00**
642085-A17	07-19958	**$1,295.00**
642087A64	07-19959	**$2,275.00**
642087A68	07-19960	**$2,275.00**
642087A69	07-19962	**$2,275.00**
642087A70	07-19963	**$2,275.00**
635048-A1	07-19964	**$1,595.00**
635048-A16	07-19965	**$1,595.00**
635048-A20	07-19966	**$1,595.00**
635050A4	07-19967	**$1,195.00**
643259A18	07-19968	**$1,295.00**
643259A39	07-19969	**$1,436.00**
658440A1	07-19970	**$1,295.00**
653074-A51	07-19971	**$1,795.00**
646220-A37	07-19972	**$1,295.00**
646220-A5	07-19973	**$1,295.00**

CONVERSION CHART

The Magnaflite lightweight starter listed in the table below will be superseded by the E-Drive and/or X-Drive starter listed therein. All Magnaflite P/N's listed below that are currently installed, being installed or in inventory are in no way affected. Standard Limited Warranty, is in effect and returns for reason of supersedure will not be accepted.

KAPS Part Number	X-Drive Left Hand Solenoid	X-Drive Right Hand Solenoid	E-Drive
MHB-6016	SRB-9021	SRB-9031	ERB-8011
MHB-6018	SRB-9021	SRB-9031	ERB-8011
MMU-6001	SRB-9022	SRB-9032	ERB-8012
MZ-6204	SRZ-9022	SRZ-9032	ERZ-8012
MZ-6222	SRZ-9021	SRZ-9031	ERZ-8011
MZ-6224	SRZ-9021	SRZ-9031	ERZ-8011
MZ-6226	SRZ-9021	N/A	ERZ-8011

Prices Subject to Change Without Notice

SKY-TEC STARTERS

SKY-TEC ST2 & KCST2 MODEL STARTERS FOR SMALL CONTINENTAL ENGINES



SKY-TEC PULL START CONVERSION C12ST2 - FOR FACTORY KEYSTART STARTER FOR A65-12 THROUGH O-300C ENGINES - 9.2 lbs., Bolt-off / Bolt-on, High Torque, Low-Current, Gasket Included, Replaces TCM starter & continuous running sprag clutch in TCM factory keystart engines. Now featuring internal, self-resetting Kickback Protection System - zero maintenance - no pin to shear.

SKY-TEC KCST2 - STC-CERTIFIED CONVERSION KIT FOR FACTORY PULL-START ENGINES - STC Modification of Engine Required (removal of OEM starter pinion shaft in rear of engine). STC Modification of Airframe Required (replacement of pull-start T-handle with Sky-Tec-supplied push button & wiring) High Torque, Low-Current, 9.2 lbs. Now featuring internal, self-resetting Kickback Protection System - zero maintenance - no pin to shear. **Complete Conversion Kit includes:** C12ST2/S Starter, Push Button Switch, Wiring Harness, Gasket, Instructions, STC for Airframe Modification, STC for Engine Modification

SKY-TEC KEY-START C12ST2/SR - REVERSE TURNING for Continental GO-300 Engines ONLY - Internal, self-resetting Kickback Protection System - zero maintenance - no pin to shear. 6-8 lbs. lighter and significantly more reliable than the original, heavyweight factory starter. **Also sold in a Kit (KCST2/SR)**STC Certified conversion kit includes C12ST2/SR REVERSE TURNING starter for GO-300 engines (only), push-button switch, push-to-start placard, wiring harness, two STC's (one for airframe modification, one for engine modification) and instructions. 2-year factory warranty.

Model C12ST2 (Starter only).....P/N 07-00614 ..... **$599.00**
Model C12ST2/S (Starter only) .....P/N 07-00719 ..... **$599.00**
Model KCST2 conversion kit .....P/N 07-00721 ..... **$624.00**
KCSW Switch and harness only.....P/N 07-00722 ..... **$71.75**
Model C12ST2/SR (Starter only).....P/N 07-01855 ..... **$605.00**
Model KCST2/SR (Kit).....P/N 07-01856 ..... **$633.00**



SKY-TEC ST3 MODEL STARTERS FOR LARGE CONTINENTAL ENGINES

Safe for all types of TCM starter adapters! Feature Sky-Tec's exclusive proprietary clutch design virtually eliminating starter induced TCM starter adapter wear. FAA/PMA certified replacement part approved for all TCM starter adapters including "classic Style", "improved style", "permold", and "sand cast" engines. Simple bolt-off / bolt-on installation. Designed to crank no slower than TCM heavyweight OEM starters. Weight: 6.9 lbs. Generous 2-Year factory warranty.

Model C12ST3 12 Volt..... P/N 07-00766.....**$620.00**
Model C24ST3 24 Volt..... P/N 07-00767.....**$535.00**

SKY-TEC ST4 SERIES STARTERS FOR TCM



The proven centrifugal release clutch from the ST3 is combined with the higher torque motor of the ST5 to provide a light weight, high torque, starter adapter friendly starter perfect for both 12 volt and 24 volt 470-powered aircraft. Recommended for 12V and 24V Continental 470-series engines. For O-300-D through TSIO-550 engines, eligibility is by FAA PMA Supplement 12.

12V(C12ST4).....P/N 07-17769 .....**$519.00**
24V(C24ST4).....P/N 07-17770 .....**$563.00**



SKY-TEC ST5 SERIES STARTERS

The ST5 starter couples a high power 2.2 kW motor with an innovative solenoid-engaged (and disengaged) drive system completely disengages the powerful permanent magnet motor while the starter is unpowered eliminating possible TCM starter adapter wear while providing authoritative, high-torque starting. Positive solenoid enabled engagement and disengagement allows the TCM starter adapter to fully unwrap under all normal operating conditions thus greatly prolonging starter adapter life. Weight: 9.1 lbs.

C12ST5 .....P/N 07-01341 .....**$519.00**
C24ST5 .....P/N 07-01342 .....**$554.00**

SKY-TEC BCE-6 EXTENSION CABLE KIT



6" Battery Cable Extension kit aids the installation of starters in aircraft that have limited slack available in the aircraft's starter power cable. Generally not required for TCM starter installations. May be needed in some PM, and NL model Lycoming installations. P/N 07-00923 ..... **$16.85**

SKY-TEC LSA STARTER



The lightest Lycoming starter ever at just 6.3 lbs. The 122-LSA is Lycoming's factory OEM starter on the new O-233 LSA engine. An excellent 12V starter for O-235, O-290 and O-320 engines with 122-tooth ring gears. Plenty of torque, high cranking speed, low current draw. Features a precision machined housing specifically designed to mount the lightweight Plane-Power AL12-EI60 alternator - enabling the industry's lightest weight starter/alternator pairing at just 13.2 lbs. for both! Perfect for lightweight, Lycoming-powered LSA aircraft. Experimental.

Starter 122-LSA.....P/N 07-01806 ..... **$465.00**
122-LSA Starter & AL12-E160-L Alternator Kit
P/N 07-01806-1 ..... **$949.00**

SKY-TEC STARTERS HIGH-TORQUE INLINE STARTERS FOR LYCOMING ENGINES



Featuring Sky-Tec's Exclusive KPS® Kickback Protection System, Sky-Tec's NL-series of starters fit all Lycoming powered aircraft. All NL-series starters are FAA-PMA certified as replacement parts for all non-geared, flat Lycoming engines. Sky-Tec NL-series starters fit without modification or 337 paperwork. At only 9.3 lbs., the NL-series is the lightest Bendix-free inline available. Two-year warranty.

Model No.	Voltage/ Description	Pitch	FAA-PMA Eligible	Part No.	Price
122-NL	12 Volt (Also 24 Volt Switchable)	10/12 (for 122- Tooth Rng Gears)	Lyc 235, 290, 320, 360, 540 & 720	07-00761	**$429.00**
149-NL	12 Volt (Also 24 Volt Switchable)	12/14 (for 149- Tooth Rng Gears)	Lyc. 235, 290, 320, 340, 360, 540	07-00762	**$425.00**
149-NLR	12 Volt (Also 24 Volt Switchable)	12/14 (for 149- Tooth Rng Gears)	Lyc. LIO-320, LO-360, LTO-360, LIO-360, LHIO-360, & LTIO-540	07-00763	**$429.00**
122-NL/ec	24 Volt Super Duty	10/12 (for 122- Tooth Rng Gears)	Lyc. 235, 290, 320, 360, 540 & 720	08-07061	**$489.00**
149-NL/ec	24 Volt Super Duty	12/14 (for 149- Tooth Rng Gears)	Lyc. 235, 290, 320, 340, 360, 540 &	08-07059	**$485.00**
149-NLR/ec	24 Volt Super Duty	12/14 (for 149- Tooth Rng Gears)	Lyc. LTIO-540	08-07060	**$489.00**



SKY-TEC HIGH-TORQUE STARTER

One of the lightest Lycoming starters available at only 8.9 lbs. Spins twice as fast as most heavyweight OEM starters. Zero maintenance - no pins to replace in the event of a kickback. FAA-PMA approved for most Lycoming engines. Some airframe applications may require minor modification for best fit. Confirm aircraft fit, ring gear tooth count and voltage before ordering. 2-Year factory warranty.

Model	Voltage	Description	Part No.	Price
122-12HT	12 Volt	10/12 Pitch (122 Tooth)	07-06250	**$559.00**
122-24HT	24 Volt	10/12 Pitch (122 Tooth)	07-06251	**$566.00**
149-12HT	12 Volt	12/14 Pitch (149 Tooth)	07-01840	**$559.00**
149-24HT	24 Volt	12/14 Pitch (149 Tooth)	07-01841	**$559.00**
149-12HT-H	12	12/14 (149 Tooth) Sky-Tec Starter	07-01336	**$559.00**
149-24HT-H	24 Volt	Replaces B&C Starters on 24 Volt Robinson Helicopters	07-01844	**$599.00**
149-24HT/EC	24	Sky-Tec Starter (149 Tooth)-SuperDuty/ec	07-06255	**$566.00**
149-12HTL	12	149 Tooth	07-01336	**$559.00**
149-24HTL	24	149 Tooth	07-17787	**$562.00**

SKY-TEC FLYWEIGHT™ STARTERS FOR LYCOMING ENGINES



FAA-PMA approved for most Lycoming engines. Some airframe applications may require modification for best fit. LS model has the solenoid offset to the left side and PM model is offset to the right. Confirm aircraft fit, ring gear tooth count and voltage before ordering. Generous 2-Year factory warranty. Note: The LS Solenoid is at the 2:30 position and the PM Solenoid is at the 7:30 position when viewed from the front. 8.1 lbs.

Model	Part No.	Price
122-12LS	07-06245	**$437.00**
149-12LS	07-06246	**$439.00**
122-12PM	07-06252	**$437.00**
149-12PM	07-06253	**$437.00**
122-24PM	07-06249	**$463.00**
149-24PM	07-06257	**$463.00**

SKY-TEC XLT STARTERS



The world's lightest starter ever certified for Lycoming engines. Only 6.5lbs! Only 8 inches total length and 3.5 inches tall! Left-side mounted solenoid. High torque and fast spin. FAA PMA certified for most Lycoming 4-cylinder engines from O-235 to IO-390. Low current draw. Highly durable, fortified aluminum mount/housing. No Bendix to lubricate. Nothing to maintain. 2-Year factory warranty.

Voltage	Model	Recommended for	Part No.	Price
12V	122-12XLT	Lycoming O-235 - IO-390 engine powered aircraft with 10/12 pitch, 122-tooth ring gears	07-02419	**$437.00**
12V	149-12XLT	Lycoming O-235 - IO-390 engine powered aircraft with 12/14 pitch, 149-tooth ring gears	07-02420	**$432.00**
24V	122-24XLT	Lycoming O-235 - IO-390 engine powered aircraft with 10/12 pitch, 122-tooth ring gears	07-02421	**$463.00**
24V	149-24XLT	Lycoming O-235 - IO-390 engine powered aircraft with 12/14 pitch, 149-tooth ring gears	07-02422	**$463.00**

RECOMMENDED STARTER BY AIRCRAFT

For complete listing of recommended Sky-Tec™ Starters by Aircraft make & model, please see the Aircraft Spruce website for a link to the Sky-Tec™ website **at www.aircraftspruce.com**

EP

SKY-TEC SOLENOIDS – GPL STARTERS



SKY-TEC SOLENOIDS

Silver contacts provide 300A in-rush capability. Much higher than the original units. Strong spring and high-current coil for quick contact opening - minimizing arcing. Single coil terminal (other end connected to case).

Model No.	Volts	Description	Part No.	Price
STS-12S	12	Starter Solenoid	07-03562	**$71.75**
STS-24S	24	Starter Solenoid	07-03563	**$86.75**
STS-12M	12	Battery/Master Solenoid	07-03564	**$72.75**
STS-24M	24	Battery/Master Solenoid	07-03565	**$86.75**
STS-12A	12	Continuous Duty (Aux) Solenoid	07-03566	**$71.75**
STS-24A	24	Continuous Duty (Aux) Solenoid	07-03567	**$88.90**

GPL ELECTRIC STARTERS

GPL Electric offers an electric starter kit for several rotax engines. This unique system not only allows you to retain pull start, but also allows you to keep oil injection (if present) otherwise, a cover plate can be used (if space constrained). This system safely engages the ring gear at a 90 degree angle, then fully disengages from the crankshaft. The gpl electric starter kit will not disable the engine due to malfunction, so it is the safest designed after market starter kit available for rotax engines and is made in the U.S.. GPL Electric also provides excellent warranty, comprehensive technical support and maintains a full replacement of parts inventory.

GPL STARTER KITS FOR ROTAX ENGINES



GPL Electric Starter Kit Includes:
(M8) Hi Collar Split Washer, (M6 X 90) Socket Head Cap Screw, (M6) Hi Collar Split Lock Washer, (M6 X 18) Socket Head Cap Screw, (M6) Split Lock Washer, (M8 X 25) Socket Head Cap Screw, (M8 X 22) Low Profile Socket Head Cap Screw, Main Casting (D3) Sits In The 10:00 Pos or Main Casting (D4) Sits In The 11:00 Pos, Ring Gear, Inner Spacer, Starter Motor (Heavy Duty), Loctite 242 Threadlocker, Installations Instructions, and Coverplate (If Not Retaining Pull Start)
If Retaining Pull Start The Following Is Also Required
Outer Spacer (1), (M8 X 12) Hex Head Cap Screw (3), (M8) Split Lock Washer (3), and (M6 X 22) Socket Head Cap Screw (4)

Application	Model No.	Part No	Price
Rotax Engines (377,447,503)	03-001	15-06473	**$635.17**
Rotax Engines (462,582,618,670)	03-004	15-06472	**$635.17**
Rotax Engines (532 CDI)	03-005	15-08364	**$635.17**
Rotax Engines (532 POINT)	03-006	15-08365	**$635.17**

EP



GPL RETAIN PULL START KITS

Retain Pull Start Kit: Engine Specific Outer Spacer And Required Hardware (nuts/bolts).

Application	Model No.	Part No	Price
Rotax Engines (462,582,618,670)	02-29 RO	15-05373	**$135.00**
Rotax Engines (377,447,503,532)	02-29 SO	15-05374	**$135.00**



GPL DELUXE STARTER KITS

The Deluxe Starter Kit Includes: Rubber Insulating Boots, Push Button Switch, Solenoid, Regulator/rectifier, 20 Amps Fuse / Fuse Holder, Cables & Wiring (aircraft Specific), Hardware (nuts/bolts). Deluxe Add On Kits Weighs 3 Lb

Application	Model No.	Part No	Price
Challenger Air Crafts (11 ft Cable)	03-009-11	15-08341	**$173.50**
Other Air Crafts (5 ft Cable)	03-009-05	15-08340	**$173.50**



GPL ELECTRIC REPLACEMENT STARTER MOTORS

This motor fits all GPL Starter Kits and the Hirth F23 Engine as well. Heavy Duty Starter Motor Model 02-70HD
P/N 15-05371 ..... **$262.64**



REPLACEMENT STARTER MOTOR FOR ROTAX

(Replaces Rotax P/N 995-430) Voltage: 12 kW: 0.6 Condition: New Rotation: CW Starter Type: PMDD Number of Teeth: 9 Gear OD: 1.154" / 29.3mm Mtg Ear 1 Hole: M8-1.25 Threaded Mtg Ear 2 Hole: M8-1.25 Threaded Weight: 5.2 lbs / 2.36 kg.
Model No. 02-80 ..... P/N 07-02388..... **$199.00**



GPL PULL START RETENTION KIT

GPL pull start retention kit for Rotax 337, 447, 503, 532 - points and 532 - CDI.
P/N 15-05374..... **$135.00**



GPL PULL START RETENTION KIT

GPL pull start retention kit for Rotax 462, 582, 618, 670.
P/N 15-07970..... **$135.00**



GPL CLOCKWISE STARTER F33 AND CUYUNA

GPL clockwise starter f33 and cuyuna.
P/N 15-08398..... **$262.64**



GPL OIL INJECTION DRIVE KIT

GPL oil injection drive kit long nut pull start.
P/N 15-08397 ..... **$52.53**



GPL PUSH BUTTON SWITCH

GPL push button switch - 02-22
P/N 15-08396..... **$25.50**

SEE WWW.AIRCRAFTSPRUCE.COM FOR A COMPLETE LIST OF REPLACEMENT PARTS.

ZEFTRONICS VOLTAGE REGULATORS

Photo	Description	Part No.	Approval	Price	Replacement For
	R15100 Rev A VR:14.2V. * Ground-Fault-Protection (GFP) * Trouble-Shooting Light (TSL) * Use R15V00 Rev A for built-in OV Protection.	07-00622	FAA-STC	**$185.75**	Cessna: C611001-0101, -0102, -0201. Beech: 33-380010 Electrodelta: VR600 Lamar: DGR6 FORD: D4FF-10316-BA, D4FF-10316-CA
	R15V00 Rev A VR:14.2V; OV 16V Same as R15100 Rev A plus OV Protection	07-00628	FAA-STC	**$218.95**	Zeftronics: R15100 Rev A (ACU), Plus V11100 (OVS)
	R1510N Voltage Regulation: 14.2V * Use R15V0N for built-in OV Protection * Single or Dual Alternator Application * Externally Adjustable	07-00624	FAA-STC FAA-PMA	**$238.95**	Prestolite: VSF7201, 2, 2S, 3, 3A, 3S, 4 Electrodelta: VSF7203A TCM: 649684-1 Piper: 550-383
	R15V0N VR: 14.2V ; OV 16.0V * Low/OV Light, OV Protection	07-00630	FAA-STC FAA-PMA	**$286.95**	Zeftronics: R1510N (ACU), Plus V1510A (OVR)
	R1510L Voltage Regulation: 14.2V. * Ground-Fault-Protection (GFP) * Trouble-Shooting Light * Reduced panel lights fli * Use R15V0L for built-in OV Protection	07-00623	FAA-PMA	**$179.95**	Piper: 450-392, 484-121, 66804-03, 756-055, 484-088 Beech: 169-380063 Wico: X16300B, X17990. Lamar: B00267-1, 2, B00331-1, 2. Delco Remy: 9000590, 1116393, 1116398 Electrodelta: VR200, A Commander: 1816110 Prestolite: FVR4004, 4224, 4011 RBM: 87-87102-21 Lycoming: LA-11357, 12747
	R15V0L VR: 14.2V ; OV: 16V * Ground-Fault-Protection (GFP) * Trouble-Shooting Light (TSL) * OV Protection built-in	07-00629	FAA-PMA	**$224.95**	Piper: 557-337 Lamar: B00371-1,-8,-14 Electrodelta: VR371 Zeftronics: R1510L (ACU), Plus V1510A (OVR)
	R15300 VR: 14.2V. OV: 16V * Ground-Fault-Protection (GFP) * OV Protection built-in, T/s Light	07-00625	FAA-PMA	**$278.95**	Mooney: 800270-505, 880016-503 Electrodelta: VR415F Lamar: DGR1-1
	R1530B VR: 14.2V. OV: 16V * Ground-Fault-Protection (GFP) * OV Protection built-in * Trouble-Shooting Light	07-00626	FAA-PMA	**$292.95**	Mooney: 880016-501 Beech: 35-380093-1,2,3 Electrodelta: VR414, B00403-1 ; EM2073-1, 2 Oeco: 20053, 20065, 20137, 20437, 20082
	R25101 Rev A VR: 27.7 * GFP & Trouble-Shooting Light * Use R25400 (require mod to ALT wiring & connector) for built-in OV Protection.	07-00631	FAA-PMA	**$174.95**	Cessna: C611004-0101, C611002-0102, -0105 Ford: C8FF/ C6FF-10316-A TCM: 636147 Electrodelta: VR500-0101
	R25102 Rev A Voltage Regulation: 28.7V Same features as R25101 Rev A	07-00632	FAA-PMA	**$169.95**	Cessna: C611004-0102 Electrodelta: VR500-0102
	R251DR VR: 27.7V **BEST VALUE** *Trouble-Shooting Light & GFP *Externally Adjustable	07-00634	FAA-PMA	**$323.00**	Delco Remy: 9000591 Lycoming: 74292 TMC: 631656
	R25400 VR: 28.7V *OV Protection built-in & GFP *Trouble-Shooting Light	07-00635	FAA-STC	**$251.95**	Cessna: C611005-0103, -0101, -0102 Electrodelta: VR515F,G, GA Lamar: DGR3
	R2510N VR: 28.4V *Use R25V0N for built-in OV Protection. *Single or Dual Alternator Application *Externally Adjustable	07-00633	FAA-STC	**$274.95**	Prestolite: VSF7403A, 3S, 4Piper: 550-381 Lycoming: LW10179, 77347
	R25V0N VR: 28.4V ; OV 32V R2510N plus OV Relay, Low/Over-Voltage Indicator	07-00636	FAA-STC	**$329.00**	Prestolite: VSF7403A,3S,4. Piper: 550-381. Lyc: LW10179, 77347 Zeftronics: R2510N + V2510A
	V11100 Over-Voltage Trip: 16.0V *Use w/ R15100 Rev A, VR600 or DGR6 *More Precise OV Protection	07-00637	FAA-STC	**$149.95**	Cessna: C593001-0101 Lamar: DG01 Electrodelta: OS60. Electromech: EM235
	V1510A Over-Voltage Trip: 16.0V *Use with R1510N or VSF72XX Series for OV Protection. *Use with R1510L for OV Protection *More Precise OV Protection	07-00638	FAA-STC FAA-PMA	**$184.75**	Piper: 450-397, 484-183, 550-380, 450-393 Beech: 138-1 Wico: X-17621 Lamar: B00289-2, B00339-1 Electrodelta: OS75-14 Delco-Remy: 1115831 Prestolite: FOC-4002B
	V25101 Over-Voltage Trip: 32V *Use with R25101(2) Rev A or VR500-0101,0102 for OV Protection	07-00639	FAA-STC FAA-PMA	**$209.95**	Cessna: C593003-0101, -0102 Electrodelta: OS100-0101 Electromech: EM233 Lamar: DG02-28 Other P/n: 138-3
	V2510A Over-Voltage Trip: 32.0V * More Precise OV Protection * Use with R2510N or VSF74XX	07-00640	FAA-STC	**$191.80**	Piper: 484-182, 550-382, 584-043 Prestolite: FOC4003A, B. Lycoming: 74804, 78060 Wico: X17634, X17620 Delco Remy: 1115832
	G1200N VR:14.2V. Current Limit (CL): 20A Trouble-shooting Lights, Electronic GCU	07-00617	FAA-PMA	**$234.95**	Delco: 1118736, 1118904, 1119226. VR300-14-20. Cessna: 0413025-4, 5, 12
	G1350N * VR 14.2V: Current Limit (CL): 35A trouble shooting Lights, Electronic GCU	07-00618	FAA-PMA	**$246.95**	Delco: 1118704, 1119220, 1118-704, 1118892. VR300-14-35, 450-390. Cessna: 0413025-6, 8, 10
	G1500N VR:14.2V: Current Limit (CL): 50A Trouble-shooting Lights, Electronic GCU	07-00619	FAA-PMA	**$246.95**	Delco: 1118884, 1118713, 1119224, Electrodelta: VR300-14-50. Cessna: 0413025-7, 9, 11
	G250KN VR: 28.4V.CL: 50A, EQR Built-in	07-01367	FAA-STC	**$315.00**	1119656 ,VR300-28-50. Cessna: 0850460-9

FOR A COMPLETE LISTING OF ALL PRODUCTS AND AIRCRAFT ELIGIBILITY LIST, VISIT WWW.AIRCRAFTSPRUCE.COM.

ZEFTRONICS CONTROLLERS

FOR EXPERIMENTAL AIRCRAFT

ZEFTRONICS B SINGLE ENGINE GENERATOR CONTROLLERS GCU



14V or 28V Type B Single Engine Generator Controller (GCU) available for 10 - 50A with built-in Reverse Current Protection, Field Ground Fault Protection (GFP), and Troubleshooting Lights. Replaces carbon pile Voltage Regulators.

14V B Single .....P/N 07-17986 ..... **$494.00**
28V B Single .....P/N 07-17987 ..... **$718.00**

ZEFTRONICS ELECTRONIC LINE CONTACTOR CONTROLLERS LCC



14V or 28V Electronic Line Contactor Controller Unit (LCC) with built-in OV Protection, Armature Voltage Protection, LC Coil-to-Ground Fault Protection, and Diagnostic Lights.

14V Electronic.....P/N 07-17988 ..... **$563.00**
28V Electronic.....P/N 07-17989 ..... **$696.00**

ZEFTRONICS 28V A SINGLE ENGINE GENERATOR CONTROLLER GCU



28V Type A Single Engine (SE) Generator Controller Unit (GCU) available for 10- 50A with built-in Reverse Current Protection, and Color-Coded Diagnostic Troubleshooting Lights.

Used on Ground Power Units.

14V A Single .....P/N 07-17990 ..... **$985.00**

ZEFTRONICS ALTERNATOR CONTROLLERS WITH OV PROTECTION



14V or 28V Alternator Controller Unit (ACU) with built-in OV Protection (OVP), Field-to-Ground Short Protection (GFP), and Troubleshooting Lights that separately indicate OVP, GFP, and Power-On.

14V.....P/N 07-17991 ..... **$445.00**
28V.....P/N 07-17992 ..... **$590.00**

NEW TEMPEST STARTERS



The Tempest PowerFlite series of aviation engine starters represents a new state-of-the-art energy efficient design providing reduced current draw and long life. The PowerFlite starter mounts directly to existing TCM engines and is available in both 12 and 24 volt configurations. Tempest starter part numbers PL13459 (12v) and PL13484 (24v) are eligible on TCM engine models O-300-D, GO-300-D, IO-346, IO-360, L/TSIO-360, O-470, IO-470, TSIO-470, IO-520, TSIO-520, GTSIO-520, IO-550, TSIO-550 and TSIOL-550.

Powerflite Starter 12V New .....P/N 08-07284 .....**$725.00**
Powerflite Starter 24V New .....P/N 08-07283 .....**$725.00**

See www.aircraftspruce.com for parts and accessories.

TEMPEST POWERFLITE ALTERNATORS



Note: Core charge will be added at time of order. Amount is refunded once original core is returned.

FAA/PMA Approved PowerFlite Alternator. 28 Volts/60 Amps. Model No. 9910591-11AC. For Cessna: 172R, 172S, 182S, 182T AND T182T

New.....P/N 08-07541 .....**$629.00**

OVERHAULED ALTERNATORS

Description	Part No.	Price
2642997R OH Alternator	08-15695	**$394.00**
3656624R OH Alternator	08-15696	**$402.00**
4111810R OH Chrysler Alternator	08-15694	**$402.00**
646843R OH Alternator	08-15693	**$998.00**
649304R OH Alternator	08-15692	**$1,056.00**
ALT-8520R OH Alternator	08-15682	**$481.00**
ALT-8521R OH Alternator	08-15685	**$513.00**
ALT-9522R OH Alternator	08-15681	**$495.00**
ALU-8521R OH Alternator	08-15680	**$502.00**
ALV-9510R OH Alternator	08-15684	**$1,054.00**
ALX-9524R OH Alternator	08-15687	**$525.00**
ALX-9525BR OH Alternator	08-15688	**$489.00**
ALY-6421R OH Alternator	08-15691	**$485.00**
ALY-6521R OH Alternator	08-15690	**$440.00**
ALY-6522R OH Alternator	08-15686	**$485.00**
ALY-8520R OH Alternator	08-15683	**$485.00**
T DOFF10300BR OH Alternator	08-15697	**$399.00**
DOFF10300JR OH Alternator	08-15698	**$402.00**
9910591-11ACR OH Alternator	08-07662	**$416.00**

ZEFTRONICS 28V ALTERNATOR CONTROLLER WITH LOW AND OV INDICATION



28V Alternator Controller (ACU) with built-in Low and OV Indication, OV Protection, Field-to-Ground Short Protection, and Color-Coded Diagnostic Lights.

28V.....P/N 07-17993 ..... **$544.00**

ZEFTRONICS 28V B ALTERNATOR CONTROLLER WITH LOW AND OV PROTECTION



28V Type B Alternator Controller Unit (ACU) with built-in OV Protection, OV Indication pin. Field-to-Ground Short Protection and Color-Coded Diagnostic Lights.

28V.....P/N 07-17994 ..... **$997.00**

ZEFTRONICS ALTERNATOR OUT SENSOR OV RELAY / DIAGNOSTIC LIGHTS



14V or 28V Alternator Out Sensor with built-in OV Protection Relay and, Diagnostic Lights.

14V.....P/N 07-17995 ..... **$255.00**
28V.....P/N 07-17996 ..... **$378.00**

ZEFTRONICS OVER VOLTAGE PROTECTION RELAYS WITH WARNING



16V or 32V Over-Voltage Protection Relay (OVP) with Low and Over-Voltage Warning For Type A or Type B 14V Alternator Systems.

14V.....P/N 07-17997 ..... **$298.00**
28V.....P/N 07-17998 ..... **$399.00**

TEMPEST POWERFLITE OVERHAULED STARTERS



The first of its starter motors is a FAA-PMA approved design eligible on TCM engines. The Tempest PowerFlite series of aviation engine starters represents a state-of-the-art energy efficient design providing reduced current draw and long life. The PowerFlite starter mounts directly to existing TCM engines and is available in both 12 and 24 volt configurations.

Tempest starter part numbers PL13459 (12v) and PL13484 (24v) are eligible on TCM engine models O-300-D, GO-300-D, IO-346, IO-360, L/TSIO-360, O-470, IO-470, TSIO-470, IO-520, TSIO-520, GTSIO-520, IO-550, TSIO-550 and TSIOL-550.

12V	Part No.	Price
MHB-4016R OH Starter	08-15705	**$610.00**
MZ-4204R OH Starter	08-15709	**$414.00**
MZ-4220R OH Starter	08-15710	**$531.00**
MZ-4222R OH Starter	08-15711	**$531.00**
MZ-4224R OH Starter	08-15712	**$531.00**
MCL-6501R OH Starter	08-15713	**$402.00**
646238-2R OH Starter	08-15715	**$402.00**
646238-3R OH Starter	08-15716	**$402.00**
24V	**Part No.**	**Price**
MHB-40014R OH Starter	08-15704	**$610.00**
MHB-4018R OH Starter	08-15706	**$610.00**
MMU-4001R OH Starter	08-15707	**$562.00**
MHJ-4003R OH Starter	08-15708	**$404.00**
646275R OH Starter	08-15714	**$402.00**

EP

LAMAR ELECTRICAL COMPONENTS

LAMAR MC10 MASTER ELECTRICAL CONTROL UNIT



MC10

The Lamar MC10 is a master electrical control unit developed for 14V and 24V single engine experimental aircraft. It is designed to mount on the firewall or fuselage. It houses all the major electrical components except for the battery, starter, and alternator. the MC10 provides a greater degree of protection against moisture, dust and accidental electrical shorts along with the convenience of all the primary electrical components in one location. Features low installation cost, ease of installation and simplified troubleshooting and repair with several new performance & safety features.

The MC10 embodies the following functions: • Master (battery) (solenoid) control closing the master switch on pilot's panel connects the battery to the primary bus. • 3 aircraft bus outputs, protected via resettable circuit breakers. • Alternator Control; voltage regulation, overvoltage protection, field output overload protection, alternator feeder fault protection • Starter control (solenoid) • Low voltage warning.(L model also includes overvoltage, over-current and reverse-current annunciation) • Battery charge/ discharge ammeter drive (current shunt) • Clock output (always-on) protected with easily accessible external mounted fuse. • Ground power receptacle & control (solenoid) with reverse polarity protection.

Description	Part No.	Price
Lamar Master Control 14V Exp.	11-03295	**$1,162.00**
Lamar GC07-EXP Generator Control	11-05042	**$1,414.00**
Lamar GC11-EXP Generator Control	11-05043	**$1,189.00**
Lamar MC09-T1 Master Control Turbo	11-05055	**$3,750.00**

LAMAR ELECTRICAL COMPONENTS

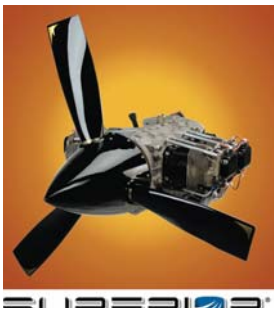
LAMAR #	DESCRIPTION	APPLICATIONS	OUR P/N	PRICE
A-00258-1	Switch, Alternator INOP	Piper: PA23 Series, PA30, PA39, PA38, PA28 Series, PA32 Series, PA34-200T, PA34-220T, Maule*, Raytheon:A36, V358, F338, F33, F33A, F33C, E33a, V35A, 36	07-01146	**$116.85**
A-00258-2	Switch, Alternator INOP	Piper: PA23 Series, PA31 Series, PA34, PA31P, Twin Commander 700 Maule*, Raytheon: 57, E55., 5895B55, D55	07-01147	**$116.85**
B-00266-2	Overvoltage Relay, 28V, Piper	Piper: PA23-235, PA23-250, PA31 Series, PA36 Series, Islander*: BN2A, BN2B, BN2T. BN2T-4, Trislander*: BN2A MK 11 Series	07-01148	**$351.00**
B-00286-1	Regulator, 28V, Parallel OP (twin)	Piper:PA23-235, PA23-250, PA31, PA300, PA44-180/180T, PA31P, PA34-220T, Cessna*:421, 414, 402, 340, 310	07-01449	**$399.00**
B-00288-1	Regulator, 14V, Parallel OP (twin)	Piper: PA23-235, PA23-250, PA30, PA39, PA34-200T, PA34-220T, PA44-180, PA44-180T, Gulfstream Aero*	07-01150	**$405.00**
B-00289-2	Overvoltage Relay, 14V	Piper: PA18, PA30, PA39, PA23-235, PA23-250, PA28 Series, PA32 Series, PA34-220, PA34-220T, Beech*: 19A, B19, M19A, 23, A23, A23A, A23-19, A23-24, B23, C23, A24, A24R, B24R, C24R, Bellanca*: 14-19, 19-2, 19-3, 19-3A, 17-30, 31, 31TC, 17-30A, 31A, 31ATC, Citabria*: 70CAA, 7ECA, 7GCBC, 7KCAB, 1GCBC, 1KCAB, Commander*: 112, B, TC, TCA, Cessna*:175, 185, 188, Grumman*: AA-1, Lake*: LA-4, A, P, Maule*: M-5-180C, 235C, M-6-180, 235, M-7-235, MX-7-180, 235, Varga*: 2150A	07-01151	**$291.95**
B-00306-3	Regulator, 28V, Parallel OP (twin)	Piper: PA60, PA60-601, PA60-601P, PA60-602P, PA60-700P	07-01153	**$488.00**
B-00325-1	Timer, Pneumatic, 28V	Piper: PA23 Series, PA31 Series, PA31T Series	07-01455	**$734.00**
B-00331-2	Voltage Regulator, Type 1, 14V	Piper: PA38	11-04130	**$236.95**
B-00341-1	Time Delay Switch	Piper: PA31 Series, PA42-720	07-01158	**$661.00**
B-00363-1	Timer, Courtesy Light, Beech-28V	Raytheon: E55, 58, 58TC, 58P, 38P, 38P-1, 38P-2, 390	07-01162	**$232.95**
B-00368-2	Alternator Control, 28V Load	PA28/PA-32 Series - See www.aircraftspruce.com for listing.	07-01803	**$431.00**
B-00371-1	Alternator Control, 14V	Piper: PA 28 Series, PA32 Series, PA38, Bellanca*: 80CB, 8KCAB, Maule*: M-5-180C, 235C. M-7-235, MT-7-235, M-8-235, MX-7-180, MXT-7-160, 180, 235, Aviat*:Pitts S-2B, S2S, Zenair*: Zenith 2000	07-01167	**$357.00**
B-00372-1	Alternator Control,Load Balancing	Raytheon: 58, E55, 95B55	07-01168	**$794.00**
B-00375-2	Monitor Low Voltage	Piper: PA31P, PA31T Series, PA34 Series, PA46-310, PA46-350, PA31 Series	07-01170	**$167.95**
B-00380-2	Sensor-Alt Out, 28V Pulsed	Raytheon: 58	07-01171	**$107.90**
B-00382-1	Alternator Control, 28V Load	Piper: PA31-350, PA34-220, PA46-310, PA46-350, PA31	07-01172	**$489.00**
B-00387-1	Voltage Regulator with Overvoltage Protection, 28V	Raytheon: A36, F33A, B36TC, 58, V35B, F33C	07-01173	**$487.00**
B-00392-1	Alternator Control, 14V, Piper	Piper: PA44-180, PA44-180T	07-01174	**$630.00**
B-00396-2	Dimmer Assembly, 14V/28V	Experimental	11-03165	**$466.00**
B-00403-1	Voltage Regulator with Overvoltage Protection, 14V	Raytheon: F33A, F33C, V35B, A36	07-01176	**$840.00**

LAMAR SOLENOIDS



Aviation grade, non FAA-PMA approved, solenoid for continuous duty 12 volt applications. Fits current GA production aircraft as well as legacy aircraft. Replaces both single terminal switched units, as well as the current double terminal switched units in production today. All units have multiple quality and functional tests prior to certification and delivery.

Description	Part Number	Price
X61-0028 12V Continuous	07-01875	**$67.75**
X61-0029 24V Continuous	07-01876	**$66.75**
X61-0030 12V Intermittent	07-01877	**$103.85**
X61-0031 24V Intermittent	07-01878	**$102.75**



XP EXPERIMENTAL ENGINES

These engine models include fuel pump, fuel system, magnetos, harness, spark plugs, lightweight starter, oil filter adapter, oil filter and updraft cast sump. Prop governor adapter included on constant speed models. Available in Dynafocal #1, Dynafocal #2 and Conical mounting configurations.

**** Attention: Roller Lifter Engine Kits do not come assembled, assembly required.***

Superior Part No.	Description	Part No.	Price
O-320-A1AC2	Carbureted, Fixed Pitch	08-12095	**$24,778.00**
O-320-B1AC2	Carbureted, Constant Speed	08-12097	**$25,112.00**
IO-320-A1AC2	Fuel Injected, Fixed Pitch	08-12098	**$25,667.00**
IO-320-B1AC2	Fuel Injected, Constant Speed	08-12099	**$26,000.00**
O-360-A1AC2	Carbureted, Fixed Pitch	08-12100	**$24,556.00**
O-360-B1AC2	Carbureted, Constant Speed	08-12101	**$25,112.00**
IO-360-A1AC2	Fuel Injected, Fixed Pitch	08-12102	**$25,667.00**
IO-360-B1AC2	Fuel Injected, Constant Speed	08-12103	**$26,000.00**
IO-400-J4AD9	Fuel Injected, Constant Speed	08-12104	**$33,889.00**
08-12105	Horizontal Cold Air Induction Sump Extra Charge on 320 & 360	08-12105	**$1,690.00**
08-12110	Piston 9:1 320 (165HP)/360 (185HP) Engine	08-12110	**$454.00**
08-12113	Lightspeed Single Plasma II Mini	08-12113	**$400.00**
08-12115	Lightspeed Dual Plasma II Mini	08-12115	**$753.00**

EP

VANTAGE CERTIFIED OEM ENGINES



These engine models include fuel pump, fuel system, magnetos, harness, spark plugs, lightweight starter, oil filter adapter, oil filter and updraft cast sump. Prop governor adapter included on constant speed models. Available in Dynafocal #1, Dynafocal #2 and Conical mounting configurations.

Superior Part No.	Description	Part No.	Price
O-320-A1A2	Carbureted, Fixed Pitch	08-12087	**$28,200.00**
O-320-B1A2	Carbureted, Constant Speed	08-12088	**$28,500.00**
IO-320-A1A2	Fuel Injected, Fixed Pitch	08-12089	**$29,000.00**
IO-320-B1A2	Fuel Injected, Constant Speed	08-12090	**$29,300.00**
O-360-A1A2	Carbureted, Fixed Pitch	08-12091	**$28,200.00**
O-360-B1A2	Carbureted, Constant Speed	08-12092	**$28,500.00**
IO-360-A1A2	Fuel Injected, Fixed Pitch	08-12093	**$29,000.00**
IO-360-B1A2	Fuel Injected, Constant Speed	08-12094	**$29,300.00**

MILLENNIUM CYLINDERS



Uniform hardness all the way through the steel barrel walls which allows the barrel to provide even wear while withstanding extreme cylinder temperatures and pressures.
Exhaust and intake ports are volumetrically matched to maximum output and performance.
Increased port wall thickness - eliminates problems with warping and cracking.
Computer-generated head fin configuration - deliver more uniform heat transfer and fewer "hot" spots.
Manufactured from the most advanced alloys available - exceed industry standard for strength and porosity.
+ Included with stud assembly.

FOR CONTINENTAL ENGINES

Superior Part No.	Application	Part No.	Price
SA65000S0	A-65 (Sold in Kit of 4 - STC)	08-11477	**$5,952.00**
SA1020	0-A20P O-200-A, B; C-125-2, C-145-2, -2H; O-300A, B, C, D	08-10908	**$916.00**
SA10200-A21P	C-75, 85	08-10909	**$945.00**
SA10200-A22P	C-90	08-10910	**$980.00**
SA47006L-A20P	O-470-U; IO-470-D, E, F, H, L, M, N, S, U, V	08-11060	**$1,280.00**
SA47006S-A20P	O-470-G, M, P; IO-470-C, G, P, R	08-11061	**$1,384.00**
SA47006S-A21P	O-470-K, L, R, S	08-11062	**$1,280.00**
SA52006-A20P	IO-520-A, B, BA, BB, C, CB, D, E, F, J, K, L, M, MB	08-11098	**$1,398.00**
SA52006-A22P	TSIO-520-AF, B, BB, C, CE, D, DB, E, EB, G, H, J, JB, K, KB, L, LB, M, N, NB, P, R, T, UB, VB, WB	08-11099	**$1,348.00**
SA52006-A23P	IO-550-A, B, C	08-11100	**$1,390.00**
SA55006-A20P	IO-550-D, E, F, L (Taper Finned Barrel)	08-11208	**$1,490.00**

FOR LYCOMING ENGINES

Superior Part No.	Application	Part No.	Price
SL 10302-A20P	O-235-F, J (High Compression)	08-11510	**$1,391.00**
SL 10302-A21P	O-235-K, L, M (Medium Compression)	08-11511	**$1,278.00**
SL 32006N-A20P	O-320-B, D, IO-320-B (Narrow Deck)	08-11732	**$1,147.00**
SL 32006W-A20P	O320-B, D; IO-320-B, D; AIO-320-B, C; AEIO-320-D; LIO-320-B (Wide Deck)	08-11735	**$1,147.00**
SL 32006W-A21P	O-320-A, C, E; IO-320-A, E; AEIO-320-E; (Wide Deck)	08-11733	**$1,146.00**
SL 36006N-A20P	O-360-A, C; IO-360-B; HO-360-B; HIO-360-B; O-540-A, D, E, G; IO-540-C, D, N; TIO-540-G (Narrow Deck)	08-11745	**$1,097.00**
SL 36006N-A21P	O-360-B, D; O-540-B (Narrow Deck)	08-11746	**$1,096.00**
SL 36006W-A20P	-360-A, C, F, G; IO-360-B, E, M; HO-360-C; HIO-360-B; LO-360-A; AEIO-360-B, H; O-540-A, E, G, H; IO-540-C, D, N, T; AEIO-540-D (Wide Deck)	08-11749	**$1,084.00**
SL 36006W-A21P	O-360-B, D; O-540-B	08-11750	**$1,145.00**

SUPERIOR LYCOMING ENGINES - MAJOR OVERHAUL GASKET SETS

Lycoming engines are built with the best components in the industry. The only parts we paint are the steel barrels to resist corrosion. All aluminum parts; crankcase, assembly case, sump cylinder heads and assy drives are alodined only for corrosion protection. This leaves an engine that is easy to inspect, provides better cooling, and is lighter weight. FAA-PMA Approved

NOTE: Intake hoses and oil drain-back hoses must be ordered separately.

* Contains Exhaust Gaskets
** Contains Spiratallic "NO BLO" Exhaust Gaskets
*** Exhaust Gaskets, Not Included

Superior Part No.	Engine Model	Cylinder Head Type	Part No.	Price
SL61499-1**	O-235 Series	Parallel	08-11792	**$178.95**
SL69371-1**	O-290 Series	Parallel	08-11840	**$197.75**
SL12636*	AIO, AEIO-320 Wide Deck	Parallel	08-11572	**$320.00**
SL14815*	O-320-H Series ('76' Series)	Parallel	08-11627	**$147.75**
SL75439-1**	IO, HIO-360 Conventional IO-360-A, C, D, K; HIO-360-A, C; LIO, LHIO-C Wide Deck	Parallel	08-11966	**$189.85**
SL75441-1**	IO, HIO-360 Conventional IO-360-A, C, D, K; HIO-360-A, C; LIO, LHIO-C Wide Deck	Angle	08-11967	**$201.95**
SL12937***	HIO-360-D1A, D1AD Wide Deck	Angle	08-11580	**$360.00**
SL12945*	O, LO-360 Wide Deck (Dual Magneto)	Parallel	08-11582	**$173.85**
SL12944**	IO-360 Wide Deck (Dual Magneto)	Angle	08-11581	**$172.80**
SL14845***	HIO-360-E, F, Wide Deck (Dual Magneto) LHIO-360-F Wide Deck (Dual Magneto)	Angle	08-11628	**$202.95**
SL71900-1***	VO-435-A Series	Angle	08-11869	**$792.00**
SL71181-1***	GSO, IGSO-480 Series	Angle	08-11857	**$1,042.00**
SL71569-1***	O-540-A, B, E, F, G, H; IO-540-C, D, J, N, R Conventional and Wide Deck (Parallel Valve Head)	Parallel	08-11861	**$288.95**
SL73185-1***	IO-540-A, B, E, G, H, K, L, M, P, S Conventional and Wide Deck (Angle Valve Head)	Angle	08-11908	**$262.95**
SL13378*	O-540, B, E, G,H, Wide Deck (Dual Magneto)	Parallel	08-11594	**$198.75**
SL13367*	IO-540-K, L, M, U Wide Deck (Dual Magneto) AEIO-540-L1B5D Wide Deck (Dual Magneto)	Angle	08-11592	**$258.95**
SL13377*	IO-540-C, N, T, V, W; O-540-J, L Wide Deck (Dual Magneto)	Parallel	08-11593	**$192.75**
SL77175-1*	TIO-540-A Series Conventional; TIO-540-A2C Wide Deck	Angle	08-11995	**$393.00**
SL15903*	TIO-540-S1AD Wide Deck	Angle	08-11642	**$721.00**
SL12956*	TIO, LTIO-540-F, J, N, R (Dual Magneto)	Angle	08-11583	**$289.95**
SL75181-1*	IO-720-A, B, C, D Series Conventional	Angle	08-11959	**$428.00**
SL15423*	IO-720-A1B, B1B, B1BD, D1B, D1C, D1CD Wide Deck	Angle	08-11638	**$292.95**

SUPERIOR LYCOMING ENGINES - SINGLE CYLINDER GASKET SETS

Lycoming engines are built with the best components in the industry. The only parts we paint are the steel barrels to resist corrosion. All aluminum parts; crankcase, assembly case, sump cylinder heads and assy drives are alodined only for corrosion protection. This leaves an engine that is easy to inspect, provides better cooling, and is lighter weight. FAA-PMA Approved

NOTE: Exhaust Gaskets Must be Purchased Separately

Superior Part No.	Engine Model	Set No.	Part No.	Price
SL12040-SC	O-235 SERIES	SL12040-SC Parallel Valve Head	08-11559	**$14.70**
SL12032-SC	O-290; O, IO, LIO-320; AIO, AEIO-320; O-340; O-360-A, B, C, D, F; IO-360-B, E, F; AEIO-360-B, H; HO-360-A, B; HIO-360-B; VO, IVO-360 O-540-A, B, E, F, G, H, J, L; IO-540-C, D, J, N, R, T, V, W; TIO-540-C, E, G, H, K; LTIO-540-K; AEIO-540-D	SL12032-SC Parallel Valve Head	08-11545	**$12.16**
SL12039-SC	IO-360-A, C, D, J; AIO-360-A, B; AEIO-360-A; HIO-360-A, C, D, E, F; LIO-360-C; LHIO-360-C, F; TO-LTO-360-A; TIO-360-A	SL12039-SC Parallel Valve Head	08-11557	**$27.99**
SL16916-SC	O-320-H; O, LO, TO, LTO-360-E "76" SERIES	SL16916-SC Parallel Valve Head	08-11679	**$19.50**
SL12036-SC	O-435-A	SL12036-SC Parallel Valve Head	08-11552	**$13.95**
SL12034-SC	GO, VO, TVO-435; GO, GSO, IGSO-480; IO-540-A, G, K, L, P, S, AA; AEIO-540-L; TIO, LTIO-540-U; VO, TVO, TIVO-540; IGO, IGSO-540-A	SL12034-SC Angle Valve Head	08-11549	**$17.50**
SL12033-SC	IO-540-B, E, M, U; TIO-540-A, S, T; TIO-LTIO-540-F, J, N, R; TIO-541-A; IGO-IGSO-540-B	SL12033-SC Angle Valve Head	08-11547	**$14.94**
SL12037-SC	IO-720-A, D	SL12037-SC Angle Valve Head	08-11554	**$16.50**

EP



SUPERIOR MILLENNIUM CYLINDERS

Uniform hardness all the way through the steel barrel walls which allows the barrel to provide even wear while withstanding extreme cylinder temperatures and pressures. Exhaust and intake ports are volumetrically matched to maximum output and performance. Increased port wall thickness - eliminates problems with warping and cracking. Computer-generated head fin configuration - deliver more uniform heat transfer and fewer "hot" spots. Manufactured from the most advanced alloys available - exceed industry standard for strength and porosity.

Millennium Cylinders For Continental Engines

Model No.	Application	Part No.	Price
SA65000S0	A-65 (Sold in Kit of 4 - STC)	08-11477	**$5,952.00**
SA10200-A20P	O-200-A, B; C-125-2, C-145-2, -2H; O-300A, B, C, D	08-10908	**$916.00**
SA10200-A21P	C-75, 85	08-10909	**$945.00**
SA10200-A22P	C-90	08-10910	**$980.00**
SA47006L-A20P	O-470-U; IO-470-D, E, F, H, L, M, N, S, U, V	08-11060	**$1,280.00**
SA47006S-A20P	O-470-G, M, P; IO-470-C, G, P, R	08-11061	**$1,384.00**
SA47006S-A21P	O-470-K, L, R, S	08-11062	**$1,280.00**
SA52006-A20P	IO-520-A, B, BA, BB, C, CB, D, E, F, J, K, L, M, MB	08-11098	**$1,398.00**
SA52006-A22P	TSIO-520-AF, B, BB, C, CE, D, DB, E, EB, G, H, J, JB, K, KB, L, LB, M, N, NB, P, R, T, UB, VB, WB	08-11099	**$1,348.00**
SA52006-A23P	IO-550-A, B, C	08-11100	**$1,390.00**
SA55006-A20P	IO-550-D, E, F, L (Taper Finned Barrel)	08-11208	**$1,490.00**

Millennium Cylinders For Lycoming Engines

Model No.	Application	Part No.	Price
SL 10302-A20P	O-235-F, J (High Compression)	08-11510	**$1,391.00**
SL 10302-A21P	O-235-K, L, M (Medium Compression)	08-11511	**$1,278.00**
SL 32006N-A20P	O-320-B, D, IO-320-B (Narrow Deck)	08-11732	**$1,147.00**
SL 32006W-A20P	O320-B, D; IO-320-B, D; AIO-320-B, C; AEIO-320-D; LIO-320-B (Wide Deck)	08-11735	**$1,147.00**
SL 32006W-A21P	O-320-A, C, E; IO-320-A, E; AEIO-320-E; (Wide Deck)	08-11733	**$1,146.00**
SL 36006N-A20P	O-360-A, C; IO-360-B; HO-360-B; HIO-360-B; O-540-A, D, E, G; IO-540-C, D, N; TIO-540-G (Narrow Deck)	08-11745	**$1,097.00**
SL 36006N-A21P	O-360-B, D; O-540-B (Narrow Deck)	08-11746	**$1,096.00**
SL 36006W-A20P	O-360-A, C, F, G; IO-360-B, E, M; HO-360-C; HIO-360-B; LO-360-A; AEIO-360-B, H; O-540-A, E, G, H; IO-540-C, D, N, T; AEIO-540-D (Wide Deck)	08-11749	**$1,084.00**
SL 36006W-A21P	O-360-B, D; O-540-B	08-11750	**$1,145.00**

Superior PN#	Description	Part No.	Price
AN124001	AN124001 O-ring	08-10756	$5.35
AN500A-10-8	AN500a-10-8 Bolt	08-10757	$1.44
AN565B1032H5	AN565b1032h5 Screw	08-10759	$3.80
AN791-2	AN791-2 Elbow	08-10761	$50.50
AS3208-18	AS3208-18 O-ring	08-10763	$1.19
AS3578-011	AS3578-011 O-ring	08-10764	$0.81
AS3578-017	AS3578-017 O-ring	08-10765	$1.30
AS3578-028	AS3578-028 O-ring	08-10766	$1.44
AS3578-150	AS3578-150 O-ring	08-10768	$4.80
AS3578-252	AS3578-252 O-ring	08-10770	$4.50
AS3582-009	AS3582-009 O-ring	08-10771	$1.61
AS3582-017	AS3582-017 O-ring	08-10772	$0.31
AS3582-112	AS3582-112 O-ring	08-10773	$0.59
AS3582-113	AS3582-113 O-ring	08-10774	$0.58
AS3582-130	AS3582-130 O-ring	08-10775	$1.98
	Horizontal Cold Air Induction Sump	08-12105	$1,690.00
IO-320-A1A2	IO-320-a1a2 Superior Cert Vantage Engine	08-12089	$29,000.00
IO-320-A1AC2	IO-320-a1ac2 Superior Exp Roller Lifter Engine	08-12098	$25,667.00
IO-320-B1A2	IO-320-b1a2 Superior Cert Vantage Engine	08-12090	$29,300.00
IO-320-B1AC2	IO-320-b1ac2 Superior Exp Roller Lifter Engine	08-12099	$26,000.00
IO-360-A1A2	IO-360-a1a2 Superior Cert Vantage Engine	08-12093	$29,000.00
IO-360-A1AC2	IO-360-a1ac2 Superior Exp Roller Lifter Engine	08-12102	$25,667.00
IO-360-B1A2	IO-360-b1a2 Superior Cert Vantage Engine	08-12094	$29,300.00
IO-360-B1AC2	IO-360-b1ac2 Superior Exp Roller Lifter Engine	08-12103	$26,000.00
IO-400-J4AD9	IO-400-j4ad9 Superior Exp Roller Lifter Engine	08-12104	$33,889.00
	Lightspeed Dual Plasma II Mini	08-12115	$753.00
	Lightspeed SinglePlasma II Mini	08-12113	$400.00
M25988/1-022	M25988/1-022 O-ring	08-10778	$3.65
M25988/1-902	M25988/1-902 O-ring	08-10780	$1.46
M83248/1-015	M83248/1-015 O-ring	08-10784	$0.73
M83248/1-019	M83248/1-019 O-ring	08-10785	$1.02
M83248/1-115	M83248/1-115 O-ring	08-10786	$0.90
M83248/1-120	M83248/1-120 O-ring	08-10787	$0.75
M83248/1-143	M83248/1-143 Oring	08-10789	$1.87
M83248/1-224	M83248/1-224 O-ring	08-10790	$2.65
M83248-1-117	M83248-1-117 O-ring	08-10794	$0.55
SA10200-A20P	Millennium Cylinder SA10200-a20p W/ Valves	08-10908	$916.00
SA10200-A21P	Millennium Cylinder SA10200-a21p Power Assy	08-10909	$945.00
SA55006-A20P	Millennium Cylinder SA55006-a20p Pwr Assy	08-11208	$1,490.00
SA52006-A23P	Millennium SA52006-A23p Cylinder Pwr Assy	08-11100	$1,390.00
SL10302-A21P	Millennium Sl10302-A21p Cylinder	08-11511	$1,278.00
SL32006N-A21P	Millennium Sl32006N-A21p Cylinder Complete Assy	08-11733	$1,146.00
SL32006W-A20P	Millennium Sl32006W-A20p Cylinder Com	08-11734	$1,147.00
SL36006N-A20P	Millennium Sl36006n-A20p Cylinder Complete Assy	08-11745	$1,097.00
SL36006N-A21P	Millennium Sl36006n-a21p Cylinder Complete Assy	08-11746	$1,096.00
SL36006W-A21P	Millennium Superior Sl36006w-a21p Cylinder Complete Assy	08-11750	$1,145.00
MM4SS	Mm4ss Drain Back Clamp	08-10796	$2.65
MS122081	MS122081 Insert	08-10798	$0.59
MS122162	MS122162 Helicoil	08-10800	$0.60
MS124737	MS124737 Helicoil	08-10801	$3.35
MS16624-1087	MS16624-1087 Ring	08-10804	$2.04
MS16624-2087	MS16624-2087 Snap Ring	08-10805	$0.70
MS16625-2081	MS16625-2081 Retaining Ring	08-10806	$0.86
MS16625-2100	MS16625-2100 Lock Ring Internal	08-10807	$1.49
MS16625-3187	MS16625-3187 Ring	08-10808	$0.86
MS20073-05-25	MS20073-05-25 Bolt	08-10810	$9.50
MS20822-6	MS20822-6 Elbow	08-10812	$31.65
MS20823-6D	MS20823-6d Elbow	08-10813	$10.55
MS20823-8D	MS20823-8d Elbow	08-10815	$24.50
MS20913-1	MS20913-1 Plug	08-10816	$6.70
MS20913-4S	MS20913-4s Plug	08-10817	$19.50
MS21209-C4-15	MS21209-c4-15 Helicoil	08-10818	$0.93
MS21318-14	MS21318-14 Drive Screw	08-10819	$0.49
MS21318-21	MS21318-21 Drive Screw	08-10820	$0.31
MS21333-104	MS21333-104 Clamp	08-10821	$0.86
MS21333-75	MS21333-75 Clamp	08-10823	$1.30
MS21333-83	MS21333-83 Clamp	08-10824	$2.09
MS27183-14	MS27183-14 Washer	08-10826	$0.30
MS27769-01	MS27769-01 Plug	08-10827	$1.93
MS27769-5	MS27769-5 Plug	08-10828	$26.75
MS27769-D5	MS27769-d5 Plug	08-10829	$9.80
MS29513-142	MS29513-142 O-ring	08-10838	$1.09
MS29513-214	MS29513-214 O-ring	08-10840	$0.81
MS29561-007	MS29561-007 O-ring	08-10841	$3.35
MS29561-012	MS29561-012 O-ring	08-10843	$1.33
MS29561-218	MS29561-218 O-ring	08-10848	$0.91
MS29561-222	MS29561-222 O-ring	08-10849	$1.31
MS29561-223	MS29561-223 O-ring	08-10850	$3.50
MS29561-248	MS29561-248 O-ring	08-10853	$2.65
MS35692-10	MS35692-10 Nut	08-10855	$7.50
MS35692-2	MS35692-2 Nut	08-10856	$5.55
MS35756-5	MS35756-5 (2)woodruff Key	08-10857	$1.35
MS35756-6	MS35756-6 Key	08-10858	$1.35
MS35842-13	MS35842-13 Clamp	08-10861	$4.75
MS39326-20	MS39326-20 Hose Clamp	08-10862	$3.85
MS49005-2Z	MS49005-2z Plug	08-10864	$1.29
MS49005-4Z	MS49005-4z Plug	08-10865	$2.36
MS51095-333	MS51095-333 Bolt, Hex, Drilled Head	08-10866	$7.50
MS51527A6	MS51527a6 Elbow	08-10867	$21.50
MS51528A6	MS51528a6 Elbow	08-10868	$22.50
MS51990-105P	MS51990-105p Ring - Lock	08-10869	$3.95

Superior PN#	Description	Part No.	Price
MS9018-01/2-50	MS9018-01/2-50 Helicoil	08-10870	$2.83
MS90725-10	MS90725-10 Bolt	08-10873	$0.75
MS90725-12	MS90725-12 Bolt	08-10874	$0.55
MS90725-13	MS90725-13 Bolt	08-10875	$0.75
MS90725-3	MS90725-3 Bolt	08-10877	$0.86
MS90725-32	MS90725-32 Bolt	08-10878	$1.40
MS90725-35	MS90725-35 Bolt	08-10879	$0.60
MS90725-40	MS90725-40 Bolt	08-10880	$1.40
MS90725-5	MS90725-5 Bolt	08-10881	$1.68
MS90725-8	MS90725-8 Bolt	08-10883	$0.88
MS90725-9	MS90725-9 Bolt	08-10884	$0.86
MS9135-01	MS9135-01 Gasket	08-10886	$0.77
MS9245-25	MS9245-25 Cotter Pin	08-10889	$0.96
MS9388-009	MS9388-009 O-ring	08-10891	$0.30
MS9549-17	MS9549-17 Washer	08-10893	$0.59
NAS1352-6H20P	NAS1352-6h20p Screw	08-10894	$14.95
NAS1612-2	NAS1612-2 Packing	08-10895	$0.65
NAS1922-0050-3	NAS1922-0050-3 Clamp 7/16 Hose	08-10896	$21.50
NAS1922-0075-3	NAS1922-0075-3 Clamp	08-10897	$19.50
NASM21044-N3	NASm21044-n3 Lock Nut	08-10898	$0.48
NASM21333-100	NASm21333-100 Clamp	08-10899	$5.80
NASM21333-75	NASm21333-75 Clamp	08-10900	$5.80
NASM501-10-10	NASm501-10-10 Screw	08-10901	$0.48
NASM501-10-8	NASm501-10-8 Screw	08-10902	$0.72
O-320-A1A2	O-320-a1a2 Superior Cert Vantage Engine	08-12087	$28,200.00
O-320-A1AC2	O-320-a1ac2 Superior Exp Roller Lifter Engine	08-12095	$24,778.00
O-320-B1A2	O-320-b1a2 Superior Cert Vantage Engine	08-12088	$28,500.00
O-320-B1AC2	O-320-b1ac2 Superior Exp Roller Lifter Engine	08-12097	$25,112.00
O-360-A1A2	O-360-a1a2 Superior Cert Vantage Engine	08-12091	$28,200.00
O-360-A1AC2	O-360-a1ac2 Superior Exp Roller Lifter Engine	08-12100	$24,556.00
O-360-B1A2	O-360-b1a2 Superior Cert Vantage Engine	08-12092	$28,500.00
O-360-B1AC2	O-360-b1ac2 Superior Exp Roller Lifter Engine	08-12101	$25,112.00
	Piston 9:1 320 / 360 Engine	08-12110	$454.00
SA539740	Rocker Shaft SA539740	08-03685	$24.69
SA1000 P05	SA1000 P05 Ring	08-10904	$7.50
SA1000 P15	SA1000 P15 Piston Ring	08-10905	$7.50
SA1000	SA1000 Ring	08-10903	$6.29
SA1007 P15	SA1007 P15 Ring	08-10907	$7.50
SA10200-A22P	SA10200-a22p C-90 Millennium Cylinder	08-10910	$980.00
SA10204	SA10204 Valve, Exh.	08-10911	$113.75
SA10205-1	SA10205-1 Guide Ni-resist	08-10912	$16.99
SA10205-1 P05	SA10205-1 P05 Guide N1-resist	08-10913	$18.50
SA10205-1 P20	SA10205-1 P20 Guide Unreamed O200 X-gd	08-10915	$17.50
SA10205-1 P30	SA10205-1 P30 Guide Ni-resist	08-10916	$17.50
SA10206 P05	SA10206 P05 Ring	08-10918	$12.50
SA10206 P15	SA10206 P15 Ring	08-10919	$11.85
SA10206	SA10206 Ring	08-10917	$11.50
SA10209-1	SA10209-1 Guide Intake (unreamed)	08-10920	$18.50
SA10209-1 P05	SA10209-1 P05 Guide Intake (unreamed)	08-10921	$20.50
SA10209-1 P20	SA10209-1 P20 Guide Intake (unreamed)	08-10923	$18.50
SA10209-1 P30	SA10209-1 P30 Guide Intake (unreamed)	08-10924	$18.50
SA2000 P05	SA2000 P05 Ring	08-10927	$22.50
SA2000 P15	SA2000 P15 Piston Ring	08-10928	$22.50
SA2000	SA2000 Ring	08-10926	$16.50
SA2000-SC P15	SA2000-sc P15 Ring Set Single Cylinder	08-10930	$61.75
SA2024	SA2024 (4)plug	08-10932	$3.35
SA2025	SA2025 Plug	08-10933	$2.86
SA21051	SA21051 Gasket	08-10935	$1.44
SA2106	SA2106 Insert, Exh.	08-10936	$29.55
SA21153	SA21153 Shaft, Rocker Valve	08-10937	$23.50
SA21284	SA21284 Housing, Push Rod	08-10938	$8.50
SA21284 P05	SA21284 P05 Housing Pushrod	08-10939	$8.50
SA21477	SA21477 Packing, Cylinder BASe	08-10941	$0.56
SA22133	SA22133 Gasket, Oil Cooler To Adapter	08-10942	$1.43
SA22354	SA22354 Gear, Oil Pump Driving	08-10945	$270.95
SA22354-1	SA22354-1 Oil Pump Kit	08-10946	$607.00
SA22355	SA22355 Gear, Oil Pump, Driven	08-10947	$387.00
SA225	SA225 Gasket Set Top Overhaul	08-10948	$344.00
SA22535	SA22535 Washer	08-10951	$1.71
SA225-T1	SA225-t1 Gasket Set Single Cylinder	08-10952	$45.90
SA22949	SA22949 Bushing	08-10954	$8.50
SA22949 M05	SA22949 M05 Bushing, Rocker Shaft	08-10955	$3.35
SA22949 P05	SA22949 P05 Bushing, Rocker Shaft Boss	08-10956	$2.71
SA22949 P20	SA22949 P20 Bushing	08-10957	$2.71
SA23410	SA23410 Cover, Oil Pressure	08-10958	$173.85
SA24030	SA24030 Spring Valve	08-10961	$9.51
SA24044	SA24044 Retainer, Valve Spring	08-10963	$3.45
SA24239	SA24239 Washer	08-10965	$0.59
SA24770	SA24770 Plug, Crankshaft	08-10970	$1.89
SA24856	SA24856 Gasket	08-10973	$2.29
SA24890-A7	SA24890-a7 Gasket Set Major Overhaul	08-10975	$116.75
SA25001	SA25001 Seal	08-10976	$10.90
SA25103-A2	SA25103-a2 Gasket Set Major Overhaul	08-10978	$212.95
SA300	SA300 Gasket Set Top Overhaul	08-10981	$92.75
SA3364	SA3364 Ring	08-10982	$18.50
SA3364-SC	SA3364-sc Ring Set Single Cylinder	08-10983	$57.75
SA3365	SA3365 Ring	08-10984	$18.50
SA35019	SA35019 Gasket	08-10985	$4.50
SA352026-A1	SA352026-a1 Gasket Set Major Overhaul	08-10987	$472.00
SA352058	SA352058 Gasket	08-10988	$0.69
SA352061	SA352061 Gasket	08-10989	$7.50
SA352065	SA352065 Gasket	08-10993	$1.68
SA352066	SA352066 Gasket	08-10994	$1.58
SA352068	SA352068 Seal	08-10996	$5.55
SA352069	SA352069 Gasket	08-10997	$6.70

Prices Subject to Change Without Notice

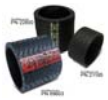
Superior PN#	Description	Part No.	Price
SA352179	SA352179 Gasket, Starter Pad	08-10998	$3.99
SA3577	SA3577 Gasket	08-10999	$2.91
SA35923	SA35923 Gasket	08-11000	$4.50
SA35967	SA35967 Insert, Valve	08-11002	$24.60
SA35971	SA35971 Retainer	08-11004	$10.85
SA35972	SA35972 Bolt, Connecting Rod	08-11005	$18.75
SA35985	SA35985 Gasket	08-11006	$1.75
SA360	SA360 Gasket Set Top Overhaul	08-11007	$165.75
SA36027	SA36027 Gasket	08-11008	$3.50
SA36066	SA36066 Gear, Magneto Drive	08-11010	$535.00
SA3610-SC P05	SA3610-sc P05 Ring Set Single Cylinder	08-11014	$115.75
SA3610-SC P15	SA3610-sc P15 Ring Set Single Cylinder	08-11015	$115.75
SA3610-SC	SA3610-sc Ring Set Single Cylinder	08-11013	$116.75
SA36170 M10	SA36170 M10 Bearing	08-11016	$134.75
SA36171	SA36171 Bearing, Main	08-11017	$36.65
SA4000-SC2 P05	SA4000-sc2 P05 Ring Set Single Cylinder	08-11019	$117.75
SA4000-SC2 P15	SA4000-sc2 P15 Ring Set Single Cylinder	08-11020	$117.75
SA4000-SC3 P05	SA4000-sc3 P05 Ring Set Single Cylinder	08-11024	$78.75
SA4000-SC3 P15	SA4000-sc3 P15 Ring Set Single Cylinder	08-11025	$78.75
SA4000-SC3	SA4000-sc3 Ring Set Single Cylinder	08-11022	$109.95
SA4000-SC5 P05	SA4000-sc5 P05 Ring Set Single Cylinder	08-11027	$68.80
SA4000-SC5 P15	SA4000-sc5 P15 Ring Set Single Cylinder	08-11028	$68.80
SA4000-SC5	SA4000-sc5 Ring Set Single Cylinder	08-11026	$64.75
SA4000-SC6 P05	SA4000-sc6 P05 Ring Set Single Cylinder	08-11030	$103.80
SA4000-SC6 P15	SA4000-sc6 P15 Ring Set Single Cylinder	08-11033	$103.80
SA4000-SC6	SA4000-sc6 Ring Set Single Cylinder	08-11029	$82.75
SA4000-SC7 P05	SA4000-sc7 P05 Ring Set Single Cylinder	08-11035	$128.75
SA4000-SC7 P15	SA4000-sc7 P15 Ring Set Single Cylinder	08-11036	$128.75
SA4000-SC7	SA4000-sc7 Ring Set Single Cylinder	08-11034	$79.75
SA4000-SC8 P15	SA4000-sc8 P15 Ring Set Single Cylinder	08-11038	$47.90
SA4000-SC8	SA4000-sc8 Ring Set Single Cylinder	08-11037	$47.90
SA4001 P05	SA4001 P05 Ring	08-11040	$25.50
SA4001 P15	SA4001 P15 Ring	08-11041	$37.70
SA4001	SA4001 Ring	08-11039	$26.50
SA4003 P05	SA4003 P05 Ring	08-11043	$55.75
SA4003 P15	SA4003 P15 Ring	08-11044	$55.75
SA4003	SA4003 Ring	08-11042	$29.50
SA401870 P03	SA401870 P03 Stud	08-11048	$14.95
SA401870 P07	SA401870 P07 Stud	08-11049	$10.85
SA401870 P12	SA401870 P12 Stud	08-11050	$10.85
SA401870	SA401870 Stud	08-11047	$5.90
SA401893 P03	SA401893 P03 Stud	08-11051	$4.50
SA402151 P03	SA402151 P03 Stud, 5/16 X 1 1/4 Long	08-11054	$5.99
SA402151 P07	SA402151 P07 Stud, 5/16 X 1 1/4 Long	08-11055	$6.70
SA40762BLU	SA40762blu Valve Cover Blue	08-11057	$22.55
SA4700	SA4700 Ring	08-11059	$24.65
SA47006S-A20P	SA47006s-a20p Millennium Cylinder	08-11061	$1,384.00
SA4700-SC3	SA4700-sc3 Ring Set Single Cylinder	08-11063	$58.75
SA4700-SC5	SA4700-sc5 Ring Set Single Cylinder	08-11064	$73.75
SA4700-SC6	SA4700-sc6 Ring Set Single Cylinder	08-11065	$58.75
SA4701	SA4701 Ring	08-11066	$20.50
SA4701-SC7	SA4701-sc7 Ring Set Single Cylinder	08-11068	$67.75
SA4701-SC8	SA4701-sc8 Ring Set Single Cylinder	08-11069	$57.75
SA4705	SA4705 Assy, Ring	08-11070	$33.90
SA4705 P05	SA4705 P05 Ring	08-11071	$36.65
SA4705 P15	SA4705 P15 Ring	08-11072	$35.55
SA4707 P05	SA4707 P05 Ring	08-11075	$20.50
SA4707 P15	SA4707 P15 Ring	08-11076	$34.55
SA4707	SA4707 Ring	08-11074	$20.50
SA4709 P05	SA4709 P05 Ring	08-11078	$13.90
SA4709 P15	SA4709 P15 Ring	08-11079	$13.90
SA470-A1	SA470-a1 Gasket Set Top Overhaul	08-11080	$352.00
SA470-A2	SA470-a2 Gasket Set Top Overhaul	08-11081	$272.95
SA5000-SC5 P10	SA5000-sc5 P10 Ring Set Single Cylinder	08-11086	$108.13
SA5000-SC5 P15	SA5000-sc5 P15 Ring Set Single Cylinder	08-11087	$116.75
SA5003 P05	SA5003 P05 Ring	08-11089	$53.75
SA5003 P10	SA5003 P10 Ring	08-11090	$53.75
SA5003 P15	SA5003 P15 Ring	08-11091	$53.75
SA5003	SA5003 Ring	08-11088	$35.55
SA5004 P05	SA5004 P05 Ring	08-11093	$34.50
SA5004 P10	SA5004 P10 Ring	08-11094	$34.50
SA5004 P15	SA5004 P15 Ring	08-11095	$34.50
SA5004	SA5004 Ring	08-11092	$34.50
SA5201	SA5201 Ring	08-11101	$20.50
SA5201-SC2	SA5201-sc2 Ring Set Single Cylinder	08-11103	$66.75
SA5202	SA5202 Ring	08-11104	$23.50
SA5205A	SA5205a Ring	08-11105	$20.50
SA5208 P05	SA5208 P05 Ring	08-11107	$35.55
SA5208 P10	SA5208 P10 Ring	08-11108	$35.55
SA5208 P15	SA5208 P15 Ring	08-11109	$35.55
SA5208	SA5208 Ring	08-11106	$29.50
SA5209 P05	SA5209 P05 Ring	08-11111	$11.85
SA5209 P10	SA5209 P10 Ring	08-11112	$11.85
SA5209 P15	SA5209 P15 Ring	08-11113	$11.85
SA5209	SA5209 Ring	08-11110	$9.80
SA520-A1	SA520-a1 Gasket Set Top Overhaul	08-11114	$244.95
SA520-A2	SA520-a2 Gasket Set Top Overhaul	08-11115	$217.95
SA520-A3	SA520-a3 Gasket Set Top Overhaul	08-11116	$197.75
SA520-T1-S	SA520-t1-s Gasket Set Single Cylinder	08-11118	$22.50
SA520-T2	SA520-t2 Gasket Set Single Cylinder	08-11119	$48.50
SA520-T3	SA520-t3 Gasket Set Single Cylinder	08-11120	$17.50
SA524818	SA524818 Plug, Pipe	08-11121	$1.38
SA530058 M10	SA530058 M10 Bearing	08-11123	$73.75

Superior PN#	Description	Part No.	Price
SA530058-A4	SA530058-a4 Bearing Set	08-11124	$459.00
SA530058-A4 M10	SA530058-a4 M10 Bearing Set	08-11125	$458.00
SA530058-A5	SA530058-a5 Bearing Set	08-11126	$454.00
SA530058-A5 M10	SA530058-a5 M10 Bearing Set	08-11127	$486.00
SA530058-A6	SA530058-a6 Bearing Set	08-11128	$342.00
SA530162-S	SA530162-s Gasket, Rocker Cover	08-11131	$6.66
SA530367	SA530367 Bearing	08-11136	$9.80
SA530383	SA530383 Bearing, Connecting Rod	08-11137	$18.50
SA530383 M10	SA530383 M10 Bearing, Conn Rod Upper & Lowr	08-11138	$20.90
SA530462	SA530462 Bushing Rocker Shaft Serv	08-11139	$4.80
SA530523	SA530523 Gasket	08-11140	$2.59
SA530658	SA530658 Bushing	08-11142	$7.75
SA530830	SA530830 Assy, Pin	08-11143	$53.75
SA530856	SA530856 Piston Pin	08-11145	$147.75
SA532200	SA532200 Seal	08-03683	$2.44
SA532364-50.0	SA532364-50.0 Felt	08-11156	$5.90
SA532432	SA532432 Plug, Hex Head	08-11157	$7.75
SA532518	SA532518 Gasket	08-11158	$1.66
SA534079	SA534079 Gasket	08-11160	$9.80
SA534316	SA534316 Gasket	08-11161	$3.50
SA534740	SA534740 Gasket	08-11162	$4.80
SA534743	SA534743 Gasket	08-11163	$30.10
SA534857-S	SA534857-s Gasket	08-11166	$7.11
SA534940	SA534940 Gasket	08-11168	$0.87
SA535661	SA535661 Camshaft	08-11174	$754.00
SA535666	SA535666 Screw	08-11175	$5.35
SA535885	SA535885 Gasket	08-11177	$1.24
SA536092-A11	SA536092-a11 Gasket Set Major Overhaul	08-11179	$495.00
SA536092-A9	SA536092-a9 Gasket Set Major Overhaul	08-11181	$449.00
SA536379	SA536379 Screw	08-11182	$5.45
SA536997-A1	SA536997-a1 Gasket Set Major Overhaul	08-11185	$635.00
SA537019	SA537019 Screw	08-11186	$6.50
SA537401	SA537401 Bearing, Thrust	08-11188	$230.95
SA537401 M10	SA537401 M10 Bearing	08-11189	$406.00
SA537401-A3	SA537401-a3 Bearing Set	08-11190	$567.00
SA537401-A3 M10	SA537401-a3 M10 Bearing Set	08-11191	$991.00
SA537690	SA537690 (10)Washer	08-11192	$1.11
SA537721	SA537721 Needle Bearing	08-11193	$9.80
SA537728	SA537728 Screw	08-11194	$3.35
SA537745	SA537745 Gasket	08-11195	$3.86
SA537749	SA537749 Gasket	08-11196	$5.35
SA537870 P30	SA537870 P30 Pushrod Assy	08-11197	$36.60
SA538185	SA538185 Gasket	08-11198	$3.99
SA538304 P30	SA538304 P30 Pushrod Assy	08-11199	$59.75
SA538684	SA538684 Bushing	08-11200	$9.80
SA538804	SA538804 Gasket	08-11201	$1.31
SA539058	SA539058 Washer	08-11202	$1.06
SA539467	SA539467 Piston Pin & Plug Assy	08-11203	$52.75
SA539800	SA539800 Clutch Gear	08-11204	$224.95
SA539800 M15	SA539800 M15 Spring, Clutch	08-11205	$244.95
SA539988	SA539988 Valve, Int.	08-11206	$57.75
SA550-T1	SA550-t1 Gasket Set	08-11209	$18.50
SA625065-2	SA625065-2 Bushing	08-11210	$3.75
SA625142	SA625142 Shaft	08-11211	$38.80
SA625303	SA625303 Gasket	08-11212	$3.08
SA625393	SA625393 Retainer	08-11213	$1.03
SA625957	SA625957 Spring, Valve	08-11215	$3.75
SA625961	SA625961 Seat, Valve Spring	08-11217	$14.95
SA626049-A4	SA626049-a4 Gasket Set Major Overhaul	08-11219	$309.00
SA627246	SA627246 Bearing	08-11224	$225.95
SA627246 M10	SA627246 M10 Bearing	08-11225	$439.00
SA627246-A2	SA627246-a2 Bearing Set	08-11226	$534.00
SA627246A2M10	SA627246a2m10 Bearing Set	08-11227	$686.00
SA627368	SA627368 Gasket, Air Throttle	08-11229	$1.31
SA627731	SA627731 Key, Valve Spring	08-11233	$2.63
SA627795	SA627795 Bearing, Main	08-11234	$250.95
SA627795 M10	SA627795 M10 Bearing	08-11235	$281.95
SA627795-A3	SA627795-a3 Bearing Set	08-11236	$540.00
SA627795A3M10	SA627795a3m10 Bearing Set	08-11237	$822.00
SA628555-1	SA628555-1 Hose	08-11242	$13.95
SA628555-16	SA628555-16 Hose	08-11243	$5.55
SA628975	SA628975 Bushing	08-11246	$28.50
SA629004	SA629004 Snap Ring	08-11247	$0.39
SA629016	SA629016 Gasket, Reductlon Gear Cover	08-11248	$2.16
SA629117-1	SA629117-1 Rotocoil Assembly	08-11251	$14.95
SA629159	SA629159 Gasket, Outlet	08-11252	$1.63
SA629163-5	SA629163-5 Clamp (Not FAA/PMA Approved)	08-11253	$24.65
SA629196	SA629196 Packing	08-11254	$1.59
SA629518-3H	SA629518-3h Plug	08-11258	$8.80
SA630261-11	SA630261-11 Pin *	08-11262	$12.90
SA630261-15	SA630261-15 Pin *	08-11263	$11.85
SA630261-34	SA630261-34 Pin	08-11264	$8.50
SA630261-38	SA630261-38 Pin	08-11266	$9.80
SA630261-39	SA630261-39 Pin	08-11267	$9.80
SA630261-40	SA630261-40 Pin	08-11268	$9.80

EP

Visit www.aircraftspruce.com for a complete product listing of Superior Air Parts.

INTAKE HOSES



Lycoming 1-3/4" Intake Hose 69603 ..... **$8.58**
Cont. #22800 OUTER & Cont. #21185 INNER Hose (8 sets required for A-65 thru 0-300) P/N 08-03700 .. **$6.50**
Cont. #22800 OUTER Intake Hose 22800 ..... **$4.81**
Cont. #21185 INNER Intake Hose P/N 07-03477 .. **$2.13**

INTAKE GASKETS



Cont. #21327 (4) for A-65 only..... **$1.43 ea**
Cont. #22250 (4) for C-85 — 0-300 .... **$1.03 ea**

EXHAUST GASKETS



Cont.. #21493 (08-05237) for A-65 thru 0-300 SS..... **$1.65 ea**
Cont. #632837 SS ..... **$1.76 ea**
#77611 for 0-320 - not for H series SS ... **$9.66 ea**

EXHAUST NUTS



Cont. #22022 (5/16-24) for A-65 thru 0-300 (8) ..... **$1.25 ea**
Cont. #MS20500-428 (1/4-28) for 0-470 (12) ..... **$2.45 ea**
Lyc. #STD1410 (5/16-18)..... **$1.47 ea**

ROCKER BOX GASKETS



Cont. #530162 for A-65 thru 0-300 (4 required)..... **$5.84 ea**
Lyc. #75906 for 0-235 thru 0-320 (4 req) ..... **$2.72 ea**

ROCKER BOX COVER SCREWS



Cont. #535091 (24) **$0.66 Ea**
Lyc. #STD1925 (24) **$1.22 Ea**

CYLINDER BASE SEALS



Cont. #21477 for A-65 thru 0-200 (4)..... **$0.92 Ea**

MAGNETO FLANGE GASKET



Cont. #535324 ..... **$7.45 Ea**
Lycoming #62224 ..... **$2.20 Ea**

TACH OIL SEAL



Cont. #642714 (was #640087) for A-65 thru 0-300..... **$8.47**
Lyc. #LW14260 for 0-235, 0-290.. **$6.37**

OIL PRESSURE HOUSING GASKETS



Lyc. #61173 for 0-235, 0-290 (1) (2 with oil cooler) ..... **$1.69 Ea**

CARBURETOR GASKETS



For A-65 thru 0-200 Cont. #21051 (Top)..... **$2.60 Ea**
Cont. #21323 (Bottom) **$1.35 Ea**

GENERATOR DRIVE BELT



Lyc. #60886 for 0-235, 0-290..... **$87.27**

"O" SERIES LYCOMING VALVE COVER GASKETS



Replace the original cork gaskets which come standard on Lycoming 0-235, 0-320 and 0-360 engines. NOT FAA approved. For experimental aircraft only.
P/N 08-01187 ..... **$4.95**

TCM GASKET



TCM Gasket for Magneto & Access Drive. P/N 08-07531 ..... **$1.68**

ANGLED VALVE "IO" SERIES LYCOMING VALVE COVER GASKETS



These gaskets are for the fuel injected "IO" series, sometimes referred to as the Angle Valve cylinder Lycoming They are not FAA approved and are not manufactured under a PMA. These are used on Angled valve Lycoming engines IO-360, IO-540, IO-720. P/N 08-05882 .. **$6.85**

652072 ALTERNATOR GASKET



TCM Alternator Gasket, Gear driven alternator mounting gasket (gasket for engine that has been converted from generator to alternator).
P/N 07-01492..... **$3.23**

649984 ALTERNATOR GASKET



TCM Alternator Gasket replaces Continental Motors: 352066, 632560.
P/N 07-00768 ..... **$2.57**

PUSH ROD SEALS



Continental #539840 for A-65 thru 0-200 (8)..... **$6.18 Ea.**

OIL SUMP GASKET & PLUG



Cont. #532432 Plug..... **$14.50**

CRANKSHAFT OIL SEALS



Cont. #530019 for A-65 thru 0-200, Flanged Shaft..... **$57.31**
Cont. #24321 for A-65 and C-85, Taper Shaft **$65.80**
Lyc. #76940 for 0-235, 0-290 **$40.00**

AN900 COPPER GASKETS



Cont. Engine Applications, A-65 thru 0-200 (1) each:
-10: Oil sump drain plug thermometer hole in oil screen, suction tube ass'y ..... **$0.46 Ea**
-14: Oil relief valve ..... **$0.50 Ea**
-22: Tach drive housing ..... **$0.84 Ea**
-28: Oil pressure screen..... **$0.89 Ea**

AERO-SEAL HOSE CLAMPS



Aero-Seal Clamps for Cont. Intake Hoses.
P/N QS100-M32W..... **$2.01 Ea**

PROP GOVERNOR GASKET

P/N 07-00878..... **$19.75**

RING HOSE CLAMPS



Cont. #536388 (16) Required **$2.39 Ea**

ENGINE MOUNT BUSHINGS



Cont. #22387 for A-65, C-85, C-90 except C-90-14F (8) Req'd **$3.63 Ea**

Lyc. #60883 for 0-235 and 0-290, 7/8" hole (8)Req'd..... **$19.99 Ea**
Lyc. #71032 for 0-320 with 1" hole (8) Req'd **$10.56 Ea.**
Lycoming, FAA Approved. Replaces #71032. Set of 8. P/N 71032 ..... **$10.56**

ENGINE MOUNT WASHERS



Cont. #21530 for A-65, C-85, C-90 except C-90-14F (8) Req'd . **$12.75 Ea**
Lyc #STD619 for 0-235 thru 0-320 (8) Req'd ..... **$10.92 Ea.**

CRANKSHAFT SEAL LW11997



LW11997 Crankshaft Seal. Spring is impregnated in the gasket 4-04.
P/N 08-11997 ..... **$96.19**

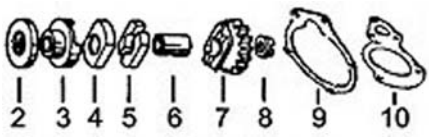
LYCOMING PARTS TO CONVERT 0-235 WITH SPIN ON OIL FILTER TO OIL SCREEN

Oil Pressure Screen Housing P/N 68974 ..... **$615.00**
Oil ScreenP/N 62817..... **$121.75**
Oil Screen Housing Gasket P/N 61173 ..... **$1.69**
FOR OIL COOLER INSTALLATION ADD:
SpringP/N 69436 ..... **$47.50**
PlungerP/N 62415 ..... **$32.50**
GasketP/N AN900-10..... **$0.46**

Cont. Oil Screen..... P/N 08-01544 ..... **$342.99**

OIL COOLER PARTS SHOWN ABOVE NOT USED WITH THERMAL VALVE ASS'Y

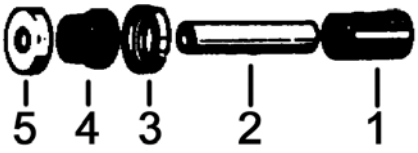
GENERATOR ATTACHING PARTS FOR CONT. C85, C90 & 0-200



Ref.	P/N	Item	Price
#2	352068	Oil Seal	$9.01
#3	530406	653983 Hub Coupling	$369.85
#4	07-01328	Attaching 653982 Retainer	$25.43
#5	626543	Bushing*	$13.50 ea
#6	530407	Sleeve	$102.96
#7	531325	Gear	$482.33
#8	530412	Slotted Nut	$37.73
#9	352179	Starter Gasket	$6.86
#10	35019	Generator Gasket	$7.49

*Note: 626543 is sold as a pair. If only one bushing is needed, order PN 08-06218 ..... **$6.89**

ENGINE MOUNTING PARTS FOR CONT. C-90-14F & O-200 ONLY



Ref.	P/N	Item	Qty.	Price Each
#1	628555-16	Hose	(4)	$8.87
#2	530627	Spacer	(4)	$29.61
#3	530626	Seat	(8)	$20.50
#4	530740	Bushing	(8)	$39.13
#5	530741	Washer	(8)	$6.96
	AN6-55	Bolt	(4)	$11.50
	AN310-6	Nut	(4)	$1.31
	MS24665-283	Pin	(4)	$0.03

ALTERNATOR & GENERATOR BELTS



Lycoming .....37A19773-376 (Alt.) **$87.27**
Lycoming .....37B19774-374 (Gen.).... **$114.24**
Lycoming .....37B19774-325 (Gen.)..... **$87.27**
Continental ....539547-31.19 ..... **$37.36**
Piper PA28/PA32 05-06877 ..... **$49.85**

24031 VALVE SPRING



Continental Inner Valve Spring Used on C90 & O-200 Engines
P/N 07-24031..... **$14.03**

Prices Subject to Change Without Notice

CONTINENTAL ENGINE PARTS

C-85

	Price Each
639640 Bearing set, rod (2 req.)	$15.95
21477 Cyl base seal	$0.92
530917 Crankshaft seal taper	$51.80
SA402151 Ex. stud	$4.45
22022 Ex. nut	$1.25
646612 Exhaust Valve	$196.37
653728 Gasket, rocker	$5.84
632837 Gasket, no-blow	$1.76
22250 Gasket, intake	$1.03
646539-A1 Gasket set, moh	$118.95
21185 Intake hose	$2.13
641792 Intake Valve (30 degree)	$70.68
530019 Nose seal, flange sft	$57.31
530830 Piston pin	$77.95
539840 Push rod packing	$6.18
649632-A1 Ring set, steel barrel	$37.39

O-200

627246-A1 Bearing set, main	
639640 Bearing set, rod (2 req.)	$15.95
21477 Cyl base seal	$0.92
530019 Crankshaft seal	$57.31
SA402151 Ex. stud	$4.45
22022 Ex. nut	$1.25
646612 Exhaust Valve	$196.37
530162 Gasket, rocker	$5.84
627429 Gasket, no-blow	$8.50
22250 Gasket, intake	$1.03
646539-A1 Gasket set, moh	$118.95
22800 Intake hose	$4.81
641792 Intake Valve (30°)	$70.68
646255 Piston	$364.00
530830 Piston pin	$77.95
539840 Push rod packing	$1.42
649632-A1 Ring set, steel barrel	$37.39
653394 Ring set, chrm barrel	$26.08

O-300

639640 Bearing set, rod (2 req.)	$15.95
21477 Cyl base seal	$0.92
530917 Crankshaft seal	$51.80
SA402151 Ex. stud	$4.45
22022 Ex. nut	$1.25
646612 Exhaust Valve	$196.37
530162 Gasket, rocker	$5.84
627429 Gasket, no-blow	$8.50
22250 Gasket, intake	$1.03
6465417-A1 Gasket set, moh	$154.75
21185 Intake hose	$2.13
641792 Intake Valve (30°)	$70.68
646255 Piston	$364.00
530830 Piston pin	$77.95
539840 Push rod packing	$1.42
649632-A1 Ring set, steel barrel	$37.39
625958 Springs outer	$8.96

O-470 ANGLE HEAD

653888 Camshaft follower tappet	$174.82
SSR532200 Cyl base seal	$2.44
PA641250 Crankshaft seal	$34.75
SSR401893 Ex. stud	$3.66
Ex. nut MS20500-428	$2.45
643967 Ex. nut	$2.45
SA643873 Exhaust Valve	$175.90
653191 Gasket, rocker, angle	$9.18
SSR536413 Gasket, intake	$0.43
646546-A1 Gasket set, moh	$255.95
642917-1 Intake hose	$27.70
646263 Piston	$299.95
539467 Piston pin	$68.39
SA534610 Push rod packing	$0.74
649226 Ring set, steel barrel	$138.05
649226CP Ring set, chrm barrel	$117.70
SSR539740 Rocker shaft	$24.69
637837 Spring, valve, outer	$8.89
631521 Springs, valve, inner	$5.92
SA539740 Rocker Shaft	$24.69

IO-470 ANGLE HEAD

SSR532200 Cyl base seal	$2.44
PA641250 Crankshaft seal	$34.75
SA402151 Ex. stud	$4.45
Ex. nut MS20500-428	$2.45
643967 Ex. nut	$2.45
SA643873 Exhaust Valve	$175.90
653191 Gasket, rocker, angle head	$9.18
628260 Gasket, no-blow	$10.50
SSR536413 Gasket, intake	$0.43
646546-A1 Gasket set, moh	$255.95
642917-1 Intake hose	$27.70
646283 Intake Valve	$186.43
539467 Piston pin	$68.39
SA534610 Push rod packing	$0.74
SSR539740 Rocker shaft	$24.69
SA539740 Rocker Shaft	$24.69

IO-520 TSIO-520

630826 Bearing set, rod	$9.95
653888 Camshaft follower tappet	$174.82
SSR641066 Cyl base seal	$5.28
PA641250 Crankshaft seal	$34.75
SSR401893 Ex. stud	$3.66
SSR638125 Ex. stud, rosan	$9.26
Ex. nut MS20500-428	$2.45
643967 Ex. nut	$2.45
SA643873 Exhaust Valve	$175.90
653191 Gasket, rocker	$9.18
SSR536413 Gasket, intake	$0.43
642917-1 Intake hose	$27.70
646283 Intake Valve	$186.43
654850 Piston IO-520	$302.73
630046 Piston pin	$67.66
SA534610 Push rod packing	$0.74
652148 Ring set, steel cyl IO-520	$154.28
SA539740 Rocker Shaft	$24.69

CONTINENTAL ENGINE BELTS

539547-30.00	$33.50
539547-31.19	$37.36
539547-32.00	$44.68
539547-35.00	$58.75
642759	$36.75
37A19773-376 (76026)	$87.27
37A19773-382 (74519)	$83.37
37B19774-325 (60886)	$87.27
37B19774-341 (71579)	$87.27

LYCOMING ENGINE PARTS

O-235 L,N SERIES

	Price Each
69373 Bearing, rod, 8 req.	$26.77
71105 Camshaft follower tappet	$113.91
SSR62869 Cyl base seal	$4.35
STD-2180 Cyl drain hose	$4.98
LW-11997 Crankshaft seal	$36.50
SSR31C-12 Ex. stud	$4.35
STD-1410 Ex. nut	$1.47
41271 Fuel pump, mechanical	$403.00
75906 Gasket, rocker 4 required	$2.72
77611 Gasket, no-blow	$9.66
71973 Gasket, intake	$1.40
SSR61499-1 Gasket set, moh	$241.84
SSRSTD-1196 Intake hose 1-1/2"	$3.45
SSRLW-13445 Piston pin	$89.23
68028 Piston pin plug	$16.50
SSRLW-18661 Push rod packing	$3.14
LW-11800 Spring, valve outer	$25.47
SL60592 Carb. Gaslet	$0.78

O-290

69373 Bearing set, rod	$26.77
SSR71481 Cyl base seal	$2.24
SSR31C-12 Ex. stud	$4.35
STD-1410 Ex. nut	$1.47
41271 Fuel pump, mechanical	$403.00
75906 Gasket, rocker	$2.72
77611 Gasket, no-blow	$9.66
71973 Gasket, intake	$1.40
SSR69371-1 Gasket set, moh	$279.27
SSRSTD-1196 Intake hose 1-1/2"	$3.45
Intake Valve 73938	$105.41
SSRLW-18661 Push rod packing	$3.14
62916 Ring, compression steel cylinder	$108.75
69401 Ring, oil control steel cyl	$35.85
LW11795 Spring, Valve, inner	$16.22
LW-11800 Springs, Valve, outer	$25.47
69373 Bearing, rod	$26.77
SSR71481 Cyl base seal	$2.24
LW-11997 Crankshaft seal	$36.50
SSR31C-12 Ex. stud	$4.35
STD-1410 Ex. nut	$1.47
LW-19001 Exhaust Valve	$317.71
SL60592 Carb. Gasket	$0.78

LYCOMING CYLINDERS

O-235C,E,H chrome stud	$1,607.00
LW15318 O320H new ass'y	$3,833.03
LW12427 O-360 new ass'y	$3,433.10
LW12988 O540/HIO360 new ass'y	$4,916.48

O-320

71973 Gasket, intake	$1.40
SSRSTD-1196 Intake hose 1-1/2	$3.45
69603 Intake hose 1-3/4	$8.58
73938 Intake Valve	$105.41
75089 Piston, high compression	$242.46
75413 Piston, low compression	$392.28
SSRLW-13444 Piston pin	$109.19
SSRLW-18661 Push rod packing	$3.14
74241 Ring, compression steel cylinder	$45.65
SSR73857 Ring, oil ctl steel cylinder	$27.50
SL11997 Crankshaft Seal	$36.50
SL66224 Carb. Gasket	$0.70
66224 Lyc. Carb. Gasket	$1.40
RG-72059 Dipstick Tube Base Gasket	$6.50

O,IO-360

SSA72877 Camshaft follower	$113.29
SSR71481 Cyl base seal	$2.24
LW-11997 Crankshaft seal	$36.50
SSR31C-12 Ex. stud	$4.35
STD-1410 Ex. nut	$1.47
LW-19001 Exhaust Valve	$317.71
LW15473 Fuel pump, mech.	$422.00
75906 Gasket, rocker	$2.72
77611 Gasket, no-blow	$9.66
71973 Gasket, intake	$1.40
SSR75439-1 Gasket set, moh	$291.54
69603 Intake hose 1-3/4"	$8.58
75089 Piston, high compression	$242.46
SSRLW-18661 Push rod packing	$3.14
74241 Ring, comp steel cyl	$45.65
SSR73857 Ring, oil ctk steel cyl	$27.50
LW11795 Springs, Valve, Inner	$16.22
LW-11800 Springs, Valve, Outer	$25.47
SL66224 Carb. Gasket	$0.70

O,IO-540

SSR71481 Cyl base seal	$2.24
13792 Crankshaft seal	$19.37
SSR31C-12 Ex. stud	$4.35
STD-1410 Ex. nut	$1.47
LW15473 Fuel pump, mech.	$422.00
75906 Gasket, rocker, most	$2.72
77611 Gasket, no-blow	$9.66
71973 Gasket, intake	$1.40
SSR71569-1 Gasket set, moh	$423.12
69603 Intake hose 1-3/4"	$8.58
73938 Intake Valve	$105.41
75089 Piston	$242.46
60828 Piston pin plugs	$16.50
SSR70310 Push rod packing	$0.68
74241 Ring, comp steel cyl	$45.65
SSR73857 Ring, oil ctl, steel cyl	$27.50
LW11795 Spring, Valve, inner	$16.22
LW-11800 Springs Valve, outer	$25.47
SL66224 Carb. Gasket	$0.70

AIRCRAFT SPRUCE CARRIES THE COMPLETE CONTINENTAL MOTORS PRODUCT LINE. SEE OUR WEBSITE FOR PART NUMBERS AND PRICING.

AIRCRAFT SPRUCE CARRIES THE COMPLETE LYCOMING PRODUCT LINE. SEE OUR WEBSITE FOR PART NUMBERS AND PRICING.

CHALLENGER AIR FILTERS



CHALLENGER AVIATION HIGH-FLOW AIR FILTER W/ K&N FILTER MEDIA

Features & Benefits of Prime air filters: • 40% - 50% better airflow • Can be washed and serviced up to 25 times • Increase horse power 2%-4% •Save money and improve engine efficiency • FAA-PMA approved • Properly serviced, can be used to TBO of an engine • Ecologically sound • Better takeoff and climb-out performance • Fire retardant • Faster airspeed and/or better fuel consumption • Have been used on high performance vehicles for 40yrs • Accordion fold design provides up to 5 times the filtering surface of non-pleated designs. **PART NUMBERS WITH A -1 INCLUDE GREASE.**

Model	Application	Installation	Part No.	Price
CPE-1957	Aero Commander - A-9, A9A, A9B	Brackett BA-104 Fram CA-161PL	08-00721-1	**$219.95**
CP-1150	Aeronca - S65, S65CA, 7AC, 7ACA, 7 BCM(L-16A) ARMY, 7CCM(6-16B) ARMY, 7DC, 7EC, 7FC, 7JC, 7ECA, 7GCAA, 7GCBC, 7KC, 7KCAB, S7AC, S7CCM, S7DC, S7EC P/N CP-3274 is the installation kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	**$204.95**
CPE-1957	Aeronca - 7GC, 7GCA, 7HC, 7GCB, 7GCBA, 7KC	Donaldson P10-4145, Fram CA-161-PL, Air Maze 13203	08-00721-1	**$219.95**
CP-2004	Beech Baron - 95-C55 S/N TE-1 thru TE-451 except TE-50, 95-C55A S/N TE-1 Thru TE-451 Except TE-50, D55 S/N TE-452 Thru TE-492, D55A S/N TE-452 Thru TE-492, E55 S/N TE-768 Thru TE-1079, E55A S/N TE-768 Thru TE-1079 , 58 S/N TH1-TH740 No sealing grease or gasket required for this application.	Donaldson P12-7996, Air Maze 121128-2, Brackett BA-6210-1	08-01024	**$210.49**
CPE-1957	Beech Musketeer - A23A, A23, A23-24, B23, 23	Brackett BA-104, Beech 169-3	08-07101	**$242.95**
CP-1182	Bellanca - 14-19-3-A, 17-30 P/N CP-3276 Is the install kit. Use P/N CP-2602 To replace gasket at annual.	Brackett BA-8110	08-00870	**$306.00**
CPE-1957	Bellanca - 17-30A	Brackett BA-104	08-00721-1	**$219.95**
CPE-1957	Brantly B2B	Fram CA161PL	08-00721-1	**$219.95**
CP-1150	Cessna - 120, 140, 150, 150A-M, A150K, A150L, A150M, 152, A152 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106, Donaldson P10-7150, Cessna C294510-0201	08-00843	**$204.95**
CP-1172	Cessna - 170, 170A, 170B, 172, 172A-G, H, I, K, L, M, N, P, Q P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Cessna C294510-0301, Donaldson P10-7172, Brackett BA-5110	08-00902	**$219.00**
CPE-1173	Cessna - 172R, S	Donaldson P198281, Fram 3559	08-00894-1	**$232.95**
CP-1182	Cessna - 180, (exception 1953-1955 models), 180A-H, 180J-K, 182, 182A-H, 182J-R, T182T S/N T18208001 AND ON, 182T S/N 18280945 AND ON, 185, 185A-E, A185E, A185F P/N CP-3276 Is the install kit. Use P/N CP-2602 To replace gasket at annual.	Cessna 0750038-1-4, Donaldson P10-6150, Brackett BA-8110	08-00870	**$306.00**
CPE-1202	Cessna - 182S, S/N >s 18280001 thru 18280944	Donaldson P19-8290, Fram CA3717	08-00903-1	**$211.95**
CPE-1178	CIRRUS - SR-20, SR-22 No sealing grease required for this application.	Brackett BA-111	08-01221	**$251.95**
CPE-2175	CIRRUS - SR-22 with STC SA10925SC	BA-111	08-07404	**$203.95**
CP-2175	GREAT LAKES - 2T1A-1, 2T1A-2	12009, P57A, AC-6486197 BA-101	08-06282	**$189.95**
CP-4423	ENSTROM HELICOPTER - F-28A	CA151PL, A86A, AFP5	08-07388-1	**$207.95**
CPE-1040	GRUMMAN - AG CAT G164B	Brackett BA-105	08-00717-1	**$210.95**
CPE-1957	LAVIA S.A. - PA25, PA25-235, PA25-260(PRIOR TO S/N 1477)	Fram CA-161PL, Brackett BA-104	08-00721-1	**$219.95**
CP-1150	LUSCOMBE - 8, 8A, 8B, 8C, 8D, 8E, 8F, T-8F P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	**$204.95**
CP-1172	MAULE - M-4, M-4T, M-4C, M-4S, M-4-180C, M-4-180S, M-180T, M-4-220, M-4-220C,M-4-220S, M-4-220T, M-5-180C, MX-7-160, MX-7-180,M-5-210C, M-5-235C, M-5-210TC, M-5-220C, M-6-180, M-6-235, M-7-235 P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Brackett BA-6110, Donaldson P12-6491	08-00902	**$219.00**
CPE-1178	MAULE - M-4-210, M-4-210C, M-4-210S, M-4-210T, M-5-210C No sealing grease required for this application.	Brackett BA-111	08-01221	**$251.95**
CP-1150	MOONEY - M10 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106, Donaldson P12-0494	08-00843	**$204.95**
CP-1172	MOONEY - M20, M20A, M20B, M20C, M20D, M20G P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Fram 13219, Brackett BA-6110, Donaldson P12-6491	08-00902	**$219.00**
CP-1176	MOONEY - M20 E,F REPLACEMENT GASKET P/N-CP-2802	Donaldson P10-4065 Brackett BA-6310	08-01031	**$235.95**
CP-1174	MOONEY - M20J (201)	BRACKET BA-6210	08-00896	**$213.69**
CP-1175	MOONEY - M20K S/N 25-1000 & UP	Donaldson P13-6287	08-01020-1	**$212.95**
CPE-1179	MOONEY - M20M, M20R, M20S	MOONEY 600417-503, AM EDD4028, Donaldson P524257	08-01263-1	**$213.95**
CPE-1151	PIPER - PA-18 S/N 18-6964 and up O-320	PIPER 454-118, FRAM CA-122PL, BRACKETT BA-112	08-01032-1	**$203.95**
CPE-1040	PIPER - PA28R-180, PA28R-200, PA28R-200T, PA28R-201, PA28RT-201, PA28R-201T, PA30, PA-34-200, PA39, PA44-180, PA44-180T	Piper 460-630 Brackett BA-105	08-00717-1	**$210.95**

EP

Prices Subject to Change Without Notice

CHALLENGER AIR FILTERS

CHALLENGER AVIATION HIGH-FLOW AIR FILTER W/ K&N FILTER MEDIA

(CONTINUED FROM PREVIOUS PAGE)

Model	Application	Installation	Part No.	Price
CPE-1957	PIPER - PA23-235A, PA23-235B , PA23-250B, PA-24 S/N 1479 and up, PA24-180 S/N 1477 and up, PA24-250 S/N 1477 and up, PA24-260, PA25-150, PA25-235, PA25-260 PRIOR TO S/N1477, PA28-140, PA28-150, PA28-160, PA28-180 ,PA28-181,PA28RT-201T, PA28-235,*PA32-260,*PA32-300 S/N 32-7640001 & UP, *PA32R-300, *PA32RT-300, *PA32RT-300T, *PA32R-301 (SP), *PA34-200T, *PA34-220T, *PA36 W/CONT. *COVER PLATE CPE-0528 MAY BE REQUIRED WHEN REPLACING Brackett FILTER.	Fram CA-161PL, Piper 460-632, Brackett BA-104, PURO AFP-2, AC-6485710	08-00721-1	**$219.95**
CP-1150	PIPER - J3, J3C-65, J3C-65S, J5A, J5A-80, PA-11, PA-11S, PA-12, PA-12S, PA-16, PA-17, PA-18, PA-18A, PA-18S, PA-18-105, PA-20-115 PA-20-135, PA-22-108,PA-22-135, PA-22-150,PA-22-160, PA-38-112 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106, Piper 460-638	08-00843	**$204.95**
CPE-1956	PIPER - PA28-151, 161 REPLACEMENT GASKET P/N CP-2604.	Brackett BA-16, Piper 560-679	08-01033	**$195.46**
CP-3202	PIPER - PA-31-300, PA31-310, PA-31-325, PA-31-350, PA-32RT-300T	460-817 560-747 P10-6590	08-07405	**$223.95**
CP-1150	REIMS/(Cessna) F150G, F150H, F150J, F150K, F150L, F150M, FA150K, FA150L, F152, FA152 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Cessna C294510-0201 Brackett BA-4106 Donaldson P10-7150	08-00843	**$204.95**
CP-1172	REIMS/(Cessna) - F172D, F172E,F172G, F172H, F172K, F172L, F172M P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Cessna C294510-0301 Brackett BA-5110 Donaldson P10-7172	08-00902	**$219.00**
CPE-1220	ROBINSON - R-44	ROBINSON C771-1	08-00720-1	**$206.95**
CP-4422	ROBINSON - R44 II	C-771-2	08-07380-1	**$228.95**
CPE-1104	ROBINSON - R-22	ROBINSON A771-1 Brackett BA-110	08-01021-1	**$210.95**
CP-2100	ROCKWELL COMMANDER - 100-180, 112, 112B	124748-019 Brackett BA-3910	08-05915	**$199.95**
CP-1172	SOCATA - TB9, TB10 P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Brackett BA-5110	08-00902	**$219.00**
CP-1150	TAYLORCRAFT - BF65, BF12-65, BFS65 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	**$204.95**
CP-1150	TIGER AIRCRAFT/LLC/GULFSTREAM AMERICAN - AA-1, AA-1A, AA-1B, AA-1C, AA-5 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4210 AMS13202	08-00843	**$204.95**
CP-1960	TIGER AIRCRAFT / GULFSTREAM AMERICAN - AA5A	Brackett BA-19	08-07307	**$190.84**
CP-1958	TIGER AIRCRAFT/GULFSTREAM AMERICAN - TIGER AA-5B	Brackett BA-4106	08-01022-1	**$210.95**
CP-1150	UNIVAIR - A-2, A2A (FORNEY) F-1, F-1A - P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	**$204.95**
CP-1150	GLOBE/SWIFT - SWIFT GC-1A, GC-1B P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	**$204.95**
CP-2010	WACO AIRCRAFT - UPF-7	22756-B	08-07389-1	**$209.95**

CHALLENGER AIR FILTER ACCESSORIES

Aircraft	Type	Challenger Part No.	Part No.	Price
CP-2003 Beech Bonanza	Gasket	CP-2502	08-01041	**$9.95**
CP-2055 Beech Baron 55, A55, B55	Gasket	CP-1505	08-07357	**$7.75**
CP-2175 Cessna 175, 175A-C	Gasket	CP-2775	08-07358	**$7.65**
CP-2182 Cessna R182, TR182, T182	Gasket	CP-2782	08-07360	**$7.65**
CP-1150 Cessna 140, 150, 152	Gasket	CP-2402	08-01043	**$9.95**
CP-1172 Cessna 170, 172	Gasket	CP-2302	08-01044	**$9.95**
CP-1182 Cessna 180, 182, 185	Gasket	CP-2602	08-01045	**$9.95**
CP-1177 Cessna Cardinal 177	Gasket	CP-1504	08-01264	**$9.95**
CP-1178 Cirrus SR-20, SR22	Gasket	CP-2902	08-07364	**$6.50**
CP-1176 Mooney 20E, F	Gasket	CP-2802	08-01047	**$9.95**
CP-1174 Mooney M20J	Gasket	CP-2202	08-01048	**$9.95**
CP-5502A Air Tractor AT-502A / AT-602	Gasket	CP-2705	08-07361	**$14.75**
CP-5502 Air Tractor AT-402/502/502B/503A	Gasket	CP-2704	08-07359	**$7.25**
CPE-1956 Piper PA-28-151, 161	Gasket	CP-2604	08-01046	**$9.95**
CPE-1957 Piper Oval Cover	Gasket	CP-2102	08-01049	**$9.95**
CPE-1040 Piper Round	Gasket	CP-2702	08-01050	**$9.95**
CPE2003, CP1177, CP1182	Installation Kit	CP-3276	08-01040	**$25.95**
CP1150 & CP1172	Installation Kit	CP-3274	08-01039	**$19.85**
All Models	Re-Charger Kit	CP-99-5050	08-05884	**$14.95**
* Various Models	Sealing Grease	CP-99-0704	08-04954	**$15.95**



CHALLENGER RE-CHARGING KIT

Challenger's recharger kit includes non-aerosol bottles of air filter cleaner and air filter oil for recharging air filters. Restores airflow efficiency.

P/N 08-05884 ..... **$14.95**

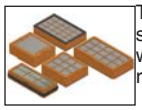


CHALLENGER SEALING GREASE

K&N Sealing Grease provides an airtight fit around sealing surfaces on all types of air filter elements. It resists heat and will not melt or run off. K&N sealing grease is not to be used on clamp-on filter elements. 6 oz. Squeeze Tube. P/N 08-04954 ..... **$15.95**

If you do not see your application here, or for more CHALLENGER AIR FILTER ACCESSORIES, please call or VISIT OUR WEBSITE AT WWW.AIRCRAFTSPRUCE.COM

BRACKETT AIR FILTERS



The specially treated polyurethane element in the Brackett filter assures near total protection from any foreign material entering the system. Repels water, fire retardant and has good air flow for proper fuel/air ratio. Has no pleats to collect dirt. Low-cost maintenance with increased engine life. FAA approved. Replace original air filter unit with a Brackett assembly. Thereafter, throw away element and replace with new one at minimal cost.

Aircraft Model Assy	Air Filter P/N	Assy Price	Element Part No.	Element Price
Aero Commander: A9, A9A, A9B	BA104	$31.95	BA3	$15.75
100-100A	BA8910	$72.75	BA8905	$11.85
100-180,112,112A,112B	BA3910	$70.75	BA3905	$16.90
112TC,112TC-A,114,114A	BA4010	$74.75	BA4005	$17.85
500A-B,560F,680F,FL,FLP,500U	BA151	$83.75	BA151E	$21.50
560, 560A, 560E, 680 - L	BA2610L	$76.80	BA2605L	$20.50
560, 560A, 560E, 680 - R	BA2610R	$76.80	BA2605R	$20.50
Aircoupe: 415C, CD, D, E, G	BA8810	$49.75	BA8805	$10.70
F-1, A-1, A2-2	BA4106	$62.90	BA4108	$8.75
Beech: 23, A23, A23A, A23-19	BA104	$31.95	BA3	$15.75
A23-19A, A-23-24, B23	BA104	$31.95	BA3	$15.75
C-23, C24R, A24R, B24R, B19	BA7510	$73.75	BA7305	$14.70
33, A33, B33, C33, E33, F33	BA7110	$74.75	BA7112	$15.80
C33A,E33A,E33,F33A,F33C,G33	BA7210	$74.75	BA7112	$15.80
35, A35, B35 thru S/N2605	BA7310	$80.75	BA7305	$14.70
B35,C35,D35,E35,F35,G35,H35,J35	BA7110	$74.75	BA7112	$15.80
K35, M35, N35, P35, 35R	BA7110	$74.75	BA7112	$15.80
S35 thru S/N D7671	BA7410	$73.75	BA7112	$15.80
S35, V35, V35A, V35B,36,A36	BA7210	$74.75	BA7112	$15.80
A36TC, B36TC, A45(T-34)	BA7210	$74.75	BA7112	$15.80
B45((T-34A), D45(T-34B)	BA7210	$74.75	BA7112	$15.80
W/STC SA1450 SW Cont.IO-52O	BA7210	$74.75	BA7112	$15.80
50,B50,C50,D50,D50A,D50B,D50C,D50E	N/A	$42.75	BA4805	$20.50
E50 (L-23D, RL-23D),F50	BA100	$106.80	BA7	$19.99
55, A55, B55	BA7610	$76.75	BA7605	$17.50
G50, H50, J50	BA100	$106.80	BA7	$19.99
C55, D55, E55, 355	BA6210-1	$72.75	BA6205	$14.85
S/N TE768-1078 58 thru S/N TH 740	BA6210-1	$72.75	BA6205	$14.85
E55, 355A, SN TE-1079 & up	BA7710	$74.75	BA7705	$18.50
58, 58A, SN TH741 & up	BA7710	$74.75	BA7705	$18.50
A65, 70, 65-B80, B88	BA100	$106.80	BA7	$19.99
76	BA7010	$77.90	BA7005	$14.50
77	BA2010	$64.75	BA6108	$10.85
95, B95, B95A, D95A	BA7810	$72.75	BA7805	$18.75
Bell:				
47G-2,47G2A,47G2A-1,47G-3,47G-3B	BA102	$37.99	BA2	$21.50
47G-3B-1,47G-3B-2,47G-3B 2A,47J,47J-2	BA102	$37.99	BA2	$21.50
47J-2A,47G-3B,47G-3B,47G-3B-1	BA102	$37.99	BA2	$21.50
47G-3B-2,47G-4,47G-4A,47G-5,47J-2,47J-2A	BA103	$58.75	BA9	$26.75
Bellanca: 14-19-3A, 17-30	BA8110	$86.75	BA8103-1	$19.50
17-30A	BA104	$31.95	BA3	$15.75
Brantly: B-2, B-2B	BA104	$31.95	BA3	$15.75
Cessna: 340,340A,402C,414,414A	BA109	$66.75	BA22	$25.50
402B,SN0801 & after,421,T310R	BA108	$74.75	BA13	$28.65
421A, 421B, 421C, T310R	BA108	$74.75	BA13	$28.65
337,337A-H,R172K,F337E-H,336,T41B-D	BA111	$82.75	BA24	$19.50
P337, T337 Rear Engine,172RG	BA5810	$81.75	BA5805	$15.70
R182, TR182, T-182, FR182	BA2510	$83.75	BA2505	$21.50
190, 195, 195A, 195B	BA8410	$94.99	BA8405	$31.65
120,140,140A,150,150A-M,152,152A	BA4106	$62.90	BA4108	$8.75
170, 170A-M,172, 172A-M	BA5110	$69.75	BA6108	$10.85
172N, 172P, F172N, F172P	BA5110A	$69.75	BA6108	$10.85
175, 175A-C, L-19	BA101	$87.75	BA8	$12.80
177, 177A, B, RG, F177RG	BA5710	$88.75	BA5705	$11.85
180 ('53-'55)	BA8010	$74.75	BA8005	$13.50
180A-K,182,182A-R,F182P,F182Q	BA8110	$86.75	BA8103-1	$19.50
185,185A-E,A185E,A185F	BA8110	$86.75	BA8103-1	$19.50
188, 188A	N/A	--	BA14	$24.60
205,205A,210,210A,B,C,310A,B,C,D	BA2110	$89.95	BA2305	$19.50
P206A-E, U206A-G, 207, 207A	BA2210L	$92.75	BA2205-L	$21.50
210D-N (to SN 64535 w/o air)	BA2210L	$92.75	BA2205-L	$21.50
210D-N (to SN 64535 w/o air)	BA2210R	$96.75	BA2205-R	$22.50
210N(SN645436 & up w/air),210R,T210F-N	BA2410	$91.75	BA2405	$35.85
P210 All	BA8710	$98.75	BA8705	$18.50
310F thru L	BA2310	$96.75	BA2305	$19.50
310N-Q, T310P, T310Q, 401 S/N 145-401B S/N 221, 402 S/N 145-402B S/N 800	BA107	$71.75	BA12	$25.50
F150GthruM,FA150K-L,F152,FA152	BA4106	$62.90	BA4108	$8.75
R172K, FR172E-K	BA111	$82.75	BA24	$19.50
TP206,TP206A-E,TU206A-G,T207,T207A	BA2410	$91.75	BA2405	$35.85
411, 411A	BA-3810	$79.99	BA3805	$20.60
Bobcat T-50, AT-17, UC-78, JRC-1	N/A	---	BA2705	$23.50
Champion: 7GC,7GCA,7GCBC,7HC	BA104	$31.95	BA3	$15.75
8KCAB,8GCBC,7KCAB,7GCBC,7GCAA	BA8110	$86.75	BA8103-1	$19.50
7GCAA,7GCBC,7KCAB,8KCAB,7ECA	BA106	$32.50	BA11	$14.50
7ECAw/Cont.0-200-,7ACA,7ECA,7FC,65CA	BA4106	$62.90	BA4108	$8.75
Cirrus: SR20 & SR22 Non-Turbo	BA111	$82.75	BA24	$19.50
DeHavilland: DHC-2 (L-20)	BA8210-1	$111.75	BA8205	$31.60
Aircraft Model Assy	**Air Filter P/N**	**Assy Price**	**Element Part No.**	**Element Price**
Great Lakes: 2TIA-2	BA101	$87.75	BA8	$12.80
Helio: H295	N/A	---	BA21	$33.75
Hiller: UH-12, UH-12-E	BA102	$37.99	BA2	$21.50
Grumman American				
AA-1,AA-1A,AA-1B,AA-5,AA- 1C,AA-5	BA4210	$62.99	BA4108	$8.75
AA-5B-Tiger, GA-7, G164B	N/A	---	BA20	$19.50
AgCat, G164, G164A	BA8210	$101.75	BA8205	$31.60
AA5A	N/A	---	BA19	$13.90
Hughes: 269A,269A-1,269B-C	BA102	$37.99	BA2	$21.50
Lake: LA4, LA4-200	BA3110	$76.75	BA7305	$14.70
Luscombe: 8, 8A thru 8F, T8F	BA4106	$62.90	BA4108	$8.75
Maule: M-4-210T, M-5-210C	BA111	$82.75	BA24	$19.50
M-4-210,M-4-210C,M-4-210-S	BA111	$82.75	BA24	$19.50
MA-4, M-4C, M-4S, M-4T	BA6110	$83.75	BA6108	$10.85
M-4-220, M-4-220C, M-4-220S	BA6110	$83.75	BA6108	$10.85
M-4-220T, M-4-180C, M-4-180S	BA6110	$83.75	BA6108	$10.85
M-4-180T, M-5-220C, M-5-235C	BA6110	$83.75	BA6108	$10.85
M-5-180C, M-5-210C, M-6-180	BA6110	$83.75	BA6108	$10.85
M-6-235, MX7-180, M-7-235	BA6110	$83.75	BA6108	$10.85
Mooney: M-10	BA4106	$62.90	BA4108	$8.75
M-18C	BA5110	$69.75	BA4108	$8.75
M20, M20A, B, C, D, G	BA6110	$83.75	BA6108	$10.85
M20E, F	BA6310	$72.75	BA6305	$19.90
M20J	BA6210	$70.75	BA6205	$14.85
Navion: A with (E) Series Engines	BA113	$50.50	BA25	$20.50
B; G, H, or with 10-470	BA4310	$67.75	BA4305	$12.70
North American: AT6 (SNJ)	N/A	---	BA8305	$60.85
Partenavia: P68, P68B, P68C	N/A	---	BA162E	$12.80
Piper: 600, 601	N/A	---	BA4	$33.75
J-3,J-4,J5,PA-11,11S,12,12S,16,17	BA4106	$62.90	BA4108	$8.75
PA-18,19,20,115,135,PA-22-ALL	BA4106	$62.90	BA4108	$8.75
PA-18-"150",18A-"150",18S-"150",18S-"150"	BA112	$64.75	BA13	$28.65
SN18-6964 & up w/TCDS Item 110 Installed	BA112	$64.75	BA13	$28.65
PA-23,160,24-180 up to SN1476	BA3110A	$73.75	BA7305	$14.70
PA-24-250 up to SN 1476	BA3210	$75.75	BA3205	$17.50
PA-23-235, 250, PA-25-235, 260	BA104	$31.95	BA3	$15.75
PA-28-140, 150, 160, 180, 235	BA104	$31.95	BA3	$15.75
PA-28-181, 201T, PA-28R-201T	BA104	$31.95	BA3	$15.75
PA-28RT-201T, PA-32-260,	BA104	$31.95	BA3	$15.75
PA-23-250,E23-250,SN27 2505 & up	BA115	$42.50	BA15	$18.75
PA-23-250, E23-250, w/Turbo Lyc.	N/A	---	BA3505	$21.50
PA-23-250 w/Air Research Turbo	N/A	---	BA8605	$16.60
PA-24-180 & PA-24-250 SN1477 & up	BA104	$31.95	BA3	$15.75
PA-24-25 SN103-1476 w/Piper Kit 754-285 Install	BA104	$31.95	BA3	$15.75
PA-24-260 SN4000-4802 except 24-4783	BA104	$31.95	BA3	$15.75
PA-32-300 SN76-40001&up	BA104	$31.95	BA3	$15.75
PA-32R-300,PA-32RT-300,PA-32R-301	BA104	$31.95	BA3	$15.75
PA-34-200T, 220T	BA104	$31.95	BA3	$15.75
PA-28R-201,PA-28RT-201,PA-28R-180, PA-28R-200	BA105	$37.50	BA10	$21.50
PA-28-236 S/N 28-7911283 & Up	BA2910	$67.75	BA2905	$14.95
PA-30-160	BA105	$37.50	BA10	$21.50
PA-31P, 31P-350	N/A	N/A	BA3305	$26.50
PA-38	BA4106	$62.90	BA4108	$8.75
PA-28-151,161	N/A	N/A	BA16	$10.55
PA-28-236 SN 28-7911283 & up	BA2910	$67.75	BA2905	$14.95
PA30, with Ray Jay Turbo	BA121	$42.50	BA27	$18.50
PA31, PA-31-300, -310, -325,-350	BA100	$106.80	BA7	$19.99
PA-31P, 31P-350	N/A	N/A	BA3305	$26.50
PA-32-300 w/I0-540-K1A5	BA115	$42.50	BA15	$18.75
PA-32RT-300T	BA100	$106.80	BA7	$19.99
PA-32-301T, 32R-301T	BA100	$106.80	BA7	$19.99
PA-34-200w/LYCI0360C01ES or LI0-360-C1E6	BA105	$37.50	BA10	$21.50
PA-44-180T	N/A	N/A	BA3505	$21.50
Robinson: R22	BA110	$32.50	BA23	$19.50
Stearman: All Series 75	BA118	$71.75	BA18	$33.75
Stinson: 108, 108-1, -2 ,-3	BA9110	$42.75	BA9105	$12.65
Swift: GC-1A, GC-1B	BA4106	$62.90	BA4108	$8.75
Taylorcraft	BA4106	$62.90	BA4108	$8.75
Varga: 2150A	BA4106	$62.90	BA4108	$8.75

SEE WWW.AIRCRAFTSPRUCE.COM FOR REPLACEMENT BRACKETT AIRFILTER GRILLS & GASKETS

DONALDSON AIR FILTERS



Donaldson has been the OEM source for Cessna, Piper, Beechcraft, and Maule & Mooney since the 1960's. They currently supply Cessna all of their SE Piston aircraft filters, Beech Bonanza & Baron filters, Mooney & Maul with their filters. For Piper they currently supply all of their Turbo charge aircraft with filters. Aircraft Spruce is a factory authorized distributor for Donaldson filters.

FEATURES: • High Performance Engine Intake Filters • Synthetic media: offers improved air flow and better dust capturing efficiency • Engineered to last 500 Flight Hours • Washable filter element, use compressed air/warm soapy water • Clean installation: dry media, no sticky/messy oil to trap dirt • OEM choice for GA aircraft for over 30 years • Meets All Flammability requirements per FAR 23.853 • Solid Construction with no removable parts-no loose screens, elements or screws • Exceptional wet weather performance, no oil to wash away in wet weather • Moisture passes thru the filter, doesn't build up an oiled surfaces (no oil present) • All filters starting with "P" feature our Premium Synthetic filter media • No Airworthiness Directives against Synthetic media filters • Cost efficient over the life of the filter, 3 years, 500 FH 5 cleanings

Only filters with * after part number have cellulous media

Donaldson	OEM	Description	PN	Price
P107150	C-294510-0201, 13203	C-150/152 & Various others Engine Intake air filter	08-06027	**$98.75**
P107172	C-294510-0301, 13219	C-170/172 Engine Intake air filter	08-06024	**$113.90**
P15-1936	PS600073 / 561-020	Piper PA-32R *(Engine Intake air filter)	08-06029	**$77.75**
P107336	C-294510-0401	C-172XP/ 337 Engine Intake air filter	08-06038	**$102.95**
AM102035FP	C-294510-0501	Engine Intake air filter	08-06052	**$187.75**
P106150	0750038-4	C-180/182/185 Engine Intake air filter	08-06023	**$124.75**
P131367	C-294510-0901	TR182/182R Engine Intake air filter	08-06042	**$254.95**
AM102135FP	1250704-3	C-206/207/210 Engine Intake air filter	08-06033	**$150.75**
AM102235FP	1250704-4	C-210 Engine Intake air filter	08-06046	**$158.75**
P107210	1250846-1	T206/T207/T210 Engine Intake air filter	08-06047	**$152.75**
P131364	C-294510-0801	T210N/P Engine Intake air filter	08-06049	**$147.75**
P108421	99100181	T310/320/335/401/402/421 Engine Intake air filter	08-06056	**$103.75**
P109337	C-294510-0701	337/T337 Engine Intake air filter	08-06051	**$210.95**
AM102035FP	C-294510-0501	Engine Intake air filter	08-06052	**$187.75**
P148670	C-294510-0902	T303 Engine Intake air filter	08-06053	**$178.80**
AM102735EA	9910018-2	310/401/402 Engine Intake air filter	08-06054	**$98.90**
AM102935EA	9910200-1	310R Engine Intake air filter	08-06055	**$154.75**
P128156	9913001-1	340/414 Engine Intake air filter	08-06028	**$92.95**
P128157	9910141-1	404 Engine Intake air filter	08-06057	**$172.90**
EBG03-0001	C-294501-0101	Instrument Air Filter Assembly, Cover & Filter element	08-06059	**$481.00**
P105290	C-294501-0203	Replaceable instrument Instrument air filter only, part of EBG03-0002 assy	08-06060	**$51.75**
AM103435IA	C-294501-0301	Instrument Air Filter	08-06035	**$66.95**
AM103535IA	C-294501-0302	Instrument Air Filter	08-06036	**$56.75**
P122322	169-380064-3	B19 Engine Intake air filter	08-06061	**$119.75**
P130374	45-91210, 13917	Debonair & Early Bonanza Engine Intake air filter	08-06062	**$496.00**
P105304	35-380035-5, -12	Bonanza Engine Intake air filter	08-06032	**$133.75**
P137627	35-380035-7	Bonanza Engine Intake air filter	08-06026	**$93.75**
P136680	105-389000-3	B76 Engine Intake air filter	08-06063	**$150.75**
P133881	P13-3881	B77 Engine Intake air filter	08-06064	**$169.95**
P128219	P12-8219, 122601, AM101020FP	95-55, A55, B55 Baron Engine Intake air filter	08-06065	**$81.75**
P127996	P12-7996, 121128-2, AM101120FP	C55, D55, E55 & 58 Baron Engine Intake air filter	08-06066	**$89.80**
P12-8167	96-389005-1	E55 & 58 Baron Engine Intake air filter	08-06025	**$66.75**
P108700	50-389070-15	Duke Engine Intake air filter	08-06067	**$105.75**
P124439	50-389070-23	58P Baron Engine Intake air filter	08-06069	**$60.75**
P105798	50-389070-11	A65, 70, B80 Engine Intake air filter	08-06070	**$93.75**
EBG03-0003	205538-089	Instrument air filter	08-06072	**$114.75**
EBG03-0018	101-380039-1	King Air Instrument air filter	08-06034	**$51.75**
P136602	560-584	PA-28-236 Engine Intake air filter	08-06074	**$175.75**
P138683	560-904	PA-28-236 Engine Intake air filter	08-06075	**$152.75**
P106590	560-747	PA-31 Engine Intake air filter	08-06076	**$82.75**
	460-609	PA-31P Engine Intake air filter	08-06077	**$219.95**
P136739	560-947	PA-32 Engine Intake air filter	08-06078	**$262.95**
P138580	86881-2, 560-953	PA-44T Engine Intake air filter	08-06080	**$227.95**
AM108365FP	P13-6287	M20K Engine Intake air filter	08-06081	**$194.90**
204418-156	77852	Lycoming Engine Spin on oil Filter adapter	08-06037	**$181.75**
P11-0172	C-294510-0601	Engine Intake air filter	08-06228	**$299.95**
P198281	P198281, CA3559	172R & 172S Engine Intake Filter	08-07051	**$119.75**
P198290	P198290, CA3717	182S Engine Intake Filter	08-07052	**$121.75**
P197268	P197268	T206H Engine Intake Filter	08-07053	**$185.75**
P13-0234	125997-010, BA6210	M20J Engine Intake Filter	08-07054	**$112.75**
ED04011	600417-501	M20K (s/n 25-1000 and up) engine intake Filter	08-07055	**$123.75**
ED04028	600417-503	M20M/R/S Engine Intake Filter	08-07056	**$102.80**
P10-5225	C-294501-0103	Various Instrument Air Filter	08-07057	**$45.50**
P617058	460-632	Oval Piper Filter PA28/PA34	08-07276	**$77.75**
P617053	460-630	Round Piper Filter PA28/PA44	08-07277	**$81.75**
P617774	460-629	Round Piper Filter PA23/32	08-07278	**$73.75**
--	C-294501-0201	Air Filter Assembly Cover & Filter	08-15992	**$549.00**
--	9546982 HBC, 6260A77 M0	Mooney M20J & M20K Air Filter Assembly Cover & Filter	08-15994	**$59.75**
3034507WFC	3017383, 3020967, 3022069, 3022070, 3034507, Alternate P-1035	Pratt & Whitney (Various Aircraft)	08-15976	**$141.75**
3034292WFC	3034292, 3034293, Alternate P-1010	Pratt & Whitney (Various Aircraft)	08-15978	**$95.75**
3034393WFC	3034393, 3033315, Alternate P-1011	Pratt & Whitney (Various Aircraft)	08-15981	**$76.75**
3034508WFC	3029315, 3015330, 3029316, 3020291, 3059256-01, Alternate 11-11064, P-1009	Pratt & Whitney Canada (Various Aircraft)	08-15982	**$65.75**
WF334552	3029268 Alternate 3028856, 3029267 P-1018	Pratt & Whitney Canada (Various Aircraft)	08-15979	**$149.65**
3108939-01WFC	3108939-01, Alternate P-1068	Pratt & Whitney (PT6T-3, -3B, -3BE, -6)	08-15980	**$306.00**
WF336238	3038142 P-1139	3038142 P-1139	08-15983	**$289.00**

VISIT OUR WEBSITE FOR COMPLETE AIRCRAFT APPLICATION INFORMATION.

AIR FILTERS



PLEATED PAPER AIR FILTERS

These pleated paper aircraft induction air filters are manufactured in South Africa and are fully approved by the South African Dept. of Transport, Division of Civil Aviation. Strict quality control standards are enforced at all stages of manufacture. The filters feature aluminum frames and cured EA131 pleated elements with 96% micron rating. Rubber gaskets are waterproof, oil solvent, and chemical resistant. Mesh overlays are of stainless steel for enhanced strength, durability, and appearance. Not FAA approved at this time.

Part No.	Aircraft Equivalent PN	Aircraft Type	Price
08-14639	124748-019 (No Gasket)	Aero Commander 100-180, 112, 112A, 112B	**$131.75**
08-14638	124748-019 (121262-7)	Aero Commander 100, 100A	**$131.75**
08-14640	124748-036 (615045-1)	Aero Commander 112TC, 112TCA, 114, 114A	**$153.85**
08-14641	361-200 (126053-002)	Aero Commander 500	**$138.75**
08-14642	3610239	Aero Commander 500A, 500B, 560F, 680FL, 680FLP, 500U	**$138.75**
08-00018	P10-5304	Beech 36	**$158.75**
08-00020	P12-8219 (122601)	Beech 55	**$122.75**
08-00019	P12-7996 (121128-2) TE946 thru TE1078 TH1 thru TH740	Beech 58	**$132.75**
08-14646	P13-6680 (105-389000-3)	Beech 76	**$157.75**
08-14647	P13-3881	Beech 77	**$101.75**
08-14648	A-121128-1	Beech 95, B95, B95A, D95A	**$123.75**
08-00023	P12-8167 (96-389005-1) TE1079 & after TE741 & after	Beech E55 & 58 Late Model	**$154.75**
08-14644	P10-2646 (35-0035-3) Maze 122943-1	Beech S35	**$164.95**
08-00000	C294510-0201	Cessna 150	**$137.75**
08-00001	C294510-0301	Cessna 172	**$153.85**
08-00002	C294510-0401	Cessna 172	**$152.75**
08-00003	C294510-0501	Cessna 172 RG Cutlass	**$152.75**
08-14649	P57A (AC-6486197) Maze 12009	Cessna 175, 175A, B, C	**$141.75**
08-00004	C294510-0601	Cessna 177	**$163.75**
08-00007	0750038-4	Cessna 182	**$176.00**
08-00006	C294510-0901	Cessna 182RG	**$164.75**
08-00008	1250704-3 (Port)	Cessna 206	**$261.95**
08-00009	1250704-4 (Stb)	Cessna 207	**$267.95**

Part No.	Aircraft Equivalent PN	Aircraft Type	Price
08-00013	9910018-2	Cessna 310N, P, Q, T310P, T310Q	**$147.75**
08-00014	9910200-1	Cessna 310R	**$162.75**
08-00011	C294510-0501	Cessna 337	**$148.75**
08-00016	9913001-1 (108)	Cessna 402 Late Model	**$170.85**
08-00015	9910141-1	Cessna 414 Series	**$180.75**
08-00005	C294510-0801	Cessna P210	**$170.75**
08-00010	1250846-1	Cessna T206 & T210	**$201.95**
08-00012	9910018-1	Cessna T310R	**$149.85**
08-00021	P10-8700	Duke B60	**$132.75**
08-14652	13219 (CESS-3)	Mooney M20-C, M20A, B, C, D, G	**$162.75**
08-14650	P10-4065	Mooney M20E, F	**$312.00**
08-00026	125685-004	Mooney M20K	**$176.75**
08-14651	004028	Mooney M20R	**$147.75**
08-00022	P12-4439 (50-389070-23)	P Baron (58P)	**$133.75**
08-14653	120120 (17775-00)	Piper Aztec PA-23-160	**$145.75**
08-14656	460-630 (FRAM CA144PL) 638876	Piper Cherokee PA28R-201, PA28RT-201 PA28R-180, PA28R-200	**$144.00**
08-00029	124997-005	Piper Navajo/Chieftain (PA31)	**$143.75**
08-14654	32198	Piper PA23-250, PA23E-250	**$123.75**
08-14655	17775-02	Piper PA24-250 Up to S/N 1476	**$177.75**
08-14657	26874-00 P11-4419	Piper PA24-260C	**$195.75**
08-00033	CA161	Piper PA28 & 32 Series (PA 36 Pawnee) (PA 34 Seneca)	**$148.75**
08-00035	35477-00	Piper PA28-161	**$129.90**
08-14658	PA-560-904 (D-P12-8683)	Piper PA28-236 S/N 28-7911283 & up	**$157.75**
08-00034	CA162	Piper PA32 & PA23	**$149.75**
08-00031	560-947	Piper Saratoga (PA32-301T)	**$238.95**
08-00036	CA122	Piper Super Cub (PA18)	**$131.75**
08-00028	560-772	Piper Tomahawk	**$143.95**
08-00030	13681-02	Piper Tri-Pacer (PA22)	**$145.75**
08-00032	125196	Piper Turbo Aztec (PA23)	**$177.90**



AIR-MAZE AIR FILTERS

Filter for Continental for A-65 thru C-125*.
P/N A40599 .....**$85.75**
Filter for Lycoming O-235, O-290, some O-320 (advise aircraft application)
P/N A40599 .....**$85.75**
Aeronca 7AC, 11AC
P/N 2-849.....**$116.75**
Carb. Intake Stud .....P/N 24306 .....**$48.76**
TCM Carb. Intake Pin.....P/N 24308 .....**$24.49**
FOR NEW INSTALLATION - P/N 24306 & P/N 24308 ARE REQUIRED



NAPA AIR FILTER

Air Filter for 7GCA, 7GCB, 7GC, 7HC Models. Experimental Only. Direct replacement of FRAM made by NAPA.
P/N 05-06388 .....**$19.50**

EP

Prices Subject to Change Without Notice

K&N AIR FILTERS



K&N AIR FILTERS

Our K&N Filters are the industry standard in excellence. All filters are constructed with ultra-strong molded pliable rubber flanges which absorb vibration and provide secure attachment. These flanges can be stretched up to 1/8" (3mm) to fit in-between sizes. K&N Universal air filters are available in round, tapered, and oval designs, to fit just about any application. Use the dimensioned sketch and the selection chart to find the filter best suited to your application.

Part No.	K&N Part No.	Application	Throat	Length	Dia.	Style	Price
08-01053	FRV2440	Rotax®/Bing 36mm	2"	2"	5-3/8"	Round Straight	**$66.75**
08-01273	RU0600	Mikuni 32mm	2-1/4"	4"	3-1/2"	Round Straight	**$40.75**
08-04977	RU0800	Mikuni 34mm	2-1/2"	4"	3-1/2"	Round Straight	**$43.75**
08-04980	FRC0930	Kawasaki/Mikuni 32mm	2-3/4"	3"	5"	Round Straight	**$35.95**
08-04981	FRC1250	Mikuni 36mm	2-1/4"	4"	2"	Tapered	**$48.75**
08-04978	RU2690	Rotax®/Bing 32mm	1-3/4"	2-1/2"	2"	Tapered	**$38.50**
08-01274	RC1350	Rotax®/Bing 36mm	2-1/16"	4"	3"	Round Straight	**$51.99**
08-01275	RC1200	Rotax®/Bing 36mm	2-1/16"	4"	2"	Tapered	**$46.50**
08-04979	RC2820	Rotax® 532/582 Dual Carbs	2-1/16"	3"	8-1/2"	Dual Oval	**$61.75**
08-04976	RC2720	Rotax® 503 Dual Carbs	2-1/16"	3"	8-1/2"	Dual Oval	**$64.75**
08-04977	RU0800	Mikuni 34mm	2-7/16"	4"	3-1/2"	Straight	**$43.75**
08-01278	RU2790	Rotax® 503/532 Aerobatic carb.	3-1/2"	4-1/2"	3-1/2"	Tapered	**$44.50**
08-01279	RA045V	Rotax® 912 Offset	2"	2"	5-7/8"	Round offset	**$63.75**
08-01280	RU0810	Rotax® 814 Rd. Center	2-7/16"	5"	3-1/2"	Round Centered	**$43.95**
08-04983	FRC1890	Rotax®/Bing 36mm	2-1/16"	3"	3"	Round Straight	**$51.75**
08-04984	FRC1150	Rotax®/Bing 36mm	2-1/16"	3"	3-1/2"	Round Straight	**$43.50**



K&N AIR FILTERS

Rubber end cap instead of chrome makes this filter less likely to create damage in the event of a prop strike. Also includes rubber boss for safety wire attachment.

K&N Air Filter # RC-2314 ..... P/N 08-07291 **$142.95**

See website for engine applications.



K&N ROUND AIR FILTER ELEMENTS

Description	Part No.	Price
E-3260 Filter Element	08-12162	**$49.50**
E-3450 Filter Element	08-12163	**$49.85**



K&N SQUARE AIR FILTER ELEMENTS

Description	Part No.	Price
E-33-2060 Filter Element	08-12164	**$48.50**



K&N PRECHARGER FILTER WRAPS

The K&N PreCharger® is a specially designed filter wrap made to extend the service interval of your K&N Filter when used in very dusty conditions. They are made from durable polyester material containing uniform micron openings. The PreCharger will stop small dirt particles; yet add little restriction to the airflow of the filter. The PreCharger is designed to be run dry and can be cleaned with K&N Filter Cleaner. The PreCharger is custom made to fit each application. Double stitched elastic openings assure that the PreCharger will stay in place. Available in round straight and round tapered.

22-8016PK Precharger - Straight..... P/N 15-07233..... **$16.50**

RC-1200PK Precharger - Tapered..... P/N 15-05090..... **$19.65**



VARI-EZE / LONG EZ AIR INTAKE FILTER

NAPA #2904 air intake filter (equivalent to Purolator #AFP-177 & AC #44-8C)

P/N 2904..... **$14.75**



OVAL AIR FILTER FOR DUAL BING 54 CARBURETOR

Oil impregnated, pleated, washable, polyester air filter. Can be washed and re-oiled for years. Traps dirt and other foreign particles to keep engine clean. ..... P/N 15-08370 ..... **$50.00**

Filter for Rotax 503..... P/N 15-08343 ..... **$50.00**



K&N FILTER CHARGER OIL

K&N Air Filter Oil is the only oil specially formulated to work in combination with the cotton fabric in K&N Filtercharger elements, providing a superior air filtration system. When used as directed, it quickly penetrates the filter pleats, where it remains suspended in the cotton fabric. Saturation is maintained until the element is cleaned with K&N Air Filter Cleaner.

Description	Part No.	Price
1 oz. Pillow Pack	15-05453	**$13.50**
6.5 oz. Spray Can	08-01052	**$12.90**
8 oz. Squeeze Bottle	08-01089	**$10.95**
12 oz. Spray Can	15-08139	**$13.95**
One Gallon Refill	15-05454	**$30.70**



K&N POWER KLEEN

K&N Air Filter Cleaner is the only cleaner recommended to clean K&N Air Filter elements. Dissolves dirt build up and old filter oil and can be washed away with water. It is environmentally friendly and safe on paint, chrome, cast aluminum, plastic, rubber and vinyl when used as directed (do not use on polished or anodized aluminum). Complete instructions on bottle.

12 oz. Spray..... P/N 05-01944 ..... **$13.50**

1 Gallon Refill..... P/N 15-05451 ..... **$29.95**

5 Gallon Pail..... P/N 08-07461 ..... **$86.95**



K&N AIR FILTER SEALING GREASE

K&N Sealing Grease provides an airtight fit around sealing surfaces on all types of air filter elements. It resists heat and will not melt or run off. K&N sealing grease is not to be used on clamp-on filter elements. 6 oz. Squeeze Tube. 8 oz. squeeze tube - black.....P/N 08-01093..... **$15.65**



K&N RECHARGER KIT

K&N Recharger® kits contain K&N air filter cleaner and air filter oil for recharging any K&N Filtercharger® Air Filter. Restores air flow efficiency so your K&N air filter performs like new! P/N 08-00722.....**$18.50**



K&N AIR FILTER CLEANER & DEGREASER

This is the only cleaner formulated to clean K&N Filtercharger elements. The use of any other cleaning solution will void the filter's warranty, and quite possibly could damage the cotton material. Biodegradable and safe on paint, chrome, cast aluminum, plastic, rubber, and vinyl when used as directed. Complete instructions on the bottle.

NOTE: Do not use on polished or anodized aluminum.

12-fluid oz. squirt bottle..... P/N F99-0606 .....**$13.50**



GPL WASHABLE RE-USEABLE AIR FILTER FOR BING 54

Oil Impregnated, Pleated, Washable, Polyester Air Filter. Can be washed and re-oiled for years. Fits Bing 54 Carburetor. GPL Part # 3920 For Bing 54. 3.5" D x 4" L x 2 1/16" ID

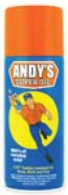
P/N 08-07665 .....**$26.50**



GPL WASHABLE RE-USEABLE AIR FILTER FOR MIKUNI 34-36MM

Oil Impregnated, Pleated, Washable, Polyester Air Filter. Can be washed and re-oiled for years. Traps dirt and other foreign particles to keep engine clean. GPL Part # 3921 For Mikuni 34—36mm. 3.5" X 4" X 2 7/16". P/N 08-07631 .....**$26.00**

EP



ANDYS SUPER OIL LUBRICANT

Powerful Lubrication - A 21st Century Formula. Andy's Super Oil takes advantage of the latest advances in tribology (the science of lubrication) by combining a high-quality petroleum base with the finest additives, including PTFE (commonly known by the trademarked- name Teflon). PTFE is one of the most lubricious materials known and is a key element in making Andy's Super Oil the finest spray lubricant available today. 11 oz. P/N 09-04441 ..... **$8.95**



MOLYKOTE 33 BEARING GREASE

Dow Corning 33 Extreme Low Temperature Bearing Grease is a thickened silicone oil; resistant to oxidation, moisture and corrosive atmospheres, inert, good shear stability and wide service temperature range.

Specifications:

- 5.3oz (150g) Tube.
- Base Chemistry: Silicone
- Flash Point: >101.1°C
- Service Temperature: -73 to 204°C
- Specific Gravity: 1.1 @ 25°C
- Viscosity Cp: 100 @ 25 °C

P/N 06-02342 ..... **$29.95**



LOCTITE® HIGH TEMPERATURE GASKET SEALANT

LOCTITE® High Temperature Gasket Sealant is a slow drying viscous paste. It remains pliable and flexible and is designed to seal flanges, threaded connections and fasteners at temperatures from -45° C to +315 °C. It can be effectively applied to cork, paper, plastic and metal surfaces. Typical applications include sealing gaskets, flanges and threaded connections, aircraft heating systems, manifolds, pipe fittings, steam lines, gear boxes and cover plates..... P/N 09-28425..... **$23.75**



PERMATEX FORM-A-GASKET NO. 1

Seals and repairs a wide range of gaskets. Fills in uneven flanges surfaces. Seals pipe fittings, air ducts, boilers, plumbing connections and threaded assemblies. Dries fast, sets hard for sealing permanent or rigid assemblies. Easy to apply. Improves gasket sealing power, adds reliability to rigid or permanent assemblies. Eliminates delays.

3 oz., Tube, #1B..... P/N 09-28415..... **$5.65**
11 oz, Tube, #1C ..... P/N 09-28430..... **$12.50**



PERMATEX FORM-A-GASKET NO. 2

A non-hardening, heavy-bodied, pliable sealant for semi-permanent assemblies. Use on threaded assemblies, over plates and hose connections, metal-to-metal applications. Temperature range -65° to 400° F., pressures up to 5000 PSI. Apply with putty knife or stiff bristle brush. Conforms to MIL-S-45180B Type II.

3 Oz. Tube #2B..... P/N 09-28420..... **$6.50**
11Oz. Tube #2C..... P/N 09-28400..... **$13.50**



ANDEROL ROYCO 782 HYDRAULIC FLUID

Synthetic fire resistant "Super Clean" hydraulic fluid ROYCO 782 is a red - colored synthetic hydraulic fluid developed to meet the severe duty demands of today's military and industrial equipment. Modern additive technology is employed for oxidative stability, corrosion inhibition, and anti-wear protection. ROYCO 782 is compatible with petroleum based fluids and all components used in mineral oil type hydraulic systems. Mil-Spec: MIL-PRF-83282.

Quart.....P/N 08-07539-1 .....**$13.95**
Case (24 Quarts) .....P/N 08-07539 .....**$324.00**



AVIATION FORM-A-GASKET NO. 3

A non-hardening sealant. Recommended for heating hose connections, close fitting metal parts and threaded connections. Resists water, gasoline, acids and alkalies. Temperature range -65° to 400°F., pressures to 5000 PSI. Conforms to MIL-S-45180B, Type III.

4 Oz. Can #3H ..... P/N 09-28500..... **$7.50**
1 Pint Can #3D..... P/N 09-28600..... **$17.90**



GUNK SUPER CONCENTRATE DEGREASER

A concentrated self-emulsifying degreasing solvent for engine and parts. Dilute one part concentrate with nine parts of kerosine or light Diesel fuel oil for very effective cleaning. Spray or brush on. Does not harm electrical system, strip paint or cause rust. Water rinse.

Attention: Volatile Organic Compounds (VOCs) Government Regulations: Product cannot be purchased, sold or used in the states listed below. CA, CT, DC, DE, IL, IN, ME, MD, MA, MI, NH, NJ, NY, OH, PA,

SC-2A, Qt. (2 Lbs.).....P/N 09-29400.....**$9.50**
SC-3, Gal. (8 Lbs.) .....P/N 09-29500.....**$34.95**



GUNK "ENGINE BRITE" ENGINE CLEANER

Ready-to-use engine cleaner in convenient aerosol 15oz. can. Note: Due to environmental regulations, 09-29700 cannot be used in California. For California customers see Alternate Item.

P/N 09-29700.....**$5.50**
For CA only.....P/N 09-03767.....**$5.75**



GUNK HYDRO-SEAL

Two-layer room temperature carbon digester and paint stripper. No flash point. Safe on all metals. Simply soak and pressure rinse or solvent rinse. 5 gal. pail contains parts soaking basket.

HS-3, 1 Gal. Can (11 Lbs.).....P/N 09-29900.....**$96.75**
HS-5K, 5 Gal. Pail w/ parts basket (Wt. 56 lbs., truck shipment req'd) .....P/N 09-30000...**$183.75**

Factory-direct shipment on 50 gal. drums of Gunk and Hydro-seal. F.O.B. Charlotte, N.C.



POB #4 PERFECT SEAL SEALANT

• Used worldwide in the automotive, aircraft and marine industries • Liquid sealant designed to meet rigid requirements of OEM specifications. • Non-hardening and resists extreme temperatures. • Seals all gaskets and threaded connections. • Prevents corrosion of bolts, studs and fitting threads. • Resistant to gasoline, oils, steam, salt-water, antifreeze and propane. • Withstands temperatures from -50 F to 400 F.

4oz. ..... P/N 08-07218 ..... **$8.50**
16oz. ..... P/N 08-07217 ..... **$15.55**



MARVEL MYSTERY OIL

Standard for break-in on new or overhauled engines and for carbon removal from cylinder heads, piston rings, valves, etc. Mix with regular oil for perfect engine operation to -20°F. Lubricates tight nuts, control hinges and landing gear. Dust repellent.

Qt. ..... P/N 09-27500 ..... **$12.50**
Pint ..... P/N 09-27505 ..... **$9.50**
Gal. ..... P/N 09-27600 ..... **$39.95**



MOUSE MILK OIL

For speedy help in removal of rusted or frozen studs, nut and bolts; frees up cables, slides and linkage; unequalled wherever a lubricant and penetrant are required. Lasting lubricating qualities.8 Oz ..... P/N 09-39608..... **$5.95**
32 Oz ..... P/N 09-39632..... **$18.50**



BENDIX MAGNETO GREASE

#10-27165 **-** Factory recommended lubricant for bearings in Bendix magnetos.

1 Lb. Can..... P/N 10-27165 ..... **$79.83**

#10-391200 **-** For use on distributor block bushing. Provides proper shaft lubrication.

8 oz. can..... P/N 10-391200 ..... **$79.95**

#10-86527 **-** High temperature breaker/cam lubricant

P/N 10-86527 ..... **$54.95**



AIM-A-SQUIRT

To apply lubricants, corrosion inhibitors and solvents in those hard to reach areas without getting the products all over everything. P/N 09-02325..... **$11.50**

Prices Subject to Change Without Notice

ENGINE PREHEATERS

RED DRAGON ENGINE PREHEATERS



Model	Description	Part No.	Price
MH300	Originally developed for Alaskan Bush Pilots, RED DRAGON® Engine Preheaters have been favored by pilots for over 30 years. Not just for aircraft, but for any engine subjected to low temperatures – perfect for construction, farm and oil field equipment. All preheaters are safe, easy to use and burn clean efficient propane. Available in 12 volt D.C. or 115 volt A.C. models, Red Dragon Preheaters are the best around. Each Preheater is tested before leaving the factory. • Fully Assembled • Compact & Lightweight • Full Safety Features • Push Button Ignition • Fueled by Clean, Efficient Propane • Sturdy Steel Construction • Made in the U.S.A.	08-04300	**$389.00**
MH310	Use these Preheaters anywhere electrical outlets are available. Perfect for in the hangar, garage or machine shop. These units include full safety features and push button ignition. Safety features include safety shutoff valve, adjustable regulator and excess flow safety P.O.L. tank fitting. Each unit includes a 5' power cord and a 5' fuel hose to connect to any refillable LP-Gas cylinder. For added safety, an optional high limit heat sensor located near the air outlet will shut off fuel to the burner if the preheater surface temperature exceeds safe levels. A soft carrying case is also available for easy transport.	08-04305	**$359.00**
H175	A complete 12 volt D.C. preheater package with almost everything necessary to put your Red Dragon® into operation plus a sturdy dolly for easy transportation. Comes equipped with the LT 2-12 MH 300 preheater. These units include safety features and push button ignition. Safety features include safety shutoff valve, adjustable regulator and excess flow safety P.O.L. tank fitting. Each unit includes a 10' power cord with alligator clips to quickly attach to your battery source and a 5' fuel hose to connect to any refillable LP-Gas cylinder. For added safety the LT 2-12 MH 300 has an optional high limit heat sensor located near the air outlet and will shut off fuel to the burner if the preheater surface temperature exceeds safe levels. These kits also come complete with a sturdy H-125 Cylinder Dolly w/battery bracket and battery box, 20 pound cylinder and 6' of heavy duty ducting. Just add fuel to the cylinder and a battery and you're ready to go!	08-04315	**$549.00**
	RED DRAGON ACCESSORIES		
--	***Heat Ducting*** **-** 12' long x 4" diameter; Heavy-Duty Flexible Ducting.	08-04310	**$109.95**
--	6'Lx4" Dia. Heavy-Duty Flexible Ducting.	08-04325	**$79.95**
--	Carrying Case - Strong Plastic Case with lock, for model MH300. (20.25"x 9.5"x 9.5")	08-04320	**$53.75**
--	12V Cigarette Lighter Adapter Plug	08-04330	**$16.95**
--	Propane Quick Disconnect set - For Rapid Connect & Disconnect of Fuel Line from Propane Bottle w/o Tools (even under pressure)	08-04340	**$21.95**
--	Propane Bottle - Std. Refillable Bottle (5 Gal. Cap. or 20 Lbs.) Supplies Min. 2 Hours of Heating. (Empty)	08-04351	**$55.00**
--	Soft Carrying Case - This soft carrying case is for 115V preheaters only.	08-01218	**$21.95**
--	Red Dragon Disposable Cylinder Adapter - Has a shut off valve and is disposable usually for 1 preheat.	08-01295	**$28.95**

E-Z HEAT AIRCRAFT ENGINE PREHEATERS



Preheating engines for winter operations is at best a miserable chore and at worst can be a disaster for the plane, the pilot & flight operations - until the development of the E-Z Heat Aircraft Engine Heater. The E-Z Heat was designed to provide very efficient engine heating for virtually all propeller driven aircraft. The heaters consist of a flexible synthetic pad that easily conforms to the contours of the oil pan. This pad will heat 12 qts of oil from -40° to +60°F in an hour while using approximately 300 watts of electricity. The heater is 1/32" thick. which enables the immediate heat transfer from heater to engine.

The heaters are thermostatically controlled, so leaving them plugged in overnight means the plane will be ready to go in the morning. Normally, complete pre-heating takes only 3-5 hours for the entire engine to be nice and warm. With this new lighted plug, the owner simply needs to look out the window or peek in the hangar to see if they remembered to plug in their E-Z Heat engine pre-heater. Molded into the male plug end is a newly designed light emitting diode (LED). This LED allows the operator to visually recognize if there is electrical power to the preheat system even from a distance. FAA approved for certificated aircraft.

End your cold weather starting problems and reduce premature engine wear with the installation of our proven

Specifications:

Power Consumption: 300 watts or less / Thermostatically Controlled

Power Requirement: 110/120 volts (models 441 and 540 are available in 220 volts).

Installation: The adhesive is already on the pad. All you need to do is peel and stick it on! (excluding model 470)

Preheat Time: 3 to 5 hours on cold soaked engine, although, since unit is thermostatically controlled, it may be left on overnight, or all the time. Cowl covers and prop covers are recommended for extreme cold weather, they also reduce preheat time.

Lite Brite Plug: With this new lighted plug, the owner simply has to look out the window or peek in the hangar to see if they remembered to plug in their E-Z Heat engine pre-heater! (excluding model 470)

Weight: Only 9 ounces!

Heat Transfer: Convection/conduction, the safest way of heat transfer available. No flames or glowing elements are potential fire hazards.

P/N	Application	Heater #	Price
07-00756	Cont. A-65 to o-200 (round) Use on round kidney shaped oil sumps	360	**$149.00**
07-05315	Cont. A-65 to 0-200 (rectangle) Use on flat oil sump surface	270	**$149.00**
07-05100	Cont. C-125 to 0-300, E-165 to E-225, IO-360 to TI0-360 Lyc. 0-235, 0-290, 0-320*	440	**$149.00**
07-05200	Cont. 0-470, I0-470, 0-520, I0-520 Lyc. 0-320*, 0-360, I0-360, 0-540, I0-540C, D, T10-540C	441	**$149.00**
07-01320	Cont. O-470, IO-470, O-520, IO-520	470	**$149.00**
07-05210	Lyc. IO-360A & C Series	442	**$149.00**
07-05345	Cont. 0-470, I0-470, 0-520, I0-520 I0-550 Lyc. 0-540, TIO-540	411, 440 or 540	**$175.00**
07-05345-2	(except C), I0-720	220V	**$175.00**
07-05200-2	Model 441 - 220Volt	441-2	**$149.00**

**** Except H and Rear Carbs***

E-Z HEAT 912 ENGINE PREHEATER



The E-Z Heat Engine Preheater system fits the Rotax motors and many other light sport aircraft on the market today. The system consists of two heater pads connected with a common "Light Bright" power cord. Installation is easy by peeling and sticking a pad on both the sump and on the oil tank to assure the engine gets the proper amount of heat. P/N 07-01860 .....**$149.00**

MAXPREHEAT PRE HEATERS



Extend-A-Stay mode for the Model MPH12VDC or MPH24VDC unit. Designed to allow you extra time on the ground. Once you land, hook up the device per instructions, and you will have many more hours of "on the ground time". In an emergency this unit can get your engine up to a starting temperature in an hour or so. Coming from a cold engine condition with everything in place as described, this can be an actual life saver. You will need to decide on settings, placements and other parameters based on your local conditions.

12VDC ..... P/N 07-17783 .....**$169.95**
28VDC ..... P/N 07-17785 .....**$169.95**
120VAC ..... P/N 07-17784 .....**$189.95**

EP

TANIS PREHEAT SYSTEMS

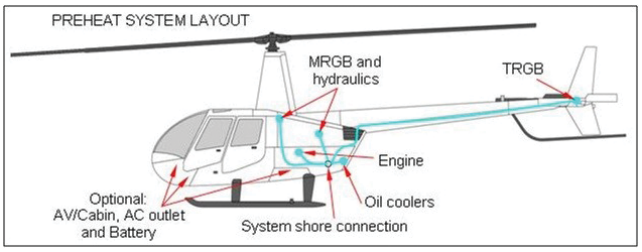


TANIS CONTINENTAL / LYCOMING PREHEAT KITS

Engine Preheat Kit for 4 / 6 / 8 Cylinder Continental and Lycoming engines. This preheat kit contains threaded heat elements located in each cylinder assembly and one pad heat element on the engine crankcase/oil sump/tank. This multi-point configuration fully preheats the engine and attached accessories. Power is routed to the elements through a dedicated wiring assembly with LED system power indication and circuit overload protection standard. The system is self-regulating through design. Heated components reach an average state of thermal equilibrium in approximately six hours. This preheat kit is compatible with all engine monitor systems as the threaded heat elements can replace either a rocker cover screw or intake bolt fasteners. Not eligible for rotorwing aircraft (helicopters)

STC / PMA	Description	Part No.	Price
FAA-STC: # SE03232CH TCCA acceptance of FAA-STC on file. EASA-STC: # 10054417	Tanis Stc Engine Preheat Kit - 4 Cylinder Continental And Lycoming - 115 Volt #se03232ch..also Tcca & Easa Approved Tsp-4cyl-2925-115	05-14825	**$820.00**
FAA-STC: # SE03232CH TCCA acceptance of FAA-STC on file. EASA-STC: # 10054417	Tanis Stc Engine Preheat Kit - 4 Cylinder Continental And Lycoming - 230 Volt #se03232ch..also Tcca & Easa Approved Tsp-4cyl-2925-230	05-14826	**$820.00**
FAA-STC: # SE03309CH TCCA acceptance of FAA-STC on file EASA-STC: # 10054433	Tanis Stc Engine Preheat Kit - 6 Cylinder Continental, Lycoming And Franklin - 115 Volt #se03309ch..also Tcca & Easa Approved Tsp6cyl-2927-115	05-14829	**$1,200.00**
FAA-STC: # SE03309CH TCCA acceptance of FAA-STC on file EASA-STC: # 10054433	Tanis Stc Engine Preheat Kit - 6 Cylinder Continental, Lycoming And Franklin - 230 Volt #se03309ch..also Tcca & Easa Approved Tsp6cyl-2927-230	05-14830	**$1,200.00**
PMA ONLY	Tanis Engine Preheat Kit - 8 Cylinder Io-720 - 115 Volt Tsp8cyl-1045-115	05-14833	**$1,425.00**
PMA ONLY	Tanis Engine Preheat Kit - 8 Cylinder Io-720 - 230 Volt Tsp8cyl-1045-230	05-14834	**$1,425.00**

TANIS ROBINSON HELI-PREHEATER KITS



Preheating is accomplished using electrical resistance heat in the form of thin pads sized and shaped to fit various parts. The pads are surface mounted with a bonding adhesive. This includes engine, accessory and propeller reduction gearboxes, attached accessories, and engine oil tank. Power is routed to the heating elements through a dedicated shore power plug, circuit protection, and wiring assembly. System is self-regulating, heated components reach an average state of thermal equilibrium in approximately six hours.

Description	Part No.	Price
Tanis Heli-preheat Kit - Robinson R44 - 115 Volt Tshr44-2778-115	05-14813	**$2,182.00**
Tanis Heli-preheat Kit - Robinson R44 - 230 Volt Tshr44-2778-230	05-14814	**$2,275.00**
Tanis Heli-preheat Kit - Robinson R66 - Rr250-c300/a1 - 115 Volt Tshr66-3078-115	05-14815	**$4,125.00**
Tanis Heli-preheat Kit - Robinson R66 - Rr250-c300/a1 - 230 Volt Tshr66-3078-230	05-14816	**$4,125.00**

TANIS HEATER FOR C162 SKYCATCHER



Tanis Aircraft Products announced today that they now have an engine preheat system specifically for the Cessna 162 Skycatcher and the LSA market. This system has been approved by Cessna as per "Modification Kit MK162-25-06B". (Reference Preheat System Part Number: TS02884-115.) The Skycatcher system is a new addition to the extensive product line already available for all Single Engine, Multi Engine and Turbine Cessna products.....

15V ..... P/N 08-07626 ..... **$720.00**
230V ..... P/N 05-14765 ..... **$720.00**

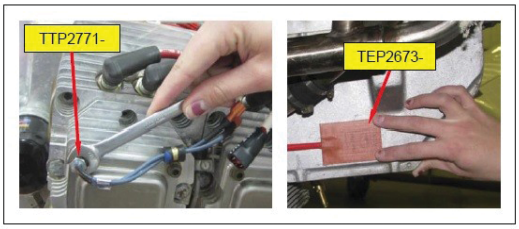


TANIS PREHEAT SYSTEM FOR ROTAX 912/914 SERIES ENGINES

Preheat system for Rotax 912/914 series engines. Kit contains heating elements for each cylinder, crankcase, and oil sump.

Standard ..... P/N 08-07395 ..... **$720.00**
Europe ..... P/N 08-07395-230 ..... **$720.00**

TANIS JABIRU PREHEAT KITS



Preheating is accomplished using electrical resistance heat in the form of thin pads sized and shaped to fit various parts. The pads are surface mounted with a bonding adhesive. This includes engine, accessory and propeller reduction gearboxes, attached accessories, and engine oil tank. Power is routed to the heating elements through a dedicated shore power plug, circuit protection, and wiring assembly. System is self-regulating, heated components reach an average state of thermal equilibrium in approximately six hours.

Description	Part No.	Price
Tanis Engine Preheat Kit -jabiru 2200 - 115 Volt Tsp4cyl-2513-115	05-14821	**$720.00**
Tanis Engine Preheat Kit -jabiru 2200 - 230 Volt Tsp4cyl-2513-230	05-14822	**$720.00**



TANIS AVIONICS / CABIN HEATER

Includes 6 foot long cable for easy use on floor of aircraft. Note: Extension cord to get to your aircraft or inlet/outlets not included. Output: 500 watts ± 10%. Required power: AC 100-240 Volt - 50/60 Hz. Dimensions: 6 x 5.75 x 2 inches (150 x 145 x 45 mm) Approximate Heater Lead length: 6 inches (150 mm) Approximate P/N 05-14755 ..... **$340.00**



TANIS 4 / 6 CYLINDER ENGINE PRESERVATION KIT

Engine Preservation Kit: recommended by engine manufacturers for storage of an engine longer than 90 days. Everything you need for long-term protection of your Lycoming & Continental engine.

4 Cylinder..... P/N 08-07085 ..... **$180.00**
6 Cylinder..... P/N 08-07086 ..... **$270.00**

TANIS BONDING SEALANT



Conforms to MIL-A-46106. Clear must be used as the coloring dies and other added materials reduce the materials thermal transfer rates. Bonding sealant - 1 ounce tube.

P/N 08-13884 ..... **$10.00**

EP

Prices Subject to Change Without Notice

TANIS PREHEAT SYSTEMS

Engine preheating is accomplished through electrical resistance heat in the form of thin pads sized and shaped to fit various parts. The pads are surface mounted with a bonding sealant/adhesive. Heated items include, engine accessory/reduction gearboxes, fluids, batteries and attached accessories. Power is routed to the heat elements through a dedicated wiring assembly with power indication and circuit overload protection. System is self-regulating through design. Heated components reach an average state of thermal equilibrium in approximately six hours.

Description	Part No.	Price
Cessna 208B - PT6A-140A - 115 Volt - When installed will supply 555 watts with a 4.8 amp draw at 115 volts.	05-14769	**$2,800.00**
Cessna 208B - PT6A-140A - 230 Volt - When installed will supply 555 watts with a 2.4 amp draw at 230 volts.	05-14770	**$2,800.00**
Twin Otter DHC-6 400 PT6A-34 - 115 Volt	05-14771	**$6,210.00**
Twin Otter DHC-6 400 PT6A-34 - 230 Volt	05-14772	**$6,210.00**
Gippsaero Airvan GA8 Series - W/battery & Avionics/cabin Heat - 115 Volt TSFGA8-3120-115	05-14773	**$3,375.00**
Gippsaero Airvan GA8 Series -W/battery & Avionics/cabin Heat - 230 Volt TSFGA8-3120-230	05-14774	**$3,375.00**
Quest Kodiak 100 - W/battery & Avionics/cabin Heat - 115 Volt TSFKODIAK-3123-115	05-14775	**$4,450.00**
Quest Kodiak 100 - W/battery & Avionics/cabin Heat -230 Volt TSFKODIAK-3123-230	05-14776	**$4,450.00**
Pilatus PC-12, PC-12/45, PC-12/47, Serial number (S/N): 101 thru 999 Engine: PT6A-67B. When installed will supply 703 watts with a 6.1 amp draw at 115 volts	05-14777	**$5,200.00**
Pilatus PC-12, PC-12/45, PC-12/47, Serial number (S/N): 101 thru 999 Engine: PT6A-67B. When installed will supply 703 watts with a 3.1 amp draw at 230 volts	05-14778	**$5,200.00**
Pilatus PC-12/47E, Serial number (S/N): 1001 - UP Engine: PT6A-67P. When installed will supply 703 watts with a 6.1 amp draw at 115 volts	05-14779	**$5,200.00**
Pilatus PC-12/47E, Serial number (S/N): 1001 - UP Engine: PT6A-67P. When installed will supply 703 watts with a 3.1 amp draw at 230 volts	05-14780	**$5,200.00**
P&W - R1340 - 115 Volt TSP9CYL-2904-115	05-14835	**$3,025.00**
P&W - R1340 - 230 Volt TSP9CYL-2904-230	05-14836	**$3,025.00**
Pratt & Whitney DHC-8 (Q400). Supplies 2838 watts with a 24.6 amp draw at 115 volts. Each engine is supplied with 1315 watts with a 11.4 amp draw at 115 volts. The 3 batteries are supplied with 208 watts with a 1.8 amp draw at 115 volts.	05-14781	**$8,500.00**
Pratt & Whitney DHC-8 (Q400). Supplies 2838 watts with a 12.3 amp draw at 230 volts. Each engine is supplied with 1315 watts with a 5.7 amp draw at 230 volts. The 3 batteries are supplied with 208 watts with a 0.9 amp draw at 230 volts.	05-14782	**$8,500.00**
Pratt & Whitney PT6A Small And Medium Engines (Short PRGB) - 115 Volt	05-14841	**$1,730.00**
Pratt & Whitney PT6A Small And Medium Engines (Short PRGB) - 230 Volt	05-14842	**$1,800.00**
Pratt & Whitney PT6A Large Engines (Long PRGB) - 115 Volt	05-14843	**$2,100.00**
Pratt & Whitney PT6A Large Engines (Long PRGB) - 230 Volt	05-14844	**$2,100.00**
Pratt & Whitney 118, 120, 121, 123 - 115 Volt	05-14845	**$3,300.00**
Pratt & Whitney 118, 120, 121, 123 - 230 Volt	05-14846	**$3,300.00**
Pratt & Whitney 124, 125, 126, 127 - 115 Volt	05-14847	**$3,500.00**
Pratt & Whitney 124, 125, 126, 127 - 230 Volt	05-14848	**$3,500.00**
Pratt And Whitney PW545A (Cessna Citation Excel) - 115 Volt	05-14849	**$1,695.00**
Pratt And Whitney PW545A (Cessna Citation Excel) - 230 Volt	05-14850	**$1,695.00**
Pratt & Whitney PWJT15D Series Turbofan Engines - 115 Volt	05-14851	**$1,695.00**
Pratt & Whitney PWJT15D Series Turbofan Engines - 230 Volt	05-14852	**$1,695.00**
Garrett TPE 331u & TPE 331 Series - 115 Volt	05-14839	**$1,695.00**
Garrett TPE 331 Series - 230 Volt	05-14840	**$1,695.00**
AgustaWestland A109C, A109E, A109S, AW109SP WITH PW206C/PW207C - 115 VOLT TSHAW109-2219-115	05-14787	**$11,000.00**
AgustaWestland A109C, A109E, A109S, AW109SP WITH PW206C/PW207C - 230 VOLT TSHAW109-2219-230	05-14788	**$11,000.00**
Rolls Royce RR250 Series Turboprop - 115 Volt	05-14853	**$1,695.00**

Description	Part No.	Price
Rolls Royce RR250 Series Turboprop - 230 Volt	05-14854	**$1,695.00**
Airbus TSHAS350-318 - RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14783	**$4,585.00**
Airbus TSHAS350-3184-230 - RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14784	**$4,585.00**
Airbus TSHAS350-3185-115	05-14785	**$4,585.00**
Airbus TSHAS350-3185-230	05-14786	**$4,585.00**
Airbus TSHEC130-3186-115 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14803	**$4,585.00**
Airbus TSHEC130-3186-230 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14804	**$4,585.00**
Airbus (Eurocopter) Ec 135 P1 & P2 With PW206B - 115 Volt TSHEC135-2230-115 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14805	**$5,875.00**
Airbus (Eurocopter) Ec 135 P1 & P2 With PW206B - 230 Volt TSHEC135-2230-230 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14806	**$5,875.00**
Airbus (Eurocopter) EC135T1/T2 W/arrius 2b/2b1/2b2 - 115 Volt TSHEC135-2765-115 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14807	**$5,875.00**
Airbus (Eurocopter) EC135T1/T2 W/ARRIUS 2B/2B1/2B2 - 230 Volt TSHEC135-2765-230 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14808	**$5,875.00**
Austro AE300 - 115 Volt #SE03232CH..ALSO TCCA & EASA Approved TSP4CYL-3001-115	05-14827	**$1,400.00**
Austro AE300 - 230 Volt #SE03232CH..ALSO TCCA & EASA Approved TSP4CYL-3001-230	05-14828	**$1,400.00**
Jacobs (L-4) R-755 - 115 Volt TSP-7CYL-3002-115	05-14831	**$2,340.00**
Jacobs (L-4) R-755 - 230 Volt TSP-7CYL-3002-230	05-14832	**$2,340.00**
Bell 407 With RR250-C47B - 115 Volt #SR03474CH TSHB407-3083-115	05-14795	**$10,380.00**
Bell 407 With RR250-C47B - 230 Volt #SR03474CH TSHB407-3083-230	05-14796	**$10,380.00**
Bell 212, 412, 412cf, 412EP - 115 Volt #SR04132CH TSHB412-3132-115	05-14799	**$15,600.00**
Bell 212, 412, 412CF, 412EP - 230 Volt #SR04132CH TSHB412-3132-230	05-14800	**$15,600.00**
AgustaWestland AW119 (Koala) with PT6B-37A. 802 watts with a 7.0 amp draw at 115 volts	05-14789	**$9,780.00**
AgustaWestland AW119 (Koala) with PT6B-37A. 802 watts with a 3.5 amp draw at 230 volts	05-14790	**$9,780.00**
Enstrom Helicopter F-28/280 W/ Hio-360 - Standard (CHT Not Wells Required) - 115 Volt TSHEN280-2780-115	05-14809	**$1,250.00**
Enstrom Helicopter F-28/280 W/ Hio-360 - Standard (CHT Not Wells Required) - 230 Volt TSHEN280-2780-230	05-14810	**$1,250.00**
Enstrom 480 - 115 Volt TSHEN480-2504-115	05-14811	**$2,500.00**
Enstrom 480 - 230 Volt TSHEN480-2504-230	05-14812	**$2,500.00**
Schweizer/Sikorsky 269/300 - Standard (CHT Wells Not Required) - 115 Volt TSHS269-2508-771-dt-115	05-14817	**$1,250.00**
Schweizer/Sikorsky 269/300 - Standard (CHT Wells Not Required) - 230 Volt TSHS269-2508-771-dt-230	05-14818	**$1,250.00**
Airbus (Eurocopter) AS350D with Lycoming LTS101 - When installed will supply 587 watts with a 5.1 amp draw at 115 volts.	05-14729	**$4,585.00**
Airbus (Eurocopter) AS350D with Lycoming LTS101 - When installed will supply 587 watts with a 2.6 amp draw at 230 volts.	05-14730	**$4,585.00**
Airbus (Eurocopter) Twin Engine - When installed will supply 1060 watts with a 9.2 amp draw at 115 volts.	05-14727	**$4,875.00**
Airbus (Eurocopter) Twin Engine - When installed will supply 1060 watts with a 4.6 amp draw at 230 volts.	05-14728	**$4,875.00**
Oil Tank Heater Kit - 115 Volt TSP1051-115	05-14819	**$380.00**
Oil Tank Heater Kit - 230 Volt TSP1051-230	05-14820	**$380.00**

EP

TANIS PREHEAT ACCESSORIES

TANIS PAD HEAT ELEMENTS

Dims	Voltage/ Wattage	Description	Part No.	Price
1.75" X 7"	115/120	Shape: Rectangular Connector: Pin	05-14748	$145.00
1.75" X 7"	230/120	Shape: Rectangular Connector: Pin	05-14749	$145.00
2" X 3"	115/40	Shape: Rectangular Connector: Pin	05-14750	$145.00
2" X 3"	230/40	Shape: Rectangular Connector: Pin	05-14751	$145.00
2" X 4.5"	115/80	Shape: Rectangular Connector: Pin Usage: 6 cylinder piston engine sump and case	05-14752	$145.00
2" X 4.5"	230/80	Shape: Rectangular Connector: Pin Usage: 6 cylinder piston engine sump and case	05-14753	$145.00

TANIS THREADED HEAT ELEMENTS

Description	Part No.	Price
Threaded Heat Element 3/8-24 CHT (TAS100) with socket connector 50 WATT - 115 VOLT	05-14855	$65.00
Threaded Heat Element 3/8-24 CHT (TAS100) with socket connector 50 WATT - 230 VOLT	05-14856	$65.00
Threaded Heat Element 3/8-24 CHT (TAS100) W/PIN CONNECTOR 50 WATT - 115 VOLT	05-14859	$65.00
Threaded Heat Element 3/8-24 CHT (TAS100) W/PIN CONNECTOR 50 WATT - 230 VOLT	05-14860	$65.00
Threaded Heat Element 3/8-24 CHT DUAL PROBE - J TYPE GROUNDED - RED/WHT OR BLK/YEL (TAS100T-J) W/PIN CONNECTOR	05-14861	$170.00
Threaded Heat Element 3/8-24 CHT DUAL PROBE - J TYPE UNGROUNDED - RED/WHT OR BLK/YEL (TAS100T-JUG) W/PIN CONNECTOR	05-14862	$170.00
Threaded Heat Element 3/8-24 CHT DUAL PROBE - K TYPE GROUNDED - RED/YEL (TAS100T-K) W/PIN CONNECTOR	05-14863	$170.00
Threaded Heat Element 3/8-24 CHT DUAL PROBE - K TYPE UNGROUNDED - RED/YEL (TAS100T-KUG) W/PIN CONNECTOR	05-14864	$170.00
Threaded Heat Element 1.0-20 LYC. SUMP SCREEN BOLT (TAS101) W/PIN CONNECTOR - 50 WATT - 115 VOLT	05-14865	$145.00
Threaded Heat Element 1.0-20 LYC. SUMP SCREEN BOLT (TAS101) W/PIN CONNECTOR - 50 WATT - 230 VOLT	05-14866	$145.00
Threaded Heat Element 1/4-20X1.00 50 WATT - 115 VOLT	05-14857	$140.00
Threaded Heat Element 1/4-20 50 WATT - 230 VOLT	05-14858	$140.00
Threaded Heat Element 1/4-20 W/PIN CONNECTOR 50 WATT - 115 VOLT	05-14868	$140.00
Threaded Heat Element 1/4-20 W/PIN CONNECTOR 50 WATT - 230 VOLT	05-14870	$140.00

TANIS BATTERY HEAT ELEMENTS

Dims	Voltage/ Wattage	Connector	Part No.	Price
31.5" X 4"	115/60	with socket connector	05-14731	$285.00
31.5" X 4"	230/60	with socket connector	05-14732	$285.00
31.5" X 3.5"	115/60	with socket connector	05-14733	$285.00
31.5" X 3.5"	230/60	with socket connector	05-14734	$285.00
38.5" X 4"	115/74	with socket connector	05-14735	$360.00
38.5" X 4"	230/74	with socket connector	05-14736	$360.00
31.5" X 4"	115/60	with pin connector	05-14737	$285.00
31.5" X 4"	230/60	with pin connector	05-14738	$285.00
31.5" X 3.5"	115/60	with pin connector	05-14739	$285.00
31.5" X 3.5"	230/60	with pin connector	05-14740	$285.00
38.5" X 4"	115/74	with pin connector	05-14741	$360.00
18" X 2.37"	115/20	with pin connector	05-14742	$250.00

TANIS LED INDICATOR LIGHTS

Description	Part No.	Price
LED Indicator Light 6 inch lead, Pin connector - 115V	05-14756	$60.00
LED Indicator Light 6 inch lead, Pin connector - 230V	05-14757	$60.00
LED Indicator Light 6 inch lead, socket connector - 115V	05-14758	$60.00
LED Indicator Light 6 inch lead, socket connector - 230V	05-14759	$60.00

TANIS PREHEAT PARTS

Description	Part No.	Price
Connector kit comes with all the items necessary to install one 2 contact socket connector.	05-14745	$5.99
Connector kit comes with all the items necessary to install one 3 contact socket connector.	05-14746	$7.60
Solid Pin Contact - For single 18 or 20 gauge wire connection 0460-202-16141	05-14701	$1.08
Solid Pin Contact - Nickel w/ green stripe - For single 18 gauge wire connection or two 20 gauge wires 0460-215-16141	05-14702	$1.08
Solid Socket Contact - For single 18 or 20 gauge wire connection 0462-201-16141	05-14703	$1.92
Solid Socket Contact - Nickel w/ green stripe. For single 18 gauge wire connection or two 20 gauge wires 0462-209-16141	05-14704	$1.92
Solvent Wipe CB911	05-14711	$6.00
4 Way Indent Crimp Tool for 16-22 AWG Wire TU02793	05-14876	$45.00
Aluminum Spacer - 1/4" I.D. TU02846	05-14877	$0.25
Aluminum Spacer - 5/16" I.D. TU02846-5	05-14878	$0.45
Anti-Seize 2 Gram Pillow Pack	05-14881	$2.40
Flush Mount Plug - Metal - 115V	05-14760	$56.00
Flush Mount Plug - Synthetic - 115V	05-14761	$56.00
Flush Mount Plug - Tethered Cap	05-14762	$56.00
Fuse, 12AMP TU02848	05-14880	$1.62
Harness Connector (Blade Contact) CNA	05-14713	$1.90
Battery Heat Installation Kit..- Battery Heat Element Sold Separately TSB2800	05-14766	$450.00
Bonding Sealant 1oz. AC-1230	08-13884	$10.00
Slotted Socket - 11mm Deep 6 Sided 1/4 Drive TU03032	05-14884	$16.00
Bracket, Shore Plug (Continental Sandcast, AE300) TU03016	05-14883	$37.00
Cable Tie - 8" Long, 40 lb, Black, Heat Stabilized	05-14879	$0.08
Low Profile Cable Mount, Click Bond adhesive.	05-14874	$12.00
18 gauge, 2 conductor - Black/Grey (BLK) and White (WHT) paired nickel coated copper wires with Red jacket.	05-14706	$5.73
Circular Plug Bracket (Lycoming)	05-14871	$37.00
Click Bond Installation Kit	05-14712	$15.00
Contact Removal Tool	05-14715	$30.00
Element Connector "Spade style" (receptacle contact)	05-14714	$1.80
Washer Kit for LED Light TU03065	05-14885	$14.50
Washer Thermocouple, J Type Grounded Kit.	05-14724	$65.00
Washer Thermocouple, K Type Grounded Kit	05-14725	$65.00
Panel Mount Fuse Holder for 1/4" x 1 1/4" Fuses.	05-14723	$5.55
Install one 2 contact pin connector.	05-14743	$5.80
Install one 3 contact pin connector.	05-14744	$7.60
Placard for Tanis 115 Volt Systems	05-14872	$3.00
Placard for Tanis 230 Volt Systems	05-14873	$4.50
Plug Body, 2 Socket DT06-2S-E004	05-14720	$2.16
Power Door Kit (2.4) TD02840	05-14747	$156.00
Power Plug, Free Hanging 115V TP02770-115	05-14763	$25.00
Receptacle Body, 2 Pin DT04-2P-E004	05-14717	$2.16
Sealing Cap for 2 Socket Connector DT04-2P-E004	05-14720	$2.16
Sealing Cap for 2 Pin Connector DT06-2S-C017	05-14716	$5.94
Sleeving - 0.249"/0.229", Non-Fray HO #3 Red - /FT 3120003-Red	05-14707	$2.40
Sleeving - 0.198"/0.182", Non-Fray HO #5 Red - /FT 3120005-Red	05-14708	$2.42
Sleeving - 0.178"/0.162", Non-Fray HO #6 Red - /FT 3120006-Red	05-14709	$2.50
Slotted Socket - 1/2" Deep 6 Sided 1/4 Drive TU02905-05	05-14882	$16.00
Triangular Plug Body, 3 Socket DT06-3S-E004	05-14722	$3.51
Triangular Receptacle Body, 3 Pin DT04-3P-E004	05-14718	$2.50
Triangular Sealing Plug For 3 Pin Connector DT06-3S-C017	05-14721	$10.00

EP

C & D AIRCRAFT HEATERS



Designed for upgrading obsolete aircraft heating systems or first time installation in your aircraft, C&D Installation kits include a complete group of materials necessary to replace the obsolete system or to install for the first time. Commonly used C&D heater components are shown below. For replacement heaters, request a quote by phone or email and provide aircraft make, model, and serial number.

HEATER COMPONENTS

C & D P/N	Description	Part No.	Price
CD12065-1	Cabin Heater	05-12002	$7,492.00
CD12064-1	Cabin Heater	05-12003	$6,549.00
CD14072-1	Cabin Heater	05-12004	$6,562.00
CD14073-1	Cabin Heater	05-12005	$6,495.00
CD14075-1	Cabin Heater	05-12006	$6,485.00
CD14077-1	Cabin Heater	05-12007	$7,432.00
CD14066-1	Cabin Heater	05-12009	$7,491.00
CD14078-1	Cabin Heater	05-12010	$8,473.00
CD21253	Electronic Thermostat	08-14605	$587.00
CD21255	Rotary Thermostat	08-14606	$95.99
CD21402	24V Motor	08-14607	$1,586.00 +$50 Core
CD21401	12V Motor	08-14608	$793.00 +$50 Core
CD22050	Spark Plug	08-14609	$159.85
CD21381	24V Ignition Unit	08-14610	$799.00 +$50 Core
CD20800	12VDC Fuel Regulator	08-04612	$56.75 +$100 Core
CD20801	24VDC Fuel Regulator	08-04613	$55.75 +$100 Core

KENNON INSULATED ENGINE COVERS



Kennon's insulated engine covers are custom made for the specific year, make and model of aircraft for a a snug fit. Kennon makes its own engine blanket material using a bonded fiberfill that doesn't need to be quilted to stay in place, which can destroy the loft and put thousands of needle holes in the cover where heat can escape. The outer shell is made of red, blue, or black polyester rather than nylon, increasing the useful life of the cover and the inner layer is fluorescent orange which can be used as a signaling device in the event of an emergency. Flaps for oil doors to check or fill the oil and cowling inlet flaps for preheating purposes can be added for $25.00 each. Insulated prop and spinner covers are also available.

2-Seat A/C (sml) . 07-00983..**$499.95** 4-6 seat A/C (reg.).. 07-00984 .**$499.95**
Twin Eng. A/C ... 07-00985..**$820.00** Spinner Cover . 07-00987 .**$148.75**
Prop Cover ..... 07-00988....**$64.95**

NEAT HEATER



A neat and compact, powerful heater system for your Light Sport Aircraft! Never fly cold again. Installs quickly and easily in any aircraft with a liquid cooled power plant. Specifically Designed For the Rotax 912 and 582.

Features: • Powerful 300 CFM Fan • Draws Only 3.4 amps • Simple on/off controls • Completely Shut Coolant Off In Summer • Tested, Proven Design to 250 Deg at 25 psi. • Infinite Mounting Possibilities • Safe and Reliable • Easy to Install/Service • One Year Parts Replacement Warranty

Specifications: • Dimensions: 7.5" x 6.75" x 3.75" • Weighs only 6 lbs pounds

Neat Heater.....P/N 08-07376 .....**$456.00**
Neat Heater Install Kit .....P/N 08-07377 .....**$242.95**

SAFE-HEET ENGINE HEATERS



SAFE-HEET is a thin flexible pad that is bonded to the engine oil sump. The kit is complete with materials and step-by-step instructions. A log book entry is all that is required for permanent installation; No S.T.C. or 337 form required. There are no airframe modifications required. SAFE-HEET can be used with a timer or the 707 temperature controller, and uses standard 110 A.C. voltage. We recommend using the SAFE-HEET 707 Temperature Controller to cure the adhesive for faster installation.

MODEL 700 Dimension: 4" x 4"..... P/N 05-04420.....**$186.95**
MODEL 720 Dimension: 4" x 7"..... P/N 05-04421.....**$186.95**



VARIABLE TEMPERATURE CONTROLLER - The SAFE-HEET Variable Temperature Controller can be used with any 700 Series SAFE-HEET Engine Pre-heater as an installation aid, or for providing temperature control for continuous pre-heat without promoting internal engine corrosion. ..... P/N 05-04423.....**$77.75**

For application information please call or visit our website at www.aircraftspruce.com

NORTHERN COMPANION PRE-HEATER



Compact: NC5A = 6" x 17.25", NC5B = 6" x 15". Lightweight: 6lbs, 6oz average weight. Multi Fuel: *100LL aviation gas - Leaded or unleaded auto gas - White Gas - Kerosene . Diesel - JP4 and JP8 jet fuel. Approximately 20,000 BTU: Type of fuel and pressure in bottle affect output. Shockcorded legs: Slide the legs away from the clips and they seat themselves in the base. Stainless Steel Burner Chamber. No Battery or Other Electrical Power Required. Fast Setup and Takedown - Even with mittens on!. No Tools Required

6" X 17.25"..... P/N 05-04767.....**$954.00**
6" X 15"..... P/N 05-04768.....**$856.00**

REIFF HOTSTRIP OIL SUMP HEATERS



HotStrip is thin and lightweight like a silicone pad, but made of aluminum for maximum durability. Works either as a stand-alone sump heater or integrated with the Hot Band Cylinder Heating Systems in the Standard, Turbo, and Turbo XP Systems. Bonds to the bottom or side of oil sump and electrically heats the oil. Features dual heating elements for redundancy. System includes two 100W elements thermostat, and power cord. **FAA Approved for: Lycoming** 0-235; All 290, 320, 360 series; All 435, 480, 540, 541 series; **Continental** IO-346; All 300, 600 series; E-165, E-185, E-225, All 470, 520, 550 series. **HotStrip Oil Sump Heater System:** All engines above (Except Continental A-65, A-75, A-80, C-85, C-90, O-200, IO-240. These engines with oval oil sump use HotPad flexible silicone heating elements) Franklin 165, 220. P/N 08-00688 .....**$199.00**

REIFF PREHEATER FOR ROTAX 912/914



The Reiff preheat system for Rotax 912 and Rotax 914 aircraft engines is an engine-mounted electric preheat system designed for easier cold-weather starts. The preheat system consists of a 100-watt metal "hot strip" element, which is epoxied to the bottom of the crankcase, and a 50-watt band heater that is clamped to the oil tank.

The Reiff is FAA approved, and includes a thermostat to keep the oil from exceeding 150° F.

Description	Part No.	Price
150 Watts 110V	08-06219	$249.95
150 Watts 220V	08-06219-1	$251.95
250 Watts 110V	08-07620	$385.00
250 Watts 220V	08-07620-1	$394.00
350 Watts 110V	08-07621	$550.00
350 Watts 220V	08-07621-1	$533.00

THE SWITCHBOX REMOTE CONTROL APP



The easiest, cheapest and safest way to remote control any electrical device. For Pilots: No more driving to the airport hours before a flight. Turn on your Engine Heater from your cellphone, and simplify your cold flying routine! TIP: Activate a 2nd device like a Cabin Heater for your sensitive avionics, or a Coffee Maker before you arrive!

For General Use: Your new 'Smart Home' with the easy automation from SwitchBox. Remote control your heating, lighting and air conditioning, from anywhere in the world. TIP: Turn On the A/C before you get home, or check to see if you left the lights On and turn them Off. Save Money!

SwitchBox App for iPhone/iPad/Android - Free. Visit our website to download your copy.

The Switchbox 2G.....P/N 08-07711 .....**$299.00**
The Switchbox 4G.....P/N 08-15733 .....**$352.00**
The Switchbox 4G with LED .....P/N 08-15734 .....**$364.99**
Cell Service Sim Card.....P/N 08-13550 .....**$19.95**
Wired Antenna.....P/N 08-13551 .....**$14.95**

EP

ENGINE PREHEATERS – CABIN HEATERS

BRUSHLESS CABIN HEATERS



These heaters are available from 12-48 volts, and different wattages as well. The Stealth heater is simple to install and can be operational in minutes. Measuring only 6" long and 5" tall, our Stealth heater will fit in virtually any small space. RuCar elements allow the heaters to be mounted vertically OR horizontally which allows even a tighter mounting space. Specifications: Heater Dimensions: 6"x 5" X 4". Brushless 50,000 Hour Ball Bearing Fan. 10,000 Hour DC Thermal ©RuCar Vacuum Sealed Elements. Case Construction: Riveted T5052 Aircraft Aluminum. Wired Entirely with GXL Wire. Thermally Protected. HIGH and LOW HEAT Settings. Comes complete with mounting hardware, mounting bracket, fuse, fuse holder, electrical connector ends, and detailed instruction. TWO YEAR Parts AND Labor Warranty.

Model	Volts/Watts	BTUS	Part No.	Price
SA12-3000	12V / 360W	6012	05-02121	**$208.95**
SA12-4000	12V / 480W	8016	05-01966	**$218.95**
SA12-5000	12V / 600W	10,020	05-03869	**$228.95**
SA24-2500	24V / 600W	10,020	05-04855	**$199.85**
SA24-3500	24V / 840W	14,028	05-03870	**$219.95**
SA24-4500	24V / 1080W	18,036	05-02123	**$228.95**

PREHEATER REMOTE CONTROL



REGAL PRO provides Reliable Remote Control of TANIS, REIFF and other Aircraft Engine Preheaters. The PRO is a one-stop product that includes U.S. based customer/product support and Cell service. PRO has two independently-controlled 115 VAC outlets with a combined capacity of 1700 Watts. The unit is fully interactive, interrogated by a free iPhone App or by SMS messages from any text capable cell phone. Clock Operations allow users to program the outlets to turn on at future times (within 24 hours of programming) and remain on for periods selected by the user. Both outlets can be turned OFF and ON individually by iPhone App or manual text commands. Both outlets can be turned ON for Specific Periods by App or text message, turning OFF when the period expires. A semi-permanent Resident Program can be pre-set to activate the outlets for user selected ON periods by use of iPhone App or text messages. The Resident Program is activated by a No-Cost phone call. Range of Operation is Nationwide.

P/N 11-13671 ..... **$375.00**

RANS AIRCRAFT CABIN HEATER



The RANS aircraft heater is the answer to the winter flying "chills". It is very lightweight, inexpensive and installs easily in just two hours. This heater utilizes ram air & the heat off the engine muffler. Operation is simple. Slipstream air is forced through the heater inlet, passing over the muffler, picking up the heat and delivering it to the cabin or pod via an Aeroduct hose. Contains no moving parts. Fits Rotax mufflers and adaptable to other engines. P/N 05-17400 ..... **$239.00**

HORNET AIRCRAFT HEATERS



Because the Hornet Heaters are hand built, the user can select the thermostat temperatures. The two-stage operation also reduces amp inrush by sequencing the heaters. Perhaps the most important feature of the Twin heating system is the peace of mind that comes from knowing that the possibility of both heaters failing simultaneously is almost nonexistent and one heating circuit will provide enough heat to prevent engine damage. The unit is equipped with a switch that provides the user with a means to test the operation of each heating circuit independently. Other important features include a non-conductive fire rated fiberglass housing, mil-spec wiring, and an industry leading 3-year warranty. Made in the United States.

Description	Part No.	Price
Twin Hornet - 22 Cigarette Cord / Inflight Heater 2 - Fan; User controlled on/off toggle; 2" x 2.5" x 9.5"; 12v DC 200 watts	08-12218	**$199.00**
Twin Hornet - 22 Cigarette Cord / Inflight Heater 2 - Fan; User controlled on/off toggle 2" x 2.5" x 9.5"; 24v DC 250 watts	08-12220	**$199.75**
Quad Hornet 40ft Cord / Engine Preheater 4 - Fans; 70° F; 2.5" x 4" x 9"; 120v AC; 500 watts	08-12221	**$429.00**
Hornet 45 Engine or Cockpit Preheater 1 - Fan; 70° F; 3.625" x 5" x 5.25"; 120v AC; 700 watts	08-12224	**$289.00**

NEW HARTZELL JANITROL CABIN HEATERS



Hartzell Engine Technologies' I-Series aircraft cabin heater features innovative combustion tube technology fabricated from advanced Inconel® material. Adapted from many years of proven military applications, this material provides substantially improved protection in extreme temperature applications. See "Application Guide" before ordering.

Heater	Model	Part Number	Price
--	I-1500	07-18437	**$5,961.00**
--	I-1500	07-18439	**$6,412.00**
--	I-2500	07-18415	**$6,413.00**
--	I-2500	07-18425	**$6,412.00**
--	I-2500	07-18440	**$5,971.00**
B3040	I-3500	07-18408	**$6,411.00**
B3040	I-3500	07-18411	**$7,372.00**
B3040	I-3500	07-18416	**$6,413.00**
B3040	I-3500	07-18418	**$6,413.00**
B3040	I-3500	07-18419	**$5,961.00**
B3040	I-3500	07-18420	**$5,961.00**
B3040	I-3500	07-18421	**$5,961.00**
B3040	I-3500	07-18422	**$6,412.00**
B3040	I-3500	07-18423	**$5,961.00**
B3040	I-3500	07-18427	**$6,412.00**
B3040	I-3500	07-18428	**$6,412.00**
B3040	I-3500	07-18429	**$6,412.00**
B3040	I-3500	07-18430	**$6,412.00**
B3040	I-3500	07-18434	**$6,412.00**
B3040	I-3500	07-18435	**$6,412.00**
B3040	I-3500	07-18438	**$6,413.00**
B3040	I-3500	07-18441	**$6,412.00**
B3040	I-3500	07-18442	**$6,412.00**
B3040	I-3500	07-18443	**$6,412.00**
B3040	I-3500	07-18444	**$6,412.00**
B3040	I-3500	07-18445	**$6,413.00**
--	I-4500	07-18409	**$6,412.00**
--	I-4500	07-18410	**$6,413.00**
--	I-4500	07-18412	**$6,412.00**
--	I-4500	07-18413	**$6,412.00**
--	I-4500	07-18414	**$6,413.00**
--	I-4500	07-18417	**$6,412.00**
--	I-4500	07-18424	**$6,412.00**
--	I-4500	07-18426	**$5,870.00**
--	I-4500	07-18431	**$6,412.00**
--	I-4500	07-18432	**$6,412.00**
--	I-4500	07-18433	**$6,412.00**
--	I-4500	07-18436	**$6,412.00**

REBUILT HARTZELL JANITROL CABIN HEATERS

Heater	Model	Part No.	Price
--	I-2500	07-18461	**$4,751.00**
--	I-2500	07-18471	**$4,141.00**
B3040	I-3500	07-18446	**$4,660.00**
B3040	I-3500	07-18449	**$4,751.00**
B3040	I-3500	07-18453	**$4,142.00**
B3040	I-3500	07-18455	**$4,141.00**
B3040	I-3500	07-18456	**$4,141.00**
B3040	I-3500	07-18457	**$4,142.00**
B3040	I-3500	07-18458	**$4,751.00**
B3040	I-3500	07-18459	**$4,142.00**
B3040	I-3500	07-18462	**$4,751.00**
B3040	I-3500	07-18463	**$4,141.00**
B3040	I-3500	07-18464	**$4,234.00**
B3040	I-3500	07-18468	**$4,142.00**
B3040	I-3500	07-18469	**$4,142.00**
B3040	I-3500	07-18472	**$4,751.00**
B3040	I-3500	07-18473	**$4,233.00**
B3040	I-3500	07-18474	**$4,751.00**
B3040	I-3500	07-18475	**$4,234.00**

HARTZELL UPGRADE JANITROL CABIN HEATERS

Heater	Model	Part No.	Price
B3040	B3500	07-18497	**$2,722.00**
B3040	B3500	07-18523	**$2,226.00**
B3040	B3500	07-18608	**$2,094.00**
B3040	B3500	07-18609	**$2,137.00**
--	B4500	07-18502	**$2,554.00**
--	B4500	07-18574	**$2,002.00**

EP

CHAMPION SPIN-ON OIL FILTERS



CH48110-1 CH48111-1

Aircraft	Aircraft Model	Filter P/N
Beech	E33, F33, A35 thru S35	CH48109-1
Cessna	120, 140, 170, 172, 180, 182, 185,205,210, 310 C thru Q, 310R	CH48110-1
Mooney	M20, M22	CH48110-1
Piper	PA-18, PA-22, PA-23, PA-24, PA-25, PA-28, PA-30, PA-31, PA-34, PA-60	CH48110-1
LSA	Lycoming 233	CH48114-1

Filter P/N	Price	12 Pack	Price
CH48103-1	$25.55	08-00905-12	$297.95
CH48104-1	$25.50	08-00906-12	$297.95
CH48108-1	$25.50	08-00907-12	$296.95
CH48109-1	$25.50	08-00908-12	$298.95
Filter P/N	**Price**	**12 Pack**	**Price**
CH48110-1	$25.50	08-00909-12	$297.95
CH48111-1	$25.50	08-00910-12	$296.95
CH48114-1	$34.90	08-07538-12	$418.80
CFO-100-1	$25.75	----	---

K&N OIL FILTERS



K&N powersports oil filters are 'TUV' product endorsed and 'TUV' factory production monitored. This means every K&N oil filter is equal to or will exceed all OEM specifications. Our filters contain a modern synthetic filter media, designed for ultimate flow with less pressure drop, yet engineered for outstanding filtration to meet or exceed all OEM specifications. All K&N powersports 'spin-on' oil filters feature a heavy-duty metal can with a 17mm nut affixed onto the end that allows for easy installation and removal. The 17mm nut is crossed-drilled so racers can safety wire the filter to their bike.

K&N OIL FILTER KN-141..... P/N 08-06231 ..... **$9.75**
K&N OIL FILTER KN-142..... P/N 08-00691 ..... **$9.75**

TEMPEST SPIN-EZOIL FILTERS



Tempest Oil Filters feature a MAGNETIC secondary filtration system that attracts steel particles too small to be caught in the filter media.* Base Plate Thickness: .187" * Burst Pressure: 700 psi * Media Size: 311 sq. in. * AA48108 & AA48109: *Bypass Relief Valve TCM specs: 12-14 psi *Patented PC Housing.

Filter No.	Our Part No.	Price
AA48103-2	08-01266	$20.50
AA48104	08-01267	$20.50
AA48162 Cessna 162 LSA	08-48162	$19.75

Filter No.	Our Part No.	Price
AA48108-2	08-01268	$20.50
AA48109	08-01269	$20.50
AA48110-2	08-01270	$20.50
AA48111	08-01271	$20.50

SPIN-ON OIL FILTER - SIX PACK

Part No.	Tempest	Price	Part No.	Tempest	Price
08-04969	AA48103-2-6PK	$119.50	08-04972	AA48109-6PK	$119.50
08-04970	AA48104-6PK	$119.95	08-04973	AA48110-2-6PK	$118.95
08-04971	AA48108--26PK	$118.95	08-04974	AA48111-6PK	$119.95

TEMPEST ROTAX OIL FILTERS



The new filter has all the features which have made the Tempest oil filter so popular, including the magnetic secondary filtration system, and higher burst pressure. Full Can Thickness:.019". Base Plate Thickness:.100". Burst Pressure:275-325. Media Size:118 sq. in. P/N 08-07226 ..... **$19.95**

FOR TEMPEST OIL FILTER TOOLS SEE PAGE 800.

AEROMAG



Note: Sold as a single unit, however to gain maximum results purchase as a set of two (one on each side). Within the tight clearances of today's aircraft engines, normal wear generates tiny steel particles that are carried away in your oil. These particles are so small they will pass right through an normal oil filter. When the oil circulates back into the engine, these same particles are carried into every lubricated space where they can cause three body abrasive wear. AeroMag® extracts normal, wear-causing steel particles from your oil with its powerful, focused, magnetic field technology. These particles are permanently trapped on the inside wall of the filter and are thrown away when the filter is changed. Slide the AeroMag® off the old filter, snap it onto a new one and it goes right back to work protecting your engine.

AM360 3.6" (Lyc & Cont with at least a 3.625 in. diameter oil filter) P/N 08-01088..... **$107.75**
AM300 2.9" (Tall Rotax) ..... P/N 08-01235..... **$109.75**
AM150 2.5" (Short Rotax) ..... P/N 08-07058..... **$83.95**

AIRWOLF REMOTE MOUNTED OIL FILTER KITS



The remote mount oil filter kit by Airwolf Filter Corp. replaces the Lycoming oil screen and housing allowing every aircraft to have an oil filter and to locate it on the firewall where it's easy to get to. The adapter takes up no more space on the engine than the original part, so even the tightest installations can benefit from it. Your Vernatherm and oil temp bulb are reused and transferred directly to our adapter, everything else is included. Universal STC'd kit fits any Lycoming powered Single/Multi engine airplane less than 450hp. All other STC'd for specific aircraft. **Hoses not included unless where indicated.** ***Perfect for Tight Installations in:*** * Avion * Aeronca * Bellanca *Beech *Cessna *Cozy MK-IV * Glasair * Grumman * Lancair *Long EZ *Maule *Mooney * Piper * Pitts * RV *Skybolt *T-18 *Vari-EZ * Velocity
Fits Lycoming Series Engines: 0-235, 290, 320, 340, 360, & 540

CONTINENTAL

Description	Part No.	Price
STCD Universal Continental Kit - Fits A50, A65, A75, A80, C75, C85, C90, C125, O-200, & IO-240 Engines.	08-05675	$595.00
STCD Continental Kit-Fits C145,O300,GO300,&IO360A,C,D, G,H,J,K	08-05680	$595.00
STCD Continental Kit (O470, IO470, IO520, TSIO520, GTSIO520, & IO550 Engines)	08-05685	$595.00
STCD Continental Kit (O470-11 & -15 Military Engines used on T34 & Cessna 305 Birddogs.)	08-05690	$595.00
STCd Continental Kit - Fits E-165, E-185, E-205, E-225	08-05700	$595.00
STCD Continental Kit (TIO360, IO520BA, C, M, TSIO520 B, D, E, J, K, L, N, U, BE, VB, WB & IO550B, C Engines)	08-05800	$695.00
STCd Continental Kit - Fits W-670 Radials(Stearman) Includes Hoses & Clamps	08-05805	$595.00
STCD Continental Kit - Fits W-670 Radials (Waco)	08-05810	$595.00

LYCOMING

Description	Part No.	Price
Lycoming Homebuilt Kit	08-05605	$569.00
STCD Husky Kit AFC-K005 Includes Hoses & Clamps	08-05635	$995.00
STCD Super Cub Kit AFC-K006 Includes Hoses & Clamps	08-05630	$895.00
STCD Universal Lycoming Kit	08-05660	$595.00
All American Champion Aircraft with Lycoming engine. Includes Lifetime Teflon Firesleeved Hoses	08-15995	$845.00
STCD Lycoming Kit-Fits all with Single Drive,Dual Magneto Engines.	08-05665	$595.00
STCD Lycoming Kit - Fits All IO-720 Engines	08-05670	$795.00
Lycoming Filter Relocation Kit - Requires existing Lycoming 77852 Spin-on adapter. Application does not include helicopters.	08-00038	$595.00
K007-G Stearman Kit [Lycoming R680 Radial] Includes Hoses	08-13248	$595.00
STCD Franklin Oil Filter Kit Includes Hoses & Clamps	08-05815	$1,299.00

RADIAL

Description	Part No.	Price
P&W R985 Kit, Stearman	08-00995	$895.00
AFC-K015-D P&W R1830 Kit, DC-3/C-47	08-00997	$1,595.00
AFC-K015-E R985 Kit, Beach-18, Staggerwing, DGA-15	08-00998	$895.00
P&W R1340 Kit, Otter	08-00999	$995.00
AFC-K015-G P&W R985/1340 Kit, AG-Cat	08-01001	$995.00
AFC-K015-H P&W R1340 Kit, AT301/401/501	08-01002	$995.00
R1340 Kit, Thrush/S2D (Snow)	08-01003	$995.00
AFC-K015-L P&W R985 Kit,	08-01004	$895.00
FC-K015-K P&W R985 Kit, Weatherly ; Gorilla Pump for radial engines.	08-07297	$995.00
AFC-K016-A - Curtis Wright R755 Kit [Small Radials] Gorilla Pump for radial engines.	08-07298	$523.00
AFC-K016-C Curtis Wright R1820 Kit [Sikorsky S-58] Gorilla Pump for radial engines.	08-07300	$1,234.00
AFC-K016-D Curtis Wright R1820 Kit [DC-3] Gorilla Pump for radial engines.	08-07301	$1,234.00
AFC-K016-E Curtis Wright R1820 Kit [Grumman Tracker] Gorilla Pump for radial engines.	08-07302	$995.00
P&W R1340 Kit, T-6/Harvard Gorilla Pump for radial engines with slip on fittings.	08-07385	$929.00
P&W R1340 Kit, T-6/Harvard Gorilla Pump for radial engines with Aeroquip flare type fittings.	08-07386	$940.00

PUROLATOR PT6 OIL FILTER



Oil filter, Pratt Whitney PT6 Series Filter may also be purchased with Filter Analysis Kit GA-F-L and Oil Analysis Kit GA-M,F-L.

P/N 08-14696 ..... **$126.75**

EP

OIL FUEL FLOW RESTRICTOR FITTING



An oil/fuel flow restrictor fitting designed to fit the Lycoming engine oil pressure port as well as the fuel pressure port on the KB-090-T. This fitting is a modified AN823-4 and the restriction is a .040" hole. Threaded end is 1/8" NPT. ..... P/N 05-11908 ..... **$33.00**

CONTINENTAL REMOTE OIL FILTER ADAPTER



Replaces the oil screen and will fit C65 thru O-200 engines. 3 ports In and out. Note: This Continental Remote Oil Filter Adaptor will go nicely with the Remote Oil Filter Bracket 08-01057. For Experimental use only Does not include fittings or copper gasket as shown in image. IN & OUT pipe threads in the continental oil filter adapter are: 3/8-18 npt (female). The third hole is a 5/8-18 straight thread with a 45 degree chamfer at the bottom of the thread for a temperature probe to seat against. P/N 08-13154 ..... **$255.95**

B&C BC700 LYCOMING OIL FILTER ADAPTER



The original 90-degree oil filter adapter for Lycoming engines, precision CNC machined from billet aluminum. Designed to provide a high-quality replacement for the stock Lycoming oil screen or horizontal spin-on filter adapter, the BC700 mounts directly on the engine accessory case without interference with the magnetos, vacuum pump, or standard mechanical tach drive. STC/PMA on Lycoming 0-235; O, IO, LIO, AIO, AEIO-320; O, IO, LIO, HO, HIO, TIO, AEIO-360; O, IO, HIO, TIO, LTI, AEIO-540 & IO-720 series engines. Adapter kit also includes a new gasket, crush washers, mounting bolts, and CH48108-1 filter. Weight: 1 lbs. (with filter: 2.30 lbs).

BC700-1 Oil Filter Adapter, STC/PMA ..... P/N 08-00195 ..... **$445.00**
BC700-H Oil Filter Adapter, Homebuilt ..... P/N 08-00196 ..... **$398.00**

ACCESSORIES:

B&C Oil Temperature Probe Adapter ..... P/N 08-07092 ..... **$13.50**
B&C Vern-a-therm Opening Plug ..... P/N 08-07093 ..... **$34.50**

EP

CESSNA / CONTINENTAL OIL FILTER ADAPTER KITS

Part No.	Aircraft Application	Price
0450404-3	C150, A150, F150, FA150, FRA150	**$932.00**
0556010-200	C172, F172	**$963.00**
1250922-201	C180, C185, C188, T188	**$4,592.00**
1250922-200	C205, C206, U206, P206, 207, 210,	**$1,246.00**
1250922-4	188, 188T, 206, 207, T207, 210, T303, 335, 340A, 421-C	**$595.00**

All the Continental spin on adapter kits above require the following items in addition to the adapter: Oil Filter ..... P/N CH48110 ..... **$25.50**
Nut ..... P/N 1250405-1 . **$443.00**
AN123883 O-Ring . P/N 08-04930 ..... **$4.70**

LYCOMING SPIN-ON FILTER ADAPTER KITS

Part No.	Aircraft Application	Price
LW-13743	All Applicable Engines Except Models Shown In Table Below	**$700.61**
LW-13744	0-235 Series	**$700.61**
LW-13745	IO-720 with 1200 Series Series Magnetos	**$700.61**
08-00513	0-320-H (LW-14969)	**$2,234.55**
LW-13904	All Engines with Dual Magnetos. Includes Converter Plate Assembly and Does Not Include Filter	**$1,031.03**

All Lycoming spin on oil filter adapter kits above include adapter, oil filter assembly, adapter plate, gaskets, & attaching hardware. LW-14969 kit also contains oil cooler bypass valve assembly, 2 elbows, & 2 oil seals for oil cooler installations.

CASPER LABS NO SPILL OIL FILTER HOUSING



The Casper Labs "full flow" vertical oil filter kit is designed to provide Lycoming Engine owners several improvements over the standard Lycoming oil screen or filter hardware. This device locates the filter in the vertical plane.

The unit has no moving parts and requires no maintenance. Standard aviation filters are compatible. Temperature probe hardware transfers directly from the present screen housing or OEM filter adapter. Note: Verify the adapter and filter fit in the engine compartment before bolting the unit on to the case. **Kits Include:** • Filter (some kits do NOT include a filter: see descriptions for details) • Housing • O-Ring and Washers, seal rings, gasket & installation manual

Description	PN	Price
CL1000A-STC Kit with CH48109-1 Filter	08-01237	**$333.95**
CL1000A-STC Kit with CH48108-1 Filter	08-01236	**$333.95**
CL1000A-STC Adapter ONLY for Retrofit Lycoming Engine (see web for models)with 2/MAG & 2 Drive ONLY	08-01094	**$309.00**
CL1000A-EXP (EXPERIMENTAL) Kit with CH48109-1 Filter	08-00977	**$314.95**
CL1000A-EXP (EXPERIMENTAL) Kit with CH48108-1 Filter	08-00976	**$314.95**
CL1000A-EXP (EXPERIMENTAL) Adapter ONLY (no filter)	08-00975	**$289.95**

AEROQUIP E-Z OIL DRAIN SUMP VALVES



Makes aircraft oil changes easy. The hand actuated valve when attached to the oil drain port permits engine oil changes from the ground without removing the engine cowling. The spring loaded E-Z Drain valve cannot be accidentally opened. Actuation of the valve requires a combination push/twist motion. It also contains a dual seal arrangement which combines both an O-ring & metal-to-metal seal to prevent accidental leakage of oil through the valve. FAA Approved for use on the engines listed. Incorporates fine Aeroquip quality hose. Installation eligibility listing furnished with each unit.

Part No.	Engine Application	Thread	Price
AE99950G	Cont. C-90, O-200, GO-300, IO-360 TSIO-360, O-470, IO-470 TSIO-470, IO-520, TSIO-520, GTSIO-520	5/8-18	**$296.95**
AE80666H	Cont. O-300, late C-145	1-18	**$687.50**
AE80664H	Lycoming Engines	1/2NPT	**$249.95**

Valve O-Ring, All Models ..... MS28775-011 ..... **$0.65 Ea.**
Interface O-Ring ..... AE99950G MS28775-113 ..... **$0.47 Ea.**
AE805555H MS28775-118 ..... **$0.42 Ea.**

Not to be used on Piper Models PA-28R-200, PA-28R-201, PA-28RT-200.

SAF-AIR OIL DRAIN SUMP VALVES



Changing hot engine oil has never been easier! With the SAF-AIR oil drain valve, no wrench is needed to remove the drain plug. A simple push and turn of the SAF-AIR valve locks it in the open position. The valve is made completely from anodized aluminum and stainless steel components. These materials are used throughout the aircraft industry due to their strength and durability. FAA & PMA APPROVED.

Part No.	Engine Application	Thread	Price
S6250	Cont. (same as Aeroquip AE99950G)	5/8-18	**$92.75**
S1000	Cont. (same as Aeroquip AE80666H)	1-18	**$97.75**
P5000	LYC (same as Aeroquip AE80664H)	1/2NPT	**$92.50**
M12175	ROTAX 912, 914	12mm x 1.75	**$43.95**
S7516	Cont IO-520-E	3/4"-16	**$97.75**
P7500	Franklin Engines	3/4" NPT	**$99.75**
S5020J	Jabiru 2200 / 3300	1/2"-20	**$44.50**
M20150	Subaru 2.2L / 2.5L	20-1.50mm	**$54.75**

F62



SAF-AIR LOW PROFILE 2-PIECE OIL DRAIN SUMP VALVES

Perfect for a close clearance engine oil drain application such as on the Piper Arrow. These low profile oil drain valves are designed to clear retractable landing gears & other restrictions. The valve is very affordable and can be rebuilt. It is a simple procedure to sample or drain hot oil. The valve is made from 360 brass & 302 stainless steel. FAA & PMA APPROVED. All valves come with a F50-180 opener.

Mfg. No.	Engine App.	Thread	Part No.	Price
F62	Continental	5/8-18	05-00981	**$129.95**
F10	Pratt & Whitney	1-18	05-00982	**$129.75**
F50	Lycoming	1/2-18 NPT	05-00983	**$129.95**
F50-90 Bent	Lycoming, Continental, Pratt & Whitney, Franklin	--	05-06924	**$27.50**
F50-180 Straight	Lycoming, Continental, Pratt & Whitney, Franklin	--	05-15064	**$17.65**



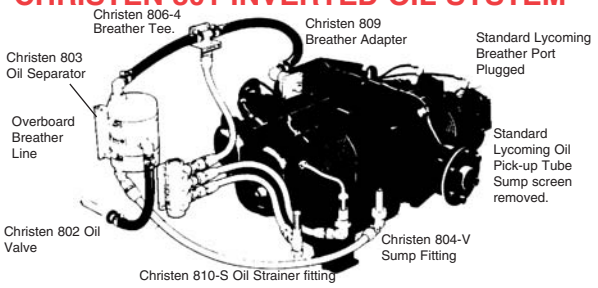
CURTIS CCB-38000 LYCOMING LOW PROFILE OIL DRAIN VALVE

FAA PMA Approved low profile aluminum oil drain valve for Lycoming engines. Designed to fit in applications where there would be an interference from landing gear operations, hoses, and other objects preventing the use of an oil Drain valve and operation of draining oil. These components are anodized for corrosion protection. This valve does not include hose & clamps. FAA & PMA APPROVED. Aluminum Anodized. Thread Size: 1/2 NPT. Length: .789 Inch. Action: Spiral, Lock Open. Includes CCA-38001 Activation Tool. Anti-Seize compound required on threads for installation.

P/N 05-15400 ..... **$107.85**

Prices Subject to Change Without Notice

CHRISTEN 801 INVERTED OIL SYSTEM



This accessory kit for Lycoming engines provides normal engine lubrication with minimal oil loss during aerobatic flight. It functions as a self-contained extension of the normal engine oil and breather systems. Can be installed in a few hours without engine disassembly.

Part No.	Description	Price
801-4	For four-cylinder engines. Includes 802 Oil Valve (with plug wrench and plugs for unused ports), 803 Oil Separator, 806-4 Breather Tee, and product manual which provides detailed instructions for application. Weight: 4.75 lb. installed.	$1,076.00
801-6	For six-cylinder engines. Same as 801-4 Kit, but is supplied with 806-6 Breather Tee. Weight: 4.75 lb. installed.	$1,088.00
811-V	For vertical-screen sump engines. Includes 810-S Oil Strainer Fitting, 810-R Oil Return Fitting, 804-V Sump Fitting (vertical type) with crush gasket and MS20822-10D elbow. Weight: 0.50 lb. installed.	$539.00
811-A	For horizontal-screen sump engines. Includes 810-S Oil Strainer Fitting, 810-R Oil Return Fitting, 805 Sump Plug with insertion tool, 804-A Sump Fitting (angular 360° swivel-type) with crush gasket and wrench for swivel clamping screw. Weight: 0.36 lb. installed.	$690.00
811-S	For horizontal-screen sump engines. Includes 810-S Oil Strainer Fitting, 810-R Oil Return Fitting, 805 Sump Plug with insertion tool, 804-S Sump Fitting (straight-type) with crush gasket. Weight: 0.33 lb. installed.	$598.00
809-K	For engines with forward breather ports such as the O-235 and O-290 models. Includes 809 Breather Adapter with gasket. AN842-12D hose elbow, and MS20913-6D plug for forward breather port. Weight: 0.53 lb. installed.	$303.00
812-2	For addition of oil ports to engine sumps. Includes two 812 Weld Bosses and quantity of 5% silicon-aluminum welding rod (type 4043) Weight: 0.12 lb. installed.	$163.75
812-1	Same as 812-2 Kit, except with only one 812 Weld Boss for addition of single sump port. Weight: 0.06 lb. installed.	$94.75
813-4	Stainless steel spring wire. Installed inside breather hose to permit relatively sharp bends without collapsing or kinking. 10 x 47/64". Weight: 0.12 lb. installed.	$99.85
813-6	Stainless steel spring wire. Installed inside breather hose to permit relatively sharp bends without collapsing or kinking. 10 x 63/64". Weight: 0.12 lb. installed.	$22.65
807-4	All hoses and fittings required for deluxe show-plane quality installation on four-cylinder engines. Includes Aeroquip braided stainless steel hose for oil lines, MIL-H-6000 rubber-fabric hose for breather lines, thin abrasive cut-off wheel for professional-quality hose cuts, AN and MS fittings (blue anodized), Aeroquip hose end fittings (blue and red anodized), and miniature stainless steel hose clamps. All materials are factory new; no surplus. Weight Excluding Hose: 1.53 lb. installed.	$1,511.00
807-4 Economy Hose & Fitting Kit	These kits include same items as Aviat Factory Kits but are packaged by Aircraft Spruce.	$705.00
807-6 Economy Hose & Fitting Kit		$721.00

10-page detailed manual - describes system operation & procedure for selecting proper components for each engine model.
P/N 05-20600 ..... **$17.50 ea.**



CHRISTEN OIL VALVE

Multiple port gravity operated ball valve. It is cast aluminum with textured white epoxy enamel finish and all internal steel parts are cadmium plated. Normally installed on firewall or on engine mount. Designed for fittings to be installed either at side or front or both. Requires 3 AN816-10D nipples for hose connection. Wt. 1.75 lbs. installed. P/N 08-06745 ..... **$385.00**



CHRISTEN OIL SEPARATOR

Features welded aluminum construction with a textured white epoxy enamel finish. All internal parts are cadmium plated, and unit includes stainless steel positioning clamps. Normally installed on fire wall or on engine mount. Requires 2 AN842-12D or -16D hose elbows and one AN823-10D hose fitting. Wt. 2.8 lbs. installed. Applicable to all Lycoming engine applications. Used to replace a worn out or broken oil separator on Christen 801-4 systems only. P/N 08-06740 ..... **$473.00**

AERO CONVERSIONS OIL SEPARATOR



A high-quality welded and powder-coated aluminum assembly designed to save oil vs. direct overboard crankcase breathers in normal flight operations. Features an extra-high-volume design offering enhanced inverted flight performance in entry-level aerobatic aircraft, allowing oil to be retained and returned to the engine during short-duration inverted and limited negative G maneuvers. The angled design makes it a perfect fit for Sonex Aircraft angled firewalls, while retaining compatibility with traditional vertical firewall installations in other aircraft. Comes with comprehensive installation instructions suitable for a wide-range of engine installations. P/N 08-07107 ..... **$128.75**

BOGERT AVIATION 180 DEGREE OIL QUICK DRAIN PROBE



Drain probe not only gives you an alternative to the high priced AVI probe but it includes some major improvements. Probe is leak proof! The AVI design could leak where it mates to the valve plunger making a mess. This design incorporates an O-ring seal around the valve body preventing leaks. The O-ring also locks the probe to the valve body. Also note the larger drain tube to speed up the oil flow and prevent restrictions.
Valve NOT included, this is Probe ONLY
P/N 12-03289 ..... **$73.75**

BOGERT AVIATION 90 DEGREE OIL QUICK DRAIN PROBEOIL QUICK DRAIN PROBE



This drain probe not only gives you an alternative to the high priced AVI probe but it includes some major improvements. The first big improvement is that the probe is leak proof. The AVI design could leak where it mates to the valve plunger making a mess. Incorporates an O-ring seal around the valve body preventing leaks. The O-ring also locks the probe to the valve body. The compactness of the probe, is actually shorter than the BJ 107B making it easier to install. 09M-PRB90 Replaces: • Piper part number 481-359 • Beechcraft part number 107-B • Auto Valve Inc. AVI-BJ-107B P/N 12-03237 ..... **$73.75**

RAVEN INVERTED OIL SYSTEMS



The Raven Full Oil System includes a CNC machined adjustable valve. There are no extra holes to plug, you simply rotate it to where you want it. The system includes the valve, mount and clamps, as well as the air/oil separator, mount and clamps. Both the valve and separator use stainless steel internal parts and are powder coated for durability. The weight of all components is 4 ½ lbs.
The Raven Half System is the breather portion of the full inverted system, it is used to perform basic positive G aerobatics where a full inverted system is not required, it will catch and return approx 95% of the oil that would normally end up overboard when performing basic maneuvers.

Description	Kit Contents	Color	PN	Price
Half Inverted Oil System 4"	Air/Oil Separator & Mount with Clamps & Sump Return Fitting	Black	08-15637	$391.50
Half Inverted Oil System 4"		White	08-15638	$479.00
Full Inverted Oil System 5"	Valve & Mount with Clamps, Air/Oil Separator & Mount with Clamps	Black	08-00796	$899.00
Full Inverted Oil System 5"		White	08-00800	$899.00
Full Inverted Oil System 4"		Black	08-00797	$899.00
Full Inverted Oil System 4"		White	08-00801	$933.00

RAVEN INVERTED SYSTEM VAC ADAPTERS



These vac adapters are machined from solid aluminum with anodized finish. Furnished with a seal installed, and complete with AN fitting and gaskets.
Vac-4 for 4 cyl Lycomings
P/N 08-00785 ..... **$263.95**
Non-Acc'y Vac Pad Oil P/U
P/N 08-00786 ..... **$66.75**

RAVEN SUMP FITTING KITS



These sump fitting kits come with specialized fittings, washers , O rings needed to install the kit.

Sump kit for Horizontal screen 4 or 6 cyl. Lyc.
P/N 08-00787 .. **$508.00**
With Straight Fitting ... P/N 08-00787 .. **$508.00**
With 45° Swivel..... P/N 08-15780 .. **$512.00**

EP

AIRWOLF AIR/OIL SEPARATORS



The Airwolf Air/Oil Separator will improve the efficiency of your aircraft dramatically whether it is a single engine fun craft of a twin powered corporate plane. Designed to separate air and oil in the crankcase breather & wet vacuum pump systems on conventional aircraft engines, Airwolf recovers oil from the crankcase, thus eliminating the oily overboard discharge and the ever present "oily belly" syndrome. Oil loss is greatly reduced - tests have indicated a recovery of up to 80% of crankcase oil previously wasted, depending on the type and condition of the engine.

The Airwolf oil recovery system is only slightly larger than an oil filter cartridge (4" dia. x 7.5") and it is available for all conventional engines regardless of displacement. It can be easily removed and disassembled for inspection and cleaning. With no moving parts, the Airwolf is designed to last the life of your engine. Available for planes with either wet or dry vacuum pump. Now STC'd for most aircraft. Available in black epoxy finish only. Specify aircraft model no., serial no., and engine model.

Airwolf Part No.	Part No.	Price
AFC-302-A	08-03806	$595.00
AFC-304-H	08-13269	$795.00
AFC-314-B	08-13288	$530.00
AFC-314-C	08-13289	$824.00
AFC-314-D	08-13290	$589.00
AFC-315-B	08-13292	$795.00
AFC-335-C	08-13604	$648.00
AFC-5006	08-05630	$895.00
AFC-700	08-07390	$32.95
AFC-CH1	08-07394	$149.95
AFC-K001	08-05605	$569.00
AFC-K005	08-05635	$995.00
AFC-K007-A	08-05660	$595.00
AFC-K007-B	08-05665	$595.00
AFC-K007-C	08-05670	$795.00
AFC-K007-F	08-00038	$595.00
AFC-K007-G	08-13248	$595.00
AFC-K008-A	08-05675	$595.00
AFC-K008-B	08-05680	$595.00
AFC-K008-C	08-05685	$595.00
AFC-K008-D	08-05690	$595.00
AFC-K008-E	08-05700	$595.00
AFC-K008-F	08-05800	$695.00
AFC-K008-G	08-05805	$595.00
AFC-K008-H	08-05810	$595.00
AFC-K009	08-05815	$1,299.00
afc-k01-ca	08-07385	$929.00
AFC-K015-A	08-00995	$895.00
AFC-K015-B	08-00039	$1,030.00
AFC-K015-CA	08-00996	$1,126.00
AFC-K015-CB	08-07386	$940.00
AFC-K015-D	08-00997	$1,595.00
AFC-K015-E	08-00998	$895.00
AFC-K015-F	08-00999	$995.00
AFC-K015-G	08-01001	$995.00
AFC-K015-H	08-01002	$995.00
AFC-K015-J	08-01003	$995.00
AFC-K015-K	08-07297	$995.00
AFC-K015-L	08-01004	$895.00
AFC-K016-A	08-07298	$523.00
AFC-K016-C	08-07300	$1,234.00
AFC-K016-D	08-07301	$1,234.00
AFC-K016-E	08-07302	$995.00
AFC-K017-B	08-13612	$595.00
AFC-W300-A	08-00645	$595.00
AFC-W300-B	08-13253	$595.00
AFC-W300-C	08-13254	$695.00
AFC-W300-D	08-13255	$795.00
AFC-W301-A	08-13256	$595.00
AFC-W301-B	08-13257	$595.00
AFC-W301-C	08-13258	$695.00
AFC-W301-D	08-13259	$795.00
AFC-W302-B	08-13260	$695.00
AFC-W303-A	08-13261	$595.00
AFC-W303-B	08-13262	$695.00
AFC-W304-A	08-01299	$595.00
AFC-W304-B	08-13263	$895.00
AFC-W304-C	08-13264	$595.00
AFC-W304-D	08-13265	$695.00
AFC-W304-E	08-13266	$895.00
AFC-W304-F	08-13267	$895.00
AFC-W304-G	08-13268	$895.00
AFC-W305	08-13270	$595.00
AFC-W306-A	08-07398	$595.00
AFC-W306-B	08-13271	$699.00

Airwolf Part No.	Part No.	Price
AFC-W306-C	08-13236	$595.00
AFC-W306-D	08-13273	$595.00
AFC-W307-A	08-01301	$595.00
AFC-W307-B	08-13274	$595.00
AFC-W309-A	08-01302	$695.00
AFC-W309-B	08-13276	$648.00
AFC-W309-C	08-13278	$895.00
AFC-W309-D	08-13279	$1,495.00
AFC-W309-E	08-13280	$795.00
AFC-W310	08-13281	$765.00
AFC-W311-A	08-01303	$595.00
AFC-W311-B	08-13282	$795.00
AFC-W311-D	08-13283	$895.00
AFC-W311-E	08-13284	$895.00
AFC-W311-F	08-13285	$895.00
AFC-W312-A	08-13286	$595.00
AFC-W314-A	08-03834	$595.00
AFC-W315-A	08-13291	$595.00
AFC-W315-C	08-13293	$795.00
AFC-W316-A	08-00652	$595.00
AFC-W316-B	08-13294	$648.00
AFC-W316-C	08-13297	$795.00
AFC-W316-D	08-13295	$795.00
AFC-W316-E	08-13298	$795.00
AFC-W316-F	08-13299	$795.00
AFC-W317	08-13300	$595.00
AFC-W318-A	08-01297	$899.00
AFC-W318-B	08-13571	$895.00
AFC-W318-D	08-13572	$895.00
AFC-W319	08-13573	$545.00
AFC-W320	08-13574	$995.00
AFC-W321-A	08-00655	$595.00
AFC-W321-B	08-13575	$595.00
AFC-W321-C	08-13576	$595.00
AFC-W321-D	08-13577	$595.00
AFC-W322	08-01304	$595.00
AFC-W323-A	08-01306	$595.00
AFC-W323-B	08-13578	$699.00
AFC-W323-C	08-13579	$895.00
AFC-W323-D	08-13580	$795.00
AFC-W324	08-13582	$795.00
AFC-W325	08-13583	$530.00
AFC-W327-A	08-13584	$595.00
AFC-W327-B	08-13585	$695.00
AFC-W328	08-13249	$595.00
AFC-W329-A	08-13588	$545.00
AFC-W329-B	08-13589	$695.00
AFC-W329-C	08-13590	$795.00
AFC-W330	08-13591	$530.00
AFC-W331-A	08-13592	$530.00
AFC-W331-B	08-13593	$595.00
AFC-W331-C	08-13594	$895.00
AFC-W331-D	08-13595	$845.00
AFC-W332-A	08-13596	$595.00
AFC-W332-B	08-13597	$595.00
AFC-W332-C	08-13598	$445.00
AFC-W333-A	08-13599	$795.00
AFC-W333-B	08-13600	$1,045.00
AFC-W334	08-13601	$595.00
AFC-W335-A	08-13602	$695.00
AFC-W335-B	08-13603	$695.00
AFC-W335-D	08-13605	$795.00
AFC-W336-A	08-13606	$445.00
AFC-W336-B	08-13622	$595.00
AFC-W337-A	08-13623	$595.00

Airwolf Part No.	Part No.	Price
AFC-W337-B	08-13625	$595.00
AFC-W338-A	08-13626	$595.00
AFC-W338-B	08-13627	$695.00
AFC-W339-A	08-13628	$595.00
AFC-W339-B	08-13629	$595.00
AFC-W340-A	08-13630	$595.00
AFC-W340-B	08-13631	$595.00
AFC-W341-A	08-13632	$645.00
AFC-W341-B	08-13633	$795.00
AFC-W341-C	08-13634	$795.00
AFC-W341-D	08-13635	$795.00
AFC-W342	08-13636	$595.00
AFC-W343-B	08-13638	$595.00
AFC-W344-A	08-13639	$695.00
AFC-W345-A	08-13640	$795.00
AFC-W345-B	08-13641	$795.00
AFC-W346	08-13642	$530.00
AFC-W347-A	08-13643	$824.00
AFC-W347-B	08-13644	$595.00
AFC-W347-C	08-13645	$1,065.00
AFC-W348-A	08-13646	$595.00
AFC-W348-B	08-13647	$595.00
AFC-W348-C	08-13648	$595.00
AFC-W349-A	08-13649	$695.00
AFC-W349-B	08-13650	$695.00
AFC-W349-C	08-13651	$795.00
AFC-W350	08-13652	$412.00
AFC-W351	08-13653	$412.00
AFC-W352-A	08-13655	$530.00
AFC-W352-B	08-13656	$595.00
AFC-W352-C	08-13657	$595.00
AFC-W352-D	08-13658	$595.00
AFC-W353-A	08-13659	$595.00
AFC-W354-A	08-13660	$595.00
AFC-W355-A	08-13661	$595.00
AFC-W355-B	08-13662	$795.00
AFC-W357-A	08-13663	$1,045.00
AFC-W357-B	08-13664	$1,045.00
AFC-W358-A	08-13665	$645.00
AFC-W359-A	08-13666	$645.00
AFC-W361-A	08-13667	$645.00
AFC-W362	08-13668	$645.00
AFC-W363	08-13669	$795.00
AFC-W364	08-13670	$695.00
AFC-W365	08-13672	$1,045.00
AFC-W367-A	08-13674	$745.00
AFC-W367-B	08-13675	$1,045.00
AFC-W368-A	08-13676	$595.00
AFC-W368-B	08-13677	$595.00
AFC-W368-C	08-13678	$795.00
AFC-W369	08-13679	$695.00
AFC-W400	08-07189	$498.00
AFC-W410	08-05887	$495.00
AFC-W420	08-07188	$450.00
AFC-W440	08-07190	$465.00
AFC-W699-B	08-13673	$765.00
AFC-W70	08-13681	$530.00

VERIFY AIRCRAFT APPLICATION BEFORE ORDERING. VISIT WWW.AIRCRAFTSPRUCE.COM FOR AIRCRAFT APPLICATION CHART.

Airwolf W-2300 Air/Oil Separator gasket ..... P/N 08-13956 ..... **$9.85**

TEMPEST ENGINE MOUNTED OIL FILTER ADAPTER



P/N 08-00631

Tempest engine mounted oil filter adapters eliminate the need for oil screens and provide increased filtering capabilities for longer engine life. Being engine mounted with no external lines, they reduce mess during oil changes and increase the time between oil changes. STC APPROVED. Note: Tempest filters are included with adaptors. Price listed is for one adapter each.

FM Model	Aircraft Application	Engine Application	Part No.	Price
T.A.F.-L	Cont. C-75-12 C-85-12 O-200 O-200A	Cessna 120, Cessna 140, Cessna 150, Luscombes, Taylorcrafts, Cubs Note: Will only for Cubs with pressure cowls (totally encloses the engine). Will not work on Cubs that cylinders stick out through the cowling.	08-00631	**$325.00**
CO-300	Cont. C-125, C-145, CO-300	Cessna 170, 172, Globe Swift, Maule	08-00632	**$367.00**
C6LC-S	Cont. O-470, Cont. IO-470, Cont. IO-520	Bellanca Viking, Cessna 182, 55 series Beech Baron	08-00633*	**$439.00**
C6LC-L	Cont.O-470 IO-470, IO-520	Cessna 205, 206, 207, 210,310, Beech Bonanza & Debonair, Navion, Meyers, Twin Commander,Widgeon	08-00634	**$434.00**
C6LC-11/15	Cessna L-19 "Bird Dog"	Continental Motors 0-470-11 and 0-470-15	08-01037	**$472.00**
C6SC	Cessna 175, Cessna 172 Hawk XP, Maules, Cessna 337, Cessna 336, Cessna 0-2, Mooney M20-K, Piper Turbo Arrow III & IV, Piper Seneca II, PA-34-200T	Continental GO-300 Series & IO-360 Series	08-01038	**$472.00**

**** WILL NOT FIT AIRCRAFT WITH FLOATS***

TEMPEST OIL FILTER ADAPTER GASKETS

These Gaskets work with the Tempest Oil Filter Adapters, see your manual to ensure proper selection.

Tempest Gasket FM-02 .....P/N 08-13896 .....**$13.55**
Tempest Gasket FM-07 .....P/N 08-00978 .....**$15.40**

AIRWOLF MINI AIR/OIL SEPARATOR



Reduce oil consumption and remove harmful water vapor with Airwolf's Walker Air/Oil Separator. The AirSep distills and recirculates crankcase oil vapor generated by normal operation, extending engine life.

The Airwolf Walker AirSeps uses a tiny amount of vacuum pump discharge air, to help condense the oil inside the AirSep, and to overcome crankcase pressure to return collected oil to the engine while the engine is running. The competitive systems are only gravity flow so no oil returns into the engine until the engine is completely shut off. Thus, one system is large enough to clean both the engine breather oil and wet vacuum pumps discharge. It comes with a lifetime warranty on workmanship and material of all new AirSeps produced. STC'd

MiniSep, 3/4" Inlet .....P/N 08-05887.....**$495.00**
MiniSep, 1" Inlet .....P/N 08-07188.....**$450.00**
MiniSep, 5/8" Inlet .....P/N 08-07189.....**$498.00**
Wet Vacuum Pump MiniSep, 5/8" Inlet .....P/N 08-07190.....**$465.00**

CHALLENGER STAINLESS STEEL MICRONIC OIL FILTER FOR ROTAX 912/914 ENGINES



The filter element is made from medical grade, type 304 stainless steel micronic filter cloth providing unmatched protection against oil contamination and resultant engine damage.

A rare earth magnet is installed in the top of the element for magnetic pre-filtering of the oil. The unique twist lock design allows for easy disassembly, inspection and cleaning. The quad-ring gasket doubles the seal between the filter and the engine . The filter housing is carved out of a solid piece of 6061 T6 billet aluminum with cooling fins, which not only looks good but aids in dissipating heat.

Features: • Cleanable and Reusable • High Flow Rate • Unique Twist Lock Design • Exteriors Fins • Unaffected by Water, Heat, or Pressure • Safety Wire Attachments 360 degrees • Environmentally Friendly.

P/N 08-07174 .....**$195.50**

CHALLENGER FAA/PMA LIFETIME OIL FILTER SYSTEM



The filter element is made from medical grade, type 304 stainless steel micronic filter cloth providing unmatched protection against oil contamination and resultant engine damage.

A rare earth magnet is installed in the top of the element for magnetic pre-filtering of the oil. The unique twist lock design allows for easy disassembly, inspection and cleaning. The quad-ring gasket doubles the seal between the filter and the engine . The filter housing is carved out of a solid piece of 6061 T6 billet aluminum with cooling fins, which not only looks good but aids in dissipating heat.

Features: • Cleanable and Reusable • High Flow Rate • Unique Twist Lock Design • Exteriors Fins • Unaffected by Water, Heat, or Pressure • Safety Wire Attachments 360 degrees • Environmentally Friendly.

Challenger	Replaces	Our P/N	Engine Model	Price
CP-48103C 13/16-16 Thread w/o relief valve	CH48103-1	08-06017	LYCOMING O-320, IO320, O360,IO-360, LO-360, TO-360, HIO-360, LTO-360, LHI0-360 SERIES	**$295.00**
CP-48108C 3/4-16 Thread w/o relief valve	CH48108-1	08-06019	CONTINENTAL 6-285, IO-346, IO-360, TSIO-360, O-470, IO-470, LIO-470, TSIO-470, IO-520, TSIO-520, GTSIO-520, LTSIO-520, IO-550 SERIES	**$295.00**
CP-48109C 3/4-16 Thread w/ relief valve	CH48109-1	08-06020		**$295.00**
CP-48110C 3/4-16 Thread w/ Nipple w/o relief valve	CP48110-1	08-06021	LYCOMING O-235, IO-320 SERIES LIO-320, AIO-3230, AEIO-320, O360,IO360, AIO-360, HIO-360,LIO-360, TIO-360, LHIO-360, AEIO-360, O-540, IO-540, HIO-540, TIO-540, AEIO-540, LTIO-540, TIO-541, IO-580, IO-720 SERIES	**$295.00**
CP-48111C 3/4-16 Thread w/nipple w/o relief valve	CH48111-1	08-06022		**$295.00**
CP-9124C w/ relief valve	8245-706	08-07174	Bombardier-Rotax 912 F2, 912 F3, 912 F4, 912 S2, 912 S3, 912 S4, 914 F2, 914 F3, 914 F4	**$195.50**

CHALLENGER OIL FILTER ELEMENT REPLACEMENTS



The filter element is made from medical grade, type 304 stainless steel micronic filter cloth providing unmatched protection against oil contamination and resultant engine damage. A rare earth magnet is installed in the top of the element for magnetic pre-filtering of the oil. The unique twist lock design allows for easy disassembly, inspection and cleaning. The quad-ring gasket doubles the seal between the filter and the engine . The filter housing is carved out of a solid piece of 6061 T6 billet aluminum with cooling fins, which not only looks good but aids in dissipating heat.

Challenger	Application	PN	Price
CP-621	CHALLENGER 48103, 48104	08-07370	**$154.95**
CP-620	CHALLENGER 48108, 48109	08-07369	**$154.95**
CP-619	CHALLENGER 48110, 48111	08-07366	**$159.00**
CP-720	CHALLENGER 9124C	08-07371	**$140.95**

CHALLENGER ACCESSORIES

Description	Part No.	Price
CP-621 48103, 48104 Element	08-07370	**$154.95**
CP-620 48108, 48109 Element	08-07369	**$154.95**
CP-619 48110, 48111 Element	08-07366	**$159.00**
CP-720 9124C Element	08-07371	**$140.95**
CP-623 Oil Filter Quad Seal Gasket	08-07186	**$5.95**

EP

AIR OIL SEPARATORS – OIL ANALYSIS



OIL FILTER BIB

For horizontal or angle-mounted filters. No more messy oil changes! Catches the Oil & the Filter. No Dripping. No Spillage. No Messy Clean-Ups. Easy To Use. Slide Bib Around the Oil Filter, pull up on Tabs and Tilt to Form a Seal, and unscrew the Oil Filter. Withstands High Temperature. Will not melt, weaken or leak from Hot Engine Oil and Filter. Great for filters in tight places. Fits any sized filter. Disposable.

3 pack ..... P/N 12-04883 ..... **$11.95**
10 pack ..... P/N 12-04884 ..... **$35.95**



SUPER SLIME FIGHTER®

Following in the success of the Slime Fighter® series of air separators, Aircraft Spruce now offers the Super Slime Fighter with the same ease of installation for large Lycoming engines found in aircraft such as the RV-10, Glassair III and the F1 Rocket. Installs in 20 minutes with no additional drain line required. Includes instructions. Clamps and hoses are only included in the RV-10 kit. RV-10 kit includes custom hose shape. Not FAA approved.

Standard (80HP-160HP) ..... P/N 08-13971 ..... **$168.75**
Mid-Size (160HP-220HP) ..... P/N 08-13972 ..... **$197.85**
Large (220HP-320HP) ..... P/N 08-13973 ..... **$214.95**
RV10 Experimental ..... P/N 08-06152 ..... **$246.95**



HOMEBUILDER'S OIL BREATHER/SEPARATOR

These 4 inch diameter reservoirs have beaded outlets for 5/8" I.D. hoses and a mounting flange for easy firewall attachment. These units are of a new, improved design and the reservoir body is now a spun aluminum bowl for optimum performance. The oil separators minimize oil loss and allow free breathing of the engine. They are recommended for experimental aircraft use only and are not STC'd for any certificated aircraft. Size: 4"dia.x 3-3/8"h. P/N 10570 ..... **$49.50**



RMJ-AERO OIL SEPARATOR

Designed to remove oil from the engine crankcase breather line providing the builder with a cleaner plane, less oil consumption, and prolonged engine life from maximum cooking, cleaning, & lubrication. Fashioned after Tony Bingelis' proven design, these separators incorporate several enhancements, including O-ring seals for the lid. Fabricated from aircraft quality materials, TIG welded, and alodyned for corrosion control. They can be firewall or cooling baffle mounted with the cushion clamp provided. The design allows for easy installation in the breather line by the use of hose clamps. Oil from the separator is returned thru tubing to a port in your engine's housing. Should your engine not have an available oil return port, RMJ-Aero can provide a Self Sealing Clamp-On Adapter utilizing your engine's oil filler neck. Installation of this adapter is easy for both flying and aircraft under construction. When clamped in place around the filler neck, the adapter provides a return port for separated oil and an integral seal, which prevents leakage. Installation & maintenance guidelines are included.

Description	Part No.	Price
Oil Separator for Lycoming (3/4" inlet/outlet)	08-00571	$259.95
Oil Separator for Cont. (5/8" inlet/outlet)	08-00572	$259.95
Adapter for Lycomings	08-00577	$31.75
Adapter for Continentals	08-00578	$32.50



ANDAIR OIL/AIR SEPARATOR

The OS8850 has been designed to remove the oil from the crankcase breather on Lycoming and Continental Engines. This gives reduced oil consumption, cleaner aircraft, and environment. * Upper outlet can rotate through 360° allowing easy installation. * The unit can be dismantled for inspection/cleaning. * Vortex swirl separation. O-Ring seals. * Light weight: 6.4 oz. * 4 off 10-32 mounting lugs on the base of the separator for easy fire wall mounting.

P/N 08-01034 ..... **$360.00**



ANDAIR CONDENSATION TRAP

This new device is a small and very light weight condensation trap. It is used to extract the water from the oil when used in conjunction with the Andair Oil / Air Separator. Water can build up in the engine due to water in the air condensing during a cold night. Overnight this water sinks to the bottom of the sump settling at the lowest point. This is generally where the oil pump pick up is. Therefore there is a real potential that if one of these devices is not used water can build up in the engine. Flight test have shown that the worst possible condition for water in the oil is on humid days, cold nights and where short flights are undertaken.

P/N 08-01035 ..... **$112.80**



METAL CHECK ENGINE OIL ANALYSIS KIT

This oil analysis kit is used for determination of the condition of oil wetted engine parts, even on the first sample. This laboratory analysis consists of ICP (Inductively Coupled Plasma Spectroscopy) quantitation of 12 wear metal elements for piston and turbine engines. The analysis is completed in 24 hours - abnormal results are communicated immediately. Available in two versions: with return postage included and without return postage included to fit your needs! AV Lab is recommended or authorized by most engine manufacturers. The kit is excellent for pre-purchase inspection.

Not applicable for hydraulic fluid.

OIL ANALYSIS RESULTS - INCLUDING INTERPRETATION AND STATISTICAL ANALYSIS, ARE AVAILABLE ONLINE.

Return Postage Included ..... P/N 08-00931 ..... **$22.95**
Return Postage Not Included ..... P/N 08-10691 ..... **$16.85**



METAL CHECK AIRCRAFT ENGINE OIL FILTER ANALYSIS KIT

Includes oil and oil filter analysis. Oil filter debris analysis should be part of all preventative maintenance programs. Filter analysis is critical for turbine engines because they generate predominately larger wear particles that are trapped by small micron filtration. The oil filter is rinsed and the exact alloys presents in the debris are determined by SEM/EDXRF. The AMS number, amount, type, form, and condition of the particles are reported. Features: • Largest Oil Analysis Results Database •The Most Accurate Interpretive Results Guidelines • The Most Experienced staff. • Recommended, Approved, or Authorized by Engine Manufacturers. • 24 Hour a Day Service Available 7 Days a Week. Large Oil Analysis Kit. P/N 08-06270 ..... **$72.65**



CHAMPION OIL FILTER ANALYSIS KIT

Champion Oil Filter Analysis Kit can help you detect abnormal engine wear and even predict impending engine trouble, because it provides a comprehensive analysis of both the larger wear particles in the oil filter and the finer wear particles in the engines oil.

P/N 08-01051 ..... **$117.95**



OIL DIPSTICKS

New manufacture oil tank dipsticks stamped with proper calibration markings.

Dipstick Long Neck 13-3/4" ..... P/N 08-00037 ..... **$56.75**
Dipstick Short Neck 9-1/2" ..... P/N 08-04612 ..... **$56.75**
Dipstick 6 Qt. Short Neck 11-3/4" for O-200, C-90
P/N 08-04613 ..... **$55.75**
Dipstick 4 Qt. Ercoupe long Neck 18-3/4"
P/N 08-04614 ..... **$63.75**

VERNI-THERM VALVE - Lycoming thermostatic oil cooler bypass valve wt. 4 oz. P/N 08-12154 ..... **$433.36**



THIXO # 2 AVIATION GREASE - 425 GRAM TUBE

ThixO #2 Aviation Grease: A high performance water resistant grease using advanced thickening agents and superior lubricant chemistry. ThixO #2 Aviation Grease is a specialty lubricant designed for specific aviation applications primarily to prevent rust, corrosion, and seizing of critical components in drives, hub sets and splines. ThixO#2 Aviation Grease demonstrates outstanding sheer stability and exhibits a broad temperature range (-35C to >250C) dependent on application requirements.

P/N 08-13829 ..... **$22.95**



THIXO SYNTHETIC AVIATON GREASE - 400 GRAM TUBE

ThixO SYN Aviation Grease: A high performance synthetic extreme temperature grease using overbased calcium sulphonate thickener and advanced lubricant chemistry. Specifically designed for aviation applications. ThixO SYN Aviation Grease is a specialty lubricant designed for specific aviation applications including helicopter rotor shafts, splines and hub assemblies for the Bell 206A, 206B and 206 L Models.

P/N 08-13830 ..... **$26.95**



DOW CORNING 55 MOLYKOTE O-RING GREASE

Molykote 55 is a strong, silicone-based substance that will swell natural rubber and other materials to make a more powerful seal.

Typical Use: Used for dynamic lubrication and sealing between rubber and metal parts in pneumatic valves. Typical applications are found within the aircraft, automotive and other industries.

5.3 oz. Tube ..... P/N 08-13684 ..... **$24.75**
8 Lb. Can ..... P/N 08-13685 ..... **$426.00**

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Prices Subject to Change Without Notice

OIL COOLERS

OIL COOLER APPLICATION CHART

Aircraft Model	Aero-Classic Part No.	Positech Part No.	Stewart Warner Part No.
Beech 10, C23, A24R, C24R	8000075	4211	8406R
Cessna 150,152,A152,170,170,172,175,177	8000075	4211	8406R
Experimental	8000081	4215	10599
Piper PA23-150, PA28-140, PA23-160 (SN 23-163 up), PA28-150, -151, PA28-160, -161, PA28-180, -181	8000075	4211	8406R
PA18, PA18A, PA22-135, -150, -160	8000328		
Pitts S2B	8000215	4219	10611
Stinson 108, 108-1, -2, -3	8000075	4211	8406R
Taylorcraft F22B, F22C, F22R	8000075	4211	8406R

MEGGITT TROY OIL COOLERS

MEGGITT TROY 8406R



MEGGITT TROY South Wind 8406R (formerly Harrison P/N 8526250). Applicable to all Lycoming installations from 4-cylinder 0-235 through 6-cylinder IO-540 engines. Inlet & outlet ports accept 3/8" pipe fittings. Fits Beech B-19 Sport (0-320-E2C), C-23 Sundowner (0-360-A4G), Muskateer (0-360-A2G), Cessna 172 Skyhawk (0-320-E2D), 177 Cardinal (I0-360-AF6D), 177 Cardinal (0-0-360-A1FG), 177 Cardinal RG (0-360-AFGD), Mooney Ranger (0-360-A2D). Size: 7.75"l x 3.5"d x 4.75"h. Wt.: 4 lbs.

Model 8406R..... P/N 8406R **$860.00**

Model 8432R–Fits BeechA24R Sierra (IO-360-A2B), Mooney Chaparral (IO-360-A1A), Mooney Mark 22 (TIO-541-A1A). Weight 4 lbs. size: 5-3/4"Hx8"Wx3-5/8"L ..... P/N 8432R **$948.00**

Model 10611R - Fits Piper Single Engines..... P/N 10611R .. **$759.00**

Model 10599R - Fits Cessna and Stoddard ..... P/N 10599R .. **$716.00**

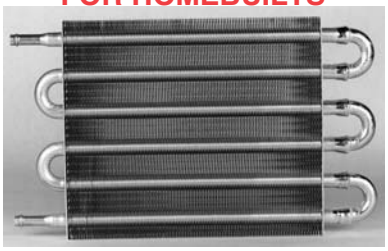
Model 10578R - Fits Gulfstream AA-1 ..... P/N 10578R .. **$654.00**

Model 10610R - Fits Cessnas ..... P/N 10610R .. **$719.00**

Model 10568R - Fits Gulfstream AA5B, GA-7.. P/N 10568R .. **$623.00**

Note: The oil coolers manufactured by MEGGITT TROY formerly Stewart Warner will fit the aircraft listed but in most cases are not furnished with the FAA/PMA certification for those aircraft. The exceptions are P/N 8406R and P/N 8432R are furnished with FAA/PMA approval for certain Mooney aircraft. For all other applications, Form 337 field approvals are required for installation on certificated aircraft. Call for further information.

LIGHTWEIGHT OIL COOLER FOR HOMEBUILTS



Lightweight, compact oil cooler improves cooling in closely cowled homebuilts. Mounts in any position. Furnished with 4 ft. of 5/16" I.D. hose and 4 clamps. Size 7-1/2H x 12-3/4L x 3/4D.

P/N 403 ..... **$61.75**

HOMEBUILDER'S ENGINE CRANK CASE OIL BREATHER



This is a 3-1/4" dia. can reservoir with a 3/4" or 5/8" od hose barb outlet, 1/8npt curtis drain valve on bottom of can, and a fire wall mounting bracket. Item also available with a 5/8 od hose barb outlet, please call or email for price & availability. It keeps oil in can and off belly of airplane then can be drained later with petcock. Helps to keep crank case condensation to a minimum. Recommended for experimental aircraft use only not STC'd for certified aircraft.

3/4" od hose barb outlet .....P/N 08-00765 ..... **$105.85**

5/8" od hose barb outlet .....P/N 08-07219 ..... **$105.85**

AERO CLASSICS REMOTE MOUNT OIL COOLERS



8000357
Bar & Plate

Aero Classics offers the General Aviation community the largest number of FAA-PMA. (Federal Aviation Administration - Parts Manufacturing Authority) approved oil coolers in the world. Remote-mount oil coolers mount to the airframe or engine baffle instead of directly to the engine. Hoses are used to connect the oil cooler to the engine. This type of oil cooler is used with most non-Continental engines including all Lycoming engines. All FAA-PMA approved with supporting FAA 8130-3 documentation unless otherwise noted. All models have 3/8 NPT inlets and outlets. All Aero-Classic coolers come with a full two year warranty. Note: Models 8000081, 8000706 & 8000942 are for experimental aircraft only. Not FAA-PMA Approved. ******May not work with all applications******

Model No.	Description	FAA/PMA Approved	Part No.	Price
8000075	7 Row Drawn Cup	YES	08-00640	**$307.00**
8000074	9 Row Drawn Cup	YES	08-00641	**$309.00**
8000081*	10 Row Drawn Cup	NO	08-00642	**$323.00**
8000215	13 Row Drawn Cup	YES	08-00643	**$349.00**
8000216	17 Row Drawn Cup	YES	08-00644	**$445.00**
8000353	18 Row Drawn Cup	YES	08-00808	**$510.00**
8000328	Bar & Plate	YES	08-00809	**$669.00**
8000343	9 Row 2 Pass Drawn Cup	YES	08-00810	**$675.00**
8000356	Bar & Plate	YES	08-00811	**$762.00**
8000357	Bar & Plate	YES	08-00812	**$762.00**
8000590	Bar & Plate with Valve	YES	08-07408	**$2,901.80**
8000661	13 Row Drawn Cup	YES	08-07409	**$479.00**
8000618	Bar & Plate with Valve	YES	08-07410	**$2,309.27**
8000706	Bar & Plate	NO	08-07411	**$783.00**
8000942	Bar & Plate	NO	08-07412	**$1,155.00**
8000950	Bar & Plate with Valve	YES	08-07413	**$2,233.74**
8000997	Bar & Plate with Valve	YES	08-07414	**$3,432.51**
8001201	7 Row Bar & Plate	YES	08-07415	**$536.00**
8001241	3 Hole 7" Oil Cooler	Yes	08-16189	**$2,945.00**
8001467	Bar & Plate With Valve	Yes	08-16190	**$2,999.00**
8001628	3 Hole 7" Oil Cooler	Yes	08-16191	**$2,945.00**
8001819	2 Hole 8" Oil Cooler	Yes	08-16192	**$2,945.00**
8002015	Remote Mount Oil Cooler	Yes	08-16193	**$3,498.00**
8002038	Remote Mount Oil Cooler	Yes	08-16194	**$5,875.00**
8002319	Remote Mount Oil Cooler	Yes	08-16195	**$1,665.00**
8002320	Remote Mount Oil Cooler	Yes	08-16196	**$1,665.00**
8002437	Remote Mount Oil Cooler	Yes	08-16197	**$2,835.00**

AERO CLASSICS ''HE SERIES'' AVIATION OIL COOLERS



Aero's HE Series (High Efficiency) FAA-PMA oil coolers are designed to be direct replacements for Stewart Warner (today known as Meggitt) oil coolers – most of which do not have FAA-PMA. Aero-Classics HE Series oil coolers are intended to be a competitively priced option for those whose aircraft came with a Stewart Warner oil cooler. The HE Series come with full FAA-PMA documentation, an industry leading 2YR/2,000HR warranty, and heat rejection capabilities that match or exceed the competition. Aero's HE Series oil coolers are approved for use on many Beech, Cessna, Grumman, Mooney, Robinson Helicopter, and other popular aircraft makes. Listed below is the SW part number and the corresponding Aero-Classics HE Series replacement part number.

SW Part No.	Aero Part No.	Description	Part No.	Price
10578R	8001535	4 Row 6" Long Core	08-07425	**$483.00**
10877A	8001588	6 Row 7" Long Core	08-07426	**$596.00**
10599R	8001599	8 Row 6" Long Core	08-07427	**$614.00**
8406R	8001602	6 Row 6" Long Core	08-07428	**$556.00**
10568R	8001640	5 Row 6" Long Core	08-07429	**$505.00**
10614R	8001643	14 Row 6" Long Core	08-07430	**$849.00**
10610R	8001646	10 Row 6" Long Core	08-07431	**$644.00**
10611R	8001649	11 Row 6" Long Core	08-07432	**$679.00**
10634R	8001652	12 Row 6" Long Core	08-07433	**$751.00**
8432R	8001689	8 Row Dual Pass 6" Long Core	08-07434	**$690.00**
8432S	8001694	8 Dual Pass 6" Long Core	08-07435	**$759.00**
10865B	8001701	16 Row 7" Long Core	08-07436	**$1,025.00**
10880A	8001713	16 Row Dual Pass 7" Long Core	08-07437	**$1,085.00**
10891A	8001718	14 Row Dual Pass 6" Long Core	08-07438	**$844.00**
10886A	8001723	16 Row 7" Long Core	08-07439	**$969.00**
8406R	8001733	6 Row Bar & Plate 8" Long Core	08-07440	**$554.00**

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OIL COOLERS

AERO CLASSIC CONTINENTAL OIL COOLERS



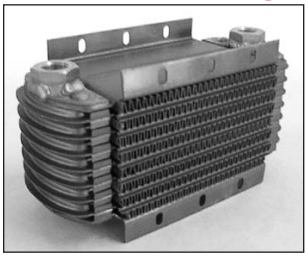
8000545 10" Non-Congealing Universal 7th Stud

Aero-Classic's engine mounted oil coolers for Continental powered aircraft offer high quality features such as a CNC machined base for reliable, leak-proof mounting. Aero's line of Continental front mounted oil coolers feature a hassle free design that accommodates both 7th stud and non-7th stud engine cases - eliminating the chance of getting the "wrong" oil cooler. The oil coolers on Continental engines often mount directly to the engine and do not require hoses. All FAA-PMA approved with supporting FAA 8130-3 documentation, and full two year warranty.

Model No.	TCM PN	Description	Spruce Part No.	Price
8000545	639171	10" Non-congealing Universal 7th Stud Front Mount	08-04961	**$762.00**
8000319	639151	11" Non-congealing Universal 7th Stud Front Mount	08-04963	**$759.00**
8000531	639152	11.5" Non-congealing Universal 7th Stud Front Mount	08-04965	**$765.00**
8000683	626189	12 Bolt Congealing Non 7th Stud Front Mount	08-04967	**$726.00**
8000687	652671	12 Bolt Congealing 7th Stud Front Mount	08-04968	**$757.00**
8000925	627392	8 Bolt Front Mount	08-07418	**$699.00**
8000440	654580	Rear Mount	08-07419	**$927.00**
8000464	646685	Rear Mount	08-07420	**$925.00**
8000934	646880	8 Bolt Rear Mount	08-07421	**$699.00**
8000953	654585	Rear Mount	08-07422	**$1,632.00**
8000960	654572	Rear Mount	08-07423	**$893.00**
8001213	655090	Rear Mount	08-07424	**$1,615.00**

Note: Some part numbers have been superseded
8000677 (our part # 08-04962) superseded by 8000545 (our part # 08-04961)
8000307 (our part # 08-04964) superseded by 8000319 (our part # 08-04963)
8000127 (our part # 08-04966) superseded by 8000531 (our part # 08-04965)

NDM OIL COOLERS



NDM is one of the world's largest volume manufacturers of FAA approved oil coolers. An approved supplier to both Lycoming and Continental, as well as many airframe manufacturers, NDM holds FAA/PMA's for most of these oil coolers. NDM oil coolers are manufactured utilizing the vacuum oven brazing process rather than the less costly Controlled Atmosphere Brazing (CAB) method used by others to save costs. Utilizing the vacuum oven process guarantees a high quality product and lower warranty returns. If you are not sure which NDM oil cooler is FAA Approved for your aircraft, please provide the aircraft model & serial number and we will determine the correct oil cooler for your application.

Part No.	NDM P/N	Stew.t Warner P/N	Price
08-00740	20002A	8406R	**$343.00**
08-00741	20003A	N/A	**$398.00**
08-00742	20004A	10599R	**$427.00**
08-00743	20005A	N/A	**$472.00**
08-00744	20006A	10611R	**$475.00**
08-00745	20007A	N/A	**$428.95**
08-00746	20008A	10614R	**$542.00**

AIRWOLF OIL CHILLER



The new Airwolf Oil Chiller is 20 aircraft quality aluminum fins that are precisely bent to mold around the outside of any standard oil filter. These fins total a whopping 600 sq/in of cooling area to suck the heat from your oil filter, thereby cooling your engine oil. The fins are gold anodized and quickly secured to the oil filter with two hose clamps. Easy on..easy off. Everything you need is in the kit. Lower your oil temperatures today with our "Poor Mans" oil cooler. P/N 08-07394 ..... **$149.95**

OIL THERMOSTAT SYSTEM



Designed to regulate the oil temperature on engines like the Rotax and Jabiru. If you are flying time and time again and the engine temperature is only getting to say 85°C the water will remain in your oil as a contaminant and can go on to destroy your engine with corrosion problems. Additionally, warmup is achieved very quickly on even the coldest of days because the thermostat diverts the oil flow from the oil cooler. Made in the USA these special oil thermostat units are designed to quickly allow your engine to reach and maintain its optimum operating temperature even on the coldest of days. CNC machined from 6061-T6 the unit is anodised with the type 2 surface finish to protect the thermostat long-term against corrosion. There are a number of benefits in using an oil thermostat in your aircraft which include fuel savings resulting from quick warmup times and engine operation at optimum oil temperature which also increases engine life because the engine is being operated at the correct oil temperature. Does not include Hardware. P/N 08-07212 ..... **$146.95**

ROTAX 912 13MM OIL COOLER HOSE



912 Oil Cooler Hose 13mm high heat hose for 912-914 oil coolers. Sold by the foot.
P/N 15-06907 ..... **$7.50**

OIL COOLER DUCT SYSTEM



This economical duct system provides the aircraft builder with a simple way to route cooling air to Stewart Warner style oil coolers. Manufactured from .040 aluminum, this kit was designed for use on RV series aircraft but is ideal for virtually any homebuilt using a firewall mounted oil cooler. Kit includes baffle duct, oil cooler duct, hardware, & installation instructions. P/N 08-05000 ..... **$54.95 ea**

ALUMINUM SIDE LOUVERS



These side louvers let hot air out of your engine compartment - or, if they are installed with the louvered openings facing forward, to bring cool air into the engine compartment, enhancing performance and service life of the engine and under-hood components. Helicopter owners often mount these over their oil cooler to let cool air in and help reduce operating temperatures. Complete with do-it-yourself instructions and hardware. Rest a set on your plane, hood or fender- see just how good they look! (2) 2-11/16" x 12-1/4"
Semi-Gloss Black ..... P/N 05-04969 ..... **$99.00**
Aluminum ..... P/N 09-04968 ..... **$89.00**

ALUMINUM COOLING LOUVERS



These aluminum cooling louvers are custom made and designed to improve the cooling of your engine compartment on your experimental aircraft. They are simple to install, and will dramatically lower your CHT temps, as well as your oil temperature.
The standard size of the aluminum plate is 12" long and 5" wide, and the outside flange can be trimmed to fit your application. There are a total of 9 louver slots which aid in cooling. P/N 08-07625 ..... **$17.85**

OIL DOOR HINGE



The hidden hinge has a uniquely shaped arm that allows the hinge to be mounted completely out of view to the underside of the cowling. The center hinge eye is removed for the custom made spring that loads the hinge to be full open when unlatched. If your oil door unlatched it will be full open, eliminating accidentally taking off with the oil door unlatched. The hinge is aircraft quality extruded MS20001-4 hinge with a 3/32" steel hinge pin. One end of the hinge pin is flattened. When installed and closed the hinge pin is gripped tightly by the force of the spring.
Oil Door Hinge ..... P/N 12-04708 ..... **$37.90**
Replacement Spring ..... P/N 12-04709 ..... **$2.95**

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Prices Subject to Change Without Notice

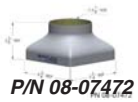


X-SERIES OIL COOLERS BY AIRFLOW SYSTEM

The first aircraft oil cooler design in 50 years. Computer modeling and flight testing have been used to develop coolers that deliver significantly lower oil temps with no increase in oil cooler size or oil pressure drop. Designed as a direct replacement for popular oil coolers used in experimental aircraft, the X- SERIES oil coolers are built to Airflow Systems specifications and certified aircraft oil cooler standards. Flight testing on the popular RV series of aircraft has shown oil temperature drops of 10 -15 degrees F for coolers of the same size in the same location. Not FAA approved.

Model	Size	Engine Application	Notes	Part No.	Price
2002X	7 Rows	Continental O-200, Lycoming O-235, Lycoming O-320, Lycoming O-360, Lycoming IO-360, Corvair, Subaru, VW	Max 180 HP. No piston squirters or cold air induction	08-06153	**$411.00**
2004X	10 Rows	Continental O-200, Lycoming O-235, Lycoming O-320, Lycoming O-360, Lycoming IO-360, Corvair, Subaru, VW	Max 180 HP. No piston squirters or cold air induction	08-13963	**$489.00**
2006X	13 Rows	Lycoming O-360K, Lycoming IO-360, Lycoming IO-540	Go up one size for piston squirters, cold air induction, aerobatic and/or float plane applications	08-06154	**$562.00**
2007X	15 Rows	Lycoming O-360K, Lycoming IO-360, Lycoming IO-540	Go up one size for piston squirters, cold air induction, aerobatic and/or float plane applications	08-13964	**$569.00**
2008X	17 Rows	Lycoming O-360K, Lycoming IO-360, Lycoming IO-540	Go up one size for piston squirters, cold air induction, aerobatic and/or float plane applications	08-06155	**$620.00**

AIRFLOW SYSTEMS OIL COOLER DUCTS



P/N 08-07472

Super lightweight and strong hand laid fiberglass ducts designed using Computational Fluid Dynamics (CFD) software and flight testing to provide the best air pressure distribution over the face of the oil cooler. Mounting hardware and installation instructions provided. The new versions will have a gray "in mold" primer coating on them. The advantage to the customer is that there are no pin holes in the fiberglass and the almost-ready-to-paint finish.

Airflow Systems Part No.	Oil Cooler Application	Part No.	Price
ASOCP-O- 13 (0°)	13 ROW, 20006A, 2006X, 10611R, 08-00644	08-07472	**$175.75**
ASOCP-45-13 (45°)	13 ROW, 20006A, 2006X, 10611R, 08-00644	08-07473	**$168.75**
ASOCP-90-13 (90°)	13 ROW, 20006A, 2006X, 10611R, 08-00644	08-07474	**$149.75**
ASOCP-45-17 (45°)	17 ROW, 200008A, 2008X, 10614R, 08-00644	08-07476	**$163.75**
ASOCP-90-17 (90°)	17 ROW, 200008A, 2008X, 10614R, 08-00644	08-07477	**$153.75**



AIRFLOW SYSTEMS OIL COOLER INSTALLATION KITS

Airflow Systems oil cooler brackets and mounting hardware kits offer the homebuilder a quick and easy solution for firewall mounted oil cooler installations. A variety of mounting angles cover most applications at a cost that is often little more than the cost of material for a builder made bracket. The generous radiuses resist cracking. Delivered without holes but including an oil cooler mounting hole template the brackets may be tailored to individual installations.

Description	Part No	Price
Asik-01 Oil Cooler Installation Kit Bolts & Spacers	08-13968	**$86.75**
Asik-02 Oil Cooler Install Kit 45* Bracket	08-13969	**$97.85**
Asik-03 Oil Cooler Install Kit 90* Bracket	08-13970	**$119.75**



THE A.S.A. OIL SEPARATORS

"THE ASA OIL SEPARATOR" Is a solution to the oil consumption and collection of oil on the belly of your aircraft. The breathers kick out oil mist that collects on the belly that in turn grabs all the dust and dirt. For years we have been making this type of product used in automotive racing engines so the leap to a light weight aircraft unit was a small one. After many hours on the dynamometer many changes and hours of flight testing the effort was well worth it. "ASA Oil Separator" that in our tests out performs most of the competition at a fraction of the price.

Description	Part No	Price
4 Cylinder Polished Mirror	05-12369	**$169.00**
4 Cylinder White Powder	05-12472	**$179.85**
6 Cylinder Polished Mirror	05-12473	**$179.85**
6 Cylinder White Powder	05-12474	**$179.85**



OIL SEPARATOR INSTALL KITS

Included are three feet of high quality silicone hose, four quality hose clamps, one steel braid -4 AN Teflon oil return hose, one -4 AN X 1/8" NPT 90 Deg. Fitting and one 1/8" X 3/8" NPT reducer bushing that fits the oil return in the accessory case on most Lycoming engines. Also included is a new accessory case breather fitting that is more IO-540 friendly when installing on the six cyl engines. Full installation and maintenance instructions will be included as well.

Description	Part No	Price
4 Cylinder Install Kit	05-12370	**$52.00**
6 Cylinder Install Kit	05-12482	**$67.50**



E-Z COOL FLAP

This revolutionary product, the "EZ Cool Flap" is a long awaited solution to this sometimes challenging task of climbing out without high CHTs. This revolutionary, retrofit electric cowl flap product will definitely help calm the fears of many RV owners and builders of these great aircraft. Our effort turned out to be far greater in monetary and time investment than we initially planned but, all good things take time. After a considerable investment in design, engineering and testing many different configurations, learning and improving along the way. We now offer our product as the most logical, simple and easily installed device to address these temperature concerns. This product is constructed of the finest aircraft alloys and workmanship available and is far superior to any and all other solutions available at any price. This product only weighs a few ounces, is extremely easy to use, and offers unparalleled protection for your aircraft engine. P/N 05-12374.....**$369.00**



CRANKCASE VACUUM KIT

Included are the 321 stainless steel saddle mount fitting, mounting clamps, vacuum valve assembly and a complete safety by-pass with a .25 psi internal pop-off valve. This will put the finishing touch on your oil separator installation or breather system. Your engine will virtually stop all leaks and seeping when in service, due to the vacuum inside. This system stops any possibility of freezing up the breather tube in cold climates, as no moisture laden air is present in the engine and none can be inhaled through the overboard draft tube. The rarefied air and low pressure in the crankcase has a very dramatic effect on windage and oil in suspension, thus freeing up a little power and adding some efficiency. This will also greatly lower the boiling point of any moisture that finds its way into the engine. Any oil temperature over 160 degrees will get rid of all the moisture in turn the acids. Any lowering of pressure on the underside of the pistons is exactly the same as adding cylinder pressure on top. This results in a very noticeable power increase (on the average 180 HP engine, 3 to 5 HP). We hear this over and over with reports of higher static RPM, better climb and acceleration, lower fuel burn etc. The belly of your airplane will stay immaculately clean as anything that exits the separator or breather line will be consumed in the exhaust stream.

P/N 05-12429.....**$109.00**

CRANKCASE VACUUM VALVE



This reliable crankcase vacuum valve and 321 stainless steel fitting will put the finishing touch on your oil separator installation. This special valve in conjunction with our installation kit, complements the main product "THE ASA OIL SEPARATOR". Full installation and maintenance instructions will be included.

P/N 05-12371.....**$131.75**

MAGNETIC SUPER PLUG



This is the most powerful plug available and was designed specifically for GA aircraft use. This is about the least expensive thing you can add to your aircraft that will extend engine life and prevent damage to your engine. The plug end is very high quality with a special rolled thread to prevent leaks, is cad plated to prevent corrosion and drilled for safety wire. The rolled thread size is 1/2" npt and this fits all Lycoming, Continental, Franklin and many other aircraft engines. The extremely powerful high temperature, Alnico magnet is pressed and locked into the plug permanently and will outlast your engine. This powerful device extends into the oil and removes all ferrous material that is suspended in and circulating with your oil causing wear.

P/N 05-12373.....**$22.50**

OIL ANALYSIS KITS - ENGINE TREATMENT

AVIATION OIL ANALYSIS (AOA) KIT



A cost-effective service to enhance your aviation maintenance practices and provide confidence in the health of your engine. Aviation Oil Analysis (AOA) by ALS Tribology Division brings you a state-of-the-art oil analysis program designed specifically for aircraft owners. Oil analysis is an early warning system that reduces downtime, lowers maintenance costs, and helps you spot troubling issues before they become serious problems. AOA 'basic' kits can be ordered with or without return postage and include standard elemental analysis to detect evidence of engine component wear. A small vial, mailing bag, and information form are furnished with the order. Upon receipt at the laboratory in Phoenix, AZ, the oil sample is analyzed and a full report, including statistical analysis and interpretation, is forwarded within 24 hours and posted for viewing online. Note: insufficient postage will cause a delay in receipt of your sample, please consult your local post office or contact the laboratory (1-800-445-7930) regarding current postage rates.

Description	Part No.	Price
Basic Kit for Piston Engines (no return postage)	08-00436	**$12.95**
Basic Kit for Piston Engines (with return postage)	08-16223	**$19.50**
Basic Kit for Turbine Engines (no return postage)	08-00435	**$13.85**
Basic Kit for Turbine Engines (with return postage)	08-16224	**$19.95**
Advanced Kit for all Engines (with return postage)	08-16225	**$24.65**
Comprehensive Kit for all Engines (with return postage)	08-16226	**$89.75**

LAB ONE AVIATION (LOA) OIL ANALYSIS KIT



This kit includes a sample bottle, shipping container and the paperwork. Upon receipt, your sample will be processed within 24 hours with the results emailed or mailed from Lab One in Phoenix, AZ. Can be used on any reciprocating or turbine engine and helicopter transmissions and tail rotors P/N 08-01222 ..... **$12.95**

AVIATION LABS OIL FILTER ANALYSIS



Analysis of the oil filter only. The oil filter is rinsed and the debris removed is analyzed. The exact alloys present are determined by Scanning Electron Microscopy and EDXRF. The alloys are reported by AMS number. Amount, type, form and condition of particles are reported. Alloy spectra and metal maps for most aircraft engines. Filter analysis is a critical part of all preventative maintenance programs. Aviation Laboratories has been a leader in the development of filter analysis programs for aircraft engines since 1985. Analysis completed in 24 hours. pre-purchase inspection. P/N 08-10692..... **$64.75**

OTHER OIL ANALYSIS KITS

Description	Part No.	Price
Aviation Labs APU Oil Analysis	08-10693	**$79.95**
Aviation Labs CF34 Oil Filter Analysis	08-10694	**$86.75**
PW-MOP-NO PW100 Oil Filter Analysis	08-10695	**$86.75**
PW-RGB-NO PW100 Oil Filter Analysis	08-10696	**$79.95**
Aviation Labs PW305 Oil Filter Analysis	08-10697	**$79.95**
Aviation Labs FJ44-33 Oil Filter Analysis	08-10698	**$204.95**
Aviation Labs Chip Flakes Analysis	08-10699	**$129.95**
Aviation Labs AE3007 Oil Filter Analysis	08-10700	**$79.95**
Aviation Labs GA001-OF-PTG Oil Filter Analysis	08-13834	**$199.75**
Aviation Labs GA001-OFP Oil Filter Analysis	08-13835	**$170.75**

AVBLEND LUBRICANT



An oil supplement for all piston engine-powered aircraft owners and operators worldwide. Providing critical lubrication at start-up, AvBlend helps prevent accumulation of combustion chamber areas. Wear is reduced, engines stay cleaner and combustion chambers stay properly sealed. FAA approved. 4-cylinder engines require 1 can at each oil change, and 6 cylinder engines require 2 cans.

12oz. can .....P/N 08-05470 ..... **$14.50**
1Case (24 cans) .....P/N 08-05470-1 ..... **$319.00**

LYCOMING OIL ADDITIVE



Approved oil additive LW-16702 that contains an anti-scuffing agent and can dramatically reduce engine wear. Applicable to all Avco Lycoming piston aircraft engines, and factory recommends use at every oil change or every 50 hours, whichever occurs first. For 6-8 qt. sump, use one 6 oz. can, for 12-15 qt. sump, use (2) 6 oz. cans, for 17-19 qt. sump, use (3) 6 oz. cans, for 23 qt. sump, use (4) 6 oz. cans....P/N 08-05600..... **$41.60**

CAMGUARD OIL ADDITIVE



Designed to dramatically improve the performance of all mineral based , semi-synthetic and fully synthetic motor oils in the areas of corrosion protection, wear reduction, and seal protection. Designed to make regular engine oil what it needs to protect and lubricate any engine. A synergistic blend of advanced oil additives from all over the world, designed to reduce wear, curb deposit formation and more importantly protect engines against rust and corrosion. It contains multiple corrosion inhibitors for both ferrous and non-ferrous metals. A combination of ashless anti-wear compounds, anti-oxidants designed to reduce carbon deposits and special seal conditioners to prevent oil weeping. Camguard is FAA accepted and approved for use in piston engine aircraft oils meeting SAE-1899 standards.

1 pint..... P/N 08-07096.....**$22.95**
4 pints..... P/N 08-07097.....**$91.00**
Case of 12 pints..... P/N 08-07097-1.....**$245.95**
Gallon ..... P/N 08-14636.....**$189.95**
Auto oil additive 8 oz.bottles..... P/N 08-12126.....**$14.95**
Auto oil additive Case of 4..... P/N 08-12126-1.....**$325.00**
Combo Pkg. - 4 Bottles Aviation & 1 Bottle Auto
P/N 08-07096-C.....**$99.65**
Marine oil additive 8 oz..... P/N 08-01217-1.....**$14.95**
Marine oil additive Case of 4 ..... P/N 08-12127.....**$358.80**
Camguard Small Engine Supplement(pint) P/N 08-07402.....**$17.95**

MOBIL AGL SYNTHETIC AVIATION GEAR LUBRICANT

Mobil

MOBIL AGL
SYNTHETIC AVIATION GEAR LUBRICANT

Mobil AGL Synthetic Aviation Gear Lubricant offers measurably better wear protection for transmissions operating at high temperatures than Type I (MIL-L-7808) and Type II (MIL-L-23699) turbine oils, as well as wear resistance that is especially beneficial to military and other helicopters operating under unusual stresses. Mobil AGL is formulated with synthesized hydrocarbon-based fluids. The combination of a naturally high viscosity index and a unique proprietary additive system help enable the gear lubricant to provide outstanding performance in extreme service applications at high temperatures, well beyond the capabilities of mineral oils. Note: ExxonMobil recommends Mobil AGL for use in helicopter transmissions only. Before using Mobil AGL, operators should confirm the OEM's approved transmission lubricants. Size: 5 Gallon.

P/N 08-07406.....**$418.00**

MICROLON AIRCRAFT ENGINE TREATMENT

FLAMMABLE



One-time metal treatment that virtually eliminates friction in all internal combustion engines which improves performance (horsepower), reduces wear, and extends engine life. Also decreases fuel consumption, reduces oil consumption, and lowers operating temperatures. Impregnates the engines bearing surfaces, forming a dry film lubricant that lasts no matter how many times the oil is changed. Continental A-65, C-85, and C-90 engines take the Half Kit. Most Lycoming and Continental engines used in light aircraft take the Single Kit. Turbocharged and Radial engines take from 2 to 6 Single Kits. Call for details if you have any questions on the quantity of Microlon needed for your application.

Microlon CL-100 Aircraft Kit (Single).....P/N 09-35805 .....**$119.95**
Microlon CL-100 Aircraft Kit (Half) .....P/N 09-35810 .....**$75.50**

SHELL WATER DETECTOR



Water can occur in jet fuel in three forms, dissolved (chemically in solution in the jet fuel), settled (as in free water at the bottom of the tank), or as finely dispersed undissolved water held in suspension. The Shell Water Detector is designed to detect undissolved water; it has been proven reliably for 30 years. This is water that a filter separator can remove, and is usually invisible to the eye in quantities below 40-60 ppm. .....P/N 08-13897.....**$183.75**

AEROSHELL AVIATION OILS

AEROSHELL AVIATION OIL 15W-50 MULTIGRADE



Aeroshell Oil W 15 W 50 is a premium semi-synthetic multigrade ashless dispersant oil specifically developed for aviation piston engines. AeroShell Oil W 15 W 50 is a special blend of a high quality mineral oil and synthetic hydrocarbons with an advanced additive package..

Single Quart ..... P/N 08-05450 .....**$7.75**
Case of 12 ..... P/N 08-05451 .....**$93.00**
55 Gallon Drum ..... P/N 08-15636 ...**$1,598.00**

AEROSHELL AVIATION OIL W100 SAE50



Aeroshell W100 is an ashless, SAE 50 dispersant oil that provides excellent service in all four cycle aircraft piston engines. AeroShell Oils W80, W100 and W120 are produced to meet fully the SAE specification J-1899 (Grades SAE 30, 40, 50 and 60 respectively). Furthermore, they all have military qualification approval and are listed on the Qualified Products List (QPL) issued by the US Navy.

Single Quart ..... P/N 08-05400 .....**$6.75**
Case of 12 ..... P/N 08-05401 .....**$79.00**
55 Gallon Drum ..... P/N 08-15645 ...**$1,410.00**

AEROSHELL AVIATION OIL W100 PLUS



Single Grade Ashless Dispersant Engine Oils: .AeroShell Oil W100 Plus and W 80 Plus are new single grade oils that combine proven AeroShell ashless dispersant technology with advanced antiwear additives. They are the oils for pilots who want a single grade that delivers extra protection and performance. AeroShell Oil W 100 Plus and W 80 Plus brings together the best qualities of two of the world's best-selling four cycle aviation oils.

Single Quart ..... P/N 08-05485 .....**$7.50**
Case of 12 ..... P/N 08-05486 .....**$88.00**
55 Gallon Drum ..... P/N 08-15647 ...**$1,547.00**

AEROSHELL AVIATION OIL 100 SAE 50 MINERAL OIL



AeroShell Oil 100 is a straight mineral oil blended from selected high viscosity index base oil. This oil does not contain any additives except for very small amounts of pour point depressant (which aids to improve fluidity at very low temperatures) and an anti-oxidant. AeroShell Oil 100 is approved for all aviation piston engines of civil aircraft when the use of an oil not containing a dispersant additive is required; however, it should also be used during the break-in of a new aviation piston engine or those recently overhauled.

Single Quart..... P/N 08-05410 .....**$6.85**
Case of 12 ..... P/N 08-05411 .....**$78.75**
55 Gallon Drum ..... P/N 08-15642 ...**$1,289.00**

AEROSHELL AVIATION OIL W80 PLUS



Shell Oil W80 Plus introduces the anti-wear and anti-corrosion additives of AeroShell W100 Plus engine oil into a lighter, single-grade oil for use in colder climates. The anti-wear additive reduces wear on start-up by forming a microscopic layer on the engine's moving parts to prevent metal-to-metal contract when there is little oil present. Combined with a corrosion inhibitor, it is designed for pilots who fly either in cooler weather or less frequently.

Single Quart..... P/N 08-05920 .....**$7.25**
Case of 12 ..... P/N 08-05919 .....**$88.75**
55 Gallon Drum..... P/N 08-15646 ...**$1,598.00**

AEROSHELL AVIATION OIL 80 SAE 40 MINERAL OIL



AeroShell Oil 80 straight mineral oils blended from selected high viscosity index base oils. These oils do not contain any additives except for very small amounts of pour point depressant (which aids to improve fluidity at very low temperatures) and an anti-oxidant. AeroShell Oil 80 approved for all aviation piston engines of civil aircraft when the use of an oil not containing a dispersant additive is required; should also be used during the break-in of a new aviation piston engine.

Single Quart..... P/N 08-07507-1 .....**$6.50**
Case of 12 ..... P/N 08-07507 .....**$76.85**
55 Gallon Drum ..... P/N 08-15641 ...**$1,293.00**

AEROSHELL AVIATION OIL W80



An ashless dispersant oil specifically developed for aviation piston engines. No general rule exists for every engine type when choosing the correct grade of oil; however, based on the average ambient outside temperature at engine start-up the most common grades are SAE 40, SAE 50 and SAE 60, which equates to AeroShell Oil W80, W100 and W120 respectively.

Single Quart..... P/N 08-00884 .....**$6.75**
Case of 12 ..... P/N 08-01223 .....**$82.75**
55 Gallon Drum..... P/N 08-15644 ...**$1,418.00**

AEROSHELL AVIATION OIL W120 SAE 60



AeroShell Oil W120 is an ashless dispersant oil specifically developed for aviation piston engines. It combines non-metallic additives with selected high viscosity index base oils to give exceptional stability, dispersancy and anti-foaming performance. No general rule exists for every engine type when choosing the correct grade of oil; however, based on the average ambient outside temperature at engine start-up the most common grades are SAE 40, SAE 50 and SAE 60, which equates to AeroShell Oil W80, W100 and W120 respectively.

5 Litre Container(1.32 gallons) ..... P/N 08-00344-1 .....**$38.58**
Case of 3 ..... P/N 08-00344 **$115.75**55 Gallon
Drum..... P/N 08-00344-55 .....**$1,370.00**

AEROSHELL AVIATION OIL 65



AeroShell Oil 65 is straight mineral oils blended from selected high viscosity index base oils. These oils do not contain any additives except for very small amounts of pour point depressant (which aids to improve fluidity at very low temperatures) and an anti-oxidant. AeroShell Oils 65 is approved for all aviation piston engines of civil aircraft when the use of an oil not containing a dispersant additive is required; however, they should also be used during the break-in of a new aviation piston engine or those recently overhauled.

Quart.....P/N 08-15640 .....**$8.00**
Case of 12 .....P/N 08-15640-1 .....**$93.00**

AEROSHELL TURBINE 500



A 5 centistoke synthetic hindered ester oil incorporating additives to improve thermal and oxidational stability and also metal passivation. AeroShell Turbine Oil 500 was developed essentially to meet the requirements of Pratt & Whitney 521 B Type II and MIL -L-23699 specifications and is entirely suitable for all civil and military engines requiring this class of lubricant. The outstanding high temperature and oxidation stability of AeroShell Turbine Oil 500 is due to the natural properties of the synthetic hindered ester base fluids used.

Single Quart..... P/N 08-00581 .....**$13.25**
Case of 12 ..... P/N 08-00582 .....**$314.00**

AEROSHELL TURBINE OIL 555



An advanced 5 mm2/s synthetic hindered ester oil incorporating a finely balanced blend of additives to improve thermal and oxidation stability. Specifically developed to meet the high temperatures and load carrying requirements of SST engines and the DEF STAN 91-100 (formerly DERD 2497) and XAS-2354 specifications. AeroShell Turbine Oil 555 was also designed to give enhanced performance in current engines. More recently with the need to transmit more power and higher loads through helicopter transmission and gearbox systems (many helicopters use a synthetic turbine engine oil in the transmission/gearbox system) it has become apparent that the use of a very good load carrying oil, such as AeroShell Turbine Oil 555is necessary.

Single Quart..... P/N 08-00757 .....**$13.25**
Case of 12 ..... P/N 08-00758 .....**$339.00**

AEROSHELL TURBINE OIL 560



A third generation 'low coking' 5 centistoke synthetic hindered ester lubricating oil. It incorporates advanced additive technology and a fine balance of additives to resist the high temperatures generated by turbine engines. Also improves the thermal and oxidational stability. The outstanding high temperature and oxidation stability of AeroShell Turbine Oil 560 is due to the natural properties of the synthetic hindered ester base fluid used. These fluids are clean running in that they tend to dissolve varnish and sludge rather than leave deposits on working surfaces. AeroShell Turbine Oil 560 was developed essentially to meet the high temperature requirements of both modern engines and future models.

Single Quart..... P/N 08-00759 .....**$14.50**
Case of 12 ..... P/N 08-00760 .....**$335.00**

AEROSHELL TURBINE OIL 308



AeroShell Turbine Oil 308 is a 3 mm2 /s synthetic ester oil incorporating additives to improve resistance to oxidation and corrosion and to minimize wear. AeroShell Turbine Oil 308 was developed specifically for use in particular models of aircraft turbo-prop and turbo-jet engines for which a MIL-PRF-7808 (formerly MIL-L-7808) oil is required. AeroShell Turbine Oil 308 contains a synthetic ester oil and should not be used in contact with incompatible seal materials and it also affects some paints and plastics.

Quart.....P/N 08-14702 .....**$14.25**
Case of 12 .....P/N 08-14702-1 .....**$346.00**

EP

AVIATION OILS



AEROSHELL TURBINE OIL 390

Helps to improve auxiliary power unit (APU) starting reliability, particularly coldsoak starting. Products such as ASTO 390 are commonly used in the APUs of four-engine intercontinental aircraft, but are now being considered for use in twin-engine aircraft.

Quart.....P/N 08-14703 .....**$14.50**
Case of 24 .....P/N 08-14703-1 .....**$348.00**

AEROSHELL 2 TURBINE OIL

AeroShell Turbine Oil 2 is a 2 mm2/s mineral turbine oil blended from mineral base stocks to which a pour-point depressant and an anti-oxidant have been added. Widely used for inhibiting fuel systems and fuel system components during storage. AeroShell Oil 2 is an analogue to the Russian Grade MK-8 and can therefore be used in turbine engines which require the use of MK-8.

55 Gallon Drum .....P/N 08-14705 .....**$1,576.00**



AEROSHELL 3 TURBINE OIL

AeroShell Turbine Oil 3 is a 3 mm 2 /s mineral turbine oil blended from mineral base stocks to which a anti-corrosion additive has been added. AeroShell Turbine Oil 3 was developed for early pure jet engines and is still approved for some versions of these engines plus the Turbomeca Astazou, Artouste, Turmo, Bastan and Marbore engines.

55 Gallon Drum .....P/N 08-14704 .....**$1,682.00**



AEROSHELL FLUID 3

AeroShell Fluid 3 is a general purpose mineral lubricating oil recommended for general lubrication of aircraft parts that require a light oil with good low temperature characteristics and a low freezing point. It is inhibited against oxidation and corrosion. AeroShell Fluid 3 is a relatively low viscosity product with good resistance to evaporation.

Gallon .....P/N 08-14710 .....**$36.50**
Case of .....P/N 08-14710-1 .....**$232.00**

AEROSHELL TURBINE OIL 750

AeroShell Turbine Oil 750 is a 7½ mm2/s synthetic mixed ester oil containing a thickener and additives which provide excellent load carrying, thermal and oxidation stability.

Quart.....P/N 08-15765 .....**$18.00**
Case of 24 .....P/N 08-15765-1 .....**$451.00**

AEROSHELL COMPOUND 7

AeroShell Compound 07 is a de-icing fluid composed of ethylene glycol, isopropyl alcohol and distilled water. AeroShell Compound 07 is also recommended for removing hoar frost and light snow/ice from parked aircraft. AeroShell Compound 07 can be sprayed undiluted or mixed with up to 50% volume of water, depending upon the severity of the icing conditions, the efficiency of the spraying technique and whether it is applied hot or cold.

5 Gallon .....P/N 08-14712 .....**$168.75**

AEROSHELL 2XN PRESERVATIVE FLUID



AeroShell Fluid 2XN is a corrosion preservative concentrate for protecting infrequently used engines. It uses an ashless anti-corrosion additive package and highly refined mineral base oils to protect internal engine surfaces from the Effects of humidity. It is also designed to neutralize the acidic by-products of oil oxidation and combustion. AeroShell Fluid 2XN can be used neat to long-term storage, but it is typically mixed with one part AeroShell Fluid 2XN to three parts fresh AeroShell Oil 100 to create an inhibited oil. It can also be sprayed undiluted on piston-engine exhaust ports, Rocker arms and accessories to provide additional protection.

5 Gallon .....P/N 08-14701 .....**$359.00**

AEROSHELL DIESEL ULTRA



AeroShell Oil Diesel Ultra is a fully synthetic, multigrade engine oil designed for use in the new generation of compression ignition (Diesel) Aviation Piston Engines. The formulation has been selected to be suitable in piston engines fueled by Jet A or Jet A-1 and is designed for use in the latest highly rated turbocharged diesel engines under all operation conditions. AeroShell Oil Diesel Ultra MUST NOT be used in spark ignition, or Avgas powered aircraft engines.

5W-30 Liter .....P/N 08-10754 .....**$14.00**
5W-30 Case of 12 .....P/N 08-10754-1 .....**$164.75**



AEROSHELL OIL SPORT PLUS 4

AeroShell Oil Sport Plus 4 is ideal; as it is extremely resistant to the immense sheer forces that occur in areas of high-pressure contact such as high-speed gearboxes, valve trains, bearings, pistons and liners. This is where the blend of base oil and additives is most crucial. AeroShell Oil Sport Plus 4 is made up of a blend incorporating synthetic technology and high performance additives to provide long lasting protection. So when you change your oil to new AeroShell Oil Sport Plus 4, you are not only removing dirt from your engine, you are also replenishing the additives used to protect your engine during normal operation. ***DO NOT use AeroShell Oil Sport Plus 4 in engines that are designed to use Ashless Dispersant aviation piston engine oils such as AeroShell W Oils. This includes air cooled Teledyne Continental Motors, Textron Lycoming and Jabiru engines.***

4 Cycle Sport Plus 4 Oil (Case of 12)..... P/N 08-07047 .....**$126.95**



EXXON ELITE AVIATION OIL

Exxon Elite™ 20W-50 is a multigrade oil with the flexibility to lubricate effectively over a wider range of temperatures than monograde oils. Compared to a monograde oil, a multigrade oil provides better cold-start protection and a stronger lubricant film at typical operating temperatures. FAA approved fluid for Alternative Method of compliance w/AD-80-04-03-R2, paragraph b.1

Quart..... P/N 08-00392 ...**$10.85** Case.....P/N 08-00432...**$109.00**



MOBIL JET OIL II (AVIATION)

Mobil Jet Oil II helps keep oil systems clean. That can mean less maintenance more flying and greater revenue. Mobil Jet Oil II has a history of helping to keep aircraft where they belong - in the air generating revenue. Today, about 160 major airline use Mobil Jet Oil II in more than 11,000 gas turbine engines.

Quart ..... P/N 08-00763 .....**$17.50**
Mobil Jet II Case... P/N 08-00764 .....**$399.00**
55 Gallon Drum .... P/N 08-15960 ..**$3,249.00**



MOBIL JET OIL 254

Mobil Jet Oil 254 is a third-generation synthetic lubricant made from a specially prepared hindered-ester base stock fortified with a special chemical additive package. The result is a product having superior thermal and oxidation stability that resists deterioration and deposit formation, while maintaining the physical characteristics required by builder and military specifications.

QT..... P/N 08-07374-1 **$18.75** Case .....P/N 08-07374....**$445.00**



EXXON MOBIL HYJET IV-A PLUS

Exxon HyJet IV-A plus is a fire-resistant phosphate ester hydraulic fluid designed for use in commercial aircraft. It is the best-performing Type IV fluid and approaches to a great extent many of the performance capabilities of Type V fluids, including high temperature stability, long fluid life, low density, and rust protection.

It is superior to all other Type IV fluids in these respects. Exxon HyJet IV-A plus meets the specifications of all major aircraft manufacturers and SAE AS1241.

1 Quart..... P/N 08-15974-1 .....**$25.75**
Case of 24 Quarts..... P/N 08-5974.....**$617.00**
1 Gallon ..... P/N 08-15957-1 .....**$102.95**
Case of 6 Gallons ..... P/N 08-15957.....**$607.00**
55 Gallon Drum..... P/N 08-15974-55 ...**$4,954.00**



MOBIL JET OIL 387

Proactively developed to respond to the evolving needs of customers and the industry, Mobil Jet Oil 387 is the most advanced Mobil turbine oil ever developed. Specifically formulated to deliver unsurpassed engine performance, it strikes the perfect balance, providing optimal engine performance and advanced protection for engines and components. It will meet the performance requirements of both current and future, advanced gas turbine engines used in commercial and military service. Mobil Jet Oil 387 is approved for use in an array of engine models and components.

Quart..... P/N 08-16230-1 .....**$22.55**
Case of 24 Qt..... P/N 08-16230.....**$545.00**
55 Gal. Drum ..... P/N 08-16231.....**$4,955.00**



POLY-FIBER ESO ENGINE STORAGE OIL

A fine lubricating and preservative oil used to prevent corrosion in internal combustion engines during extended storage. MIL-1-21260.

Quart.....P/N 09-42450 ..... **$24.00**
Gallon .....P/N 09-42455 ..... **$89.00**

EP

Prices Subject to Change Without Notice

EASTMAN OILS – SKYDROL



EASTMAN TURBO OIL 2380

Turbo Oil 2380 is recommended for the lubrication of most aircraft gas turbines and accessories. It is also recommended for the lubrication of aero-derived gas turbines in industrial power generation, offshore and marine applications.

Single Quart ..... P/N 08-00761 ..... **$18.50**
Case of 24 ..... P/N 08-00762 ..... **$411.00**
5 Gal ..... P/N 08-13061 ..... **$398.00**
55 Gal. Drum ..... P/N 08-13753 ..... **$3,416.00**



EASTMAN TURBINE OIL 2389

Turbo Oil 2389 is a 3 cSt synthetic lubricant. Turbo Oil 2389 is approved against US military specification MIL-PRF-7808L grade 3 and incorporates a level of technology from Type II (5 cSt) commercial turbine lubricants.

Single Quart ..... P/N 08-13757-1 ..... **$19.95**
Case of 12 ..... P/N 08-13757 ..... **$438.00**
55 Gal. Drum ..... P/N 08-13757-55 ..... **$3,670.00**



EASTMAN TURBINE OIL 25

Turbo Oil 25 is a 5 cSt high load carrying synthetic lubricant which was developed to meet the requirements of supersonic aircraft engines. Approved against US military specification DOD-L-85734(AS), and UK military specification DEF STAN 91-100/1 (DERD 2497). Designed to meet the severe requirements of helicopters.

Single Quart .. P/N 08-13758-1 ..... **$20.50**
Case of 12 ..... P/N 08-13758 ..... **$480.00**
55 Gal. Drum. P/N 08-13758-55 ..... **$3,862.00**



EASTMAN TURBINE OIL 2197

Eastman Turbo Oil 2197 is a latest generation 5 cSt High Thermal Stability (HTS) synthetic lubricant that is approved against US military specification MIL-PRF-23699 HTS. It is formulated to provide exceptional high temperature cleanliness in vapor mist and liquid film areas, as well as outstanding oxidative, thermal and hydrolytic stability. It provides exceptional performance in the most demanding existing turbines as well as new generation turbines just entering service. Eastman Turbo Oil 2197 is the newest turbo oil, designed to be a "fleet-wide" oil especially suitable for hot aircraft and aeroderived engines.

Single Quart ..... P/N 08-12341 ..... **$18.75**
Case of 12 ..... P/N 08-12341-1 ..... **$443.00**
5 Gallon Pail ..... P/N 08-13959 ..... **$379.00**

EASTMAN TURBINE OIL 157
55 GALLON DRUM

Eastman™ HALO 157 is a clear amber colored fluid with a faintly aromatic odor reminiscent of turbine engine oils. It is based on selected polyol esters, the inherent characteristics of which are enhanced by additives. also fully compatible and miscible with other oils approved to specifications, MIL-PRF-23699 and MIL-PRF-7808. Multiple testing has been completed in bearing and gearbox rigs and flight evaluations culminating in the NATO standard (AIR STANDARD ACS 4035) for a 9 cSt advanced Helicopter Gear Box Lubricant.

P/N 08-13960 ..... **$4,724.00**



SKYDROL LD-4 HYDRAULIC FLUID

Skydrol LD-4 was also introduced in 1978, and is today the largest selling aviation phosphate ester fluid in the world. At the time of its introduction it was a breakthrough product, solving problems of valve erosion and thermal stability common in earlier fluids. Its excellent thermal stability under real world conditions has given it a reputation as the gold standard among Type IV fluids. In recent years it has received an additional qualification of 5000 psi approval under Boeing BMS 3-11 (Type V, Grade B and Grade C). Skydrol LD-4 features low density, excellent thermal stability, valve erosion prevention, and deposit control.

Single Quart ..... P/N 08-12239 ..... **$36.25**
Case of 24 Quarts ..... P/N 08-12239-1 ..... **$835.00**
Gallon ..... P/N 08-12241 ..... **$131.95**
Case of 6 Gallons ..... P/N 08-12241-1 ..... **$780.00**
5 Gallon ..... P/N 08-12240 ..... **$575.00**
55 Gallons ..... P/N 08-13994 ..... **$5,631.00**



SKYDROL 500-B4 HYDRAULIC FLUID

The Skydrol 500 series of fluids has the longest service history among phosphate ester products. The first version, Skydrol 500, was introduced in 1952. Steady improvements to the formulation led in 1978 to the current version, Skydrol 500B-4 which contains the same breakthrough anti erosion additive and acid scavenger found in Skydrol LD-4. Skydrol 500B-4 is the most worker friendly of the aviation phosphate esters; it is least irritating to skin and less prone to form mists which can be irritating to the respiratory tract. This has given the product enormous popularity for use in workshops and indoor test stands.

Single Quart ..... P/N 08-12463 ..... **$39.50**
Case of 24 Quarts ..... P/N 08-12463-1 ..... **$916.00**
Gallon ..... P/N 08-12462 ..... **$143.95**
Case of 6 Gallons ..... P/N 08-12462-1 ..... **$825.00**
55 Gallons ..... P/N 08-13995 ..... **$6,221.00**



SKYDROL HYDRAULIC FLUID SKY-5

Introduced in 1996, Skydrol 5 was the first Type V fluid qualified under the Boeing BMS 3-11 specification. Skydrol 5 offers higher temperature capability than Type IV fluids, the lowest density, and better paint compatibility. Skydrol 5 does not have universal air frame manufacturer approval, so please consult Solutia's Skydrol Technical Service (800-260-4150) for specific approval and application information.

Single Quart ..... P/N 08-12242 ..... **$41.25**
Case of 24 Quarts ..... P/N 08-12242-1 ..... **$987.00**
1 Gallon ..... P/N 08-13996 ..... **$158.95**
Case of 6 Gallons ..... P/N 08-13996-1 ..... **$914.00**



SKYDROL PE-5 HYDRAULIC FLUID

Skydrol PE-5 was developed to meet and exceed the more demanding Type V fluid requirements. It features the longest fluid life of any commercially available fluid, low density and low viscosity at low temperature; an unbeatable combination of the best features for optimum fluid performance. Thermal Stability according to Airbus test method, Fluid life test with 0.5% moisture level.

Single Quart ..... P/N 08-14001 ..... **$37.75**
Case of 24 Quarts ..... P/N 08-14001-1 ..... **$824.00**
Gallon ..... P/N 08-14003 ..... **$131.95**
Case of 6 Gallons ..... P/N 08-14003-1 ..... **$770.00**
5 Gallon ..... P/N 08-14005 ..... **$551.00**
55 Gallons ..... P/N 08-14006 ..... **$5,143.00**



SKYKLEEN ® 1000 AVIATION SOLVENT

A generation aviation solvent that combines excellent cleaning performance with environmentally friendly characteristics. Cleaning Applications: • Skydrol® removal • Polysulfide sealant removal (cured/uncured) • RTV removal Degreasing • Carbon removal (brake and piston housings) • Engine cleaning • Final cleaning prior to painting and bonding • General surface cleaning • Carbon epoxy composite surface cleaning • Fiberglass resin removal • Adhesive/epoxy removal.

16 oz. ..... P/N 08-13911 ..... **$20.25**
Case of 16 oz. ..... P/N 08-13911-1 ..... **$312.00**
5 Gallon ..... P/N 08-13909 ..... **$192.90**
54 Gallons ..... P/N 08-13910 ..... **$1,573.00**



SKYKLEEN ® 2000 AVIATION SOLVENT

Combines excellent cleaning performance with environmentally friendly characteristics. Cleaning Applications: • Adhesive/Epoxy Removal • Carbon Epoxy Composite Surface Cleaning • Carbon Removal (Brake and Piston Housings) • Degreasing • Engine Cleaning • Fiberglass Resin Removal • Final Cleaning prior to Painting and Bonding • General Surface Cleaning • Polysulfide Sealant Removal (Cured/Uncured) • RTV Removal • Skydrol Removal

Single Quart ..... P/N 08-13912 ..... **$104.95**
Case of 8 Quarts ..... P/N 08-13912-1 ..... **$790.00**
5 Gallon ..... P/N 08-13914 ..... **$1,735.00**

EP

AVIATION OILS & GREASES

PHILLIPS 66 X/C AVIATION OIL 20W50



X/C oils provide easy starting and quick lubrication under low temperature conditions. Provides film strength and low wear under high temperature conditions. Provides excellent protection against engine deposits, ring groove carbon, piston lacquer, crankcase sludge and oil oxidation. Contains ashless dispersant which keeps engine clean. With more than 10 years of outstanding field performance, X/C oil meets Avco-Lycoming & Teledyne Continental engine specifications.

Single Quart..... P/N 08-05300 .....**$5.75**
Case of 12 Quarts ..... P/N 08-05301 .....**$69.75**
Gallon ..... P/N 08-13854-1 .....**$20.75**
Case of 4 Gallons..... P/N 08-13854 .....**$82.75**
55 Gal. Drum ..... P/N 08-07506 ...**$1,082.00**

PHILLIPS 25W-60 ENGINE OIL



X/C 25W-60 is the first and only multiviscosity aviation oil designed and approved for radial engines originally designed to run on 120 grade. Pilots and mechanics will notice immediate benefits with X/C 25W-60 over single grade oils. Benefits such as improved oil flow at startup, quicker warm-up time, cooler operating temperatures and a cleaner operating engine. X/C 25W-60 also has proven corrosion protection in extreme conditions. X/C 25W-60 can be used year-round, during break-in and on to TBO.

Quart..... P/N 08-13856-1 .....**$4.75**
Case of 12 Quarts ..... P/N 08-13856 .....**$68.75**
Gallon ..... P/N 08-00885 .....**$23.75**
Case of 4 Gallons..... P/N 08-00886 .....**$84.75**
2.5 Gallon Container (Case of 2)..... P/N 08-13857 .....**$105.80**
55 Gallon Drum ..... P/N 08-13855 ...**$1,124.00**

PHILLIPS 66® AVIATION OIL VICTORY 100AW



Phillips 66® Victory Aviation Oil 100AW is an ashless dispersant, single-grade engine oil pre-blended with the proper concentration of antiscuff/antiwear additive (LW-16702) as mandated by Lycoming Service Bulletins 446E and 471B and Service Instruction 1409C. It is recommended for use in opposed piston and radial piston aircraft engines where cam lifter wear is a concern.

Quart..... P/N 08-13850-1 .....**$5.50**
Case of 12 Quarts ..... P/N 08-13850 .....**$67.75**
55 Gallon Drum ..... P/N 08-14860 ...**$1,113.00**

PHILLIPS 20W-50 MINERAL OIL



Type M is generally recommended and used as a break-in oil for newly overhauled aircraft engines. Type M is generally used by engine overhaul and repair shops for the initial run-in of aircraft piston engines. Type M 20W-50 is designed for owners and pilots who want the performance of a multi-viscosity, mineral based piston engine aviation oil without dispersant additives.

Single Quart..... P/N 08-07197 .....**$5.50**
Case of 12 ..... P/N 08-07198 .....**$64.75**
55 Gallon Drum..... P/N 08-13846 ...**$1,078.00**

PHILLIPS 66 TYPE A 100AD OIL



Phillips 66 Type A 100AD is a premium, single grade oil designed for opposed piston aircraft engines that call for SAE 50 or Commercial Grade 100 oils.

Single Quart ..... P/N 08-00882 .....**$5.75**
Case of 12..... P/N 08-05321 .....**$66.75**
55 Gallon Drum..... P/N 08-13847 .....**$1,038.00**

PHILLIPS 66® AVIATION ANTI-RUST OIL



Helps preserve aircraft piston engines during periods of inactivity. For planes that are infrequently flown, we recommend replacing up to 10% of the crankcase volume with Aviation Anti-Rust Oil 20W-50 protects against corrosion.

Gallon ..... P/N 08-07401-1 ..... **$27.69**
Case (46 Gal) ..... P/N 08-07401 ..... **$110.75**
55 Gallon Drum ..... P/N 08-13845 ..... **$1,283.00**

PHILLIPS 66 XC AERO OIL SAE



X/C Aviation Oil was the first FAA-approved mineral oil-based, ashless dispersant, multiviscosity aviation engine oil. Recommended for use in radial piston engines and in other aviation piston engines originally designed to run on heavier-grade oils, such as Commercial Grade 120.

P/N 08-13023.....**$52.25**

PENNZOIL OIL



Two-cycle oil for air-cooled engines. Recommended by engine manufacturers for air- and water-cooled engines.

8oz. Single Bottle.....P/N 08-06261 .....**$2.45**
Case of 8 oz. Bottles .....P/N 08-06260 .....**$54.75**

AEROSHELL GREASES



Shell Aviation offers a range of aviation greases designed to fill almost every lubrication need of the aviation community. Aeroshell greases are now slightly darker in color than before due to new factory formulation.

Description	14 oz Tube PN	Price 14 oz Tube	6.6 lb Can PN	Price 6.6 lb Can
Aeroshell Grease # 5	08-05455	**$11.65**	08-12335	**$73.50**
Aeroshell Grease # 6	08-05460	**$9.25**	08-13568	**$58.95**
Aeroshell Grease # 7	08-05475	**$19.00**	08-12238	**$139.00**
Aeroshell Grease # 14	08-05480	**$8.50**	08-13151	**$61.95**
Aeroshell Grease # 22	08-05490	**$12.65**	08-12236	**$89.25**
Aeroshell Grease # 33	08-00825	**$16.75**	08-13462	**$116.00**
Aeroshell Grease # 64	08-00824	**$19.75**	08-13962	**$136.75**

Description	Size	Part No.	Price
Aeroshell Grease # 22	5 Gallon	08-15792	**$474.00**
Aeroshell Grease # 14	5 Gallon	08-15766	**$309.00**
Aeroshell Grease # 33	5 Gallon	08-15769	**$641.00**
Aeroshell Grease # 64	5 Gallon	08-15771	**$755.00**
Aeroshell Grease # 5	5 Gallon	08-15772	**$389.00**
Aeroshell Grease # 6	5 Gallon	08-15773	**$304.00**
Aeroshell Grease # 7	5 Gallon	08-14586	**$647.00**

MOBIL GREASE 28



Mobilgrease 28 meets the quality level of U.S. Military Specification MIL-G-81322G, General-Purpose, Aircraft, and is approved against U.S. Military Specification DOD-G-24508A (Navy) for shipboard auxiliary machinery. It can be designated U.S. Military Symbol WTR and NATO Symbol G-395.

Grease 28 ..... P/N 08-06157 ..... **$14.85**
Case ..... P/N 08-07400..... **$577.00**
5 Gallon ..... P/N 08-14587..... **$512.00**

EXXON MOBIL GREASE 33 (CARTRIDGE)



Mobligrease33 is a true multipurpose aviation grease intended for use in highly loaded anti-friction bearings, gears, and actuators as well as instruments, high speed bearings (though not recommended for wheel bearings), and general airframe lubrication, over operating temperatures from 100° F to 250° F.

Cartridge...P/N 08-07407-1....**$15.85** Case....P/N 08-07407 ..**$625.00**

GREASE SHC-100



Mobil Aviation Grease SHC 100 is the product of choice for aircraft wheel bearing applications. Exceptional performance of Mobil Aviation Grease SHC 100 includes long grease life, enhanced bearing protection and bearing life in aircraft wheels, and wide temperature range of application.

4.4 lb. Can ..... P/N 08-13740..... **$81.00**
Case of 4 Cans..... P/N 08-13742..... **$324.00**

ISOFLEX GREASE FOR ROTAX ENGINES

Synthetic long-term lubricating grease for a wide service temperature range. Low starting and running torque. Good wear protection Good corrosion protection. Resistant to oxidation and ageing. 400 gram cartridge.

P/N 15-08430 .....**$186.75**

LEVER ACTION GREASE GUN



Multipurpose grease gun. Uses 14 ounce cartridges, bulk loaded, or loaded through a dispenser. Comes with 6" nozzle and 9" flex hose

P/N 08-07180 .....**$31.50**

ROYCO 560 TURBINE OIL



A synthetic ester-based, broad application, 5 cSt turbine engine oil that is blended with corrosion inhibition in mind and for strong oxidative and thermal stability performance. These ester lubricants include hydraulic and aviation fluids, preservatives, turbine oils, drivetrain oils, performance greases and specialty products. They are engineered to meet or exceed the most rigorous application requirements including military specifications, Boeing approvals, and public transportation constraints.

Quart..... P/N 08-13989-1.....**$21.50**
Case of 24 Quarts..... P/N 08-13989.....**$444.00**

ROYCO 586M LUBRICANT OIL

LANXESS Energizing Chemistry

A blend of highly refined mineral oils and additives that achieve excellent load carrying capacity and corrosion/oxidation inhibition. A higher viscosity and load carrying capacity than Royco® 586L Lubricating Oil. Designed for application in gear boxes and specified helicopter transmissions. High temperature load carrying lube which meets MIL - PRF - 6086 specifications.

5 Gallon ..... P/N 08-16222 .....**$223.95**

EP

CLEAN FUNNEL™


model 112


model 415


model 428

Clean Funnel™ is the funnel that keeps itself clean. Replacing the caps on each end after each use prevents left over fluid from dripping out, and keeps your work area or baggage compartment clean. No need to wipe your funnel out with a rag before reusing. Clean Funnel™ is ideal for use with fuel or oil as well as windshield washer fluid, detergents, antifreeze, hydraulic fluid, and more. Great for aircraft, automobiles, motorcycles, tractors, boats, ATV's snowmobiles, and more.

- Model 112 (turquoise) has a 1 pint fluid capacity and a 12" vinyl tube attached to its spout, making it very handy to reach into small or tight spaces.
- Model 415 (red) has a 1-1/2 quart capacity, 17" long with flexible spout, and spout I.D. is 9/16".
- Model 428 (black) has 1-1/2 quart & 13-1/4" long with a flexible spout and 1-1/8" O.D. spout.

Model #	Color	Part No.	Price
112	Turquoise	12-00374	**$8.50**
415	Red	12-00375	**$10.70**
428	Black	12-00376	**$10.70**

DISPOSABLE FOLDING OIL FUNNELS



These disposable funnels are very popular among aircraft owners and pilots for adding engine oil. They store flat, clean and dry in a reclosable bag, and eliminate the messy cleaning when using a regular funnel. Also ideal for brake fluid, resins, and paints. Furnished in pack of 10 funnels.

Pack of 10....P/N 08-00040.....**$3.55**

OIL DRIP PAN



The drip pan is 54-1/2" x 32-1/2" x 2" and is manufactured out of an extremely durable and chemical resistant plastic (high density polyethylene). White in color, our drip pan is neat and clean in appearance and allows for easy visual inspection and monitoring of any engine leaks. The size and design of the drip pan will collect virtually any leaking fluids and eliminate the need for five quart pails and other messy collection containers. It is also a convenient place to pour fuel samples. Specifically designed for general aviation.

P/N 08-06700.....**$129.00**

OIL DRIP PANS



These newly developed oil Drip Pans are designed to protect floors from those irritating drips of oil, fuel and hydraulic fluid. They are overlapping to prevent drips from getting between the pans. Their interlocking feature allows various pan sizes to be joined, protecting floors from all shapes and sizes of aircraft. Their lightweight and durable plastic design makes for easy set-up and clean-up. The interlocking feature allows various pan sizes to be joined, protecting floors from all shapes and sizes of aircraft, cars, buses, trucks and more! " Includes: (1) DripPansUSA Oil Absorbent Pad, made of a minimum of 40% recycled polypropylene.

18" X 48" Interlocking ..... P/N 08-07508 ..... **$29.95**
24" X 30" Interlocking ..... P/N 08-07378 ..... **$29.95**

DRIP PAN OIL ABSORBANT PADS



DripPansUSA Oil Absorbent Pads Absorb: oil, coolants, transmission fluids, other hydroid fluids, and water. Can also be used under and around machinery, as shelf liners, and for other clean-up applications. Made of durable blown polypropylene and have many other uses around the home and shop. DripPansUSA Oil Absorbent Pads are made of a minimum of 40% recycled polypropylene. Available in 6pk, 8pk and 12pk sizes. DripPansUSA Oil Absorbent Pads are made in the USA.

6 Pack.....P/N 08-07510 ..... **$7.95**
8 Pack.....P/N 08-07511 ..... **$9.95**
12 Pack.....P/N 08-07512 ..... **$13.95**

CANKEY TURBINE OIL CAN OPENER

The CanKey turbine oil can opener is a simple and inexpensive tool that will open turbine oil cans without the risk of debris entering the can. Using other tools to open the oil cans can lead to metal shavings and other FOD being left in the can which can lead to damage to engine parts. Eliminate this issue by using the CanKey. P/N 08-13836.....**$5.95**

TURBINE OIL / HYDRAULIC FLUID CAN DUST CAP



Turbine oil / hydraulic fluid can dust cap.

P/N 08-13837.....**$1.50**

DRIP TRAP - OIL ABSORBENT



Drip Trap is a mat made of corn stalks which captures oil, coolant, and other aviation fluids that can drip from the aircraft. Drip Trap measures 20" x 20" and can absorb up to 6 quarts of oil. It won't blow away, can be driven on, won't tip over like a drip pan, and can be walked on without tracking the fluids on the hangar floor. Excellent for use with aircraft, cars, SUV's, trucks, motorcycles and in shops. When Drip Trap is fully saturated just dispose of it and replace. Drip Trap is the environmentally friendly and economical way to capture and contain drips and spills. P/N 13-04950 ..... **$22.95**

OIL SAVER FUNNEL



The OIL-SAVER is simple in appearance, but a great deal of research has gone into its design. It consists of a basic rectangular funnel that's molded to hold six inverted oil bottles, the contents of which gradually drain out and into the depository of choice -- usually another oil bottle, leaving the plastic bottles clean enough for recycling.

And with thousands of funnels already in use, they have proven to be versatile, practical tools that allow you to save money and recycle.

Features: Innovative, Customer Friendly, Multi-purpose Containment Residual Liquid Reclamation, Pro-active, Money-making Design, Exceeds Recycling Standards, Convenient Storage, Global Application, No Assembly Required, Green / Enables Consumer to Take Pre-emptive Steps to Protect the Environment.

Color	Part No.	Price
Red	08-07391	**$12.95**
Orange	08-07533	**$12.95**
Yellow	08-07534	**$12.95**
Green	08-07535	**$12.95**
Blue	08-07536	**$12.95**
White	08-07537	**$12.95**

BOGERT AVIATION ENGINE CESSNA OIL QUICK DRAIN STC



Drain oil in wind or shop with little clean up. Saves money on clean up, solvent, labor and parts. Oil goes into bucket without splashing or spilling. Made in the USA

Approved for: Cessna 210J through 210 R, T210J through T210R, P210H through P210R, 337 through 337H, T337B through T337H, and P337H, 310 through 310R, T310P through T310R, 320 through 320F, 340, and 340A, 401 through 401B, 402 through 402C, 404, 411, 411A, 414, 414A, and 421 through 421Cnd 421 through 421C

Description	Part No.	Price
Single Engine Kit Includes: 1 ea. 09-OQD STC Paper work 1 ea. 09-Probe 1 ea. 09-BJ107 Valve w/o-ring 1 ea. 09-AN900-10 Gasket	12-02101	**$286.95**
Twin Engine Kit Includes: 1 ea. 09-OQD STC Paper work 1 ea. 09-Probe 2 ea. 09-BJ107 Valve w/o-ring 2 ea. 09-AN900-10 Gasket	12-02102	**$488.00**

VALVOLINE VV825 HIGH PERFORMANCE GEAR OIL



Valvoline® High Performance Gear Oil is a thermally stable, extreme-pressure gear lubricant that withstands severe temperatures and shock loading while providing excellent anti-wear, anti-scuffing, rust and corrosion protection. Reduced chattering in limited-slip differentials. Gear teeth wear protection from pitting and scouring. All hypoid differentials (conventional and limited slip) and manual transmissions in passenger cars, light trucks, sport utility vehicles, vans and heavy-duty trucks where an API-GL5 or MT-1 fluid is specified. P/N 15-05963.....**$11.65**

FUELING NOZZLE REPLACEMENT HANDLES



Aviation Underwing Fueling Nozzle replacement handle. Colors available are black /red. UV-Fuel-Chemical resistant. Flame Retardant. Non marking. Exceeds FAA and Military Standards. -20 F TP 200 F Service integrity. (4.40" length x open dia 0.65" x depth of 1.15") dimensional tolerance +- 0.10. Material Urethane rigid 80 shore A +- 7.5

Single Black..... P/N 08-13561 ..... **$18.50**
Single Red..... P/N 08-13562 ..... **$18.50**
Set of Black..... P/N 08-13563 ..... **$34.55**
Set of Red..... P/N 08-13564 ..... **$34.50**

EP

SPOUT DUST COVERS

Spout Covers for OPW 295 Series. D Spout Cover/Dust Cover. Colors available are red, black and blue.





Round			
Size	**Color**	**Part No.**	**Price**
1”	Red	08-13555	**$18.50**
1”	Black	08-13556	**$18.50**
1”	Blue	08-13557	**$19.75**
1.5”	Red	08-13558	**$18.65**
1.5”	Black	08-13559	**$20.50**
1.5”	Blue	08-13560	**$20.50**
Rectangular			
Size	**Color**	**Part No.**	**Price**
1.5”	Red	08-13552	**$26.50**
1.5”	Black	08-13553	**$19.75**
1.5”	Blue	08-13554	**$26.50**

NO SPILL OIL SPOUT™ WITH ON-OFF VALVE



Patented On/Off valve. Adjustable flow. No-mess... No-spill. Rev. B 3-11 P/N 14-00024 ..... **$6.95**

SUPER FLEXI-SPOUT



Works great for hard to reach areas. Dual threading fits most sized containers. Perfect for adding motor oil, anti-freeze, transmission and windshield washer fluid.

P/N 14-00707 ..... **$3.75**

OIL BUDDY (NO SPILL)



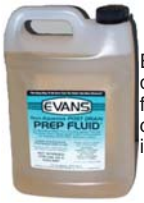
For do it yourself oil changes or refilling small tanks in lawn mowers, snowblowers and chainsaws, Oil Buddy is your best tool. Eliminating the messy cleanup and spillage problems, Oil Buddy gets the job done fast and easy without getting your clothes dirty. For small fill ups, the Oil Buddy screws onto the head of the oil container and can be left there for further use if the bottle is still partially full. When the valve is closed, oil can't get out and dirt can't get in. Even if the oil container gets knocked over, no spillage will occur. Fits most 1-Quart /1-Litre bottles. P/N 13-03144 ..... **$2.75**

EVANS NPG + COOLANT FOR ROTAX ENGINES



NPG+ is new coolant providing dramatic improvements in heat transfer and viscosity that make the new fluid a “pour-in,” not requiring changes to cooling system components. NPG+ waterless coolant virtually eliminates boil over in gasoline or diesels - the waterless coolant allows engines to tolerate running hotter, without boiling over, and allows the cooling system to run at very low or no pressure. Because there is no water in the system engines operating with NPG+ will be free from corrosion and electrolysis, and the engines will run well no matter how hard they are driven or how hot or cold the environment is. Specified coolant for Rotax Aircraft Engines, Type 912 and 914 (series). P/N 08-04535.....**$45.52**

EVANS PREP FLUID



Evans Waterless Flush is used when systems cannot be drained properly of all the conventional water and anti-freeze. Suggested to be used with experimental aircraft conversion and all motorcycle, ATV and import cars. Not intended to be used as a coolant.

P/N 08-04534.....**$31.96**

SHELL DEXCOOL® ANTIFREEZE / COOLANT



Single-phase, ethylene glycol based, extended life, universal automotive engine coolant. Suitable for a five year or 150,000 mile service life in automotive applications. It meets GM6277M-General Motor's Extended Life Coolant specification and will provide effective, long term corrosion protection for critical engine metals.

P/N 15-05767 ..... **$24.50**

NEXT AIRCRAFT SERVICE DUE - STICKERS



Service reminder decal “NEXT AIRCRAFT SERVICE DUE” decal is black text on white semigloss background with “FILL IN” blanks. Removable decal is designed to adhere to any surface and not leave residue behind, perfect for aircraft rentals, owners, CFI's, trainers, service/repair stations, POH, log books, instrument panels, windows. Decal measures 3” x 3”.

P/N 09-02137 .....**$0.45**

OIL INJECTION / WATER OVERFLOW RESERVOIRS



Constructed of high density polyethylene, these blow molded multi-purpose tanks offer excellent durability and resistance to most chemical and fluids. Express service tanks come with a cap and straight fittings. All tanks come with a 2-1/4” buttress thread cap and a straight fitting which fits a 1/4” hose. All sizes nominal. Height includes neck & fittings. Width includes mounting tabs. Max working temperature is 180-deg F and max working pressure is 5 PSI. 1 Quart 6.21” x 7.74” x 3.62” **Includes 1/4” barb spigot molded on bottom** .....P/N 15-06828 .....**$28.50**
1.5 Quart 7.71” x 7.74” x 3.62” .....P/N 15-06830 .....**$12.75**
2 Quart 7.04” x 8.632” x 4.173” .....P/N 15-06936 .....**$22.85**
4 Quart 11.652” x 8.632” x 4.173”.....P/N 15-04841 .....**$22.00**

Accessories

Reservoir Tank Cap with Seal - 2-1/4”.....P/N 15-05092 .....**$3.65**
Nylon Vented Cap - 2-1/4” .....P/N 15-06936-1 .....**$3.60**
Oil Water Reservoir Only .....P/N 15-06936-2 .....**$19.65**

FORM-A-FUNNEL®



Aviation Funnel, go with the flow. When you need to get into a tight, hard to reach place or require extra length, the Aviation model (29” x 5”) is the tool for the job.
Thick, pliable nitrile rubber coating completely encases a thin, bendable layer of aluminum alloy that resists wear.
Reshape and reuse it over and over.
Edges can be molded around filters or drains to create a leak-proof seal.
Keeps oil off of engines, frames and surrounding parts.
Highly compatible with common automotive fluids.
Works in temperatures from -30F° to 425F°.
Cleans easily with cleaners and degreasers.

Aviation Funnel (29” x 5”).....P/N 12-03148 .....**$34.99**
General Purpose Funnel (14.5” x 6.5”) .....P/N 12-03147 .....**$21.99**
General Purpose Kit (14.5” x 6.5” & 9” x 4.75”)
P/N 12-04819 .....**$33.00**

ROTELLA OIL 15W-40



Shell ROTELLA® T SAE 15W- 40 is a leader in meeting leading OEM specifications, as well as the enhanced oil performance requirements for API CI - 4 PLUS, Caterpillar ECF-1, Mercedes-Benz 228.3, Cummins CES 20078, Detroit Diesel 93K214, Mack EO-N Premium Plus 03, Mercedes-Benz 228.3, and Volvo VDS-3, and meets the warranty requirement of all major diesel engine manufacturers. P/N 15-05767 .....**$24.50**

MOBIL 1 4T MOTORCYCLE OIL



Mobil 1 Racing 4T oil meets all the requirements for Rotax 4 stroke aircraft engines. This is a full synthetic oil designed for motorcycles, however is an excellent choice for Rotax 4 stroke aircraft engines because of the gearbox and close internal tolerances. Mobil 1 Racing 4T has been fully tested, both on laboratory dynamometers and in the field, to help provide optimum horsepower and acceleration.

P/N 08-13892.....**$16.95**

SEAFOAM MOTOR TREATMENT SF-16



Sea Foam 16 oz. motor treatment for gas and diesel engines For use in gas, ethanol, diesel or biodiesel engines. Internal engine use only. Can be used in 2-cycle and 4-cycle engines. •100% pure petroleum product. Works instantly to clean deposits from internal engine parts and remove moisture from oil crankcases and fuel tanks. As a fuel system additive, and an oil system additive. P/N 09-04615 .....**$14.95**

EP

Prices Subject to Change Without Notice

PIG® OIL ABSORBENT PRODUCTS



PIG® LIGHT WEIGHT OIL ONLY ABSORBENTS

Hangs anywhere, goes anywhere! Grab one Pad or the whole tablet to clean up an oil-based spill or splatter in any corner of the shop. Durable PIG® Oil-Only Mat quickly soaks up gas and oil but won't waste absorbency on water like rags or floor sweep! Self-extinguishing material helps eliminate fire hazards; melts instead of burning if contacted by direct flame.

100 each 15"x20" Pads ..... P/N 08-07317 ..... **$44.85**
15"x50 ft. Roll ..... P/N 08-07320 ..... **$21.75**



PIG® MEDIUM WEIGHT OIL ONLY ABSORBENTS

Clean up oil-based spills without wasting absorbency on water. Unlike rags or floor sweep, PIG® Water-Repellent Oil-Absorbent Mat quickly soaks up gas and oil but repels water from rain, slush, washdowns, ponds and sumps and more!.

*3 each 15"x20" Pads ..... P/N 08-07354 ..... **$4.85**
100 each 15"x20" Pads ..... P/N 08-07318 ..... **$65.80**
30"x150 ft. Roll ..... P/N 08-07321 ..... **$105.99**



PIG® UNIVERSAL LIGHTWEIGHT ABSORBENTS

This Tablet goes anywhere to clean up drips, spills or splatters throughout the shop. Easier to use than floor sweep, so it reduces cleanup time. And with no damaging dust and grit to track around, the shop stays cleaner! Convenient pop-up tabs let you hang the Tablet anywhere you need it

*15 each 14"x14.25" Pads ..... P/N 08-07314 ..... **$13.50**
100 each 15"x20" Pads ..... P/N 08-07312 ..... **$64.75**
15"x50 ft. Roll ..... P/N 08-07315 ..... **$21.90**



PIG® MEDIUM WEIGHT UNIVERSAL ABSORBENTS

Genuine PIG® Mat is the better way to soak up drips, spills and splatters, and spend more time repairing vehicles. Easier to use than floor sweep so it reduces cleanup time. And with no damaging dust and grit to track around, the shop stays cleaner! • Safely absorbs and retains oil, coolants, water, grease, gasoline, solvents, auto fluids, paint overspray, battery acid and most other liquids

*3 each 15"x20"Pads ..... P/N 08-07353 ..... **$4.50**
100 each 15"x20" Pads ..... P/N 08-07313 ..... **$77.75**
30"x150 ft. Roll ..... P/N 08-07316 ..... **$122.85**

PIG® UNIVERSAL ABSORBENT SOCKS



Wrap flexible, self-contained PIG® Socks around tanks, drum areas and puddles to halt the spread of liquid while the Socks' thirsty absorbent filler absorbs it. Easier to use and clean up than messy floor sweep! • Moldable Socks surround equipment, drums or tanks and contain spills to keep them from spreading into walkways; also great for catching liquid that seeps under overhead doors Safely absorbs and retains oil, coolants, water, grease, gasoline, solvents, auto fluids, paint overspray, battery acid and most other liquids.

*2 Universal Socks ..... P/N 08-07324 ..... **$9.95**
12 Universal Socks ..... P/N 08-07327 ..... **$44.50**
12 Water Repelling Socks (oil only) P/N 08-07325 ..... **$59.75**

*** Designates item pictured.**

PIG® UNIVERSAL LIGHT WEIGHT ABSORBENT DRUM-TOP PADS



Eliminate messy drum storage areas without touching a mop or rag! Precut to fit on 55-gallon drums, Quickly absorb drips or overfills to help keep your shop clean and safe, so you can focus on repairing vehicles. Highly absorbent material traps liquids, so it won't drip or leave behind fibers when you pick it up; spend less time collecting used absorbent between jobs.

5 Pads ..... P/N 08-07328 ..... **$11.50**
20 Pads ..... P/N 08-07329 ..... **$39.50**

PIG® MAGNETIC ROLL HOLDER



Keep your PIG® Mat within an arm's reach for easy access and hassle-free dispensing. The PIG® Magnetic Roll Holder attaches to any metal surface to keep Mat off the floor and close at hand. • Holds one 15"W x 50'L PIG® Mat Roll (P/N 08-07320 or P/N 08-07315) for easy one-hand dispensing• Durable, powder-coated steel resists chips, rust and corrosion • Powerful magnets keep Roll Holder firmly in place during dispensing; can be removed and relocated in seconds.14.5" Magnetic Roll Holder

P/N 08-07331 ..... **$24.95**



PIG® VERTICAL ROLL HOLDER

Dispense PIG® Mat the convenient way with this handy roll holder! Its free-standing, locking metal frame adjusts to accept a wide variety of rolls and is collapsible for compact storage. • Adjust center bar to change width; choose 16" to save space and keep small rolls from sliding or 33" to maximize PIG® Mat supply. ..... P/N 08-07332 ..... **$74.85**



PIG® UNIVERSAL SPILL KIT

Respond to spills fast so you can get back to work. Our hi-viz Kit has the supplies you need for quick cleanups, and it's so affordable you can stock every spill-prone spot in your shop or stash one in each fleet vehicle for better liability protection! • Moldable Socks • Mat Pads • Bright nylon Bag stands out, so you can find it when you need it.

Universal Spill Kit..... P/N 08-07326 ..... **$57.75**

PIG® TRAFFIC MAT® RUG



Help keep extreme-traffic walkways dry and safe with this highly durable, absorbent Rug. Heat-fused TRAFFIC MAT® Rug won't rip or fray, even under wheeled traffic, so it's perfect for ensuring heavy-use, splash-prone areas stay clean and injury free. • incredible durability; won't ball or fray, even under wheeled traffic • Roll out to add traction and absorbency near parts washers, paint areas, work benches, doorways, service bays and other high-wear areas • Self-extinguishing material helps eliminate fire hazards; melts instead of burning if contacted by direct flame.

*36"x150 Ft. Standard Mat ..... P/N 08-07322 ..... **$137.99**
36"x100 Ft. Polybacked Mat..... P/N 08-07323 ..... **$225.95**

PIG AIRCRAFT SPILL KITS

Versatile spill kits go in a compartment or mounted container to keep you prepared for spills.



DUFFEL BAG - Fluids Absorbed: Oils, Coolants, Solvents & Water Spill Volume: 1 - 9 gal. Weight: 9.36 lbs. Includes: 3 - ext. dia. 3" x 48" L PIG® Blue Absorbent Sock (4048) 15 - 15" W x 20" L PIG® Absorbent Mat Pad (MAT204) 1 - ext. dia. 3.25" x 1.75" H PIG® Plug-N-Seal® No-Freeze Patching Paste (PTY237) 1 - Collapsible Container 1 - Economy Goggles (GLS290-AF) 1 - 13" L Showa-Best Chem Master(TM) Neoprene Gloves (GLV213-XL) 1 - Apron 5 - 18" W x 30" H Polyethylene Disposal Bags (BAG201-S) 1 - Lightstick 1 - Instructions. P/N 08-13247 ..... **$163.80**



STOWAWAY BAG - Fluids Absorbed: Oils, Coolants, Solvents & Water Spill Volume: 1 - 9 gal. Weight: 11.5 lbs. Includes: 3 - ext. dia. 3" x 48" L PIG® Blue Absorbent Sock (4048) 40 - 15" W x 20" L PIG® Absorbent Mat Pad (MAT204) 2 - ext. dia. 3.25" x 1.75" H PIG® Plug-N-Seal® No-Freeze Patching Paste (PTY237) 1 - Collapsible Container 1 - 13" L Showa-Best Chem Master(TM) Neoprene Gloves (GLV213-XL) 1 - Economy Goggles (GLS290-AF) 1 - Apron 1 - Lightstick 5 - 18" W x 30" H Polyethylene Disposal Bags (BAG201-S) 1 - Instructions. P/N 08-13245 ..... **$198.75**



TOTE BAG - Fluids Absorbed: Oils, Coolants, Solvents & Water Spill Volume: 1 - 9 gal. Weight: 20.15 lbs. Includes: 4 - ext. dia. 3" x 48" L PIG® Blue Absorbent Sock (4048) 25 - 15" W x 20" L PIG® Absorbent Mat Pad (MAT204) 1 - PIG® LITE-DRI® Loose Absorbent (PLP218) 1 - 10" W x 12" L PIG® Premoistened Hand and Surface Wipers (WIP1300) 2 - ext. dia. 3.25" x 1.75" H PIG® Plug-N-Seal® No-Freeze Patching Paste (PTY237) 1 - Collapsible Container 5 - 18" W x 30" H Polyethylene Disposal Bags (BAG201-S) 1 - Dustpan/Broom 1 - Economy Goggles (GLS290-AF) 1 - 13" L Showa-Best Chem Master(TM) Neoprene Gloves (GLV213-XL) 1 - Apron 1 - Lightstick 1 - Instructions. P/N 08-13246 ..... **$270.95**

EP

ULTRALIGHT ENGINE ACCESSORIES



SPARK PLUG CADDY

Handy case holds (2) 14mm spark plugs. Small enough to fit into your pocket.

P/N 13-03869 ..... **$3.95**



SPARK PLUG WRENCH

Loosen or tighten your spark plugs with this handy tool.

P/N 13-03921 ..... **$3.90**



PLASTIC STARTER HANDLE

Black flexible plastic heavy duty handle.Tested to –40°F

P/N 13-03865 ..... **$6.50**



SPARK PLUG JACK

Rivets or screws to any flat surface and holds two spare 14mm plugs. Tough polycarbonate plastic with spring-loaded plug anchors keeps plugs dry and protects gaps. P/N 13-03870 ..... **$6.50**



NYLON STARTER ROPE

The perfect replacement rope for worn-out manual starters. P/N 13-03922 ..... **$0.45 per ft.**



SPARK PLUG CAPS

Original NGK. Black. 5000 ohm resistance. P/N 08-00737 is used on threaded type plugs. P/N 08-04960 is used on solid top plugs.

P/N 08-00737 ..... **$2.75**
P/N 08-04960 ..... **$2.60**



SPARK PLUG WIRE

High-quality multi-strand copper core unshielded wire. 7mm diameter. For all Rotax® and most other engines. Replaces Rotax® Part No. 965-158.

P/N 11-04105 ..... **$1.03 per ft.**



FLEXDRIVE

PosiFlex coupler for Quicksilver®

For 377/477 w/o high-thrust mod ..... P/N 05-01985 ..... **$269.95**
For all high-thrust mods ..... P/N 05-01986 ..... **$330.00**



POSI-FLEX DRIVESHAFT

Greatly reduces vibration transmitted to the airframe. Internal rubberized flex joint allows for slight changes in shaft alignment. A popular update on most older Quicksilver aircraft. Also used as standard equipment on all current shaft drive Quicksilver aircraft. Cuyuna 430 or Rotax 503. 25-1/2" blunt.

P/N 15-06600 ..... **$204.95**



RATIO-RITE CUP

Getting the right oil-to-gas ratio is no problem with this tough polypropylene cup. Just fill the cup with oil to the ratio level desired, and mix with gasoline. Ratios from 16:1 to 50:1. Graduated in ounces and CCs for filling chain cases, etc. 18 oz. capacity.

Cup ..... P/N 08-01091 ..... **$4.35**
Lid ..... P/N 08-03677 ..... **$1.80**



SYPHON MATE

Here's a safe and easy method of fuel transfer. A simple jiggle of the Syphon Mate establishes the flow, and then air pressure maintains it. Never wears out, and it's guaranteed for three years. The outlet end is 1/2", 6' length standard pipe thread for easy attachment to a garden hose, if needed. ..... P/N 05-01018 ..... **$8.75**



AIR-TECH ROTAX GEAR BOX CLUTCH RK400

The primary purpose of the clutch is to disengage the prop from the engine allowing it to start and operate at idle without vibration. When the engine is idling (below 2350 RPM) the prop is not turning. Installation of the clutch replaces the gear box flywheel and the hardy disk. Added weight is approx. 3 Lbs. P/N 10-04811 ..... **$549.00**



CRAZEDPILOT ROTAX 582 GEARBOX BADGE PLATE

Fits E-Drive aka E-Box gearbox AND the C-Box gearbox. Package comes complete with 2 plates, and includes properly threaded bolts with aluminum standoffs to provide original air ventilation from gearbox. Powder coated for maximum lifespan. P/N 11-13317 ..... **$39.00**

STAINLESS STEEL FIREWALL SHIELDS

Two piece shields for use over cables or wires with large end-fittings or existing installations. Single piece for use where the cable or wire may pass through the hole. Flat shields designed for use on wooden or composite firewalls using a fire resistant sealant to prevent leaks. Both types of shield available in flat or with dimple to accommodate rubber grommets up to outside diameter.

Actual hole size in 2 piece shields is slightly larger than indicated to prevent chafing cable. Ream pilot hole in single piece shields oversize for the size grommet used. Use grommets that fit tightly around the cable or wire to insure a good seal.

Shields may be installed with screws, bolts and plate nuts or rivnuts. Install cable and grommet in firewall. Locate the shield to insure that it is centered on the cable - then drill attach holes in firewall. Shields pre-drilled with 5/32" mounting holes. If more than one cable passes through grommet fire resistant sealant must be applied to grommet.

Caution: Any holes drilled in the firewall are potential source of carbon monoxide in the cockpit. Extreme caution must be exercised when installing firewall shields in your aircraft. They do not provide the necessary seal around cables or wires to prevent carbon monoxide, smoke or fire from entering the cockpit. The shields are designed only to protect the sealing material (grommets/gaskets) from excessive heat.



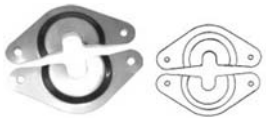
Two piece firewall shield, 5/32-Inch hole with 3/4-Inch dimple for grommet.

P/N 08-13832 ..... **$9.50**



Two Piece 3/8" Hole 1" Dimple For Grommet

P/N 61-375 ..... **$11.50**



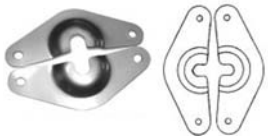
Two Piece 3/8" Hole 1-1/4" Dimple For Grommet

P/N 61-475 ..... **$11.50**



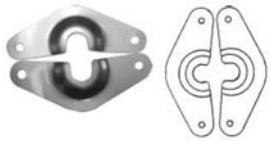
Two Piece 1/2" Hole 3/4" Dimple For Grommet

P/N 61-300 ..... **$11.50**



Two Piece 1/4" Hole 3/4" Dimple For Grommet

P/N 61-250 ..... **$11.50**



Two Piece 3/8" Hole 3/4" Dimple For Grommet

P/N 61-275 ..... **$11.50**



FLEXDRIVE

PosiFlex coupler for Quicksilver®

For 377/477 w/o high-thrust mod ..... P/N 05-01985 ..... **$269.95**
For all high-thrust mods ..... P/N 05-01986 ..... **$330.00**



CRAZEDPILOT ROTAX 503 BADGE PLATE

These Rotax 503 Badge Plates covers that ugly hole in the side of your Rotax gearbox on the side of your Rotax 503 engine. Comes complete with 2 plates, and includes properly threaded bolts with aluminum standoffs to provide original air ventilation. Powder coated for maximum lifespan.

P/N 11-14864 ..... **$33.50**



ROTAX THROTTLE SPRINGS 6822

A common complaint about the Rotax 912/914 engines is that the throttle return springs are too strong. McFarlane stocks a variety of springs so you can choose the one that best fits your application. All McFarlane throttle controls for Rotax engines include P/N 6822 spring. Less than half the strength of the original stock Rotax springs. Prevents throttle "creep" due to excessive return spring force. Requires 1 per carburetor (2 per engine) Note: Installer is responsible for determining whether this spring is an appropriate substitution for their application. For use on non-certified aircraft. Comes in a pack of two.

P/N 05-12477 ..... **$19.80**

Prices Subject to Change Without Notice

BARRY ENGINE MOUNTS



Barry Controls has actively supported the general aviation market since 1981 and holds PMA approvals on a wide range of engine mounts. Barry mounts are warranted for 500 hours or 12 months and feature outstanding quality & value. Call for unlisted part numbers.

BEECHCRAFT

Aircraft		P/N	Engine	Price
Common Name	Model			
Skipper	77	94150-40	All	$118.85
Sport	B19, M19A	94150-01	All	$87.75
Sundowner	C23	94150-01	All	$87.75
Bonanza	S-35-V35, A, B, C33A, E33A, C, F33A, C, 36	7351231-3	All	$143.75
Bonanza	A36	7351231-3	All	$143.75
Sport (Musketeer)	19A	94150-01	All	
Twin Bonanza	E50, G50, H50, F50, J50	94110-40	All	$94.75
Turbo Baron	56TC, A56TC	94011-04	All	$137.65
Baron	58P	94031-03	All	$179.90
Baron	58TC	94031-03	All	$179.90
Baron	A24, A24R, B24R, C24R, D55, D55A, E55, E55A, 58, 95-C55, 95-C55A	96068-01	All	$208.85
Baron	99-55, 95-A55, 95-B55, 95-B55A	96071-01	All	$496.00
Bonanza	C35-G35	96115-01	All	$331.00
Duke	60, A60, B60	94011-04	All	$137.65
Queen Air	65, A65, 65/80, 65/88, 65-A80, 65-B80, 70	94110-40	All	$94.75
Duchess	76	94011-02(2)	All	$119.75
		94011-20(2)	All	$133.75
Travel Air	95, B95, A, D95A, E95	94150-40	All	$118.85

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine

GULFSTREAM

Aircraft		P/N	Engine	Price
Common Name	Model			
	111	94011-02(02)	All	$119.75
		94011-20(02)	All	$133.75
	112, B, T, TC, TCA	94011-02(02)	All	$119.75
		94011-20(02)	All	$133.75
Twin Commanders	500	94110-01	All	$134.75
	500A	94110-40	All	$94.75
	560A, E, F	94110-40	All	$94.75
	680, E, F, FL, FLP	94110-40	All	$94.75
	685	94001-01	All	$242.95
	720	94110-40	All	$94.75
Cougar	GA-7	94011-20	All	$133.75
Tiger	AA5B	94011-20	All	$133.75

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine **** AIRCRAFT SERIAL NUMBERS***

VANS

Aircraft		P/N	Engine	Price
Common Name	Model			
	RV-3	94011-20	All	$133.75
	RV-4	94011-20	All	$133.75
	RV-6	94011-20	All	$133.75

CIRRUS DESIGN

Aircraft		P/N	Engine	Price
Common Name	Model			
Cirrus	SR20 - PMA Approved	96355-01	All	$329.00
Cirrus	SR22- PMA Approved	96301-01	All	$363.00

CESSNA

Aircraft		P/N	Engine	Price
Common Name	Model			
	152, 152A	94150-40	All	$118.85
Skyhawk	172I, J, K, L, M, N, P	94011-20	All	$133.75
Skyhawk / Cutlass	172RG, Q, R, S	J-9613-72HA	All	$174.75
	P172D	94110-40	All	$94.75
	R172E	94017-01	All	$195.50
Skylark	175, A, B, C	94110-40	All	$94.75
Cardinal	177, A, B	94011-20	All	$133.75
	180, A thru H	94110-40	All	$94.75
Skylane	182, A thru R	94110-40	All	$94.75
	R182, TR182, T182	94011-02	All	$119.75
Skylane	182S, T	J-9613-82HA	All	$204.95
Skywagon	185, A thru F, A185F	94110-40	All	$94.75
	188	94110-40	All	$94.75
Stationair	206, U206, A thru G, P206,A thru E	94030-01	All	$135.75
		94031-01	All	$144.75
Stationair	206H, T206H	J-15195-4HA	All	$358.00
	TP206, A thru E, TU206, A thru G	94030-01	All	$135.75
		94031-01	All	$144.75
	207, A, T207, T207A	94030-01	All	$135.75
		94031-01	All	$144.75
Yates Aircraft Conversion	A188B	94007-01	All	$326.00
Centurion	210, A thru C 210, D thru H, J	94110-40	All	$94.75
		94030-01 (2)	All	$135.75
		94031-01 (2)	All	$144.75
Centurion	210K thru N	94030-01 (2)	All	$135.75
		94031-01 (1)	All	$144.75
		94031-02 (1)	All	$267.95
Turbo Centurion	T210F thru H	94030-01 (2)	All	$135.75
		94031-01 (1)	All	$144.75
		94031-02 (1)	All	$267.95
Turbo Centurion	T210J thru N	94030-01 (2)	All	$135.75
		94031-01 (1)	All	$144.75
		94031-02 (1)	All	$267.95
Pressurized Centurion	P210N, R	94030-01 (2)	All	$135.75
		94021-01 (1)	All	$264.95
		94021-02 (1)	All	$397.00

CESSNA TWIN ENGINE

Aircraft		P/N	Engine	Price
Common Name	Model			
	310B, C	94110-40	All	$94.75
Skynight	320, A thru C	94016-03	All	$169.85
	320D, E, F	94006-01	All	$172.75
	ALT.	94017-01	All	$195.50
Skymaster	336	94016-01	All	$210.95
	337, A thru F	94017-01	All	$195.50
	P337H	94017-01	All	$195.50
	T337, B thru F	94017-01	All	$195.50
	340, A	94006-01	All	$172.75
	401, A, B	94006-01	All	$172.75
Business Liner	402, A thru C	94006-01	All	$172.75
Titan	404	94001-01	All	$242.95
	411, A	94001-01	All	$242.95
Chancellor	414, A	94006-01	All	$172.75
Golden Eagle	421, A thru, C	94001-01	All	$242.95

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine

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EP

BARRY ENGINE MOUNTS

DEHAVILLAND

Aircraft		P/N	Engine	Price
Common Name	Model			
Beaver	DHC-2 MK1	MB100875	P&W R985	---
Otter	DHC-3	MB4040	P&W R-1340	---

PIPER

Aircraft		P/N	Engine	Price
Common Name	Model			
Cherokee 140	PA28-140	94150-01	*20002-24999	**$87.75**
	PA28-140	94011-02 (2)	*25000-7125641	**$119.75**
		94011-20 (2)	*25000-7125641	**$133.75**
	PA28-140	94011-02 (2)	*7225001 & UP	**$119.75**
		94011-20 (2)	*7225001 & UP	**$133.75**
Cherokee 150	PA28-150	94150-01	All	**$87.75**
Cherokee 160	PA28-160	94150-01	All	**$87.75**
Warrior	PA28-151	94011-02 (2)	0-320-E3-D	**$119.75**
		94011-20 (2)	All	**$133.75**
Warrior	PA28-161	94011-02 (2)	All	**$119.75**
		94011-20 (2)	All	**$133.75**
Cherokee180	PA28-180	94150-01	*1761-4377	**$87.75**
	PA28-180	94150-01	*4378-5149	**$87.75**
Cherokee Six	PA32-300	94110-02	*32-7240056 & UP	**$139.75**
Archer	PA28-180	94011-20	*5151 & UP	**$133.75**
Archer II	PA28-181	94011-20	All	**$133.75**
Arrow	PA28R-180	94011-20	*3000 & UP	**$133.75**
	PA28R-200	94011-20	*35001-7135329 IO-360-C1C	**$133.75**
Arrow II	PA28R-200	94011-20	*7235001 & UP	**$133.75**
Turbo Arrow II	PA28R-201T	94006-01	TSIO-360-F, FB	**$172.75**
Arrow III	PA28R-201	94011-20	*7737002 & UP	**$133.75**
Turbo Arrow III	PA28R-201T	94006-01	All	**$172.75**
Dakota	PA28-236	94011-02	*0-540-J3A5D	**$119.75**
Comanche 250	PA25-250	94110-01	0-540-A1A	**$134.75**
Comanche 260	PA24-260	94110-01	IO-540-E or D4A5	**$134.75**
Comanche 400	PA24-400	94011-04	IO-720	**$137.65**
Cherokee Lance	PA32R-300	94110-02	IO-540-K1G5D	**$139.75**
Lance II	PA32RT-300	94110-02	IO-540-K1G5	**$139.75**
Saratoga	PA32-301	94011-02 (2)	All	**$119.75**
		94011-03 (2)	All	**$126.75**
Saratoga S.P	PA32R-301	94011-02 (2)	All	**$119.75**
		94011-03 (2)	All	**$126.75**
Tomahawk	PA38-112	94150-01	0-235	**$87.75**
Brave	PA36-300	94110-02	All	**$139.75**
Pawnee 235	PA25-235	94110-01	All	**$134.75**
Pawnee 260	PA25-260	94110-01	All	**$134.75**

PIPER TWIN ENGINE

Aircraft		P/N	Engine	Price
Common Name	Model			
Apache 235	PA23-235	94110-01	0-540-B1A5	**$134.75**
Aztec	PA23-250	94110-01	0-540, IO-540	**$134.75**
Aztec C, F	PA23-250	94011-02	IO-540-C4B5, CIB5	**$119.75**
Twin Comanche	PA30	94011-03	All	**$126.75**
	PA39	94011-03	All	**$126.75**
Turbo Navajo	PA31	94011-02	All	**$119.75**
Navajo C/R	PA31-325	94011-02	TIO-540-F2BD(L)	**$119.75**
Navajo Chieftain	PA31-350	94011-02	TIO-540-J2BD(L)	**$119.75**
Seneca	PA34-200	94011-20	All	**$133.75**
Seneca II	PA34-200T	94006-01	All	**$172.75**
Seneca III	PA34-220T	94006-01	All	**$172.75**
Seminole	PA44-180	94011-20	All	**$133.75**
Turbo Seminole	PA44-180T	94011-20	All	**$133.75**
Aerostar	PA60-700P	94011-40	All	**$373.00**
	PA60-600, 601	94011-01	All	**$153.75**
	PA60-601P,602P	94011-01	All	**$153.75**

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine * AIRCRAFT SERIAL NUMBERS

PILATUS PC-12

Compatible Aircraft: PC-12. PC-12/45. PC-12/47. PC-12/47E

Description	Part No.	Price
New	08-15950	**$2,128.00**
Rebuilt	08-15950-1	**$1,432.00**

MAULE

Aircraft		P/N	Engine	Price
Common Name	Model			
Rocket	M-4-210, C, S, T	94016-01		**$210.95**
	M-5-210C	94016-01		**$210.95**
	M-5-235, C	94016-02		**$174.75**
	M-6-235	94016-02		**$174.75**
Orion/Super Rocket	M-7-235/260, M-8-235	94016-02	0-540-J/10-540-J	**$174.75**

MOONEY

Aircraft		P/N	Engine	Price
Common Name	Model			
PFM	M20L	95167-01	Porsche	**$958.00**
Chaparral	M20E 1964 Only	94150-01	0-360-A1A	**$87.75**
Chaparral(Super 21)	M20E 1965 & Newer	94011-02	IO-360-A1A	**$119.75**
Executive	M20F	94011-02	IO-360-A1A	**$119.75**
201	M20J	94011-20		**$133.75**
231	M20K	94006-01	TSIO-360	**$172.75**
	CAP231	94016-44	ALL	**$458.00**
	M20A	94150-40	0-360-A1A, D	**$118.85**
	M20A	94150-01	0-360-A1A	**$87.75**
Master	M20D	94150-40	0-360-A1D, A2D	**$118.85**
Ranger	M20B	94150-40	0-360-A1A, D	**$118.85**
Ranger Mark 21	M20C	94150-40	0-360-A1A,D	**$118.85**
Statesmen	M20G	94150-40	IO-360-A1D	**$118.85**

LANCAIR

Aircraft		P/N	Engine	Price
Common Name	Model			
Lancair	235	94150-41	0-235	**$138.75**
Lancair	320	94150-41	0-320	**$138.75**
Lancair	360	94150-41	0-320, 0-360	**$138.75**
Lancair	4	94001-01, (2)	TIO-550, TIO-520	**$242.95**
		94011-20, (2)	TIO-550, TIO-520	**$133.75**
Lancair	ES	94017-01	All	**$195.50**
Columbia	300	94001-01	IO-550	**$242.95**

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine

SIAI MARCHETTI

Aircraft		P/N	Engine	Price
Common Name	Model			
	F260	94110-01	All	**$134.75**
	S208	94110-01	All	**$134.75**

SOCATA

Aircraft		P/N	Engine	Price
Common Name	Model			
Rallye	235C, E	94011-20	0-540-B4B5	**$133.75**

PRATT & WHITNEY TURBO PROPS

Aircraft		P/N	Engine	Price
Common Name	Model			
P&W Turbo Prop	5906-25A5	08-10679	PT-6	**$1,023.00**

REBUILT ENGINE MOUNT FOR PT-6

This engine vibration isolator assembly(engine mount) is for a variety of PT6 turbo-prop powered aircraft. Rebuilt. P/N 08-10679 .**$1,023.00**

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LORD ENGINE MOUNTS



LORD ELASTOMERIC ENGINE MOUNTS

These compression type couplings consist of bonded rubber joints pressed into the sockets of metal hubs. These dynafocal engine suspensions provide proper flexible support to isolate engine vibrations and reduce noise transmission to airframe structure in all aircraft applications. Careful design assures maximum strength to hold the engine under ultimate load and emergency conditions. Suspensions also distribute loads in most desirable patterns, control engine motions, accommodate thermal expansion and manufacturers' tolerances.

PROMPT SHIPPING GUARANTEED! IF YOU REQUIRE UNLISTED LORD MOUNTS, PLEASE CALL US FOR YOUR BEST PRICE. WE BEAT ALL COMPETITOR'S PRICES! LET US KNOW OF ANY LOWER PRICE AND WE WILL BEAT IT!

Aircraft Model	Application/ Engine	No. per A/C	Part No.	Price Each
AVIAT				
A-1	Lyc. O-360-C1G/A1P	8	J-1552	**$54.85**
S-1	Lyc. O-320	8	J-7401-2	**$59.75**
S-1S, -2A	Lyc. O-360-B4A, A1P	8	J-7401-2	**$59.75**
BEECHCRAFT				
19	Lyc. O-320-E2C	4	J-7402-16	**$121.75**
B19, M19A	Lyc. O-320-E2D	4	J-7402-16	**$121.75**
23	Lyc. O-360-A4G	4	J-7402-16	**$121.75**
23	Cont. IO-346-A	4	J-10778-4	**$415.00**
A23-24	Lyc. IO-360-A2B	4	J-10778-4	**$415.00**
C-23	Lyc. O-360-A4K	4	J-7402-16	**$121.75**
24,A24,A24R,B24R	Lyc. IO-360-A2B	2 ea*	J-10778-14	**$472.00**
C-24R	Lyc IO-360-A1B6	2 ea*	J-10778-16	**$276.95**
B33, C33	Cont. IO-470-K	4	J-7518-2	**$176.75**
C33A	Cont. IO-520-B	4	J-10520-1	**$196.75**
E33, F33	Cont. IO-470-K	4	J-7518-2	**$176.75**
E33A/C, F33A/C	Cont. IO-520-BB	4	J-10520-1	**$196.75**
G33	Cont. IO-470-N	4	J-10520-1	**$196.75**
35, A35, B35	Cont. E185-8	8	J-2245-1	**$141.75**
C35, D35, E35, F35	Cont. E185-11	4	J-3804-26	**$183.75**
E35, F35, G35	Cont. E225-8	4	J-3804-26	**$183.75**
H35	Cont. O-470-G	4	J-7518-2	**$176.75**
J35, K35, M35	Cont. IO470-C	4	J-7518-2	**$176.75**
N35, P35	Cont. IO-470-N or-C	4	J-7518-2	**$176.75**
S35,T35,V35,V35A,B	Cont. IO-520-BB	4	J-10520-1	**$196.75**
36, A-36	Cont. IO-520-BB	4	J-10520-1	**$196.75**
A36TC	Cont. TSIO-520-UB	4	J-10520-1	**$196.75**
V35A-TC	Cont. TSIO-520-D	4	J-10520-1	**$196.75**
B50	Lyc. GO-435-C2/C2E	8	J-3804-10	**$239.95**
C50	Lyc. GO-480-F1A6	8	J-3804-10	**$239.95**
D50, D50B/C/E	Lyc. GO-480-G2F6	4	J-3804-10	**$239.95**
E50, F50, G50, H50 G50, G50, J50	Lyc. GSO-480-B1B6 Lyc. IGSO-480-A1B6	4 4	J-6545-1	**$135.75**
55, A55, B55	Cont. IO-470-L	8	J-7518-2	**$176.75**
55, A55, B55, B55A	Cont. IO-470-L	8	J-9613-5	**$327.00**
C55(1967), D55, D55A,E55,E55A	Cont. IO-520-CB	8	J-10778-16	**$276.95**
56TC, A56TC	Lyc. TIO-541-EIB4	8	J-9613-9	**$262.95**
58	Cont. IO-520-CB	8	J-10778-16	**$276.95**
58 (1984-on)	Cont. IO-550-C	8	J-10778-16	**$276.95**
58P	Cont. TSIO-520-L/-LB	8	J-12453-12	**$200.75**
58P	Cont. TSIO-520-WB	8	J-12453-12	**$200.75**
58TC	Cont. TSIO-520-L/-LB	8	J-12453-12	**$200.75**
58TC	Cont. TSIO-520-WB	8	J-12453-12	**$200.75**
60, B60	Lyc. TIO-541-EIC4	8	J-9613-9	**$262.95**
65, A65, 70	Lyc. IGSO-480-AIE6	4	J-6545-1	**$135.75**
		4	J-6545-1	**$135.75**
76TC	Lyc. TO-360-CIA6D	2 ea*	J-9613-49	**$181.75**
76	Lyc. O-360-AIG6D	2 ea*	J-9613-50	**$161.75**
77	Lyc. O-235-L2C	4	J-7402-1	**$116.75**
80, A80, B80, 88	Lyc. IGSO-540-AID	4	J-6545-1	**$135.75**
		4	J-6545-1	**$135.75**
C90, C90A	PWC PT6A-21	6	LM427SA7	**$2,026.00**
E90, F90	PWC PT6A-28,-135,-135A	6	LM427SA7	**$2,026.00**
H90	PWC PT6A-34B	6	LM427SA7	**$2,026.00**
95, 95A, 95B	Lyc. IO-360-B1B	8	J-7402-1	**$116.75**
D95A, E95	Lyc. IO-360-B1B	8	J-7402-1	**$116.75**
A100	PWC PT6A-28	6	LM427SA7	**$2,026.00**
B100	GA TPE331-6-252B	4&2*	LM821SA49	**$3,456.00**
			LM821SA50	**$3,456.00**
200, 200C, 200CT	PWC PT6A-41	8	LM427SA7	**$2,026.00**
A200/C/CT	PWC PT6A-41	8	LM427SA7	**$2,026.00**
B200	PWC PT6A-42	8	LM427SA7	**$2,026.00**
C90,E90,C99,200/C /CT, A200/C/CT, B200/C/CT/T	Overhaul kit for Barry Controls P/N5906-2SA5	8	LM427SA12	**$358.00**

Aircraft Model	Application/ Engine	No. per A/C	Part No.	Price Each
BELLANCA				
17-31, 17-31A	Lyc. IO-540-K	4	J-9868-5	**$258.95**
17-31A	Lyc. IO-540-KIE5	4	J-9868-5	**$258.95**
17-31TC,17-31ATC	Lyc. IO540-G, K	4	J-9868-5	**$258.95**
7ACA	Franklin 2A-120A, B	8	J-3608-1	**$19.85**
7ECA	Cont. O-200-A	8	J-3608-1	**$19.85**
7ECA	Lyc. O-235-C1	4	J-6230-1	**$156.85**
7GCAA, 7GCBC	Lyc. O-320-A2B	4	J-6230-1	**$156.85**
7GCAA, 7GCBC	Lyc. O-320-A2D	4	J-6230-1	**$156.85**
7KCAB	Lyc. O-320-E2A	4	J-6230-1	**$156.85**
7KCA	Franklin 2A-120A, B	8	J-3608-1	**$19.85**
8GCBC-CS	Lyc. O-360-C1E	4	J-6230-1	**$156.85**
8GCBC-FP	Lyc. O-360-C2E	4	J-6230-1	**$156.85**
8GCBC	Lyc. O-360-C2E	4	J-6230-1	**$156.85**
8KCAB	Lyc.IO-320-E1A	4	J-6230-1	**$156.85**
8KCAB-CS	Lyc. AEIO-320-E1B	4	J-6230-1	**$156.85**
8KCAB-FP	Lyc. AEIO-320-E2B	4	J-6230-1	**$156.85**
8KCAB-180	Lyc. AEIO-360-H1A	4	J-6230-1	**$156.85**
CESSNA				
120-140	Cont. C-85	8	J-3608-1	**$19.85**
140A	Cont. C-90	8	J-3608-1	**$19.85**
150, 150A-L	Cont. O-200-A	8	J-3608-1	**$19.85**
152, 152 Aerobat	Lyc. O-235-L2C	4	J-7402-1	**$116.75**
172 I-P	Lyc. O-320-E2D	4	J-9613-49	**$181.75**
172P	Cowl Mount	--	J-7444-14	**$21.95**
F172P	Cowl Mount	--	J-7444-14	**$21.95**
F172P	Cowl Mount	--	J-7444-24	**$33.50**
F172	Cowl Mount	--	J-7444-36	**$59.85**
172	Lyc. O-320-D2J	4	J-9613-49	**$181.75**
172N	Lyc. O-320-H2AD	4	J-9613-49	**$181.75**
172	Cont. IO-360-K	4	J-9613-42	**$157.75**
172RG	Lyc. O-360-A1F6	2 ea*	J-9613-49	**$181.75**
			J-9613-72	**$253.95**
172Q	Lyc. O-360-AL/N	2 ea*	J-9613-49	**$181.75**
			J-9613-72	**$253.95**
172P,Q	Cowl Mount	--	J-7444-24	**$33.50**
172	Cowl Mount	--	J-7444-36	**$59.85**
P172	Cont. GO-300-E	4	J-6545-1	**$135.75**
R172E,K	Cont. IO-360-D	4	J-9613-42	**$157.75**
175	Cont. GO-300-A	4	J-6545-1	**$135.75**
175A, B	Cont. GO-300-C, D	4	J-6545-1	**$135.75**
175C	Cont. GO-300-E	4	J-6545-1	**$135.75**
177	Lyc. O-320-E2D	4	J-9613-49	**$181.75**
177A	Lyc. O-360-A2F	4	J-9613-49	**$181.75**
177B	Lyc. O-360-A1F6D	4	J-9613-49	**$181.75**
177RG	Lyc. IO-360-A1B6	4	J-9613-59	**$269.95**
180	Cont. O-470-A, J	2 ea*	J-3804-14	**$207.95**
			J-3804-15	**$239.95**
180	Cont. O-470-K	4	J-6545-1	**$135.75**
180A-H	Cont. 0-470-K, R	4	J-6545-1	**$135.75**
180H, J	Cont. O-470-R, U	4	J-6545-1	**$135.75**
182, 182A-R	Cont. O-470-R, U	4	J-6545-1	**$135.75**
182, 182A-N	Accessory Mount	--	J-14290-4	**$38.50**
182H-N	Panel Mount	--	J-6984-64	**$14.80**
T182	Lyc. O-540-L3C5D	4	J-9613-12	**$168.75**
TR182	Lyc. O-540-L3C5D	4	J-9613-12	**$168.75**
185, 185A-E	Cont. IO-470-F	4	J-6545-1	**$135.75**
185	Cont. IO-520-D	4	J-6545-1	**$135.75**
A185F	Cont. IO-520-D	4	J-6545-1	**$135.75**
188	Cont. O-470-R	4	J-6545-1	**$135.75**
188	Cont. IO-520-D	4	J-6545-1	**$135.75**

NOTE: * indicates more than one Lord Part No. needed

LORD ENGINE MOUNTS

Aircraft Model	Application / Engine	No. per A/C	Part No.	Price Ea.
CESSNA cont.				
188	Cont. IO-520-D	2 ea*	J15198-1	**$428.00**
188A, 188B	Cont. IO-520-D	2 ea*	J15198-2	**$548.00**
T188	TSIO-520T		J-6545-6	**$168.75**
205, 205A	Cont. O-360-B4A	4	J-6545-1	**$135.75**
206, 206A	Cont. IO-520A	2 ea*		
206B	Cont. IO-520F	2 ea*	J12453-1	**$200.75**
U206T	Cont. TSIO-520C	2 ea*	J12453-2	**$211.95**
U206	Cont. IO-520F	2 ea*		
U206,A,E	Panel Mount	--	J-6984-64	**$14.80**
U206G	Cont. IO-520-F	2 ea*		
TU206A-F	Cont. TSIO-520-C	2 ea*		
T206G	Cont. TSIO-520-M	2 ea*		
P206, P206A-E	Cont. IO-520-A	2 ea*	J12453-1	**$200.75**
P206T, P206T A-E	Cont. TSIO-520-C	2 ea*	J12453-2	**$211.95**
207, 207A	Cont. IO-520-F	2 ea*		
207A II	Cont. IO-520-F	2 ea*		
207T	Cont. TSIO-520-G	2 ea*		
T207A, T20A II	Cont. TSIO-520-M	2 ea*		
210, 210A-C	Cont. IO-470-E, S	4	J-6545-1	**$135.75**
210 D-J	Cont. IO-520-A, J	2 ea.*	J-12453-1	**$177.75**
210 K-R	Cont. IO-520-L	2 ea*	J-12453-2	**$211.95**
210 K, L	Panel Mount	--	J-6984-64	**$14.80**
T210M, N	Cont. TSIO-520-R	2/1/1*		
T210 F-L	Cont. TSIO-520-C, H	2 ea.*	J-12453-1	**$177.75**
P210M, N	Cont. TSIO-520-AF, P	2/1/1*	J-12453-2	**$211.95**
P210N, R		4/2	J-12453-6	**$408.00**
T210R (1985-86)	Cont. TSIO-520-CE	4/2*		
P210 R (1985-86)	Cont. TSIO-520-CE	4/2*		
310B	Cont. O-470-M	8	J-6545-1	**$135.75**
310C-H	Cont. IO-470-D	8	J-12390-1	**$198.75**
310JQ	Cont. IO-470-U, V, VO	8	J-12390-1	**$198.75**
310R	Cont. IO-520-M, MB	8	J-9613-58	**$259.95**
T310 P, Q, R	Cont. TSIO-520-B, BB	8	J-9613-58	**$259.95**
320 D-F	Cont. TSIO-520-B, BB	8	J-9613-58	**$259.95**
337, 337A-H	Cont. IO-360-C, D, G	8	J-9613-31	**$252.00**
T337B-G	Cont. TSIO-360-A, H	8	J-9613-31	**$252.00**
P337H	Cont. TSIO-360-C, CB	8	J-9613-31	**$252.00**
340	Cont. TSIO-520-K, KB	8	J-9613-58	**$259.95**
340A	Cont. TSIO-520-NB	8	J-9613-58	**$259.95**
401, 401A,B	Cont. TSIO-520-E, EB	8	J-9613-58	**$259.95**
402, 402A,B	Cont. TSIO-520-E, EB	8	J-9613-58	**$259.95**
402C	Cont. TSIO-520-VB	8	J-9613-58	**$259.95**
404	Cont. GTSIO-520-M	8	J-9613-54	**$258.95**
411, 411A	Cont. GTSIO-520-C	8	J-9613-54	**$258.95**
414, 414A	Cont. TSIO-520-J, NB	8	J-9613-58	**$259.95**
421, A, B	Cont. GTSIO-520-D, H	8	J-9613-54	**$258.95**
421C	Cont. GTSIO-520-L, N	8	J-9613-54	**$258.95**
COMMANDER AIRCRAFT CO.				
112, 112B	Lyc. O-360-C1D6	2 ea.*	J-9613-40	**$170.75**
112T, TCA	Lyc. IO-360-C1A6D	2 ea.*	J-9613-53	**$172.75**
114	Lyc. IO-540-T4A5D	4	J-3804-28	**$263.95**
GRUMMAN AMERICAN				
AA-1	Lyc. O-235-C2C	8	J-6113-5	**$61.75**
AA-1A, B	Lyc. O-235-C2C	8	J-6113-5	**$61.75**
AA-1C (Tomcat)	Lyc. O-235-L2C	4	J-7402-24	**$137.75**
AA-1C (Lynx)	Lyc. O-235-L2C	4	J-7402-24	**$137.75**
AA-5	Lyc. O-320-32G	4	J-7402-24	**$137.75**
AA-5A	Lyc. O-320-32G	4	J-7402-24	**$137.75**
AA-5B (S/N 1-399)	Lyc. O-360-A4K	4	J-9613-49	**$181.75**
AA-5B, AG-5B	Lyc. O-360-A4K	4	J-9613-59	**$269.95**
MOONEY AIRCRAFT				
M20	Lyc. O-320	4	J-6230-1	**$156.85**
M20A (1958-1960)	Lyc. O-360	4	J-7402-16	**$121.75**
M20B (S/N1701-1939)	Lyc. O-360-A1D	4	J-7402-1	**$116.75**
M20C(S/N1940-20-1258)	Lyc. O-360-A1D	4	J-7402-1	**$116.75**
M20D (S/N101-260)	Lyc. O-360-A2D	4	J-7402-1	**$116.75**
M20E (S/N101-470)	Lyc. O-360-A1A	4	J-7402-16	**$121.75**
M20E (1969-75)	Lyc. O-360-A1A	4	J-9613-12	**$168.75**
M20F (1966-77)	Lyc. O-360-A1A	4	J-9613-12	**$168.75**
M20G (1968-70)	Lyc. O-360-A1D	4	J-7402-1	**$116.75**
M22 (1966-70)	Lyc. TIO-541-A1A	4	J-10520-1	**$196.75**
M20J (1976-up)	Lyc. IO-360-A3B6D	4	J-9613-40	**$170.75**
M20K (1979-85)	Cont. TSIO-360-GB1	4	J-9613-58	**$259.95**
M20K (1979-85)	Cont. TSIO-360-GB3	1/3*	J-9613-75	**$490.00**
M20K (1979-85)	Cont. TSIO-360-GB4	1/3*	and	
M20K (1979-85)	Cont. TSIO-360-LB1B	1/3*	J-9613-76	**$413.00**
M20K (1986-up)	Cont. TSIO-360-MB1	1/3*		
NAVION AIRCRAFT				
G, H	Cont. IO-470-H or IO-520-B	4	J-7518-4	**$373.00**
PIPER				
PA-23	Lyc. O-320-D2	8	J-6230-1	**$156.85**
PA-23-160	Lyc. 0-320-B	8	J-6230-1	**$156.85**
PA-23-235	Lyc. OI-540-B1A5	8	J-3804-20	**$178.75**
PA-23-250	Lyc. O-540-A1B5, A1D5	8	J-3804-20	**$178.75**
PA-23-250 (6)	Lyc. IO-540-C1B5, A1D5	8	J-3804-20	**$178.75**
PA-23-250 (6)	Lyc. IO-540-C4B5	8	J-9613-12	**$168.75**
PA-23-250 (6)	Lyc. IO-540-J4A5	8	J-9613-12	**$168.75**
PA-23-250	Lyc. IO-540-C4B5	8	J-9613-12	**$168.75**
PA-23-250T	Lyc. TIO-540-C1A	8	J-9613-12	**$168.75**
PA-24-250	Lyc. O-540-C1B5, A1A	4	J-3804-20	**$178.75**
PA-24-260	Lyc. IO-540-E4A5, D4A5	4	J-3804-20	**$178.75**
PA-24-400	Lyc. IO-720-A1A, A1B	2 ea.	J-9613-9	**$262.95**
PA-25-235	Lyc. O-540-B2C5,B2B5	4	J-3804-20	**$178.75**
PA-25-260	Lyc. O-540-E4	4	J-3804-20	**$178.75**
PA-28-140	Lyc. O-320-E2A	4	J-7402-16	**$121.75**
PA-28-140	Lyc. O-320-E2A	2	J-9613-40	**$170.75**
PA-28-140	Lyc. O-320-E3D	2 ea.*	J-9613-40 J-9613-53	**$170.75** **$172.75**
PA-28-150	Lyc. O-320-A2B	4	J-7402-16	**$121.75**
PA-28-150	Lyc. O-320-A2B*	4	J-7402-24	**$137.75**
PA-28-150	Lyc. O-320-E2A	4	J-7402-16	**$121.75**
PA-28-151	Lyc. O-320-E3D	2 ea.*	J-9613-40 J-9613-53	**$170.75** **$172.75**
PA-28-160	Lyc. O-320-B2B	4	J-7402-16	**$121.75**
PA-28-160	Lyc. O-320-D2A**	4	J-7402-16	**$121.75**
PA-28-160	Lyc. O-320-D2A	4	J-7402-24	**$137.75**
PA-28-161	Lyc. O-320-D3G	2 ea.*	J-9613-40 J-9613-53	**$170.75** **$172.75**
PA-28-180	Lyc. O-360-A3A	4	J-7402-24	**$137.75**
PA-28-180	Lyc. O-360-A4A	4	J-7402-24	**$137.75**
PA-28-180	Lyc. O-360-A4A, M***	4	J-9613-40	**$170.75**
PA-28R-180	Lyc. O-360-B1E	4	J-9613-40	**$170.75**
PA-28-181	Lyc. O-360-A4M	4	J-9613-40	**$170.75**
PA-28R-200	Lyc. IO-360-C1C	4	J-9613-40	**$170.75**
PA-28R-201	Lyc. IO-360-C1C, C1C6	4	J-9613-40	**$170.75**
PA-28R-201T	Cont. TSIO-360-F, FB	4	J-9613-58	**$259.95**
PA-28-235	Lyc. O-540-B2B5	4	J-3804-20	**$178.75**
PA-28-235	Lyc. O-540-B1B5	4	J-7402-20	**$142.75**
PA-28-235	Lyc. O-540-B4B5	4	J-7402-20	**$142.75**
PA-28-235	Lyc. O-540-B4B5****	4	J-3804-27	**$174.75**
PA-28-236	Lyc. O-540-J3A5D	4	J-9613-12	**$168.75**
PA-30	Lyc. IO-320-B1A1C1A	8	J-9613-19	**$178.75**
PA-31	Lyc. TIO-540-A1A, or A1B, A2C, A2B	8	J-9613-12	**$168.75**
PA-31-310	Lyc. TIO-540-A2C	8	J-9613-12	**$168.75**
PA-31-325	Lyc. L/ TIO-540-F2BD	8	J-9613-12	**$168.75**
PA-31-350	Lyc. L/ TIO-540-J2BD	8	J-9613-29	**$169.95**
PA-31P-350	Lyc. TIO-540-V2AD	--	J-9613-53	**$172.75**
PA-31T-1, -500	PWC PT6A-11	6	LM-423-SA1	**$889.00**
PA-31T-620	PWC PT6A-28, 135	4	LM-423-SA1	**$889.00**
PA-31T-620XL,-31T2		2	LM-423-SAI2	**$806.50**
PA-32-260	Lyc. O-540-E4B5	4	J-7402-20	**$142.75**
PA-32-260 (s/n 570-up)	Lyc. O-540-E4B5	4	J-3804-27	**$174.75**
PA-32-300	Lyc. IO-540-K1A5	4	J-3804-27	**$174.75**
PA-32-300	Lyc. IO-540-K1G5, K1A5	4	J-3804-40	**$167.75**
PA-32R-300	Lyc. IO-540-K1G5D	4	J-3804-31	**$237.95**
PA-32R-300 (s/n 141-up)	Lyc. IO-540-K1G5D	4	J-3804-40	**$167.75**
PA-32RT-300	Lyc. IO-540-K1G5	2 ea.	J-3804-40	**$167.75**
PA-32RT-300T	Lyc. TIO-540-51AD	2 ea.	J-3804-37& J-3804-39	**$226.95** **$422.00**
PA-32-301	Lyc. IO-540-K1G5D	2 ea.	J-9613-19 &	**$178.75**
PA-32R-301	Lyc. IO-540-K1G5D	2 ea.	J-9613-12	**$168.75**
PA-32-301T	Lyc. TIO-540-S1AD	2 ea.	J-9613-19 &	**$178.75**
PA-32R-301T	Lyc. TIO-540-S1AD	2 ea.	J-9613-55	**$311.00**
PA-34-200	Lyc. L/ IO-360-C1E6	8	J-9613-40	**$170.75**
PA-34-200, 200T	Cont. TSIO-360-E, EB	8	J-9613-58	**$259.95**
PA-34-220T	Cont. L/ TSIO-360-KB	4	J-9613-58	**$259.95**
PA-36-285	Cont. 6-285	4	J-14090-7	**$499.50**
PA-36-300	Lyc. IO-540-K1G5	4	J-3804-31	**$237.95**
PA-38-112	Lyc. O-235L2C	4	J-7402-16	**$121.75**
PA39	Lyc. IO-320-B1AC1A	8	J-9613-19	**$178.75**
PA-44-180	Lyc. 0-360-E1A6D	8	J-9613-40	**$170.75**
PA-44-180T	Lyc. T0-360-E1A6D	8	J-9613-40	**$170.75**
PA-46-310P	Cont. TSIO-520-BE	4	J-9613-55	**$311.00**
PA-46-350P	Lyc. TIO-540-AE2A	8	J-9613-55	**$311.00**
PA-60-360	Lyc. IO-360-E1A	8	J-9613-12	**$178.75**
PA-60-600A	Lyc. IO-540-K1F5	8	J-9613-9	**$262.95**
PA-60-600B	Lyc. IO-540S1A5	8	J-9613-9	**$262.95**
PA-60-601P	Lyc. IO-540S1A5	8	J-9613-9	**$262.95**

NOTE: * indicates more than one Lord Part No. needed

LOCKING TAB WASHER - Used to lock mounting bolts to Lord Mounts. This Continental P/N 501867 is similar to Cessna P/N 08-51559-1.
P/N 08-50186-7 ..... **$1.32 ea.**

COWL MOUNTS

Cessna 172P and F172P Per supp 86 & 13.3....P/N J-7444-14 ... **$21.95**
Cessna 172P, F172P, and 172Q Per supp 86 & 13.3
P/N J-7444-24 ... **$33.50**
Cessna 172 Per supp 13.3.....P/N J-7444-36 ... **$59.85**

WWW.AIRCRAFTSPRUCE.COM
Prices Subject to Change Without Notice

ENGINE MOUNTS

DYNAFOCAL ENGINE MOUNT



RINGS & KITS

Standard rings furnished with 2-3/4" I.D. retainers, completely welded, ready for mount assembly. The Dynafocal ring kits contain all tubing cut and bent, with 2-3/4" I.D. retainers, ready to weld.

Dynafocal Ring for Lyc. 0-235 to I0-360 (200 HP)..P/N 33521 ..**$197.75**
Dynafocal Ring for Lycoming 0-320B..... P/N 33521-B **$299.95**
Dynafocal Ring Kit for Lyc. 0-235 to I0-360 (200 HP) . P/N 33522....**$219.00**
Retainer Cups & Rings Kit ..... P/N 33253....**$148.90**
(includes 8 cups & 4 rings - everything in #33522 kit above except the tubing)

VIP ENGINE MOUNTS FOR EXPERIMENTAL AIRCRAFT

Spruce P/N	Lord Equiv.	Barry Equiv	Price ea.
08-00774	J9613-49	94110-20	**$88.75**

SANDWICH MOUNTS FOR HOMEBUILT AIRCRAFT



Sandwich assemblies of natural rubber and specially blended synthetic compounds bonded to 2 metal plates. Normal installation requires 4 assemblies, each consisting of 2 sandwich mountings and 1 spacer. Satisfactory performance requires that the spacer be designed to the correct length to precompress each mounting to guarantee proper positioning of the mountings. Set consists of eight bonded sandwich mountings equivalent to Lord Mount No. J-7402-5 (2" Dia.) and four 4130 steel spacers with mounted rubber shoulder. Use with dynafocal engine mount rings using 2-3/4" I.D. retainer cups. Used on many homebuilts including the Defiant and Long-EZ .....P/N 08-03500 .....**$449.00**

SPECIAL HEAVY DUTY MOUNT SETS

Designed for use on aerobatic aircraft such as Christen Eagle and Acro.



Same style as homebuilt type but inner core has been "beefed up" and elastomers added to encapsulate the spacer. 2-inch diameter. Includes a set of 8 Mounts and 4 spacers to make one complete engine set of 4.

Note: Mounting hole is 7/16" and requires AN7 bolts for installation.
50401-300 w/4 Spacers .....P/N 08-03600 .....**$247.00**
DISCOUNT: LESS 10% ON 6 SETS, 15% ON 10 SETS, 20% ON 20 SETS

LORD MOUNTS FOR COZY ENGINE MOUNT



These Lord J-7402-24 mounts fit the engine mount for Lyc. 0-360 manufactured by CG Parts.
P/N 07-01115 .....**$137.75**

SKYBOLT PLATEMOUNTS



The SK2003A Series Mounts were specifically designed around the latest generation Cessna/Lord J7444-42 Series Mount. The SK2003-14A, -24A, and -42A all have the same flex feature as the J7444-42. They look and install exactly the same as the Cessna/Lord part it replaces using the same fastener length. The SK2003-14A, -24A, and -42A are fixed depth, Non-Adjustable Platemounts. The 50ADJ is adjustable and can be adjusted without removing the cowling for an exact fit.

Model	Application	Part No.	Price
SK2003-14A	Cessna PN J7444-14. Used On - 67-On C150 (10ea), 67-86 C172 (11ea), C172XP (13ea) 68-78 C177 (14ea)	08-07222	**$19.75**
SK2003-24A	Cessna PN J7444-24. Used On - 73-86 C182 (14ea)	08-07223	**$22.50**
SK2003-42A	Cessna PN J7444-36 and -42. Used on -97, C172 R & S (14ea)	08-07208	**$31.50**

SMALL URETHANE EAR STYLE ENGINE MOUNT BUSHINGS



These engine mount bushings are made of a special urethane formula which outlasts most other mounts. They have been in use on O-540, IO-540 and TI-540 series engines for years, and are now available to the experimental aircraft market. Includes two bushings, one spacer and two washers. Specifications: These small ear type bushings are applicable to the following engine models:
O-540-A1A, -A1A5, -A1B5, -A1C5, -A1D, -A1D5, -A2B, -A3D5, -B1A5, -B1B5, -B2B5, -B2C5, -B4B5, -C1B5, -E4A5, -E4B5, -E4C5, -G1A5, G2A5, -F1A5, -F1B5
IO-540-A1A5, -B1A, -B1A5, B1C5, -C1B5, C4C5, -D4A5, -E1A, -E1A5, -E1B5, -E4A5, -G1A5, -G1B5, -G1C5, -G1D5, -G1E5, -G1F5, -D4A5, -K1A5, -K1A5D, -K1B5, -K1C5, -K1d5, -K1E5, -K1F5, -K1G5, -K1G5D, -K1J5D, -T4A5D, -T4B5D, -N1A5, -R1A5, -S1A5, -C4D5D
TIO-540-A2C, -S1AD P/N 08-07393 .....**$49.95**

BARRY MOUNT FOR VANS AEROBATIC AIRCRAFT



Barry Controls is a manufacturer of many aircraft engine mounts of both experimental and certified types. They also manufacture engine mounts for experimental and kit airplanes of various makes and models. Please call or visit our website for application information.
P/N 94016-08.....**$437.95**

HOMEBUILDERS CONICAL LYCOMING ENGINE MOUNT BUSHINGS



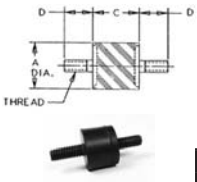
These new bushings offer superior damping qualities and do not harden over time as original mounts can do. They are molded from hi-tech silicone rubber which offering a much lower compression set which reduces engine sagging over time. Silicone also withstands a very wide temperature range and is compatible with grease and oil. These mounts are not PMA'd or FAA approved and are for use on experimental aircraft only. Not an approved replacement for Lycoming 71032 bushings. Sold in set of 8 bushings.
P/N 08-00662 .....**$42.80 /Set**

LORD ENGINE MOUNTS FOR ULTRALIGHTS



All altitude mounts for vibration isolation and shock prevention in all directions. Available in soft, medium, or hard rubber.
Soft .....P/N 08-07049 .....**$24.50**
Medium .....P/N 08-01013 .....**$22.99**
Hard .....P/N 08-07050 .....**$17.55**
Snubbing Washer .....P/N 9810145-01804 .....**$1.42**

LORD RUBBER ENGINE MOUNT



LORD Flex-Bolt™ Sandwich Mounts are designed to protect equipment and machinery against damaging vibration. These mounts provide high load-carrying capacity and assure long life. Provide lowcost mounting systems which are compact, lightweight, easy to install and maintenance-free.

Model	A	C	D	Thread	Part No.	Price
J-4624-45	1.00	.75	.75	5/16-18	10-01557	**$9.95**
J-4624-57	1.00	.75	.62	5/16-18	08-07196	**$7.95**

LORD PLATEFORM MOUNT



Lord Plateform Mounts provide effective isolation against vibration. The contour of the flexing element was developed to provide uniform stress distribution. This, plus high strength bonding and the use of specially compounded elastomers, provides maximum service life.
150 Steel Square 30 lb..... P/N 15-05391 ..... **$17.90**
200 Steel Holder 45 lb..... P/N 15-05499 ..... **$85.80**

URETHANE CONE STYLE ENGINE MOUNT BUSHINGS



These engine mount bushings are made of a special urethane formula which outlasts most other mounts. They have been in use on smaller 4 cylinder Lycoming engines from the 0-235 series to the GO-480 series for years, and are now available to the experimental aircraft market.
Specifications: These cone type mounts are applicable to the following engine models: O-235-C1, -C1B, -C2A, -C2C, -F, -F1B, -G2A, O-290-D, -D2, -D2B, -D2C, O-340-A, O-340-B, O-320-A2A, -A2B, -A2C, -A3A, -A3B, -A3C, -B2A, -B3A, -B3B, -B3C, -E1A, -E2A, IO-320-E2A, O-435-A, -A2
GO-480-B, -B1A6, -B1B, -B1C, -B1D, -C1B6, -D1A, -F6, -F1A6, -F2A6, -F4A6, -G1A6, -G1D6, -G2D6, -G2F6, -G1H6, -G1J6.
P/N 08-07392 .....**$6.95**

EP

STAINLESS STEEL FIREWALL PENETRATION KIT 3/4



The kit comes complete with stainless steel fabricated fitting, fire sleeve tubing, two ALL stainless steel hose clamps and a tube of fire block sealant to seal the ends from moisture and gasses. Includes installation instructions.

- Fireproof seal of the firewall for penetration of wires and cables.
- Seals out moisture and gasses.
- Easy replacement of wires and cables if necessary.
- Very clean looking installation.
- Available in three sizes.

To determine the size you need, plan where you want to run your wire and cable bundles. Use a tie strap or twist tie to bundle the wires and cables. Measure what size holes the bundle will fit through and choose the NEXT LARGER size (see installation instructions.) You need enough clearance between the bundle and stainless fitting to push the second fire sleeve into the fitting creating the fireproof, chafe proof seal.
Typical installation. Wires can be run straight out or turned back to attach on firewall reducing vibration.
There are so effective that they received an STC under Advisory Circular AC 20-135 Power plant Installation and Propulsion Systems Component Fire Protection Test Methods, Standards and Criteria.

Firewall Penetration Kit 3/4" ..... P/N 09-00978 ..... **$56.75**
Firewall Penetration Kit 1/2" ..... P/N 09-02601 ..... **$49.95**
Firewall Penetration Kit 1" ..... P/N 09-00979 ..... **$59.75**

EP

AEROTAR EXHAUST SYSTEMS

CESSNA 152

Model Number/Exhaust Assembly	Description	Part No.	Price
0454023-3 / 0454021-1	Riser Assembly RH AFT	08-15736	$249.95
0454023-4 / 0454021-1	Riser Assembly RH FWD	08-15737	$249.95
0454009-6 / 0454021-1	Muffler Assembly	08-15738	$556.00
0454010-9 / 0454021-1	Shroud Assembly (2 Piece)	08-15739	$626.00
0454023-2 / 0454021-1	Riser Assembly LH FWD	08-15740	$249.95
0454023-1 / 0454021-1	Riser Assembly LH AFT	08-15741	$249.95
0750161-25 / 0454021-1	Clamp	08-15742	$41.70
0454010-1 / 0454011-200	Shroud Assembly (2 Piece)	08-15743	$556.00
0454009-5 / 0454011-200	Muffler Assembly	08-15744	$556.00
0454002-4 / 0454011-200	Riser Assembly RH FWD	08-15745	$249.95
0454002-2 / 0454011-200	Riser Assembly RH AFT	08-15746	$249.95
0454002-11 / 0454011-200	Riser Assembly LH FWD	08-15747	$249.95
0454002-10 / 0454011-200	Riser Assembly LH AFT	08-15748	$249.95
0750161-25 / 0454011-200	Clamp	08-15749	$41.70

CESSNA 172

Model No.	Description	Part No.	Price
9954100-3	Shroud Assembly	08-15751	$625.00
9954100-9	Muffler Assembly	08-15752	$625.00
9954100-7	Riser RF (1754010-1)	08-15753	$249.95
9954100-4	Riser RR (1754007-1)	08-15754	$249.95
9954100-6	Riser LF (1754009-3)	08-15755	$249.95
9954100-5	Riser LR (1754008-3)	08-15756	$249.95
1555014-2	Clamp	08-15757	$41.70
0454013-1	Carb Heat Shroud	08-15758	$730.00

PIPER PA-28R (180|200|201) ARROW I / II / III / IV

Model No.	Description	Part No.	Price
67517-000	Muffler	08-15759	$480.00
67651-000	Shroud Assembly - 2	08-15760	$1,528.00
104628-002	PA-28-181 Muffler	08-15784	$1,473.00
99600-000	Shroud Assembly - 3	08-15761	$834.00
63243-002	Clamp	08-15762	$40.85



T TUBE CONNECTOR

Expanded on short leg to slip over a 2" O.D. tube to divert air in two directions. Especially handy for close to the firewall applications. Weight is 1.7 ounces.

P/N 08-07304 ..... **$35.65**



2-1/2 INCH Y TUBE CONNECTOR

With 2" offshoot. If you are running 2.5" tubing in one area and 2" to another, this is your part. Weight is 1.8 ounces.

P/N 08-07303 ..... **$36.50**



2 INCH DIAMETER Y TUBE WITH SHUT-OFF VALVE

This is a DL-010 "Y" Tube, modified with a shut-off valve in the straight run tube. The shut-off valve enables the builder to divert the flow of air from the straight tube and direct all or part of the air flow to the angled tube. Furnished with one stainless steel hose clamp. Weight is 2.9 ounces.

P/N 08-07296 ..... **$67.75**



MODIFIED VA175 TUBE CONNECTOR

This is a direct replacement for the VA175 (Van's part number). The VA175 directs warm air in the RV-10 tunnel to both sides equally.
With the Modified VA175, air can be directed all to one side, partially to one side, or both sides, through the controllable (cable actuated) flapper on the inside of the unit.

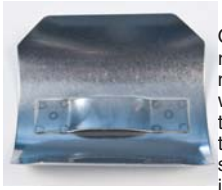
P/N 08-07306 ..... **$82.95**



SHUT OFF VALVE TUBE CONNECTOR

Expanded on one end to 2" I.D. to slip over a 2" O.D. tube to regulate or shut off air. Also available non-expanded for in-line applications. Weight is 2 ounces.

P/N 08-07305 ..... **$80.75**



EXHAUST SHIELDS

Over the years we have seen failure of the rivets that hold the exhaust heat shield to the mounting bracket. The solution was to spot weld the stainless steel mounting bracket to the stainless steel heat shield thus eliminating the possibility of rivet failure. Adding additional spot welds insures reliability. They are offered in two sizes, 2 inch and 4 inch to cover most applications.

Exhaust Shield 2" ..... P/N 08-07351 ..... **$15.75**
Exhaust Shield 4" ..... P/N 08-07352 ..... **$21.45**

HEATER BYPASS VALVES

Three models of the all stainless steel heater bypass boxes are offered. The engine side control lever comes with a backing plate that attaches to the cabin side of the firewall and has a 2 inch scat tube outlet so a tube can be attached in the cabin that directs air where wanted.
All stainless steel construction offers a fireproof closure in case of an engine fire.
New flapper design offers better seal to keep out hot air when closed.



HEATER BYPASS VALVE FOR RV-10
P/N 08-06230 .....**$234.75**



HEATER BYPASS VALVE WITH CABIN SIDE CONTROL LEVER FOR RV-7, RV-8 AND RV-9
P/N 08-01311 .....**$105.00**



HEATER BYPASS VALVE WITH ENGINE SIDE CONTROL LEVER P/N 08-01311-1 .....**$103.75**



ALL STAINLESS STEEL TRI-BOX

These boxes were developed for builders who want a simple, light, all stainless box that will fit in tight places, as it does not extend forward of the firewall as far as a standard box. Shown in the photo is a left unit. The box is available in both left and right units. The hole spacing is correct for the pre-punched holes in the RV-10 firewall, but they can be mounted on any firewall. For ease in cable routing, the arm on the box is adjustable using the provided lock nuts. Everything in the unit is stainless steel, including bushings and rivets. It is furnished with a closed-cell silicone gasket. Weight is 9.8 ounces and has a 2" inlet/outlet port. Please note that these boxes are a direct replacement for the aluminum box available from Vans. The RV-10 uses both a left and a right unit, and they also can be ordered separately. If you are not sure which one(s) you need, refer to your firewall plans drawings.

Right.....P/N 08-04958 .....**$166.75**

Left unit is a special order part. Please contact us to order.



2 1/2" INLET AND 2" OUTLET HOMEBUILDERS CABIN HEAT BOX

This box is identical to the deluxe stainless steel cabin heat box, except that the inlet is 2 ½" OD so that it can be used on larger heat muff applications where the builder is using 2 ½" scat tubing. This box is currently being used on the MICCO certified aircraft. Weight is 7.2 ounces.

P/N 08-04013 ..... **$162.75**



SIDE INTAKE HOMEBUILDERS CABIN HEAT BOX

P/N DL-015 - This box is identical to the standard cabin heat box, P/N DL-001, except that the air intake is parallel to the firewall rather than coming straight in from the heat muff. This gives the builder the option of running scat tube parallel to the firewall. Total weight is 5.2 ounces and has a 2" inlet/outlet port. Furnished with a flange gasket and four mounting rivets. Can also be bolted to firewall. P/N 08-04957 .....**$128.75**



GPL STAINLESS STEEL EXHAUST SPRING

Winding Length: 26mm. Overall Length: 58.3mm. Hook Distance: 66mm(2.90"). Wire Diameter: .2. O.D.: 13mm. Number of Rolls: 13. GPL Part Number: EXH-2S. Replaces Rotax Part Number 938-795.

P/N 08-07632.....**$4.00**



GPL STAINLESS STEEL EXHAUST SPRING FOR 2 STROKES

Winding Length: 32mm. Overall Length: 64mm. Hook Distance: 75mm. Wire Diameter: 2.0mm. O.D.: 16mm. Number of Rolls: 9.5. GPL Part Number: EXH-4S. Replaces Rotax Part Number 938-790

P/N 08-12235.....**$8.00**



CESSNA RISER HALF CLAMP 0750161-25

Cessna Riser Half Clamp 0750161-25, for Cessna 172R and 172S.

P/N 05-04890 .....**$145.75**



AERONCA HEAT MUFF

Aluminum muffs for models 7AC and 11AC exhaust stacks. Fit either left or right side.

P/N 05-08715.....**$264.95**



2" DIAMETER 90° TUBE

This unit is designed to slide over the end of the 2" O.D. tube protruding from a cabin heat box that extends through the firewall. The short end of this unit is expanded to 2" I.D. Two stainless steel clamps are furnished with the unit. If you use scat tube, the 90° angle allows you to run the scat tube parallel to the firewall and away from undesirable areas (brake pedals, etc.) Constructed of seamless 6061T4 .028 wall tube. Weight: 1.4 oz. P/N 08-00863 ..... **$42.50**



2" DIAMETER "Y" TUBE

"Y" tube is designed to be used with the Homebuilders cabin heat box to make warm air available to 2 or more locations in the aircraft. Constructed of seamless 2024T6 tube, it weighs only 2 oz. These tubes are expanded to 2" I.D. on the inlet end to slip over and clamp to the 2" O.D. tube of the cabin heat box. Due to the very light weight, "Y" tubes can be installed in scat tubing as well as attaching directly to cabin heat boxes. One stainless steel clamp is included with "Y" tube. Due to the light weight of only 1.7 oz., the non-expanded Y-tube can be placed anywhere in a run of tubing to give more options for heating additional areas of the aircraft. Furnished w/2 stainless steel hose clamps

Standard "Y" tube.....P/N 08-04100 ..... **$38.75**
Non-expanded "Y" tube.....P/N 08-04130 ..... **$39.60**



IN-LINE HEATER/DEFROSTER VALVE

This in-line valve connects to 2" SCAT ducting. It comes complete with cable end and can be hooked up in any combination to direct air to either heater outlets or defrost outlets. Actuating lever is adjustable to any position. Very popular on RV's & other homebuilt aircraft.

P/N 08-00053 ..... **$109.95**



CESSNA TYPE HEAT MUFF

Heli-arc welded aluminum muff with rust-proof stainless steel fins for clamping to stack. Similar in design to the new Cessna type. Furnished with attaching clamps.

Muff w/2" Outlet..... P/N 08-02400 ....**$89.75**
Muff w/ 2.5" Outlet..... P/N 08-02500 ....**$89.75**

THERMO-TEC STAINLESS STEEL CLAMP-ON HEAT SHIELDS



Stainless Steel Clamp-On Heat Shield incorporates Thermo-Tec proprietary coating technology. The new and improved flexible Stainless Steel Clamp-On Heat Shield blocks over 95% of the damaging radiant heat of the exhaust.The Stainless Steel construction of this heat shield provides the ultimate in protection. Comes complete with all clamps and new stainless stand offs. Easily installs in minutes.

1 ft. x 6 in.....P/N 08-13904 .....**$49.50**
2 ft. x 6 in.....P/N 08-13905 .....**$67.75**

EP

HEAT BOXES – EXHAUST COMPONENTS

EP

DELUXE HOMEBUILDER'S CABIN HEAT BOX



P/N DL-002 - This cabin box is our first modification to our standard heat box. The only difference between this and the standard is that the deluxe cabin heat box has one inlet and two outlets; the second outlet must be used to dump and route, via 2" scat tube, the warm air away from the low plenum area when heat is not being used in the cabin. (It is very important not to run the dump tube to another box on the other side of the firewall, because a constant flow of air is necessary to ensure that the heat muff does not overheat.) The weight on this unit is 5.5 ounces.

P/N 08-04005.....**$136.75**

2-1/2" OD INLET AND 2-1/2" OD OUTLET HOMEBUILDERS CABIN HEAT BOX



P/N DL-005 - This box is identical to the deluxe stainless steel cabin heat box, except that the inlet and outlet are 2 ½" OD so that this box can be used when the builder wants to use 2 ½" scat tubing throughout the project. (This box was used on the Cirrus SR20 certified aircraft. The SR20 now uses the DL-008 box listed below.) Weight is 6.3 ounces. ..... P/N 08-04015.....**$169.50**

DELUXE HOMEBUILDERS CABIN HEAT BOX. ALL STAINLESS STEEL



P/N DL-006 - This box was recently developed in response to customer requests. With the exception of brass shaft bushings, this box is constructed entirely of stainless steel, including all SS blind rivets. Like the deluxe boxes, this unit has a 2" inlet and 2" outlets. For the added durability of all stainless steel, the box still only weighs 10 ounces.

P/N 08-04025 .....**$156.75 ea.**

STANDARD HOMEBUILDERS CABIN HEAT BOX



P/N DL-001 - This cabin heat box has been engineered to be the smoothest, most efficient and lightest heat box built. Fabricated from aircraft-grade aluminum with stainless steel shaft, arm and flapper. Originally designed for use on the popular RV-4 homebuilt, but is applicable to most other designs. Total weight is only 5.2 ounces. Furnished with a gasket flange for the forward side of the firewall for leak-free ducting of warm air to anywhere the builder wants it. Inlet and outlet are 2 inch OD 6061-T4 seamless alum. The body of the box is constructed of 5052-032 alum. The outlet tube extends through the firewall so that scat tubing can be attached to route the warm air. Superior craftsmanship and quality. Over 4,000 sold to date. P/N 08-04000 .....**$121.75 ea.**

TOPCAP ENGINE PROTECTOR





Install TopCap in place of a removed cylinder to protect the engine from dirt, debris, and stray parts. Made from fuel and solvent resistant polymer, TopCap allows for full crankshaft rotation. One size fits Lycoming wide deck 320, 360, 540, 720 and Continental 470, 520, and 550.

P/N 08-00373..... **$23.75 /pr.**

TUBING CONNECTORS



2" ALUMINUM FLANGE

Accepts 2" scat tube. Flange allows riveting to firewall, baffles, etc. Wt: 0.2 oz.

P/N 08-04135..... **$16.50**



CARB HEAT CONNECTOR

Mounts on FAB airbox or similar airbox. Flange accepts 2" scat tube from muff. Standoff design allows hot air to escape when carb heat is not selected. Weight: 0.9 oz.

P/N 08-04145..... **$23.50**



FLANGED DUCT

Accepts 2" ducting on both ends. Helps route ducting through bulkheads, firewalls, etc. Especially useful for getting heat to the back seat of the aircraft. 3" square plate with 2" tubing projecting 1" from each side. Wt:0.7 oz.

P/N 08-04140..... **$21.50**



CABIN HEAT BOX

Custom built aluminum box mounts to firewall. Lever on butterfly may be attached to push-pull control for close adjustment of cabin air flow. Two 2" intake ports, one 2" outlet. Wt. 1 lb. 7-1/2" long. Fine quality construction.

P/N 08-01500..... **$159.75**



HOMEBUILDERS CABIN HEAT SHUTTLE KIT

Easily assembled and designed so that it can be modified for custom applications. Kit includes construction plans and directions along with installation hints for the popular Vans RV series of homebuilt aircraft. Controlled by ratchet type control cable such as ACS model A740 (P/N 05-12500). Order control cable separately.

P/N 08-04460 .....**$68.75**

TURBO HEAT CABIN HEAT MUFF



The Turbo Heat is an improved version of the standard Experimental Cabin Heat Muff. Each canister is made from industrial grade .063 aluminum tubes with .125 6061T-6 aluminum end caps laser cut, welded and then machined to exact tolerance for ease of installation and a vibration free fit. Internally, each canister is fitted with 10 aluminum rods surrounded by copper windings for superior heat transfer. Dimensions: The standard model is 8 in. in length with 2 in. intake and exhaust tubes. The end caps are machined specifically for the diameter of your engine's exhaust manifold. Please select your port exhaust diameter at checkout of 1.5 in, 1.75 in, or 2.0 in. P/N 05-15249..... **$173.75**

ENGINE SAVER



Every aircraft owner knows that his engine is subject to moisture build up and internal rust formation when not flown regularly. Oil companies spend millions developing special additives to minimize rust. Now there is a better way to fight this rust! The Engine saver produces a continuous supply of very low humidity air that is introduced into the engine through the breather. Low humidity air prevents water formation in the engine. The slight pressure built up keeps the moist outside air from entering, allowing the dry air to flow past the piston rings into the upper cylinder area protecting it as well. The Engine Saver is 110vac powered, requires no installation or FAA approval, and works with all piston engines. Pilots are flying less and the Engine Saver will save them money by reducing maintenance costs. P/N 08-00724 ..... **$325.00**

AWI EXHAUST SYSTEMS



EXHAUST SYSTEMS BY AEROSPACE WELDING MINNEAPOLIS, INC.

Aerospace Welding, Inc. has earned a reputation for its uncompromising commitment to quality exhaust systems and components. Aircraft Spruce is an authorized distributor of AWI products, and as such can assure our customers of minimal down time and fast shipment through the Priority Service Proram at AWI. All exhaust systems are built in fixtures for precise fit and are FAA approved for the listed aircraft. Available in factory new (N) and overhauled (OH) condition as noted.

*** NOTE: *** = 0550157-7 has been consolidated under PMA part number A0450338-14

Aircraft	OEM Part No.	Description	Part No.	Price
C-150	0450400-3	LH Muffler (N)	08-00061	**$371.00**
	0450400-26	RH Muffler (N)	08-00062	**$371.00**
	0450338-70	RH Riser (N)	08-00063	**$70.75**
	0450338-69	LH Riser (N)	08-00064	**$87.99**
	0450338-66	RH Tailpipe (N)	08-00065	**$95.00**
	0450338-67	LH Tailpipe (N)	08-00066	**$101.75**
	0450400-200	Shroud	08-14678	**$237.95**
	0450400-201	Shroud	08-14679	**$248.95**
	0450400-6	Shroud	08-14680	**$248.95**
	A0450338-10	Tailpipe Clamp without Pin	08-16025	**$10.50**
	A0450338-66	Right Hand Tailpipe	08-16026	**$93.85**
	A0450338-9	Tailpipe Clamp with Pin	08-16028	**$21.50**
	A0450400-200	LH Shroud	08-15997	**$248.95**
C-152	0454009-5	Muffler (OH)	08-00067	**$436.00**
	0454009-6	Muffler (OH)	08-00068	**$375.00**
	EL0099001-716	Muffler (OH)	08-00069	**$679.00**
	A0454002-10	LR Riser	08-15998	**$167.85**
	A0454002-11	LF Riser	08-16000	**$167.85**
	A0454002-2	RR Riser	08-16001	**$167.85**
	A0454002-4	RF Riser	08-16002	**$167.85**
	A0454023-1	LR Riser	08-16003	**$190.75**
	A0454023-2	LF Riser	08-16004	**$190.75**
	A0454023-3	RR Riser	08-16005	**$190.75**
	A0454023-4	RF Riser	08-16006	**$190.75**
C-170B/172	0550157-9	LH Muffler (OH)	08-00070	**$469.00**
	A0450338-14*	RH Muffler (OH)	08-00071	**$457.00**
	0550157-7	Riser (N)	08-00072	**$70.75**
	0550157-8	Curved Riser(OH)	08-00073	**$112.75**
	A9954100-9	Muffler (N)	08-07517	**$882.00**
	A99541005	Riser (N) LR	08-07520	**$179.75**
	A99541005	Riser (N) LF	08-07521	**$181.75**
	A0550176-54	Tailpipe	08-14681	**$135.99**
	A0550176-57	4.5" Curved Riser	08-16010	**$81.85**
	A0550176-59A	Muffler Assembly	08-16011	**$634.00**
	A0550176-7	Straight Riser	08-16012	**$66.95**
	A0450338-8	Tailpipe Clamp Kit	08-16027	**$28.80**
	A10172-013-2	Extended Tailpipe	08-16054	**$387.00**
	A1455009-3	Muffler Assmbly	08-16055	**$529.00**
	A1455009-3FP	Floatt Plane Muffler Assembly	08-16055	**$529.00**
	A1754001-23	Muffler	08-16058	**$482.00**
	A9954100-3	Shroud	08-16087	**$515.00**
C-172 Cont.	0550176-59	Muffler (N)	08-00074	**$431.00**
	0550176-13	Riser (N)	08-00076	**$90.00**
C-172	1754001-25	Muffler (N)	08-00077	**$467.00**
	1754007-1	Riser (OH) RR	08-00079	**$187.75**
	1754008-1	Riser (OH) LR	08-00080	**$187.75**
	1754009-1	Riser (OH) LF	08-00081	**$187.75**
	1754010-1	Riser (OH) RF	08-00082	**$187.75**
C172R/172S	A9954100-9	Muffler (N)	08-07517	**$882.00**
	1754001-9	Muffler w/ flm tube	08-00084	**$570.00**
	0550176-54	Tailpipe	08-14681	**$135.99**
	2454000-15	Tailpipe	08-14682	**$353.00**
C-177RG	2054000-42	LH Muffler (OH)	08-00085	**$394.00**
	2054000-40	LH Muffler (OH)	08-00086	**$392.00**
	2054000-31	LH Muffler (OH)	08-00087	**$394.00**
	2054000-39	RH Muffler (OH)	08-00088	**$394.00**
C-180	0750290-3	Muffler OH Dual exh.	08-00089	**$412.00**
	0750130-6	Stack Assy.	08-14683	**$714.00**
C-180/182	0750130-9	Muffler (OH)	08-00090	**$467.00**
	0750130-12	Muffler (OH)	08-00091	**$467.00**
C-182S	9954200-11	Tailpipe	08-14684	**$302.00**
	9954200-12	Tailpipe	08-14685	**$302.00**
C-180/182/185	A0750161-28	Muffler (N)	08-07514	**$625.00**
	A0750238-47	Exhaust Stack	08-16046	**$724.00**
	A1254017-19	Muffler Asembly	08-16053	**$610.00**
	A9954017-19	Muffler Assembly	08-16086	**$610.00**
	A0540161-28	Muffler Assembly	08-16007	**$424.00**
	A0750161-40	Shroud	08-16008	**$328.00**
	A0750130-61	Shroud	08-16009	**$327.00**
C-182/185	0750161-89	Muffler (N)	08-00094	**$426.00**

SEE WEBSITE FOR AIRCRAFT MODEL ELGIBILITY

Note: (N) or (OH) after description indicates New (N) or Overhauled (OH) condition. All overhauled parts carry a core charge. Please Order according to "Our Part No."

AWI EXHAUST SYSTEMS

Aircraft	OEM Part No.	Description	Part No.	Price
	0750238-20	15 inch Stack (N)	08-00095	**$703.00**
C-182R	2254003-17	Tailpipe	08-14686	**$133.75**
	2254003-18	Tailpipe	08-14687	**$133.75**
C-182RG	1250251-12	Muffler (OH) w/ ring	08-00107	**$341.00**
C-206/210	1250263-2A	LH Collector (OH)	08-00103	**$515.00**
	1250264-2A	RH Collector (OH)	08-00104	**$515.00**
	1250250-5	Heat Exchanger	08-00105	**$430.00**
	650-43	LH Muffler (OH)	08-00106	**$435.00**
	1250251-13	RH Muffler OH w/ rings	08-00107	**$341.00**
	1250251-16	RH Muffler (OH)	08-00108	**$280.95**
	1250256-7	LH Tailpipe (N)	08-00109	**$133.75**
	12502646-6	RH Tailpipe (N)	08-00111	**$132.75**
C-T206/T210	1250860-110	Tailpipe (OH)	08-00112	**$445.00**
	1250860-104	RF Stack (OH)	08-00113	**$472.00**
	1250860-105	Turbo Inlet (OH)	08-00114	**$473.00**
	1250860-203	Heat Exchanger (OH)	08-00115	**$1,514.00**
	1250860-90	Crossover (OH)	08-00116	**$219.95**
	1250860-100	Riser (N)	08-00117	**$69.75**
	1250860-07	Tailpipe Adapter(OH)	08-00119	**$88.75**
	12502860-164	New Tailpipe	08-15666	**$453.00**
	12520860-168	Tailpipe Adapter	08-15667	**$77.75**
	12520860-1057M	LH Exhaust Modified	08-15669	**$1,278.00**
	12520860-100	Riser	08-15670	**$57.95**
	12520860M-122	Turbo Inlet Assy Modified	08-15671	**$560.00**
	12520860-29	Riser Clamp Half	08-15674	**$24.50**
	1250263-2	LH Stack Assembly	08-16048	**$1,015.00**
	1250264-2	RH Stack Assembly	08-16049	**$1,015.00**
	1250860-117	Riser	08-16051	**$199.75**
	120860-29	Clamp	08-16052	**$27.50**
C-337	1250250-5	Muffler (OH)	08-00120	**$394.00**
	1555001-1	Muffler (OH)	08-00121	**$1,868.00**
	9910295-22	Right AFT	08-16068	**$315.00**
	9910296-7	Slip Joint SS	08-16069	**$275.95**
	9910299-15	LH Ibow Sealess	08-16071	**$395.00**
	9910299-16	RH Ibow Sealess	08-16074	**$395.00**
	9910299-15L	LH Inconel Elbow Sealess	08-16072	**$705.00**
	9910299-16L	RH Inconel Elbow Sealess	08-16075	**$705.00**
	9910299-3	LH Elbow Seal	08-16076	**$395.00**
	9910299-4	RH Elbow Seal	08-16078	**$395.00**
	9910299-3L	LH Inconel Elbow Sealess	08-16077	**$652.00**
	9910299-4L	RH Inconel Elbow Sealess	08-16079	**$652.00**
	9910299-13	Left Westgate Overboard	08-16015	**$215.95**
	9910299-14	Right Westgate Overboard	08-16016	**$215.95**
	9910299-5	Elbow	08-16080	**$245.95**
	9910299-6	Westgate Overboard	08-16081	**$163.80**
	9910299-10	Bypass Elbow	08-16014	**$363.00**
	A075161-22	Clamp	08-16044	**$11.50**
	A0750161-24	Clamp	08-16045	**$30.50**
Piper J-3	71053-02	Muffler (OH)	08-00122	**$335.00**
PA18	12433-014	Muffler (OH)	08-00123	**$349.00**
	12457-002	Stack (OH)	08-00124	**$385.00**
PA22	A10308-003	Muffler (N)	08-13103	**$450.00**
	12043-22	Stack (OH)	08-00127	**$527.00**
	12043-23	Stack (OH)	08-00128	**$475.00**
PA28-140/-180	99482-00	Muffler (OH)	08-00129	**$380.00**
	A99482-02	Muffler (N)	08-13105	**$433.00**
	99044-02	Stack (OH)	08-00131	**$285.95**
	99044-04	Stack (OH)	08-00132	**$440.00**
	99044-05	Stack (OH)	08-00133	**$347.00**
PA28-10/180/ 151/ 494/ 191	AWI 63666-002	Tailpipe (N)	08-07515	**$181.75**
	AWI 63723-001	Carb. Heat Shroud	08-14861	**$429.00**
PA-28-40/160	A63723-002	Shroud Bottom	08-14862	**$294.95**
		Left Front Stack 8” Drop	08-15764	**$427.00**
PA28-151/161/ 180/191	66894-03	Muffler (N)	08-00135	**$304.00**
PA28R-180/200	67517-00	Muffler (N)	08-00136	**$325.00**
PA28-235	65012-00	Muffler (OH)	08-00137	**$381.00**
	65813-00	Muffler (OH)	08-00138	**$381.00**
	68718-03	Muffler (OH)	08-00139	**$381.00**
	65038-00	LH Stack (OH)	08-00140	**$530.00**
	65039-00	RH Stack (OH)	08-00141	**$468.00**
PA28-236	67517-00	Muffler (N)	08-00136	**$325.00**
	LW12127	Transition (N)	08-00145	**$2,003.00**
	LW12437	Transition (N)	08-00146	**$1,832.00**
	40310-09	Lower Tailpipe (OH)	08-00147	**$548.00**
	40310-08	Upper Tailpipe (OH)	08-00148	**$518.00**
PA32-260	68718-00	Muffler (OH)	08-00150	**$454.00**
PA32-300	68796-00	Muffler (OH)	08-00153	**$431.00**
	68793-00	Stack (OH)	08-00154	**$564.00**

SEE WEBSITE FOR AIRCRAFT MODEL ELGIBILITY

Note: (N) or (OH) after description indicates New (N) or Overhauled (OH) condition. All overhauled parts carry a core charge. Please Order according to “Our Part No.”

AWI EXHAUST SYSTEMS

Aircraft	OEM Part No.	Description	Part No.	Price
PA32R-301-T	W15859	Westgate (OH)	08-00156	**$1,398.00**
PA34-200-I	78463-10	LH Tailpipe (OH)	08-00158	**$511.00**
	78463-10	RH Tailpipe (OH)	08-00159	**$511.00**
PA38-112	77669-02	Muffler (OH)	08-00160	**$237.95**
PA44-180	86299-07	Muffler (OH)	08-00161	**$269.95**
A16696	PA31 LH Center Tube	31-310/325 Navajo/31-310/ 325/350/31-350 Chieftain	08-14621	**$132.80**
A16697	PA31 LH Aft Elbow	31-350 Chieftain/31-310/325 Navajo/31-310/325/350	08-14622	**$349.00**
A16826	PA31 LH Manifold Assembly	31-310/325 Navajo/31-310/ 325/350/31-350 Chieftain	08-14623	**$780.00**
A16621	PA31 RH Center Tube	31/31-310/325 Navajo/31-350 Chieftain	08-14624	**$132.80**
A16620	PA31 RH Aft Tube	31-350 Chieftain/31-310/325 Navajo/31-310/325/350	08-14625	**$321.00**
A16825	PA31 RH Manifold Assembly	31-310/325 Navajo/31-310/ 325/ 350/31-350 Chieftain/31-350 Chieftain	08-14626	**$780.00**
A40310-10	PA31-350 Upper Tailpipe Assembly	31-350 Chieftain	08-14627	**$504.00**
A40310-9	PA31-310/325/350 Lower Tailpipe Assembly	31-310/325/350/31-350 Chieftain/31-310/325 Navajo	08-14628	**$499.00**
A15849	PA31 Short Fwd Tube	31-350 Chieftain/31-310/325 Navajo/31-310/325/350	08-14629	**$125.75**
	189	RH Muffler (OH)	08-00163	**$168.00**
B-V35/A36	35-950005-1	LH Stack (OH)	08-00164	**$472.00**
	35-950005-3	RH Stack (OH)	08-00165	**$472.00**
	701-4	LH Muffler (N)	08-00166	**$260.95**
	701-20	LH Muffler (N)	08-00167	**$315.00**
	701-5	RH Muffler (OH)	08-00168	**$448.00**
	701-19	RH Muffler (OH)	08-00169	**$481.00**
	35-950004-9	RH Tailpipe (OH)	08-00171	**$167.80**
	35-950005-61	LH Tailpipe (N)	08-00172	**$166.75**
	35-950005-57	RH Tailpipe (N)	08-00173	**$169.95**
	35-950004-7	LH Tailpipe (N)	08-00176	**$166.75**
	A35-95000539	RH Collector (N)	08-13109	**$1,043.00**
	A189	RH Muffler	08-16041	**$260.95**
	A492-43	LH Muffler	08-16042	**$472.00**
B-35H-P	492-27	RH Muffler (OH)	08-00174	**$272.95**
	35-950005-61	LH Tailpipe (N)	08-00178	**$113.00**
	35-950005-57	RH Tailpipe (N)	08-00179	**$136.00**
B-55/58	96-950002-55	LE OTNBD Tailpipe (OH)	08-00180	**$589.00**
	96-950002-57	RE INBD Tailpipe (OH)	08-00181	**$573.00**
	96-950002-59	LE INBD Tailpipe (OH)	08-00200	**$550.00**
	96-950002-61	RE OTNBD Tailpipe (OH)	08-00201	**$573.00**
	96-950002-31	Riser Cyl. #3 (OH)	08-00202	**$321.00**
	96-950002-7	Riser Cyl. #4 (OH)	08-00203	**$319.00**
	96-950002-33	Riser Cyl. #5 (OH)	08-00204	**$202.95**
	96-950002-9	Riser Cyl. #6 (OH)	08-00205	**$201.95**
B-Sundowner	099001-127	Muffler (OH)	08-00206	**$713.00**
B-Sport	099001-126	Muffler (OH)	08-00207	**$713.00**
B-Sierra	099001-131	Muffler (OH)	08-00208	**$930.00**
Bellanca Citabria	3-1493R	Muffler (OH)	08-00209	**$286.95**
	3-1493L	Muffler (OH)	08-00210	**$286.95**
Bellanca 8KCAB	099001-046	Muffler (OH)	08-00213	**$752.00**
Bellanca 8GCBC	099001-046	Muffler (N)	08-13106	**$747.00**
Bellanca 7ECA	099001-049	Muffler (OH)	08-00217	**$718.00**
Grumman AA1 Yankee	099001-113	Muffler (OH)	08-00218	**$935.00**
Grumman AA1 A&B	099001-137	Muffler (OH)	08-00219	**$815.00**
Grumman AA1/ AA5/ AA5A/ AA5B	AWI099001-102	Straight Riser (N)	08-07523	**$103.75**
Grumman AA5 Traveler	099005-148	Muffler (OH)	08-00220	**$713.00**
Grumman AA5B Tiger	A099005-184	Riser	08-16040	**$199.75**
Grumman AA5A Cheetah	099005-195	Muffler (OH)	08-00221	**$681.00**
Grumman AA5B Tiger	099001-191	Muffler (OH)	08-00222	**$751.00**
Grumman AA5/AA5A	099005-195	Muffler (OH)	08-00221-1	**$674.00**
Mooney M20	630060-501	180 Muffler (OH)	08-00223	**$675.00**
	630060-503	200 Muffler (OH)	08-00224	**$753.00**
Mooney M-20	A630053-013	Upper Riser	08-16030	**$160.75**
Mooney M20J	A630119-501	Tailpipe	08-16039	**$417.00**
Musketeer	AWI099001-120	Straight Riser (N)	08-13107	**$109.75**
American Champiom	A099005-193	O-360 Muffler	08-10702	**$718.00**
Navion	A35-950005-40	Hi Performance Right Assembly	08-15988	**$995.00**
	A35-950005-39	Hi Perf RH Collector	08-15989	**$1,080.00**
	A35-950005-37	Hi Perf LH Collector	08-15990	**$1,080.00**

SEE WEBSITE FOR AIRCRAFT MODEL ELGIBILITY

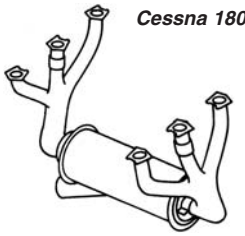
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NICROCRAFT EXHAUST PARTS

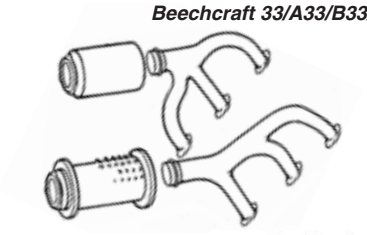
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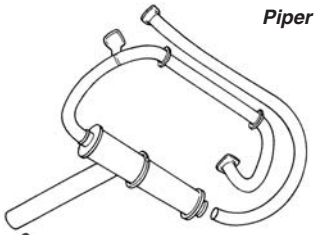
Cessna 180/182/185

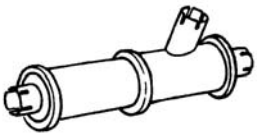


Beechcraft 33/A33/B33/35

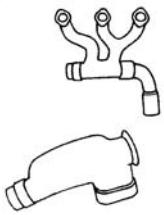


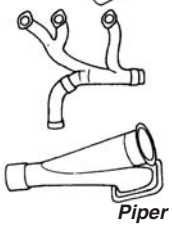
Piper PA-18





Piper PA-12, 14, 16, 20, 22, 25





Piper PA-23 Turbo

EP

CESSNA EXHAUST PARTS

Application	Desc.	OEM	PN	Price
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Clamp Asy	186-8	08-16093	**$40.85**
Cessna 180, S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Clamp Asy	192-001	08-16094	**$37.60**
Cessna 170B, 172, 172A	Clamp Asy	221-5	08-16101	**$56.75**
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Clamp Asy	568-06	08-16120	**$45.85**
Cessna 172B thru 172H; F172F thru F172K; P172D; 175B,C	Clamp Asy	568-31	08-16121	**$51.75**
Cessna : 205; 206; U206; U206A, B, C, D, F; P206, P206A, B, C, D, E	Clamp Asy	596-0005	08-16122	**$40.65**
Cessna 210B, C, D, E, F, G, H, J, K, L, M, N	Clamp Asy	596-02	08-16123	**$45.85**
Cessna 205, 206, U206A,thru,F, P206, P206A thru E, 210B thru N	Collector LH	1250263-2, 1250256-3	08-00850	**$466.00**
Cessna 205, 206, U206A,thru,F, P206, P206A thru E, 210B thru N	Collector RH	1250264-2, 1250257-3	08-00851	**$466.00**
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Collector, LH	320-23	08-16110	**$588.00**
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Collector, RH	320-24	08-16111	**$588.00**
Cessna T310P, Q, R, 320D, E,F; 401, A, B; 402, A, B	Header, LH	8026-36	08-16139	**$1,423.00**
Cessna T310P, Q, R, 320D, E,F; 401, A, B; 402, A, B	Header, RH	8026-25	08-16138	**$1,917.00**
180B, C, D, E, F	Heat Muffler	0750130-44	08-00556	**$384.00**
182B, C, D, E, F	Heat Muffler	0750130-9	08-00554	**$442.00**
Cessna 205, 206, U206A,thru,F, P206, P206A thru E, 210B thru N	Heat Muffler LH	1250250-5	650-43	**$537.00**
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Heat Muffler	225-5	08-16108	**$397.00**
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Heat Muffler	CEM0007	08-16154	**$440.00**

Application	Desc.	OEM	PN	Price
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Heat Muffler	CEM0008	08-16155	**$440.00**
Cessna 210B	Heat Muffler RH	650-99	08-16134	**$332.00**
Cessna 152	Muffler	0454009-5	08-03629	**$335.00**
& A152 (S/N 978 & up)	Muffler	0454009-6	08-03628	**$346.00**
Cessna R172	Muffler	1455009-3	08-00341	**$419.00**
Cessna 180, 182, 185	Muffler	0750161-28, 0750161-89	08-01313	**$368.00**
Cessna 172 I thru Q, 177	Muffler	1754001-15, 1754001-9, 1754001-22	08-03635	**$417.00**
Cessna 310R	Muffler	8282-1	08-16140	**$346.00**
Cessna 172R; 172S	Muffler	WCC9954100-9	08-16165	**$660.00**
Cessna 150G,H,J,K,L,M A150K, L, M, F150G, H, J, K, L, M, FA150K,L,	Muffler LH	0450400-3	8300-3	**$335.00**
C170,172,A,Cont 0-300/ C145	Muffler LH	0550157-9	221-9	**$518.00**
Cessna 172B thru H, F172F thru K, P172D, 175B,C	Muffler LH & RH	0550176-59	568-110	**$353.00**
Application	**Desc.**	**OEM**	**PN**	**Price**
Cessna 150G,H,J,K,L,M A150K, L, M, F150G, H, J, K, L, M, FA150K,L,	Muffler RH	0450400-26	8300-4	**$335.00**
C170,172,A,Cont 0-300/ C145	Muffler RH	0550157-32	08-00551	**$518.00**
C210B	Muffler RH	1250251-16	08-00849	**$336.00**
Cessna 205; 206; U206; U206A, B, C, D, F; P206, P206A, B, C, D, E	Muffler w/ Heat Shield	650-95	08-16132	**$480.00**
Cessna 337 (Rear Engine)	Muffler, Rear	CEM0022	08-16157	**$1,978.00**
Cessna 170B, 172, 172A	Riser	221-7	08-16102	**$109.75**
Cessna 170B, 172, 172A	Riser	221-8	08-16103	**$170.90**
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Riser	223-01	08-16105	**$156.95**
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Riser	223-02	08-16106	**$147.75**
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Riser	223-03	08-16107	**$139.75**
Cessna 205; 206; U206; U206A, B, C, D, F; P206, P206A, B, C, D, E	Riser	596-30	08-16124	**$100.75**

Prices Subject to Change Without Notice

CESSNA EXHAUST PARTS CONT.

Application	Desc.	OEM	PN	Price
Cessna 210B, C, D,E, F, G, H, J, K, L, M, N	Riser	650-18	08-16127	**$106.75**
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Riser	8300-13	08-16146	**$122.75**
Cessna 170B, 172, 172A	Shroud Asy, LH	221-15	08-16104	**$397.00**
Cessna 205; 206; U206; U206A, B, C, D, F; P206, P206A, B, C, D, E	Shroud Asy, LH	650-47	08-16129	**$289.95**
Cessna 210B	Shroud Asy, RH	650-46	08-16128	**$116.75**
Cessna	Spring	186-218	08-16091	**$4.35**
C172 O-320	Stack	1754007-1	08-00844	**$157.90**
C172 O-320	Stack	1754008-1	08-00846	**$157.90**
C172 O-320	Stack	1754009-1	08-00847	**$157.90**
C172 O-320	Stack	1754010-1	08-00848	**$171.75**
Cessna 180, 182, 185	Stack	CES0002	08-16158	**$792.00**
Cessna 180, 182, 185	Stack	CES0003	08-16159	**$944.00**
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Stack Asy, LH Engine Inbound	BES0007	08-16152	**$414.00**
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Stack Asy, LH Engine Outbound	BES0005	08-16150	**$414.00**
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Stack Asy, RH Engine Inbound	BES0006	08-16151	**$414.00**
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Stack Asy, RH Engine Outbound	BES0008	08-16153	**$414.00**
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Stack, LH	BES0002	08-16149	**$443.00**
Cessna 170B, 172, 172A	Tailpipe	221-33	08-16099	**$211.95**
Cessna 170B, 172, 172A	Tailpipe	221-4	08-16100	**$211.95**
Cessna 205; 206; U206; U206A, B, C, D, F; P206, P206A, B, C, D, E	Tailpipe	650-67	08-16131	**$135.85**
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Tailpipe	8300-7	08-16147	**$123.75**
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Tailpipe	8300-8	08-16148	**$123.75**
Cessna	Tension Spring	186-225	08-16092	**$3.85**

BEECHCRAFT EXHAUST PARTS

Application	Description	OEM	PN	Price
Beech FEEA,F33C, S/N CJ-26 & UP / C33A,E33A S/N CE-290 & UP	Collector LH	35-9016-1S, 35-9016-1SR	08-00853	**$492.00**
Beech FEEA,F33C, S/N CJ-26 & UP / C33A,E33A S/N CE-290 & UP	Collector RH	35-9016-1S, 35-9016-1SR	08-00854	**$513.00**
Beechcraft B33, S/N CD-736 THRU CD-813	Heat Muffler LH w/o Shroud	186-30	186-30	**$519.00**
Beechcraft H35, J, K, M, N, P35	Heat Muffler LH	492-43	08-00555	**$472.00**
Beechcraft 36,A36 S/N E-1 AND UP / S35,V35,V35A,V35B, S/N D-7310 AND UP	Heat Muffler RH	701-19	701-19	**$406.00**

Application	Description	OEM	PN	Price
Beechcraft Model 76 Duchess	Muffler	8295-205	08-16145	**$754.00**
Beechcraft 33, A 33, B33, S/N CD-1 THRU CD-735	Muffler RH	189	189	**$269.95**
Beechcraft H35; J35; K35; M35; N35; P35	Muffler RH	492-27	08-16115	**$355.00**
Beechcraft C33A; E33A, C; F33A, C; G33; S35; V35, A, B; 36; A36	Muffler and Shroud Assembly, RH	701-21	08-16135	**$606.00**
Beechcraft C33, E33	Muffler and Shroud Assembly, RH	8003-9	08-16137	**$714.00**
Beechcraft H35; J35; K35; M35; N35; P36	Shroud Assembly	492-42	08-16116	**$199.75**
Beechcraft C33, E32	Shroud Assembly RH	701-50	08-16136	**$199.75**
Beechcraft B33 THRU E33 S/N CD-1 THRU CD-1254	Stack Assembly LH	35-950118	08-03627	**$509.00**
Beechcraft B33 THRU E33 S/N CD-1 THRU CD-1254	Stack Assembly RH	35-950116	08-03626	**$510.00**
Beechcraft Model 76 Duchess	Stack, Cylinder #1	8295-101	08-16141	**$206.95**
Beechcraft Model 76 Duchess	Stack, Cylinder #2	8295-102	08-16142	**$206.95**
Beechcraft Model 76 Duchess	Stack, Cylinder #3	8295-103	08-16143	**$206.95**
Beechcraft Model 76 Duchess	Stack, Cylinder #4	8295-104	08-16144	**$206.95**

OVERHAULED EXHAUST PARTS

Aircraft	Description / OEM#	Part No.	Price
Beechcraft C33A, E33A, F33A, C, S35, 36, A36	Heater Muffler RH w/o shroud / #701-19	701-19R	**$365.00**
Cessna 210B	Heater Muffler LH / #1250250-15	1250250-5R	**$239.00**
Piper PA-18	Muffler / #12433-15	12433-15R	**$357.00**

PIPER EXHAUST CLAMP



This clamp is used on the exhaust system. The spot weld on the V Band is failing. The failure could result in the release of high-temperature gasses inside the engine compartment and possibly cause an in flight fire according to the published AD.

P/N 05-04866..... **$595.00**

FAA/PMA EXHAUST COMPONENTS

CESSNA & BEECH FAA / PMA REPLACEMENT MUFFLERS & EXHAUST COMPONENTS



FAA/PMA approved equivalents.
Cessna 120, 140, 150 Exhaust Systems: Include one left and one right muffler, shroud, tailpipe and clamps.
Cessna 120, 140, 150, 150A thru H, J, K, A150K, L & M Muffler Systems: Muffler with attached stacks. Original Cessna 120 & 140 shrouds will not fit the mufflers below.
Cessna 152 & 152A STC'D Exhaust System: For Cessna 152 S/N 15279406-15283591; F15201429-F15201673; A1520735-1520878; FA1520337-FA1520357. Ideal for homebuilts using 0-235, L2C, N2C and 0-320 Lycoming Engines.
Cessna Tailpipe Extensions: Cessna 150, 170 and early model 172 replaces original exhaust pipe Cessna P/N 0450338-66, 0550157-3 and 055015733. Extends 2" past original tailpipe, 2" OD stainless steel, Bolt-on, End cowling smudges and Reduces cabin noise.

Description	Part No.	Price
Cessna 120/140 Exhaust System	05-05279	**$1,151.00**
Cessna 150 Exhaust System	05-05280	**$1,151.00**
Cessna 120, 140, 150 Muffler Lh	05-05271	**$505.00**
Cessna 120, 140, 150 Muffler Rh	05-05272	**$553.00**
Cessna 120, 140, 150 Lh Shroud	05-05281	**$199.75**
Cessna 120, 140, 150 Rh Shroud	05-05282	**$189.95**
Cessna 150 Tailpipe, Lh	05-05273	**$100.75**
Cessna 150 Tailpipe Rh	05-05274	**$144.75**
Muffler To Tailpipe Clamp	05-05275	**$37.50**
Cessna 120, 140 Tailpipe, Lh	05-05276	**$97.75**
Cessna 120, 140 Tailpipe, Rh	05-05277	**$98.75**
Cessna 150 Exhaust System	05-05278	**$41.70**
S/s Lycoming Flange	05-05292	**$23.60**
Riser, #4 Cylinder	05-05294	**$79.75**
Riser, #1 Cylinder	05-05295	**$69.99**
Riser, #3 Cylinder	05-05296	**$69.99**
Clamp Assy	05-05297	**$22.50**
Muffler Shroud	05-05298	**$337.00**
Cessna 152 Muffler Only	05-05299	**$413.00**
Cessna 172 Muffler, S/n 17259224 To 59223	05-05250	**$479.00**
Cessna 172 Muffler, S/n 17265375 To 68582	05-05251	**$530.00**
Cessna 180 Muffler	05-05262	**$562.00**
Cessna Extension Tailpipe	05-05269	**$208.95**
Extended Tailpipe	05-05302	**$121.75**
Cessna 180 Tailpipe Extension	05-05270	**$86.95**
Musketeer Muffler	05-05263	**$434.00**
Musketeer Muffler Shroud	05-05264	**$207.95**



AERONCA FAA/PMA STACKS & HEAT MUFFS

Aeronca 7AC & 11AC stacks, fits Continental 65 thru O-200 engines.

Description	Part No.	Price
Aeronca Exhaust Stacks Aluminized Mild-steel Pair	05-05236	**$399.95**
Aeronca Lh Exhaust Stack Aluminized Mild-steel	05-05237	**$292.95**
Aeronca Rh Exhaust Stack Aluminized Mild-steel	05-05238	**$243.95**
Aeronca Heat Muff Aluminum (One Needed Per Stack)	05-05247	**$176.75**
Aeronca Exhaust Stacks Lh Mild Steel	05-08067	**$274.00**
Aeronca Exhaust Stacks Rh Mild Steel	05-08068	**$274.00**

TAYLORCRAFT FAA / PMA DESIGN B THRU BC12D MUFFLER



A-65, A-75 and C85-8 engines only. Fits B-through BC12D series. 1020 Mild Steel and cold galvanized spray finish (for corrosion protection).
Replaces OEM part BC-A6031. This system is compatible only with OEM shrouds. Not compatible with Univair shrouds.
Note: Exhaust system installation on Taylorcraft is unique in that it requires either the removal of the engine or the loosening of engine bolts. This is the original design.
P/N 05-05246 .....**$806.00**

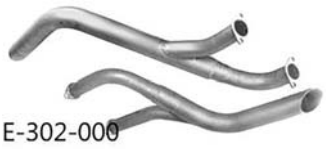
PIPER FAA / PMA REPLACEMENT MUFFLERS & EXHAUST COMPONENTS



Replacement mufflers & exhaust components for Piper Aircraft, all are FAA/PMA approved equivalents.
Note: Bale Assembly, complies with Service Bulletin No. 759 and is manufactured in accordance with FAA specifications. Wire bale is installed into tailpipe to avoid blockage of the tailpipe, should a baffle failure occur.
Requires Welding

Description	Part No.	Price
Pa-18 Super Cub Muffler	05-05256	**$571.00**
Piper Tailpipe Clamp	05-05253	**$34.85**
Piper Muffler Clamp With Pin 2-1/4 Id	05-04985	**$35.65**
Piper Pa-22 Tri-pacer / Colt Muffler	05-05254	**$538.00**
Piper Pa-22 Tri-pacer / Colt Tailpipe	05-05255	**$184.75**
Piper Pa-24-250 Comanche Tailpipe	05-05303	**$133.75**
Piper Muffler Clamp 2-1/2 Id	05-05305	**$54.99**
Piper Pa-28 140 Cherokee Muffler	05-05257	**$606.00**
Piper Pa-28 140 Cherokee Muffler Shroud	05-05258	**$351.00**
Piper Pa-28 140 Cherokee Tailpipe With Bale Assembly	05-05259	**$190.75**
Piper Pa-28 28-180 Cherokee Mufflers	05-05261	**$421.00**
Piper Pa-28r-180 200 Cherokee Arrow Muffler	05-05260	**$287.95**
Bale Assembly For Piper Exhaust Systems	05-05300	**$49.50**

LUSCOMBE & ERCOUPE FAA / PMA REPLACEMENT MUFFLERS & EXHAUST COMPONENTS



Replacement mufflers & exhaust components for Luscombe/Ercoupe Aircraft, all are FAA/PMA approved equivalents.

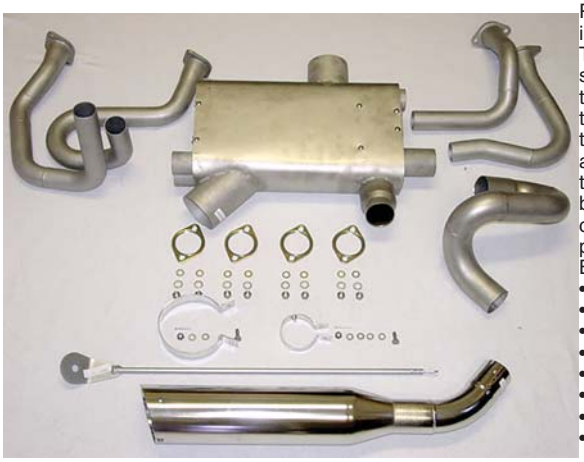
Note: Luscombe 8A, 8C, 8E &8F:
Replaces early style crossover.
Luscombe 8A, 8C, 8E &8F, Crossover 65 HP & Ercoupe stacks Model 415C series all have the extended-life hot aluminized mild-steel.

Description	Part No.	Price
Luscombe Exhaust Stack	05-05239	**$592.00**
Luscombe Lh Stack 65 Hp	05-05240	**$341.00**
Luscombe Rh Stack 65 Hp	05-05241	**$290.95**
Luscombe Cabin Heat Muff	05-05248	**$229.95**
Ercoupe Exhaust Stack	05-05242	**$564.00**
Ercoupe Lh Exhaust Stack	05-05243	**$306.00**
Ercoupe Rh Exhaust Stack	05-05244	**$314.00**
Luscombe Crossover System	05-05268	**$625.00**
Luscombe Crossover Rear	05-05265	**$228.95**
Luscombe Crossover Stack, Lh	05-05267	**$283.95**
Luscombe Crossover Stack, Rh	05-05266	**$205.95**
Continental 200 J-3 Exhaust Stacks	05-05283	**$444.00**
Continental 200 J-3 Exhaust Stack - Lh	05-05284	**$236.95**
Continental 200 J-3 Exhaust Stack - Rh	05-05285	**$236.95**
C85/c90 - 12 Exhaust Stacks	05-05286	**$500.00**
C85/c90 Exhaust Stack Lh	05-05287	**$265.95**
C85/c90 Exhaust Stack, Rh	05-05288	**$265.95**

EP

Prices Subject to Change Without Notice

POWER FLOW SYSTEMS INC. EXHAUST SYSTEMS



Power Flow Systems, Inc., the world leader in designing, manufacturing, and retailing of FAA Certified High Performance aircraft tuned exhaust systems.
Their Tuned Exhaust System is totally different. When you break down their exhaust system, you have two "sets" of pipes; the primary (header/collector combination) and the secondary (pipe after the collector). The primary contains four independent tubes that all join at the "4-1 Collector". As each "exhaust puff" of spent fuel travels through the primaries, it leaves a vacuum behind. In their tuned exhaust system, they have adjusted the length of each tube so that the vacuum reaches the collector just in time to "suck out" the exhaust from the next cylinder. The exhaust gases are not only being pushed out by the cylinder, but "extracted" by the vacuum, so a bigger, fresher charge will enter the cylinder during the next cycle. A tuned exhaust system really promotes a smoother, cooler, and finally more powerful running engine.

Benefits with Power Flow Systems:
- Shorter Take Off Roll
- Greatly Improves Rates of Climb
- More Usable Power
- Fuel Savings at Current Speeds
- Smoother Running Engine
- Runs cooler at Current Speeds
- Go up to 8 knots faster
- Mandrel Bent Tubes to maintain consistent interior dimension

Kit Contents:
- Kit includes everything to "bolt on" a Complete Replacement Exhaust System
- New Headers, Heater, & Muffler
- No blow gaskets, Nuts, Lock washers, Flat washers, Cotter pins etc.
- Stainless Steel Construction
- Up to 40% thicker than stock
- New Improved Heating System

Airplane	Type of System	Power Flow P/N	Our P/N	Price
Aviat Husky A1B, A1C-180 with Lyc., O-360	Classic Polished	PFS-18101	08-07279	**$5,500.00**
	Ceramic Upgrade	PFS-18101 Upgrade	08-15959	**$5,700.00**
Cessna 172 C-172 w/ O-320	Classic Polished	PFS-13204	08-00358	**$4,450.00**
	Classic Ceramic	PFS-13204-Ceramic	08-05957	**$4,650.00**
	Short Stack Polished	PFS-13204-InternalC	08-05958	**$4,450.00**
	Short Stack Ceramic	PFS-13204-InternalCCER	08-05959	**$4,650.00**
Cessna 172 or 175 C-172 w/ O-360	Classic Polished	PFS-13204-O360	08-00359	**$4,450.00**
	Classic Ceramic	PFS-13204-O360-Ceramic	08-05960	**$4,850.00**
	Short Stack Polished	PFS-13204-O360-InternalC	08-05961	**$4,450.00**
	Short Stack Ceramic	PFS-13204-InternalCCER	08-05962	**$4,650.00**
Cessna 177 C-177 w/ O-320	Classic Polished	PFS-13704	08-00360	**$4,650.00**
	Classic Ceramic	PFS-13704-Ceramic	08-05963	**$4,850.00**
	Short Stack Polished	PFS-13704-InternalC	08-05964	**$4,450.00**
	Short Stack Ceramic	PFS-13704-InternalCCER	08-05965	**$4,650.00**
Cessna 177A C-177 w/ O-360	Classic Polished	PFS-13704-O360	08-00361	**$4,650.00**
	Classic Ceramic	PFS-13704-0360-Ceramic	08-05966	**$4,650.00**
	Short Stack Polished	PFS-13704-0360-InternalC	08-05967	**$4,450.00**
	Short Stack Ceramic	PFS-13704-0360-InternalCCER	08-05968	**$4,850.00**
Cessna 177B (0-360)	Classic Polished	PFS-13705	08-00880	**$4,650.00**
	Classic Ceramic	PFS-13705-Ceramic	08-05969	**$4,850.00**
	Short Stack Polished	PFS-13704-InternalC	08-05970	**$4,650.00**
	Short Stack Ceramic	PFS-13705-InternalCCER	08-05971	**$4,850.00**
C-177RG w/ IO-360/390 **Revised Application	Classic Ceramic	PFS-15102-CERAMIC	08-07165	**$5,750.00**
	Short Stack Polished	PFS-13706	08-07163	**$5,750.00**
	Short Stack Ceramic	PFS-13706-CERAMIC	08-07164	**$5,950.00**
Lyc. O-360	Short Stack Polished	PFS-16104	08-15968	**$3,095.00**
Lyc. O-360	Short Stack Ceramic	PFS-16104-Ceramic	08-15969	**$3,295.00**
Grumman AA-5 (below serial #640)	Short Stack Polished	PFS-13801-InternalC	08-05973	**$4,450.00**
	Short Stack Ceramic	PFS-13801-InternalCCER	08-05974	**$4,650.00**
Grumman AA-5 (above Serial #640) & Grumman AA-5A	Short Stack Polished	PFS-13802-InternalC	08-05976	**$4,650.00**
	Short Stack Ceramic	PFS-13802-InternalCCER	08-05977	**$4,850.00**
Grumman AA-5B & AA-5B	Classic Polished	PFS-13803	08-00637	**$4,650.00**
	Classic Ceramic	PFS-13803-Ceramic	08-05978	**$4,850.00**
	Short Stack Polished	PFS-13803-InternalC	08-05979	**$4,650.00**
	Short Stack Ceramic	PFS-13803-InternalCCER	08-05980	**$4,850.00**
Glastar & Sportsman 2+2 Experimental/ Homebuilt	Polished	PFS-16104	08-04986	**$3,095.00**
	Ceramic	PFS-16104-Ceramic	08-05981	**$3,295.00**
Piper PA-28-140	Classic Polished	PFS-14150	08-05924	**$4,450.00**
	Short Stack Polished	PFS-14150-InternalC	08-05983	**$4,450.00**
	Short Stack Ceramic	PFS-14150 - InternalCCER	08-05984	**$4,650.00**
	Short Stack Polished	PFS-14150-Internal-InternalP	08-05987	**$4,450.00**
	Short Stack Ceramic	PFS-14150-InternalP-CER	08-05988	**$4,650.00**
Piper PA-28-150, 160 w/ Conical Mounts (Below Serial #1761)	Short Stack Polished	PFS-14151-InternalP	08-05990	**$4,450.00**
	Short Stack Ceramic	PFS14151-InternalPCER	08-05991	**$4,650.00**
	Short Stack Polished	PFS-14150-InternalP	08-05994	**$4,450.00**
	Short Stack Ceramic	PFS-14150-InternalP-CER	08-05995	**$4,650.00**
Mooney M20 (B,C,D,G) w/ O-360	Polished	PFS-16101	08-00694	**$4,650.00**
	Ceramic	PFS-16101-Ceramic	08-05996	**$4,850.00**
Mooney M20 (E,F,J) w/ IO-360	Ceramic	PFS-16201-Ceramic	08-05997	**$5,150.00**
Raytheon Beechcraft 23 (O-360)	Ceramic	PFS14152-Ceramic	08-05998	**$4,650.00**
	Ceramic	PFS-13804-Ceramic	08-06000	**$4,650.00**
	Polished	PFS-113804	08-05999	**$4,450.00**

CERAMIC UPGRADE - Hides discoloration that occurs when the stainless steel is heated. Retains silver finish and requires no maintenance or polishing..... P/N 08-05945 ..... **$850.00**

POWER FLOW EXHAUST SYSTEM FOR ROBINSON R22



R22 Tuned Exhaust Kit for R22, R22 Alpha, R22 Mariner, R22 Beta with 320-B2C engine and large oil cooler. FAA approved by STC. Installing a Power Flow tuned exhaust provides the same performance benefits as upgrading to a Beta II, at a fraction of the cost. It is true bolt-on horsepower for your O-320 powered Robinson R22 Alpha or Beta.

P/N 08-15965 ..... **$7,360.00**

EP

EXHAUST SYSTEMS

All exhaust stacks are heli-arc welded using Type 321 stainless steel tubing for light weight and long service life. Stainless steel stacks weight 50% less than a set in mild steel. All stacks are custom made and the workmanship is consistently of exceptional quality.

WHEN ORDERING, SPECIFY COMPLETE MODEL NUMBER AND HP OF ENGINE AND AIRCRAFT TYPE.

STRAIGHT STAINLESS STEEL EXHAUST STACKS



Basic exhaust pipes for Pitts Special, Smith Miniplane, Acro Sport, Starduster and many other homebuilts with Lycoming engines O-235 through O-360. This exhaust system fits under the intake tubes, starting at the rear cylinders, around the front intake tube, then points aft. Two mufflers (P/N 33205) or two tail pipes (P/N 33204) can be used with this system. With stainless swivel joints for vibration dampening and for positioning of tail pipes through 25° range. Wt. 7-1/4 lbs.

SYSTEM FOR LYCOMING ENGINES THRU 180 HP

Set of two basic stacks only, consisting of:
Right Hand, P/N 33202 & Left Hand, P/N 33203
Set of Two.....P/N 33202/33203 .....**$987.00**
(Tail Pipes not included.)



System for Lyc. O-320B (Fuel-Injected)
Tightest system for this engine.
P/N 33270-1 ..... **$975.00**
(Tail Pipes not included.)

ADD OPTIONS:

STRAIGHT TAILPIPES



P/N 33204 (14") ....**$217.95 Pr.** P/N 33204-24 (24") ...**$256.95 Pr.**
P/N 33204-18 (18") ....**$231.95 Pr.** P/N 33204-28 (28") ...**$272.95 Pr.**
P/N 33204-20 (20") ....**$244.95 Pr.** P/N 33204-36 (36") ...**$283.95 Pr.**

MUFFLER WITH 8" TAILPIPE (NO HEAT EXCHANGER)



P/N 33205 .....**$249.95 Ea.**

MUFFLER WITH 8" TAILPIPE & HEAT EXCHANGER



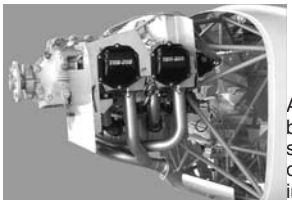
2" Dia. Inlet & Outlet .....P/N 33206-1 .....**$398.00 Ea.**
2-1/2" Dia. Inlet & Outlet.....P/N 33206-2 .....**$419.00 Ea.**

When ordering muffler with heat exchanger, advise if inlet & outlet pipe diameter other than 2" or 2-1/2" is preferred.
When ordering muffler with heat exchanger, advise diameter of inlet and outlet pipe preferred (2", 2-1/2" or other).

HOMEBUILDERS SPECIAL STACKS

Designed to fit Lycoming engines 0-235 to 0-360. Mild steel. These stacks do not fit Pitts Special. Applicable to many home builts. Wt. 7.25 lbs.
P/N 08-01900.....**$868.00**





STAINLESS STEEL CROSSOVER EXHAUST SYSTEMS

A exhaust system allows your engine to breathe properly by reducing back pressure and by picking up the correct firing order of the cylinders. This results in increased HP compared to an untuned exhaust. The added HP will be evident as higher takeoff RPM, higher cruise speed and lower fuel consumption. This crossover system fits all Lycoming engines from O-235 to IO-360 (180 HP) with bottom or aft mounted carburetors or fuel injection controllers. It is designed for tight cowling and in most cases no cowling modification will be necessary. If fit is the problem, custom tighter crossover systems are available by special order (Additional charges may apply). The system has slip joints between cylinders and ball joints where tail pipes or mufflers connect to collector tubes to prevent cracking due to expansion and vibration and to allow for positioning of the tail pipes. The exhaust system can be ordered in the following combinations:

1. With straight tail pipes
2. With two mufflers (no heat exchangers)
3. With two mufflers (one heat exchanger)
4. With two mufflers, both with heat exchangers.

All mufflers include removable 8" tail pipes. Heat shrouds have one inlet and one outlet for 2" or 2-1/2" flex tubing
Compression Springs **-** used on Exhaust System Ball Joints. 6 required per system. P/N 33703..... **$5.80**

STANDARD CROSSOVER SYSTEM

Basic system with all Collector Tubes (Without Tail Pipes)
P/N 33251 ..... **$1,053.00**

ADD OPTIONS:
Straight Tailpipes (14").....P/N 33204 ..... **$217.95 Pr.**
Muffler w/8" Tailpipe (no heat exchanger) ....P/N 33205 ..... **$249.95 ea**
Muffler w/8" Tailpipe & Heat Exchanger. .....P/N 33206-1 ... **$398.00 ea**

COMPLETE STANDARD CROSSOVER SYSTEM PRICES

Basic System with Two Straight 14'' Tailpipes.
Ass'y # 33270..... **$1,207.00**
Basic System for 0-320B w/o Tailpipes. ....Ass'y # 33270-1 ..... **$975.00**
System with 2 Mufflers, Removable 8" Tailpipes & No Heat Shrouds.
Ass'y # 33272..... **$1,495.00**
System w/2 Mufflers, 1 Heat Shroud for either Cabin heat or Carb. heat.....Ass'y # 33274..... **$1,722.00**
System w/2 Mufflers, Both w/ Heat Shrouds for Cabin heat &C arb. heat.....Ass'y # 33276..... **$1,884.00**
Stainless Crossover Systems for O-360 (200 HP)
Available for Front, Bottom or Rear Injector
P/N 08-05740 ..... **$1,051.00**
(Does not include tailpipes or heat muffs)

SPECIAL CROSSOVER SYSTEM FOR VERY TIGHTLY COWLED AIRCRAFT

Designed for the Thorpe T-18, RV-6, 7 7 8, Mustang II, and others using Lyc 0-320 to 0-360 engines

Basic System with all Collector Tubes — Please furnish exact engine designation to insure proper fit. P/N 33250.....**$995.00**

Special Mufflers for the T-18 with Heat Shrouds for Cabin Heat and Carb. Heat. P/N 33250-1..... **$444.00 Ea.**

Special Tailpipes for the T-18 (to be used when mufflers are not used). Comes with same ball joint as the mufflers and an attaching bracket.
P/N 33250-2.....**$285.95 Pr.**

NOTE: PRODUCTS ON THIS PAGE ARE FOR EXPERIMENTAL AIRCRAFT AND ARE NOT FAA APPROVED. ALL EXHAUST SYSTEMS ARE SPECIAL ORDER AND ARE NON RETURNABLE

EXHAUST SYSTEMS



EXHAUST SYSTEM FOR OSPREY AIRCRAFT

This stainless steel exhaust system is specifically designed for the Osprey Aircraft. Ideal for amphibians as the tailpipe exits vertically upward. Fits aircraft using the following engines: O-235 thru O-360.
RH & LH Stacks Only
P/N 33420.....**$870.00**

ADD OPTIONS:
Muffler Only ..... P/N 33422.....**$236.95**
Muffler with Heat Exchanger .....P/N 33424 ... **$417.00**



EXHAUST SYSTEM FOR CONTINENTAL 0-200

This universal stainless steel exhaust system is designed for experimental aircraft using Continental A65 thru O-200 engines. Consists of 2 manifolds, left hand manifold has heat shroud with 2-1/2" connection for carb heat. Muffler outlet are 3" long. Tailpipe extensions may be required, sold separately
Mufflers .....P/N 33401 ..... **$929.00**
8" Tailpipe Extensions. Furnished with slip joint and pin clamp.
P/N 33402 ..... **$136.75**

THIS SYSTEM IS PATTERNED AFTER A CESSNA 150 SYSTEM, BUT WILL NOT FIT A CESSNA 150 OR 152.



EXPRESS AIRCRAFT EXHAUST MANIFOLDS Y-STYLE

Fits Lycoming IO-540 (Angle Valve Engine) (Includes Custom 2-1/4" Tailpipes With Cabin heat shroud) (Optional studding to increase cabin heat available)
P/N 08-02105 ..... **$1,875.00**

WHEN ORDERING EXHAUST SYSTEMS, PLEASE SPECIFY COMPLETE MODEL NUMBER & HP OF ENGINE AND AIRCRAFT TYPE

STAINLESS STEEL STACKS FOR PUSHER TYPE AIRCRAFT



PN 33601 - Designed specifically for "Pusher Style Aircraft". Exhaust fits inside of intake tubes.

For Continental C-85 thru O-200
P/N 33601..... **$946.00**
For Lycoming O-235 thru O-360
P/N 33602..... **$950.00**

COZY MARK IV PUSHER EXHAUST SYSTEM



This custom stainless exhaust system was designed specifically for the Cozy Mark IV aircraft.
For Lycoming O-235 to O-360 (180 HP or less)
P/N 33702.....**$1,229.00**
For Lycoming IO-360 (200 HP) Angle Valve Engine
P/N 33702-1.....**$1,235.00**



Replacement Cozy Extension Spring
P/N 33704.....**$7.85 ea**
Cozy Inside Cowl Exhaust ..... P/N 08-07342.....**$1,477.00**

NOTE: PRODUCTS ON THIS PAGE ARE FOR EXPERIMENTAL AIRCRAFT AND ARE NOT FAA APPROVED. ALL EXHAUST SYSTEMS ARE SPECIAL ORDER AND ARE NON RETURNABLE

EXHAUST SYSTEM COMPONENTS

Fabricate your own exhaust system with these precision-formed type 321 stainless steel components.

STAINLESS STEEL 45° & 90° BENDS



Tubing Size	P/N	Radius	Angle	Price
1-1/2" X .035	33241	2-1/2"	90°	$58.80
1-1/2" X .035	33241-4	4-12"	90°	$69.95
1-1/2" X .035	33242	2-1/2"	45°	$64.75
1-3/4" X .049	33236	1-3/4"	90°	$78.75
1-3/4" X .035	33243	2-7/8"	90°	$67.85
1-3/4" X .049	33243	2-1/2-12"	90°	$71.75
1-3/4" X .035	33245	4"	90°	$66.75
1-3/4" X .049	33245	4-12"	90°	$65.80
1-3/4" X .035	33237	5-1/2"	90°	$69.80
1-3/4" X .035	33244	2-7/8"	45°	$62.85
2" X .049	33238	2-1/2"	90°	$99.85
2" X .035	33246	4"	90°	$79.85
2" X .049	33246	4-12"	90°	$87.75
2-1/4" X .049	33240	2-3/4"	90°	$93.75
2-1/2" X .049	33247	4"	90°	$99.95
3 X .049	33248	4-1/2"	90°	$146.75
2-3/4" X .049	34001	3"	90°	$139.50

STAINLESS STEEL 180° "U" BENDS



180° "U" Bends w/ odd or even leg lengths.

Tubing Size	P/N	Radius	Angle	Leg Length	Price Each
1-1/2" X .035	33260	2-1/2"	180	6"/6"	$87.75
1-1/2" X .035	33262	2-1/2"	180	10"/10"	$95.65
1-1/2" X .035	33261	2-1/2"	180	11"/14"	$89.75
1-3/4" X .035	33265	2-7/8"	180	6"/6"	$82.85
1-3/4" X .035	33264	2-7/8"	180	10"/10"	$91.75
1-3/4" X .049	33264	2-7/8"	180	10"/10"	$104.95
1-3/4" X .035	33263	2-7/8"	180	11"/14"	$89.75

STAINLESS SWIVEL BALL JOINTS - CLAMP TYPE



Tubing I.D.	P/N	Male Sz	Female Sz	Price
1-3/4"X 1-3/4"	33231	1-3/4"	1-3/4"	$83.75
1-3/4"X 2"	33232	1-3/4"	2"	$83.75
2"X 2"	33233	2"	2"	$89.80
2-1/2"X 2-1/2"	33234	2-1/2"	2-1/2"	$96.75
2-3/4"X 2-3/4"	33235	2-3/4"	2-3/4"	$101.75



CUSTOM AIRCRAFT HARDWARE KIT - Ball Joint Hardware Kit. Kit Includes: (3) Nuts (3) Bolts (3) Washers (3) springs Fits 33231 thru 33234 P/N 08-07168 .....**$18.55**

HYDRO-FORMED SLIP JOINTS - TWO PIECE UNIT 4" LONG



Slip Joint Size	P/N	Expanded Length	Price
1-1/2"	33221	2-3/4"	$52.75
1-5/8	33226	2-5/8"	$47.65
1-3/4	33222	2-5/8"	$55.75
2"	33223	2"	$59.75
2-1/4"	33227	2"	$58.85
2-1/2"	33224	2-3/8"	$63.95
3"	33225	2-1/4"	$66.75



STUB EXHAUST STACKS

Stainless tubing 6"L welded onto stainless exhaust flange.

1-1/2"x .035 for Continental (doesn't fit 0-240)
P/N 13352 .....**$89.75**

1-3/4"x .035 for Lyc. .....P/N 13354 .....**$94.75**



STAINLESS TUBING FOR EXHAUST STACKS

Stainless type 321 welded tubing for exhaust stacks.

Tubing Size (O.D. x Wall)	P/N	Price per Ft.
1-1/2" x .035	03-16300	$20.90

Tubing Size (O.D. x Wall)	P/N	Price per Ft.
1-3/4" x .035	03-16400	$22.93
2" x .035	03-16500	$24.85

EP

EXHAUST SYSTEMS



LONG-EZ EXHAUST SYSTEM

Long-EZ exhaust system fits all Lycoming 4 cylinder engines.
P/N 08-00832 ..... **$1,152.00**



LONG-EZ EXHAUST SYSTEM INSIDE THE COWL

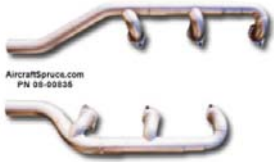
With this configuration the exhaust tips are located where the cooling air exits. This design eliminates cutting the cowling for exhaust exit and improves propeller efficiency by moving the exhaust pulses inboard, closer to the center of the prop hub. Fits Lycoming O-320 & O-360 parallel valve engines. P/N 08-00833 ..... **$1,449.00**

BERKUT 4 PIPE EXHAUST SYSTEM



Fits all Lycoming 4 cylinder engines.
P/N 08-00834 .....**$1,257.00**

BERKUT 6 PIPE EXHAUST SYSTEM



Fits 6 cylinder Berkut only. P/N 08-00835..... **$1,365.00**

EP



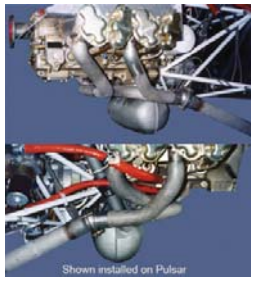
VELOCITY EXHAUST SYSTEM

Velocity exhaust system fits 6 cylinder Lycoming parallel valve and angle valve engines.
Parallel .....P/N 08-00836 ..... **$1,112.00**
Angled.....P/N 08-00837 ..... **$1,112.00**



MUSTANG II CROSSOVER EXHAUST SYSTEM

Mustang II Crossover Exhaust System Lycoming O-235 through O-360 (Comes with Custom Tailpipes) (Vertical Induction Intake)
P/N 08-07337 .....**$1,389.00**



CONTINENTAL IO-240 CROSSOVER SYSTEM

Crossover exhaust system Continental IO-240 (Tailpipe Not included)
P/N 08-07338 .....**$1,109.00**

STAINLESS STEEL EXHAUST STACKS



Manufactured from aircraft quality 321 stainless steel tubing. Set of two stacks or purchase each side individually. Patterned after Aeronca style exhaust. Fits Continental C90 Thru 0-200. Not FAA approved. Wt. 3-1/4 lbs.
Set of two
P/N 08-02001 .....**$751.00**
Right side
P/N 08-02101 .....**$422.00**
Left side
P/N 08-02201 .....**$422.00**

LANCAIR LEGACY EXHAUST SYSTEM



Lancair legacy exhaust system, left & right hand manifolds with tailpipes and cabin heat shroud. Fits IO-550 Continental.
Exh. Sys. 33805-1 ..P/N 08-00838 ..... **$1,846.00**
Exh. Sys. 470-550 ..P/N 08-02103 ..... **$1,846.00**
Legacy Exhaust ... P/N 08-02104... **$1,850.00**

6 Cylinder Continental O-470 to IO-520 Stacks - Exhaust Manifolds Y-Style L/H & R/H Continental 0-470 through IO-550 .....P/N 08-07344 ..... **$1,436.00**



GLASAIR I & II CROSSOVER EXHAUST SYSTEMS

Fits Lyc. O-320 to O-360 with vertical induction.
P/N 08-00839 ..... **$1,832.00**

Fits Lyc. engines w/ horizontal induction up to 180HP
P/N 08-00840..... **$1,814.00**

GLASTAR CROSSOVER EXHAUST SYSTEM

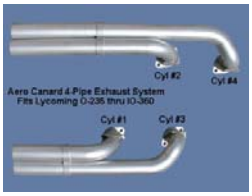
Includes exhaust system with (1) heater muffler, (1) non-heater muffler and tailpipes. Fits Lycoming O-235 and O-360 with vertical induction. P/N 08-00842..... **$1,641.00**



EXPERIMENTAL SUPER CUB CROSSOVER EXHAUST SYSTEM



PN 08-02100-Fits Lycoming O-320 (Vertical Induction Intake) (Must use "short" miniature light weight Sky Tec starter for clearance) (Optional studding to increase cabin heat available)
PN 08-02102-Fits Lycoming O-360 (Vertical Induction Intake) (Must use "short" miniature light weight Sky Tec starter for clearance) (Optional studding to increase cabin heat available)
P/N 08-02100 .....**$1,875.00**
P/N 08-02102 .....**$1,875.00**



4 CYLINDER AERO CAD 4 PIPE STACKS

Aero-Cad 4-Pipe Exhaust Manifolds Lycoming 0-235 through IO-360 200 HP
P/N 08-07343 .....**$1,241.00**

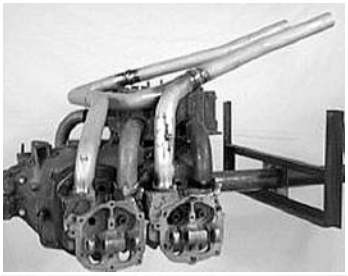
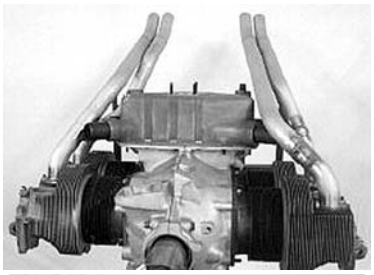
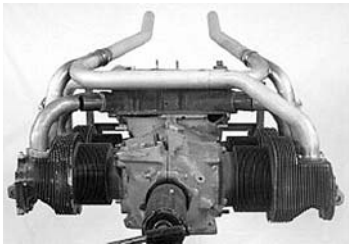
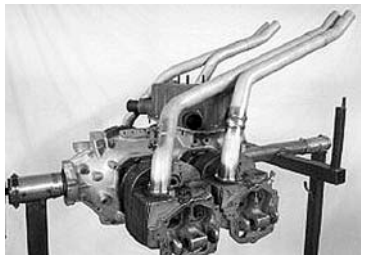
4 CYL LYCOMING CROSSOVER EXHAUST 200HP



Crossover Exhaust System Lycoming IO-360 200 HP & IO-390 210 HP Angle valve engine.
NOTE: Photo shows optional tailpipes,P/N 33204-18 (08-00827) tailpipes are not included, but can be purchased seperately.
4 Cyl. Lyc. Croosover Exhaust 200HP.....P/N 08-07341 .....**$987.00**
18" Tailpipes 33204-18.....P/N 08-00827 .....**$231.95**

EXHAUST SYSTEMS

VETTERMAN RV EXHAUST SYSTEM

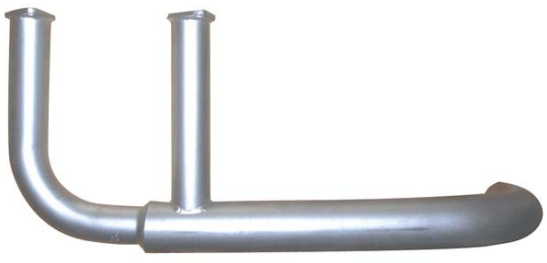





Vetterman Exhaust has been manufacturing exhaust systems for the Van's Aircraft RV series since 1990. Exhaust systems for all RV models & Van's approved engine models are available. All systems are manufactured from MIL Spec 321 stainless steel, which is mandrel bent, trimmed to length and tack welded on a Lycoming engine. This method assures the best fit possible. All systems incorporate ample slip & ball joints which greatly reduces breaking potential. All systems include blow proof gaskets, stainless exhaust nuts & washers for installation. Also include tail pipe mounting kits or pipe support brackets. Some systems also include a cabin heat muff.

AIRCRAFT	DESCRIPTION	P/N	PRICE
RV-3	O-320 Conical Mount 4 pipe sys.	08-00583	**$772.00**
RV-3	O-320 Dynofocal Mnt. 4 pipe sys.	08-00584	**$772.00**
RV-3	O-360 Dynofocal Mnt. 4 pipe sys.	08-00585	**$772.00**
RV-4	O-320 Conical Mount 4 pipe sys.	08-00586	**$767.00**
RV-4	O-320 Dynofocal Mnt. 4 pipe sys.	08-00587	**$768.00**
RV-4	O-360 Dynofocal Mnt. 4 pipe sys.	08-00588	**$768.00**
RV-4	O-320 Dynofocal Mnt. X-over sys.	08-00589	**$750.00**
RV-4	O-360 Dynofocal Mnt. X-over sys.	08-00590	**$750.00**
7-7A,8-8A, (O-360/320)	*Includes tail pipe mounting kit	08-00591	**$946.00**
RV-6,7,8,9A (O-320-H2AD)	*Includes tail pipe mounting kit	08-00592	**$1,039.00**
RV 7-7A (IO-360 AIA 200)	*Includes tail pipe mounting kit	08-00593	**$1,039.00**
RV8 (IO-360)	*Includes tail pipe mounting kit	08-00594	**$1,039.00**
RV 8A (IO-360)	*Includes tail pipe mounting kit	08-00595	**$1,039.00**

NOTE: EACH OF THESE SYSTEMS WILL NOT INTERCHANGE BETWEEN AIRCRAFT AND ENGINE MODELS. THESE SYSTEMS ARE DESIGNED AND INTENDED FOR USE ON RV AIRCRAFT ONLY. PRICES DO NOT INCLUDE SHIPPING CHARGES.

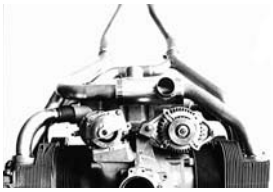
PA-11 STYLE EXHAUST STACKS



Piper PA-11 Style Exhaust Stack with Starter (Left). Experimental Use Only. Longer down pipes to clear starter, Left Hand. Can be used on Piper J-3, but some modifications of cowling may be necessary.

Starter Left..... P/N 05-12465..... **$253.95**
Starter Right ..... P/N 05-12466..... **$253.95**

SNOWLINE RV-6 & RV-6A CROSSOVER EXHAUST SYSTEM



The material used on these systems is 1-3/4" O.D. x .035 wall 321 stainless steel tubing. 2 models are available; one for Lycoming engines up to 180 H.P. and the other for the Lycoming IO-360 (200 H.P. engine). Bending is performed using an inside mandrel which the tube is drawn over during bending to maintain the inside diameter. Flanges are made from 1/4" stainless steel. This heavy material greatly reduces warping & cracking. Tail pipes are attached to the header with a slip joint. Simply slide the tail pipes onto the header, position the end of the pipe as desired in the bottom opening, and attach with the stainless steel retaining clamp. One heat muff has been provided on the front cross-tube. This muff is intended for carburetor heat. If an injection system is being used, this muff can be used for cabin heat. An optional cabin heat muff can be ordered when carburetor heat requires the use of the standard heat muff. All hardware is provided to install the system. Stainless Steel nuts, bolts, washers, blow-proof gaskets, 2 stainless clamps for attaching tail pipes to the firewall or engine mount. U-type clamp attaches the cable housing securely in place.

RV-6/RV-6A Crossover Exhaust Sys. (To 180 H.P.)
P/N 08-05790..... **$1,042.00**
Optional Cabin Heat Muff..... P/N 08-00679..... **$156.75**

Will not work with front mounted injectors

The RV-6/RV-6A exhaust systems are recommended for these aircraft only. For other experimentals, the RV-4 system may fit better under cowls as it is built tighter to the engine.

EP

HEAT SHIELDS – HEAT BOXES

VHT FLAMEPROOF COATINGS



Originally designed for NASA's reentry spacecraft. Designed to withstand temps. up to 1500°F (816°C) VHT FlameProof coatings are capable of withstanding extreme environments of spacecraft, satellites, military aircraft, and motor sports. It survives where other paints can't, shields & protects, maintains the finish, prevents rust & corrosion, and resists oils & solvents. For aircraft applications the typical use is on high temperature steel components such as exhaust & turbocharging systems.Excellent for use as a heat resistant and anti-corrosion coating on exhaust manifolds and turbine casings. Both the Flat Aluminum and Flat Black are non-facing colors.

Flat Aluminum 16 oz. aerosol spray..... P/N 08-00713.....**$14.55**
Flat Black 16 oz. aerosol spray..... P/N 08-00714.....**$14.50**

THERMO-TEC HEAVY-DUTY SPRAY ADHESIVE



Thermo-Tec's new Heavy-Duty Spray Adhesive is a fast-drying, quick-bonding, high temperature contact adhesive. Use it wherever you need a secure, long-lasting, easy-to-apply bond. It is available in a generous 16.75 oz. can.

P/N 08-01026 .....**$15.50**

HI-HEAT COATING



Finish off a clean and well-protected Exhaust Insulating Wrap application. Will protect the wrap from abrasion and harmful liquid spills. Extra resins and binders toughen the surface, extend the life of wrap by protecting it from friction, and seal the pores to minimize the penetration of harmful liquids. The 11 oz. coating comes in black and aluminum colors.

Black .....P/N 08-06725 .....**$11.50**
Aluminum .....P/N 08-06730 .....**$11.50**
Clear .....P/N 09-05229 .....**$9.75**

EXHAUST HEAT SHIELD



This heat shield is placed on exhaust where fuel lines, cable, etc. are close to exhaust and where heat may be a problem. Mounts with stainless radiator type clamp (not included). Fits exhaust pipes up to 2.5" diameter. Very popular on RV's and other homebuilt aircraft.

Single Unit.....P/N 08-00050 ..... **$14.75**
Double Unit .....P/N 08-00051 ..... **$21.75**

VARIEZE / LONG EZ CARBURETOR HEAT BOX



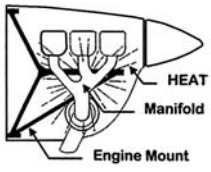
This box is an improved redesign of the original heat box. It eliminates the possibility of engine stoppage caused by worn parts plugging the carburetor intake.

Without Filter ..... P/N 08-01600.....**$194.50**
VE/LE Heat Box Repair Kit ... P/N 08-01610.....**$17.75**
VE/LE Filter Only..... P/N 08-01615.....**$39.85**
VE/LE Filter Cleaner Kit (cleaner & oil)
P/N 08-01620.....**$18.50**

ENGINE MOUNT HEAT SHIELDS



Heat damaged O-470 & O-520 engine mounts are a definite problem area. You can easily protect these engine mounts from further damage with these heat shields The aircraft manufacturers overlook providing heat protection in these areas when they designed and produced the aircraft. INSPECT ENGINE MOUNTS. Flaking paint, deterioration or pitting leads to cracking, and breakage – in other words, an UNSAFE CONDITION. If you want long-lasting protection from corrosion damage, the solution is install custom engine mount heat shields that are FAA & STC/PMA approved.



Avoid downtime and save money on airplane maintenance with this practical new device. The heat shields are built from an extremely durable 6061-T6 aluminum alloy and install in minutes. The complete kit includes installation hardware, instructions & copy of the Supplemental Type Certificate.

For Cessnas: Heat shield kit for 180, 180A-H, 180J, 180K, 182, 182A-R.....P/N 08-01660.....**$204.95**
Heat shield kit 185A-E,A185F. Fits Standard and 3 bladed mounts.
.....P/N 08-00767.....**$245.95**
Replace. Intake Shields (heavy duty) PMA'd..P/N 08-00769.....**$35.80**

CESSNA C-180/182 HEAT SHIELD KIT



Heat related corrosion caused by the exhaust system in the bed tubes and diagonal tubes of Cessna 180/182 engine mounts has been discovered on most models. Loree Air, Inc. designed and built the first set of heat shields in 1987. They were flight tested for three years and found to stop all damage from that heat source. The heat shield kit is now FAA approved and ready for installation on your aircraft. The kit, includes all the hardware, instructions and documentation.

P/N 05-12279 .....**$283.95**

CARBURETOR INTAKE ASSEMBLIES (HEAT BOXES)



50256

P/N A40599 for Continental A-65 through C-125. Also fits Lyc. 0-235, 0-290, 0-320 engines with MA3SPA, MA4SPA carburetors.
Complete assembly includes heat box, filter, gaskets. studs and pins.
Not for Certified Aircraft, Homebuilts Only.

Component	Part No.	Price
Heat Box	50256	$189.85
Filter	A40599	$85.75
Gasket	35923	$7.45
Studs (4 required)	24306	$48.76
Pins (4required)	24308	$24.49
Bottom Carb. Gasket	21323	$1.35
A40522 Assembly	08-01300	$576.00

CESSNA 150 STYLE HEAT BOX



Used on Cessna 150. Also fits Cessna 120, 140, and PA-22 Tripacer. Order filter, gaskets, studs & pins separately. Not FAA/PMA Approved.

P/N 641534 .....**$187.50**
Cable 'B' Nut .....P/N 05-16245 .....**$11.85**
Heat Box for Cessna 170 - Similar to P/N 641534 above, but larger
P/N 08-01625 .....**$250.95**
Similar to Cessna 170 box. Fits Lyc. 0-360, 0-470, etc. Uses brackett BA-5110 filter.....P/N 08-01630 .....**$296.00**

LYCOMING AND CONTINENTAL CARBURETOR HEAT BOXES



Lycoming O-320 and Continental A65-100 Carb Heat Boxes. The 100-320 is 2-1/2" diameter height is 1" smaller flange.

Lycoming O-320 Carb Heat Box w/Tube..... P/N 05-01388 ....**$243.95**
Lycoming O-320 Carb Heat Box w/o Tube..... P/N 05-06841 ....**$236.95**
Lycoming A65-100 Carb Heat Box w/Tube ..... P/N 05-01387 ....**$246.95**
Lycoming A65-100 Carb Heat Box w/o Tube .. P/N 05-06840 ....**$239.85**

CARB HEAT BOXES FOR PUSHER AIRCRAFT

Designed for airplanes and rotorwing aircraft with engines in pusher configuration using MA3/MA4 carburetors (not MA4-5). Uses same baskets as J-3 & C-150 boxes.....P/N 08-00855..... **$252.95**

USHER CARBURETOR HEAT BOXES



These high quality carburetor heat boxes are available for most common Lycoming & Continental engines. Not FAA approved. (Shown here with tube)

K1F Heat Box w/o tube .....P/N 08-01601 .....**$163.80**
K1M Heat Box with tube.....P/N 08-01602 .....**$167.75**
KO320 Heat Box with tube.....P/N 08-01603 .....**$173.75**
KO360 Heat Box with tube.....P/N 08-01604 .....**$173.75**
KC0320 Heat Box w/o tube....P/N 08-01603-1 ..**$173.75**

CARBURETOR INTAKE BOX BRACKET FOR CESSNAS



This carburetor intake box bracket mounts on top of the heat box and attaches to the engine to provide support for the heat box. Fits Cessna 150. P/N 08-01305 .....**$54.75**

CARBURETOR HEAT BOX REPAIR KITS



Prevent carburetor heat box cracking - a common problem on Cessna 150 aircraft and Cont. O-200 engine. Kit consists of actuating shaft, 2 bearing assemblies and arm. Kit no. FG100 fits Cont. 0-200-A, B, C Engines. Kit No. FG105 fits Cont. 0-300-A, B, C, D, E engines.

Model FG100..... Kit No. 08-01309 ..... **$76.85**
ModelFG105..... Kit No. 08-01310 ..... **$74.99**

ECONOMY CARB HEAT BOX REPAIR KITS



These kits include new shaft & bearings.
Kit for Cont. C-85, C-90, 0-200 Engine
P/N 07-00110..... **$42.75**
Kit for Cont. C-145, 0-300 Engine
P/N 07-00120..... **$42.75**

Requires FAA form 337 for installation on certified aircraft

CARB HEAT BOX ARM HOLE REPAIR KIT

Use this kit to repair an elongated hole in the carburetor heat box actuating arm. Kit comes complete with new bolt and attaching hardware made of stainless steel. P/N 07-00130.....**$13.75**

CARBURETOR INDUCTION MANIFOLD (INTAKE SPIDER)



For O-200 engine..... P/N 35145A-1 ..... **$437.00**
For A-65,C-75,C-85 & C-90 engines.
P/N 35145..... **$359.00**

Prices Subject to Change Without Notice

GASKETS



RAPCO REPLACEMENT EXHAUST GASKETS

High quality, economical stainless and copper beaded gaskets. Extra thick spiral wound style available “Blow Proof”

	Style	RAPCO P/N	Use As Replacement For: OEM P/N	Airborne P/N	Superior P/N	Use on These Engine Models	Our P/N	Price Each
CONTINENTAL	Solid	RA630365	630365	N/A	SA630365	IO-360-A, C, D, G, H, J, K	08-05215	$2.25
	Spiral Wound	RA970	N/A	970	N/A	IO-360-A, C, D, G, H,J, K TSIO-360-A, B	08-05270	$7.75
	Solid	RA632837	632837 21493	157	SA 632837	A-65, A-75,C-85-12F, C-90-8F,12F, 14F, -16F,E-165,E-185,E-225,O-200-A,B,O-300-A,C,D,O-470-A,E,J E-165, E-185, E-225O-200-A, B, O-300-A, C, DO-470-A, E, J	08-05237	$1.65
	Spiral Wound	RA627429	627429	999	SA 627429		08-05229	$8.50
	Solid	RA631544	631544 537379	158	SA631544	O-470-B, G, K, L, M,P, R, S, U	08-05244	$3.35
	Spiral Wound	RA628260	628260	972	SA628260	O-470-B, G, K, L, M,P, R, S, U,IO-470-D, U, V, TSIO-470-B TSIO-520-B, C, D GTSIO-520-C, D	08-05260	$7.75
LYCOMING	Solid	RA75118	75118 73720 67196 77611	160	N/A	0-290,0-320,IO-320,0-340,0-360,HO-260-B,IO-360-A,-B,-C,HIO-360-A,-B-C,V0-435,TVO-435,G0-480,GSO-480,ISGO-480,O-540-A,-B,-E,-G,IO-540-A,-C,-D,-G,-J,-K,IG0-540-A,IGS0-540-A,10-720-A	08-05218	$3.00
	Spiral Wound	RA77611	77611	1000	SL77611		08-05211	$8.95
	Solid	RALW15619	LW15619 74756	161	SL15619	TIO-541	08-05219	$5.35
	Spiral Wound	RALW15486	LW15486	971	N/A		08-05286	$12.95
	Solid	RA985	3503			R-985-AN-1,-3,-4,-6,-6B,-10,12,-12B,-14B	08-64452	$7.95

REPLACEMENT GASKET FOR WOODWARD GOVERNORS

Part Name	Approved Replacement for Part No.	Model Eligibility	Part No.	Price
 Engine Accessory Drive Gasket	Woodward Gov. 206684 Pratt & Whitney 3039526	PT6A-20/20A/-20B/-21/-25C/-27/-28/-34/-34AG/-34B/-36/-38/-41/-42/-42A/-60A/-60AG/-61/-67A/-67AF/-67AG/-67B/-67D/-67R/-67T PT6A-45A/-45B/-45R/-65B/-65AG -65AR/-65R/-114/-114A/-135/-135A	08-06264	$146.75
 Governor Gasket	Woodward Gov. 206685 Pratt & Whitney 3118953-01	PT6A-6/-6A/-6B/-11/-11AG/-15AG/-20/-20A/-20B/-34/-34AG/-34B/-36/-38/-41/-42/-42A/-45/-45A/-45B/-45R/-60A/-60AG/-61/-65B/-65R/-65AG/-65AR/-67/-67A/-67AF/-67AG/-67B/-67D/-67R/-67T/-110/-112/-121	08-07154	$69.75



LYCOMING ASSEMBLY DRIVE GASKET SL73818

Lycoming Assembly Drive Gasket SL73818. Replacement for Textron Lycoming P/N 73818.

P/N 08-00306 ..... **$6.61**



2577256 PRECISION AIRMOTIVE GASKET PEX-1

Gasket part number 365533 is no longer available from Precision Airmotive. The new gasket, part number 2577258 is available and should be used in place of 365533.

P/N 07-01312.....**$0.40**

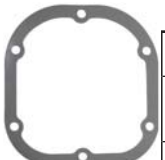


TCM VACUUM PUMP GASKET 653487

TCM vacuum pump gasket 653487. This is for the Continental 0200 and the 0470.

P/N 08-00297.....**$2.05**

SILICONE VALVE COVER GASKETS



P/N 05-11925

Model No.	Application	# in Set	Part No.	Price
GB-530162	A-65; C-75,85,90,145,175; O-200; O-300	4	05-11925	$43.75
GB-534857	0-470; IO-470; IO-520; IO-550; TSIO-520; TSIO-550	6	05-11926	$78.65
GB-632310	IO, TIO, TSIO-360	12	05-11927	$73.85
GB-646234	--	6	05-11928	$54.75
GB-75906	O-235; O-290; O-360	4	05-11930	$54.85
GB-67193	IO-360; GO-480; IO-540; TIVO-540, IO-720	6	05-11931	$72.00
GB-71450	IO-540-B; TIO/LTIO-540-A	6	05-11932	$72.00

THESE GASKETS ARE NOT FAA APPROVED.

EP

REAL GASKETS

REAL PREMIUM SILICONE VALVE COVER GASKETS

REAL are twice as thick as typical gaskets and have been hot oil and dry heat tested at 300°F. Only REAL gaskets seal uneven surfaces, eliminate corrosion, and reduce maintenance costs. They may be reused, are installed dry, and maintain screw torque. Indefinite shelf life. Highly recommended by Rutan Aircraft Factory.



Part No.	Model No.	Product	Description	Price
08-13810	RG-08527-10	Valve Cover Gaskets	Package of 10 PMA Approved. Fits Models: Ken Royce 90-5G, 110-7F, 110-7G. Le Blond Engine 85-5F, 90-5F.	$39.99
08-13876	RG-117236-18	Valve Cover Gaskets	Package of 18 PMA Approved. Fits Models: Wright Early R-1820-40, R-1820-60, R-1820-70, R-1820-87, R-1820-95, R-1820-97 (4 Holes), R-2600-20, R-2600-22, R-2600-29A, R-2600-35, R-3350-23, R-3350-23A, R-3350-57, R-3350-59.	$70.75
08-13801	RG-1302-42-4	Valve Cover Gaskets	Set of 4. de Havilland Gipsy	$28.50
08-13879	RG-138861-18	Valve Cover Gaskets	Package of 18 Fits Models: Wright Late R-1300, R-1820-55, R-1820-66, R-1829-56, R-1829-71, R-1829-72W, R-1829-76, R-1829-80, R-1829-86 (6 Holes).	$70.75
08-13864	RG-139203-36	Valve Cover Gaskets	Package of 36 PMA Approved. Fits Models: Pratt & Whitney R-2800-CB Series.	$141.80
08-13814	RG-1843-18	Valve Cover Gaskets	Package of 18 PMA Approved. Fits Models: Lycoming R-680 Series.	$72.75
08-13872	RG-2677-18	Valve Cover Gaskets	Package of 18 PMA Approved. Fits Models: 975-11, Whirlwind (4 Holes).	$70.80
08-13874	RG-2767-18	Valve Cover Gaskets	Package of 18 Fits Models: Wright J6-5, J6-7, J6-9 (2 Holes).	$70.75
08-13806	RG-30106-14	Valve Cover Gaskets	Package of 14 PMA Approved. Fits Models: Jacobs L-6.	$56.75
08-13808	RG-4331-14	Valve Cover Gaskets	Package of 14 PMA Approved. Fits Models: JACOBS R-755 Series.	$63.75
08-13804	RG-5171-18	Valve Cover Gaskets	Package of 18 Fits Models: Huoasi Model 6, Nanchang CJ6A, Yak Model 18.	$66.99
08-13869	RG-7926-14	Valve Cover Gaskets	Package of 14 Fits Models: Warner 165-185 For 4 cylinders.	$54.75
08-13862	RG-88962-18	Valve Cover Gaskets	Package of 18 PMA Approved. Fits Models: Pratt & Whitney R-1340, R-1830, R-200 to R-2000, R-2800 (3 Holes).	$73.75
08-13822	RG-90560-18	Valve Cover Gaskets	Package of 18 PMA Approved Fits Models: Pratt & Whitney R-985 Series, Wasp Jr. (4 Holes).	$74.75
08-13811	RG-08527	Valve Cover Gaskets	1 each PMA Approved. Fits Models: Ken Royce 90-5G, 110-7F, 110-7G. Le Blond Engine 85-5F, 90-5F.	$4.35
08-13877	RG-117236	Valve Cover Gaskets	1 each PMA Approved. Fits Models: Wright Early R-1820-40, R-1820-60, R-1820-70, R-1820-87, R-1820-95, R-1820-97 (4 Holes), R-2600-20, R-2600-22, R-2600-29A, R-2600-35, R-3350-23, R-3350-23A, R-3350-57, R-3350-59.	$3.95
08-13802	RG-1302-42	Valve Cover Gaskets	1 each de Havilland Gipsy	$6.95
08-13880	RG-138861	Valve Cover Gaskets	1 each Fits Models: Wright Late R-1300, R-1820-55, R-1820-66, R-1829-56, R-1829-71, R-1829-72W, R-1829-76, R-1829-80, R-1829-86 (6 Holes).	$3.95
08-13865	RG-139203	Valve Cover Gaskets	1 each PMA Approved. Fits Models: Pratt & Whitney R-2800-CB Series.	$4.35
08-00782	RG-14724	Valve Cover Gaskets	1 each. PMA Approved Fits Models: Franklin 6A8-215, B8F, B9F.	$10.55
08-01322	RG-17727	Valve Cover Gaskets	1 each. PMA Approved Fits Models: Franklin 6A-350; 4A-235; 6A4-150-B3, -B4, -B5, -B6; 6A4-165-B3, B4, B6; 6A4-200-C6; 6AS-350; 6AS-335.	$8.50
08-13821	RG-17799-1	Valve Cover Gaskets	1 each Fits Model: Menasco D4	$7.50
08-13816	RG-1843	Valve Cover Gaskets	1 each PMA Approved. Fits Models: Lycoming R-680 Series.	$4.35
08-13796	RG-20254	Valve Cover Gaskets	1 each PMA Approved Fits Models: Continental W-670 Series.	$4.75
08-13795	RG-20254-14	Valve Cover Gaskets	1 package of 14 PMA Approved Fits Models: Continental W-670 Series.	$64.75
08-13875	RG-2676	Valve Cover Gaskets	1 each Fits Models: Wright J6-5, J6-7, J6-9 (2 Holes).	$3.95
08-13871	RG-2677	Valve Cover Gaskets	1 each PMA Approved. Fits Models: Wright 975-11, Whirlwind (4 Holes).	$32.75
08-13807	RG-30106	Valve Cover Gaskets	1 each PMA Approved. Fits Models: Jacobs L-6.	$4.35
08-13809	RG-4331	Valve Cover Gaskets	1 each PMA Approved. Fits Models: JACOBS R-755 Series.	$4.65
08-13784	RG-45483	Valve Cover Gaskets	1 each. Fits Models: Lycoming O-145 Series.	$13.55
08-13805	RG-5171	Valve Cover Gaskets	1 each Fits Models: Huoasi Model 6, Nanchang CJ6A, Yak Model 18.	$3.75
08-13870	RG-7926	Valve Cover Gaskets	1 each Fits Models: Warner 165-185.	$4.35
08-13863	RG-88962	Valve Cover Gaskets	1 each PMA Approved. Fits Models: Pratt & Whitney R-1340, R-1830, R-200 to R-2000, R-2800 (3 Holes).	$4.35
08-13823	RG-90560	Valve Cover Gaskets	1 each PMA Approved Fits Models: Pratt & Whitney R-985 Series, Wasp Jr. (4 Holes).	$4.35
813813	RG-941	Valve Cover Gaskets	1 each PMA Approved. Fits Models: KINNER B-54 (2 Holes).	$4.35
08-13815	RG-942	Valve Cover Gaskets	1 each Fits Models: R-56 (4 Holes). Variants: KINNER R-5, R-53, R-55, R-56.	$4.35
08-01321	RG-71450	Valve Cover Gasket (9 holes)	1 each. PMA Approved Fits Models: Lycoming IO-540-B, E, M Series; TIO/LTIO-540-A.	$9.50
08-01317	RG-534857	Valve Cover Gasket (8 holes)	1 each. PMA Approved. Fits Models: Continental IO-346, O-470, IO-470, IO-520, IO-550, TSIO-520-Series.	$10.50
08-01316	RG-67193-SP	Valve Cover Gasket (8 holes)	1 each. PMA Approved Fits Models: Lycoming IO-360, IO-540, IO-720, GO-480, TIVO-540, VO/GO-435, VO-540.	$8.50
08-07384	RG-76036	Valve Cover Gasket (8 holes)	1 each PMA Approved Fits Models: Lycoming TO-360-C, TO-360-F, TIO/TIGO-541.	$10.50
08-01320	RG-532451	Valve Cover Gasket (7 holes)	1 each PMA Approved Fits Models: Continental E-165-2, E-185, E-225, O-470-A, O-470-E, O-470-J, IO-470-J, IO-470-K.	$8.75
08-01315	RG-530162	Valve Cover Gasket (6 holes)	1 each. PMA Approved Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300.	$8.50
08-01314	RG-75906-SP	Valve Cover Gasket (6 holes)	1 each. PMA Approved Fits Models: Lycoming O-235, O-290, O-320, IO-320, O-360, IO-360, HIO-360, O-540, IO-540, TIO-540-CIA.	$9.50
08-01319	RG-632459	Valve Cover Gasket (5 holes)	1 each PMA Approved. Fits engines: Continental TSIO-520-Series; GTSIO-520-C,D,F,H,K,L,M,N; IO-550-G	$4.65
08-01318	RG-632310	Valve Cover Gasket (4 holes)	1 each. PMA Approved. Fits Models: Continental IO-360, TSIO-360, LTSIO-360.	$4.55
08-13765	G-IV-A2	Valve Cover Gasket - Spanish Model	Set of 4. Bucker Tigre	$35.99
08-13769	RG-533355	Oil Filler Cap Gasket	1 ea. PMA Approved Size: 1/8 x 2 5/16 x 1 1/2 Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, E-185, E-225, GO-300, IO-346, IO-360, IO-470, IO-470-J, IO-470-K, IO-520, IO-550, O-200, O-300, O-470, O-470-A, O-470-E, O-470-J, LTSIO-3	$6.50
08-13777	RG-535823	Oil Filler Cap Gasket	1 each. PMA Approved. Size: ID 1 1/8 x OD 1 3/4 Thickness 1/8 Fits Models: Continental IO-346, O-470, IO-470, IO-520, IO-550, TSIO-520-Series.	$5.95

EP

REAL GASKETS

Part No.	Model No.	Product	Description	Price
08-13773	RG-633240	Oil Filler Cap Gasket	1 each PMA Approved. Size: ID 1 1/2 x OD 2 5/16 Thickness 1/16 Fits Models: Continental E-185, E-225, IO-470-J, IO-470-K, IO-346, IO-360, IO-520, IO-550, O-470, IO-470, O-470-A, O-470-E, O-470-J, LTSIO-360, TSIO-360, TSIO-520-Series.	$6.50
08-13778	RG-642892	Oil Filler Cap Gasket	1 each. PMA Approved Size: 1/8" X 1-1/2" X 2-5/16" Fits Models: Continental IO-360, TSIO-360, LTSIO-360.	$6.50
08-13786	RG-225	Fuel Cap Gasket	1 each Size: 2 1/4 OD x 1 3/8 ID 1/8 thickness for Cessna.	$7.95
08-13787	RG-250	Fuel Cap Gasket	1 each Size: 2 1/16 OD X 1 1/2 ID X 1/8 thickness for Piper.	$8.50
08-13766	RG-2551	Fuel Cap Gasket	1 each Made of nitrile. For Cessna 170. Size: 4 1/4 OD X 3 1/4 ID X 3/16 thickness.	$16.50
08-13790	RG-5172	Fuel Cap Gasket	1 each Fits Models: Yak.	$6.90
08-13763	RG-G0001	Rocker Cover Gasket E-113C	Set of 2. Aeronca	$21.50
08-13867	RG-7601	Rocker Cover Gasket	1 each Fits Models: Warner 145.	$4.85
08-13799	RG-24335	Pushrod Tube Gasket	1 each PMA Approved Fits Models: Continental W-670 Series.	$3.80
08-13818	RG-690-D	Pushrod Tube Gasket	1 each PMA Approved. Fits Models: Lycoming R-680 Series.	$3.60
08-13781	RG-18532-H	Top Cover Gasket - Helicopter	1 each. PMA Approved Size: 1/16 thick Fits Models: Franklin 4A-235, 6A4-150, 6A4-165, 6A4-200, 6AS-350, 6AS-335.	$29.65
08-00783	RG-18532-A	Top Cover Gasket - Airplane	1 each. PMA Approved Size: 1/8 thick Fits Models: Franklin 6A4-145-A3, 6A4-150, 6A4-150-B3, 6A4-165-B3, 6A-350-C1/C2, 6V4-200 SERIES, 6V-335 SERIES, 6V-350-A/B, 6VS-335-A/B, 6VS-335-A1A/A1B, YO-335-5, O-335-5/5A/5B/6/6B.	$24.50
08-13788	RG-300	Fuel Tank Cap Gasket	1 each Size: 3 OD X 2 ID by 1/16 thickness for Piper.	$7.95
08-13791	RG-753121	75 Fuel Tank Gasket	1 each Fits Models: Stearman.	$21.50
08-13768	RG-3577	Oil Sump Gasket	1 ea. PMA Approved Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200.	$7.50
08-00781	RG-10366	Oil Pan Gasket	1 each PMA Approved. Size: 1/16 thick. Fits Models: Franklin 6A4-145-A3, 6A4-150-B3, 6A4-165-B3, 6V4-178-B33, 6V4-200-C32/C33, 6V-335-A/B, 6A-350-C1/C2, 6A-335-B/B1, 6VS-335-A/B, 6VS-335-A1A/A1B.	$31.50
08-13767	RG-530928	TCM Lifter Cover Gaskets	1 ea. PMA Approved. Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300.	$3.35
08-13764	RG-G0014	Tappet Cover Gasket for E-113C	1 each. Aeronca	$9.00
08-13800	RG-20268	Lifter Body Gasket	1 each PMA Approved Fits Models: Continental W-670 Series.	$1.77
08-13803	RG-71294	Gipsy Rocker Cover Gasket	1 each - de Havilland Gipsy or Alpha Romeo radial engine	$8.50
08-13621	RG-72059	Dipstick Tube Base Gasket	1 each. PMA Approved Fits Models: Lycoming IO-320, IO-360, IO-540, IO-540-B, E, M Series, HIO-360, O-235, O-290, O-320, O-360, O-480, O-540, TIO/LTIO-540-A.	$6.50
08-13820	RG-1111-C	Pushrod Tube Seal	1 each FMA-PMA Approved Fits Models: Lycoming R-680 Series.	$5.35
08-13819	RG-1111-C-18	Pushrod Tube Seal	Package of 18 FMA-PMA Approved Fits Models: Lycoming R-680 Series.	$91.75
08-13798	RG-20266	Pushrod Tube Nut Seal	1 each PMA Approved Fits Models: Continental W-670 Series.	$4.35
08-13797	RG-20266-14	Pushrod Tube Nut Seal	1 package of 14 PMA Approved Fits Models: Continental W-670 Series.	$56.75
08-13783	RG-17864-1	Push Rod Tube Seal	1 each. PMA Approved Takes 4 seals per cylinder. Fits Models: Franklin 4A-235, 6A4-150, 6A4-165, 6A4-200, 6AS-350, 6AS-335, 6A4-150.	$3.85
08-13782	RG-17864-4	Push Rod Tube Seal	Set of 4. PMA Approved Takes 4 seals per cylinder. Fits Models: Franklin 4A-235, 6A4-150, 6A4-165, 6A4-200, 6AS-350, 6AS-335, 6A4-150.	$15.50
08-13775	RG-534610	Push Rod Tube Seal	1 each. PMA Approved. Fits Models: Continental IO-346, O-470, IO-470, IO-520, IO-550, TSIO-520-Series.	$4.35
08-13776	RG-534610-4	Push Rod Tube Seal	Set of 4. PMA Approved. Fits Models: Continental IO-346, O-470, IO-470, IO-520, IO-550, TSIO-520-Series.	$15.50
08-00779	RG-17794	Pushrod Tube Seal Lower	1 each. PMA Approved Takes 2 per cylinder. Fits Models: Franklin 4A-235, 6A4-165, 6A4-200, 6AS-350, 6AS-335.	$4.65
08-01327	RG-360PRT-6	Pushrod Tube Seal Kit - Six Complete Cylinders	6 Cylinders. PMA Approved. Real Gasket Corporation has received FAA-PMA approval for improved design pushrod tube seals for continental engines. The seals are designed to provide 37% more sealing area at the point of contact with the pushrod tube, a	$84.75
08-01323	RG-520PRT-6	Pushrod Tube Seal Kit - Six Complete Cylinders	6 Cylinders. PMA Approved. Real Gasket Corporation has received FAA-PMA approval for improved design pushrod tube seals for continental engines. The seals are designed to provide 37% more sealing area at the point of contact with the pushrod tube, a	$129.75
08-01328	RG-360PRT-1	Pushrod Tube Seal Kit - One Complete Cylinder	1 Cylinder PMA Approved. Real Gasket Corporation has received FAA-PMA approval for improved design pushrod tube seals for continental engines. The seals are designed to provide 37% more sealing area at the point of contact with the pushrod tube, and	$13.50
08-01326	RG-520PRT-1	Pushrod Tube Seal Kit - One Complete Cylinder	1 Cylinder. PMA Approved. Real Gasket Corporation has received FAA-PMA approval for improved design pushrod tube seals for continental engines. The seals are designed to provide 37% more sealing area at the point of contact with the pushrod tube, an	$23.50
08-13779	RG-550GPR-1	Pushrod Tube Seal Kit - One Complete Cylinder	1 Cylinder. PMA Approved. Real Gasket Corporation has received FAA-PMA approval for improved design pushrod tube seals for continental engines. The seals are designed to provide 37% more sealing area at the point of contact with the pushrod tube, an	$16.50
08-13772	RG-200-D	Pushrod Tube Seal Kit - 1 Cyl for New Continental Cylinder	1 each Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300.	$26.99
08-13774	VSC-2	TCM 6-Cylinder 470/520/550 Spring Compressor Tool	1 each. Fits Models: Continental E-185, E-225, IO-346, IO-470, IO-470-J, IO-470-K, IO-520, IO-550, IO-550G, O-470, O-470-A, O-470-E, O-470-J, TSIO-520-Series, TSIO-520-BE.	$69.75
08-13615	VSC-1	TCM 4-Cylinder Spring Compressor	1 each A Good tool for PRT installation. Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300.	$62.75
08-13770	RG-200-RSW	Replacement Seal & Washer Kit for RG-200PR	1 Cylinder FAA-PMA approved. Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300.	$36.60
08-13771	101BR	Ultra Copper Silicon	1 each Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300.	$10.50
08-13793	RG-8-32-BPS-20	Baffle Seal Fastener - Aluminum Binding Post & Screw Kit	1 package of 20 pieces A package of 10 pair (post and screw) = 20 pieces.	$14.80

GASKETS



TCM MAGNETO GASKET 649954

P/N 05-11920.....**$0.98**

TCM 649989 OIL COOLER GASKET



P/N 08-13252..... **$2.02**



FUEL PUMP GASKET - 649962

P/N 08-13567.....**$2.26**

PT-6 NOZZLE GASKET



PT-6 Nozzle Gasket. Replacement part for Pratt & Whitney 3029566.

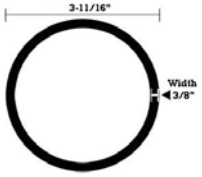
P/N 05-15099..... **$2.75**



LYCOMING PROP GOVERNOR GASKET

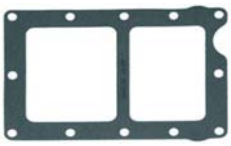
Propeller governor gasket for Lycoming 0-320 A & E Series engines. P/N 72053 ..... **$1.54**

LW12681 LYCOMING MAGNETO GASKET



Lycoming Magneto Gasket model # LW12681. For Lycoming 0320 all letter designations EXCEPT the "H" series.

P/N 08-00285 ..... **$1.87**



TCM OIL GASKETS

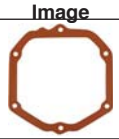
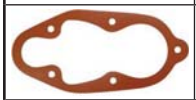
TCM 654553 Gasket, 12 Bolt Oil Cooler Gaskets for Continental Engines. (Old style crankcase)

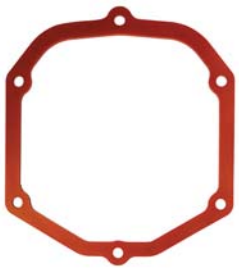
P/N 06-02793.....**$20.87**

TCM 654555 Oil Cooler Gasket for Continental Engines P/N 06-02162.....**$14.82**

1/8 INCH SILICONE VALVE COVER GASKETS

Valve cover gaskets are manufactured from a silicone rubber compounded especially for lubricating oil resistance and low compression set. It has a recommended temp. operating range of –67 to 446 F and will remain flexible while operating in the noted temp. range. One of the biggest benefits of replacing the factory cork gaskets with the Silicone rubber gaskets is that they are reusable and are easy to work with and are 1/8" thick silicone rubber.

Image	OEM Part No.	Application	PN	Price
	75906-SP	Lycoming O-235, O-290, O-320, IO320, O-360, IO-360, HIO-360, O-480, O-540, IO-540	05-11181	**$9.80**
	71450	Lycoming IO-540-B, E, M series, TIO/LTIO-540-A	05-11182	**$12.50**
	67193	Lycoming IO-360, VO/GO-435, GO-480, IO-540, VO-540, TIVO-540, IO-720	05-11183	**$9.80**
	632310	Continental IO-360, TSIO-360, LTSIO-360	05-11184	**$6.75**
	632459	Continental GTSIO-520 series, IO-550-G, TSIO-520-BE	05-11185	**$6.99**
	530162	Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300	05-11186	**$9.80**



"O" SERIES LYCOMING VALVE COVER GASKETS

Note: 08-05882 is similar to 67193 and RG-67193 but not FAA Approved for Certified Aircraft. 08-01187 is similar to 75906 and RG-75906 but not FAA Approved for Certified Aircraft.

These homebuilder's Lycoming valve cover gaskets replace the original cork gaskets which come standard on Lycoming 0-235, 0-320 and 0-360 engines. These new gaskets are molded from high temperature silicone rubber and do not harden over time so they can be re-used again and again. This hi-tech silicone rubber offers a much lower compression set, so it is superior at maintaining an oil-tight seal for the life of the engine. NOT FAA approved. For experimental aircraft only. P/N 08-01187 ..... **$4.95**



ANGLED VALVE "IO" SERIES LYCOMING VALVE COVER GASKETS

These gaskets are for the fuel injected "IO" series, sometimes referred to as the Angle Valve cylinder Lycoming, as well. these gaskets are molded from the same high-temperature silicone rubber as the "O" series gaskets above, and do not harden over time, so they can be reused again and again.This hi-tech silicone rubber offers a much lower compression set, so it is superior at maintaining an oil-tight seal for the life of the engine. They are not FAA approved and are not manufactured under a PMA. These are similar to Lycoming part number 67193 used on Angled valve Lycoming engines IO-360, IO-540, IO-720. P/N 08-05882 ..... **$6.85**

EP

GASKETS – STUDS

EXHAUST MANIFOLD NUTS



Part No.	Thread Size	Type	Engine Application	Price
21247	1/4-28	Brass	Cont., E185, IO470, IO520, GTSIO520 , LTSIO520, TSIO520, IO550, IOF5550, TSIO550, TSIOF550, TSIOL550	$3.65
22022	5/16-24	Brass	Continental: A-65, C-75 thru C-90, O-200, O-300	$1.25
STD1410	5/16-18	Steel	Lycoming	$1.47

GASCOLATOR GASKETS



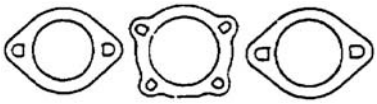
Gascolator Gasket, Manufactured from fuel resistant "Buna Rubber" material.

Description	Part Number	Price
2-1/4" OD. x 1/16" Buna and Cork material	05-11188	$9.50
2" OD. x 1/8" Buna Rubber material	05-11190	$7.75
2-1/8" OD. x 1/8" Buna Rubber material	05-11189	$7.99
2-1/4" OD. x 1/8" Buna Rubber material	05-11187	$7.99
2-1/4" OD. x 3/16" Buna Rubber material	05-11191	$8.80

OIL COOLER GASKET SETS

Our P/N	Continental P/N	Price ea.
08-76510	76510	$2.19

BLO-PROOF EXHAUST GASKETS



These gaskets are manufactured in a 1-piece design in 7/64" thick steel. They have a split metal inner ring which provides an absolute seal and they are guaranteed not to blow off. Engine manufacturer's parts.
Continental P/N 627429 for all A, C and E Series ..... **$8.50 Ea**
Continental ..... P/N 628260 for 0-470-R . **$10.50 Ea**
Lycoming P/N 77611 for 4 & 6 Cylinder Engines..... **$9.66 Ea**

EXHAUST GASKETS



Continental P/N 21493 (now P/N 632837 stainless steel)

Cont.#21493 for A-65 to 0-300.....P/N 08-05237 ..... **$1.65 Ea**
Cont. #632837 Stainless Steel.....P/N 08-13232 ..... **$1.76 Ea**
Lycoming 0-320 except h series .....P/N 77611 ..... **$9.66 Ea**

AIRBORNE BLO-PROOF GASKETS



Side view Cross Section



2 gaskets used per cylinder, with raised beads interlocked facing the exhaust stack flange. Eight required for 4 cyl. engine, 12 for 6 cyl. engine.

Engine Model Number	Airborne P/N (Use 2/ Cyl.)	Price Each
All Lycoming Engines except IO-540-B,-E,-M,-WD,IGO-540-B,IGSO-540-B,TIO-540 series,TIO-541 series TIGO-541 series, IO-540-B,-E,-M,-WD,IGO-540-B,IGSO-540-B	160	$46.50
TIO-540 Series, TIO-541 Series, TIGO-541 Series	161	$13.30

STEEL EXHAUST STACK FLANGES



MILD STEEL

Cont. A&C Series,0-200,0-300.....P/N 33011 .... **$12.50 Ea**
Lycoming 0-235 to 0-540 .....P/N 33021 ..... **$9.50 Ea**

STAINLESS STEEL

Continental A & C Series .....P/N 33101 .... **$15.50 Ea**
Continental IO-470 thru IO-520.....P/N 33103 .... **$15.50 Ea**
Lycoming 0-235 thru IO-360 .....P/N 33102 .... **$14.90 Ea**
Lycoming IO-540 .....P/N 33104 .... **$15.50 Ea**

LYCOMING STUDS

Description	Part No.	Price
25-22 Lycoming Stud-.250-20 X 2.75 LONG	07-18027	$136.80
25-27 Lycoming Stud-.250-20 X 3.38 LONG	07-14783	$76.75
25-8 Lycoming Stud-.250-20 X 1.00 LONG	07-14785	$19.00
25-8-P03 Lycoming Stud-.250-20 X 1.00 LONG	07-14786	$67.04
25C-10 Lycoming Stud-.250-20 X 1.25 LONG	07-14787	$12.60
25C-10-P03 Lycoming Stud-.250-20 X 1.25 LONG	07-14788	$17.67
25C-10-P07 Lycoming Stud-.250-20 X 1.25 LONG	07-14789	$539.02
25C-11 Lycoming Stud-.250-20 X 1.38 LONG	07-14790	$13.55
25C-11-P03 Lycoming Stud-.250-20 X 1.38 LONG	07-14791	$59.66
25C-11-P07 Lycoming Stud-.250-20 X 1.38 LONG	07-14792	$38.15
25C-12 Lycoming Stud-.250-20 X 1.50 LONG	07-14793	$20.88
25C-12-P03 Lycoming Stud-.250-20 X 1.50 LONG	07-14794	$32.60
25C-14 Lycoming Stud-.250-20 X 1.75 LONG	07-14795	$53.92
25C-14-P03 Lycoming Stud-.250-20 X 1.75 LONG	07-14796	$102.92
25C-14-P12 Lycoming Stud-.250-20 X 1.75 LONG	07-14797	$73.89
25C-16 Lycoming Stud-.250-20 X 2.00 LONG	07-14798	$108.85
25C-18 Lycoming Stud-.250-20 X 2.25 LONG	07-14799	$235.65
25C-19 Lycoming Stud-.250-20 X 2.38 LONG	07-14800	$80.49
25C-19-P03 Lycoming Stud-.250-20 X 2.38 LONG	07-14801	$133.34
25C-20 Lycoming Stud-.250-20 X 2.50 LONG	07-14802	$59.54
25C-21 Lycoming Stud-.250-20 X 2.63 LONG	07-14803	$23.96
25C-21-P03 Lycoming Stud-.250-20 X 2.63 LONG	07-14804	$63.66
25C-22 Lycoming Stud-.250-20 X 2.75 LONG	07-14805	$17.50
25C-22-P03 Lycoming Stud-.250-20 X 2.75 LONG	07-14806	$91.93
25C-22-P07 Lycoming Stud-.250-20 X 2.78 LONG	07-14807	$158.92
25C-24 Lycoming Stud-.250-20 X 3.00 LONG	07-14808	$55.88
25C-29 Lycoming Stud-.250-20 X 3.63 LONG	07-14809	$89.06
25C-31 Lycoming Stud-.250-20 X 3.88 LONG	07-14810	$42.31

EXHAUST STUDS FOR CONTINENTAL ENGINES



These high quality exhaust/engine studs produced from corrosion resistant 321 stainless steel in 5/16" X 18"-5/16" X 24" standard thread size are a direct replacement for the TCM Continental part number 402-151 stud. FAA/PMA approved for the Continental engines C-75, C-85, C-90, O-200 series engines, and o-300 (early) series engines.
P/N 08-07282..... **$9.85**
Stud for Continental Engines O-470, IO-470 (1/4"x20-1/4"x28)
P/N 08-07281..... **$8.85**

STAINLESS STEEL EXHAUST STUDS FOR LYCOMING ENGINES



Produced from corrosion resistant 321 in 5/16 x 18 standard thread size and are a direct replacement for the Lycoming part number 31C12 stud. Stop stud corrosion and rust out problems, stop expensive cylinder repair costs cause by broken studs, allow easy removal of exhaust systems for gasket replacement or inspection, but does not feature a safety wire hole (refer to p/n 08-06780 for safety wire hole feature). FAA approved for all Lycoming engines from 0-235 through 0-540.
CAD Plated Steel with out Safety Wire Hole ..... P/N 08-06279..... **$6.19**
Stainless Steel With safety wire hole feature .... P/N 08-06780.... **$11.50**

STA-FLATZ INTAKE CLAMP



Machined from billet 6061 aluminum and finished with gold anodize. This will reduce your chance of induction leaks, especially turbo charged engines! Experimental only. Not FAA approved.
P/N 08-13906 ..... **$42.65**

EP

EXHAUST INSULATING PRODUCTS



HIGH VELOCITY EXHAUST JACKET

An innovative way to insulate and block radiant heat. Cover the tubes vertically allowing for a consistent fit. The fit allows the exhaust system to expand as it comes up to operating temperatures without restrictions and provides air space for added insulation. Uses Thermal Conduction Technology (TCT), developed by Thermo-Tec, and can be applied with the headers in the vehicle.

4–6 cyl. kit.....P/N 08-00597.... **$76.75**
8 cyl. kit.....P/N 08-00598.... **$99.75**

SPARK PLUG WIRE HEAT SHIELD



The ultimate protection for spark plug wires and boots from conductive and radiant heat. The dual-purpose sleeve has a surface that reflects over 90% of radiant heat, while the inside silica-based fabric prevents conductive heat from penetrating. P/N 08-00612 ..**$18.50**



TURBO KIT

Designed to protect, improve performance, and eliminate turbo lag of a turbo charger. Fits a wide variety of turbines. The custom cut-to-fit kit comes with an excessive amount of material to cover turbos from the smallest automotive application to heavy-duty truck applications. 4 cyl. kit ..... P/N 08-00613 ..**$103.75**
6–8 cyl. kit ..... P/N 08-00614 ..**$124.90**



MUFFLER/CAT HEAT SHIELD KIT

The 40”x 24” mylar Heat Shield is made up of woven silica with a flexible mylar finish. Can be installed between the catalytic converter, muffler, or any other component to reflect radiant heat away from the undercarriage of the car. The kit includes all necessary fasteners. P/N 08-00616 .....**$68.75**



HEAT TERMINATOR ULTRA-LITE

Made of the highest-quality insulating materials available today. The material is made of a highly-textured aluminum composite surface on one side, with a high-temperature silica felt center and a durable mylar composite facing. Uses Thermal Conduction Technology (TCT), developed by Thermo-Tec.

8”x 12” .....P/N 08-00617 ....**$71.75** 10”x 18”....P/N 08-00618 . **$101.75**
18”x 18” ....P/N 08-00619 ..**$123.75** 18”x 24”....P/N 08-00620 . **$130.99**
24”x 24” ....P/N 08-00621 ..**$139.75** 24”x 36”....P/N 08-00622 . **$147.85**



STARTER HEAT SHIELD

Starters take in a lot of damaging heat that destroys the windings of the starter & solenoid. The Starter Heat Shield will reflect over 90% of radiant heat, adding life to the starter and assuring reliable starts. The Starter Heat Shield is a universal kit that fits all starters. P/N 08-00611..... **$29.50**



THERMO SHIELD

Thermo-Shield protects hoses & wires from radiant heat. Used in applications where it is difficult or not practical to disconnect one end of the hose or wire. The adhesive-backed composite construction tape can easily be wrapped around the hose or wire to make a clean, professional appearance. 15”x 1.5” roll. P/N 08-00602..... **$18.75**



THERMO–FLEX

Thermo-Flex Aluminum is a composite heat shield material with unlimited uses. The material is manufactured with a combination of materials to provide abrasion-resistance, thermal insulation, and physical containment of hoses and wiring. The combination of aluminum, silica, and stainless steel is combined to produce a sleeving that is flexible, lightweight, and strong. The aluminum-silica combination can be slit for applications such as wire looms or hose covering without disconnecting the ends of the wire or hoses. Thermo-Flex Aluminum can withstand extreme temperatures of up to 750°F. Packaged in 10 ft. lengths.

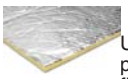
5/8” .....P/N 08-00623 .....**$48.85** 1.25”..... P/N 08-00626 .....**$69.95**
0.75” .....P/N 08-00624 .....**$52.75** 1.5”..... P/N 08-00627 .....**$79.75**
1” .....P/N 08-00625 .....**$63.75** 3”..... P/N 08-00628 ....**$133.75**



COOL-IT PLUG WIRE SLEEVES

This unique spark plug & ignition wire protector comes in five sporty colors; red, orange, blue, black & natural.These dual-purpose sleeves enhance performance, reduce misfires, extend plug wire life and will not react with petroleum products. The double-wall construction keeps the wire and boot cooler in a high-temperature engine. Its universal size fits most boots, is easy to install & non-flammable.

4-Pack .....P/N 08-01027 .....**$27.90** 6-Pack..... P/N 08-01030.. **$43.70**



COOL-IT MAT

Use the Cool-It Mat to battle excessive heat and noise that penetrate the driver compartment through the firewalls and floorboards. It is also perfect in doors, under hoods, and above transmission housings. The highly-reflective mylar reflects heat away from surfaces, while the foil side is orientated away from the heat source to conduct any penetrating heat across its surface thus providing the ultimate in heat protection. The silica blanketing is a duel-density composite and is the main sound insulator. It is easy to trim and can be applied with the push-in fasteners provided or any weather strip adhesive. P/N 08-00610..... **$37.70**



THERMO–SLEEVE

Lamination of a high-temperature fabric to a highly-reflective foil is the makeup of Thermo-Sleeve, which provides protection from radiant heat for hoses and wires. Thermo-Sleeve’s ultra light-weight construction provides more insulating than traditional bulky rubber-coated fiberglass. The aluminized sleeving reflects over 90% of radiant heat, and is fireproof & oil resistant. Comes packaged in 12-ft lengths, and sold in 5 different inside diameter sizes.

12’ 1/2” ID.....P/N 08-00605 .....**$54.75**
12’ 1” ID.....P/N 08-00606 .....**$74.75**
12” 1-1/2’ ID.....P/N 08-00607 .....**$92.75**
12’ 2” ID.....P/N 08-00608 .....**$108.50**
12” 2-1/2” ID .....P/N 08-00609 .....**$129.95**



HEAT BARRIER - ADHESIVE BACKED

Aluminized Heat Barrier is made up of woven silica with a flexible aluminized finish. The highly reflective surface of the material is capable of withstanding radiant temperatures in excess of 2000°F. The adhesive backed composite construction material can easily be applied to any surface or wrapped around a hose or wire to make a clean professional appearance. Note: Clean surface before applying. Adhesive is rated up to 300° F. Don’t apply to any parts of exhaust system. This product is designed to block radiant heat only! 12” x 12” .....P/N 08-00630 ..... **$12.90**
12” x 24” .....P/N 08-00600 ..... **$21.80**
24” x 50 foot Roll .....P/N 08-07660 ..... **$695.00**



HEADER MANIFOLD BLANKET

The Header Manifold Blanket provides excellent heat-retention for exhaust headers and manifolds. This flexible heat shield simply clips into place on the upper portion of the header. The fabric side of the material should be facing the heat source, and the aluminized side facing away, offering protection from abrasion and harmful liquid spills. Available in two sizes: (2) 20” by 24” blankets for V6 & V8 applications, and (1) 36” x 40” blanket for straight 6 & 4 cylinder engines.

20”x24” ..... P/N 08-00603.....**$94.75**
36”x40” ..... P/N 08-00604.....**$87.50**



GRAPHITE BLACK WRAP

Traditionally, high-heat coating spray had to be applied to the exhaust wrap to color it black. Now new Graphite Black Wrap eliminates the process of coating the wrap with its patented Thermal Conduction Technology (TCT) high-heat color pigment. Graphite Black Wrap is available in 2” widths, in 50-ft rolls.

Size	Part No.	Price
1" x 15	08-11153	**$10.50**
1" x 50	08-11021	**$31.50**
2" x 15	08-11154	**$17.50**

Size	Part No.	Price
2" x 25	09-05231	**$26.50**
2" x 50	08-00596	**$52.75**
2" x 100	08-11023	**$94.75**



GENERATION II COPPER HEADER WRAP

Generation II Copper Header Wrap uses a proprietary coating developed by Thermo-Tec; improved Thermal-Conduction-Technology (T-C-T). Creates more horsepower & reduces underhood temps, increases exhaust scavenging, withstands continuous heat up to 2000ºF, contains no asbestos. Sold in 1” or 2” wide, 50 ft rolls with low profile 1/16” thickness. 1”X50.....P/N 08-11031 ..... **$31.50**
2”X50.....P/N 08-11032 ..... **$52.75**



ICRO LOUVER AIR SHIELD

Lightweight yet durable. Features micro air louvers, which allow air to flow through the metal shield. The movement of the vehicle creates dynamic air flow, cooling by natural convection. The textured surface created by the micro air louvers creates more area for heat dissipation. The Micro Louver Air Shield is flexible yet durable; it bends and flexes easily by hand, making a custom fit trouble-free.

24”X24”.....P/N 08-11720 ..... **$53.75**
48”X24”.....P/N 08-11740 ..... **$92.95**



THERMO-TEC CARBON FIBER EXHAUST INSULATING WRAP

Produced utilizing pulverized Lava rock called basalt. It is extremely pliable, resistant to discoloration and can withstand 2000 degrees Fahrenheit in direct continuous contact. 1”X50.....P/N 08-13902 ..... **$35.60**
2”X50.....P/N 08-13903 ..... **$54.85**

EP

Prices Subject to Change Without Notice

EXHAUST INSULATING WRAP



The original Exhaust Insulating Wrap was developed over 14 years ago by Thermo-Tec. Exhaust Insulating Wrap is an innovative way to create more horsepower and reduce under-hood temperatures.Wrapping headers maintains hotter exhaust gases that exit the system faster through decreased density. Increased exhaust scavenging is produced, along with lower intake temperatures. Exhaust Insulating Wrap withstands continuous heat up to 2000°F, and contains no asbestos. Thermo-Tec exhaust wrap will not over-insulate a system when properly installed due to a proprietary coating developed by Thermo-Tec -- Thermal Conduction Technology (TCT) -- that conducts heat across the wrap's surface. This coating controls heat build-up and dissipation. The Header Wrap is sold in 2" wide, 50'rolls with a low profile 1/6" thickness.

Size	Part No.	Price
1" x 15	08-11151	**$9.85**
1" x 50	08-11001	**$29.95**
2" x 15	08-11152	**$16.50**

Size	Part No.	Price
2" x 25	09-05230	**$25.85**
2" x 50	09-41600	**$49.90**
2" x 100	08-11003	**$93.85**

EXHAUST WRAP KITS



Now you can get everything you need for a complete, professional installation of our Exhaust Insulating Wrap, all in one package.Kits include Exhaust Insulating Wrap, Hi-Heat Coating and Snap Strap; available in Black and Original.

2" Original, 1 Roll.....P/N 08-07204 .....**$62.75**
2" Original, 2 Rolls.....P/N 08-07205 .....**$115.00**
2" Black, 1 Roll .....P/N 08-07206 .....**$68.75**
2" Black, 2 Rolls.....P/N 08-07207 .....**$117.50**

CLAMP ON HEAT SHIELDS



Flexible clamp on pipe heat shield blocks over 95% of the damaging radiant heat of the exhaust.Provides the ultimate in protection. The kits come complete with all clamps and new stainless stand offs. Installs in minutes. Incorporate Thermo-Tec's proprietary coating technology developed by Thermo-Tec, Thermal Conduction Technology.

6"X 1'.....P/N 08-07073 .....**$27.50**
6" X 2' .....P/N 08-07074 .....**$39.90**

SNAP STRAPS



The multi-purpose stainless steel Snap Straps are used to secure the Exhaust Insulating Wrap -- and more. The high-temperature stainless steel straps have a narrow profile to fit tight spots, and can be cut to the exact length needed. Snap Straps secure with easy-to-use slide-through fasteners. .

9" 12 pack .....P/N 08-13150 .....**$28.90**
18" 6 pack.....P/N 08-13160 .....**$19.60**
9" 4 pack, 18" 2 pack.....P/N 09-05232 .....**$18.50**

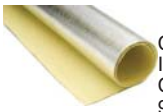
ALUMINIZED HEAT BARRIER STOPS UNWANTED HEAT TRANSFER



Keep heat where you want it with this hi-tech aluminized heat blanket. Thickness, 0.060". Furnished in 3 sizes.

18" x 20" .....P/N 09-05234 .....**$24.60**
36" x 20" .....P/N 09-05233 .....**$47.55**
36" x 40" .....P/N 08-06735 .....**$89.85**

KEVLAR HEAT SHIELD



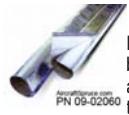
Can be used for various uses: As a header blanket, Improve driver comfort, Protect engines components, Continuous heat up to 1100 degrees F, and Reflects 90% of radiant heat up to 3000 degrees F. * Size: 26" x 40" x .062"(thick) Sheet P/N 08-07162 .....**$109.75**

KEVLAR MUFFLER COVER



Handles continuous temperatures up to 1100deg F. Reduces radiant heat inside vehicle. Dampens muffler noise and vibration. Includes stainless steel straps for installation. Neat attractive appearance and is abrasion resistant. P/N 08-07201.....**$143.75**

EXPRESS SLEEVES



Express Sleeves are just the thing that our customers have been looking for. An new easy to use sleeving which is a combination of a high temperature insulation material to a highly reflective mylar foil with a Velcro closure. The sleeving is designed to provide maximum protection for wires, hoses, and cables from the very damaging effect of radiant heat with an easy application. Simply pull apart the material, wrap around the wire, and re-close the sleeving. Express Sleeves reflect over 90% of radiant heat, is fireproof and fire resistant, and just looks good. Express Sleeves come in 1 1/2" diameter in 3', & 12' lengths.

Size	Part No.	Price	Size	Part No.	Price
1-1/2" X 3"	09-02060	**$29.95**	1/2" x 3	08-07202	**$27.50**
1-1/2" X 12"	09-02061	**$111.75**	1/2" x 12	08-07203	**$95.75**

ZIRCOFLEX™ FLEXIBLE CERAMIC HEATSHIELD



A flexible ceramic heat shield material that offers superb thermal barrier performance at minimal weight and minimal thickness. A thin aluminum backed foil, it is lightweight at only 460g/m(2) and only 0.25mm thick. It is however, robust and easy to handle. It can be cut and installed by hand or machine, and is easily fixed in place using mechanical fasteners or high temperature adhesives. Each piece is 35.4" X 21.5" (900mm x 550mm.)

Ceramic Heatshield ..... P/N 08-07214...**$154.75**
Double sided adhesive tape attachment kit..... P/N 08-07215.....**$8.95**
Stainless Steel Strapping kit..... P/N 08-07216.....**$17.85**

ZIRCOFLEX I (SINGLE THICKNESS)

This is ZircoFlex® I in its single thickness (original) format. The material offers superb thermal barrier performance at minimal weight and minimal thickness. It is produced as a thin aluminum backed foil.

Description	Size	Part No.	Price
Zircoflex I Mini Roll	400mm x 100mm (Approx. 16" x 4")	08-07635	**$20.95**
Zircoflex I Small Sheet	297mm x 210mm (Approx. 12" x 8")	08-07636	**$28.95**
Zircoflex I Medium Sheet	550mm x 450mm (Approx. 22" x 18")	08-07637	**$73.75**
Zircoflex I Small Sheet with Adhesive	297mm x 210mm (Approx. 12" x 8")	08-07646	**$37.50**
Zircoflex I Medium Sheet with Adhesive	550mm x 450mm (Approx. 22" x 18")	08-07647	**$146.85**
Zircoflex I Large Sheet with Adhesive	900mm x 550mm (Approx. 35" x 22")	08-07648	**$147.75**

ZIRCOFLEX III (TRIPLE THICKNESS)

This is an engineered triple thickness ZircoFlex® format that offers yet more thermal performance coupled with significant rigidity when compared to the original ZircoFlex I® material. It is produced as an aluminum backed matrix.

Description	Size	Part No.	Price
Zircoflex III Small Sheet	297mm x 210mm (Approx. 12" x 8")	08-07643	**$51.95**
Zircoflex III Medium Sheet	550mm x 450mm (Approx. 22" x 18")	08-07644	**$126.75**
Zircoflex III Large Sheet	900mm x 550mm (Approx. 35" x 22")	08-07645	**$255.95**
Zircoflex III Small Sheet with Adhesive	297mm x 210mm (Approx. 12" x 8")	08-07653	**$54.75**
Zircoflex III Medium Sheet with Adhesive	550mm x 450mm (Approx. 22" x 18")	08-07654	**$129.75**
Zircoflex III Large Sheet with Adhesive	900mm x 550mm (Approx. 35" x 22")	08-07655	**$259.85**

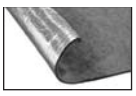
ZIRCOFLEX ACCESSORIES

Double Sided Adhesive Tape ..... P/N 08-07215.....**$8.95**
Stainless Steel Attachment Kit ..... P/N 08-07216.....**$17.85**



PT-6 INSULATION BLANKET

PT-6 Insulation Blanket Pratt TSO 3011755. Replacement part for Pratt & Whitney 3011755.
P/N 05-15101 .....**$417.00**



THERMO-GUARD FR

Thermo-Guard FR offers the best in heat and sound insulation. This lightweight, durable shield does everything: reduces sound, absorbs vibration, protects from radiant heat and provides an extra layer of insulating padding. The product features 100% synthetic fiber felt that provides sound and comfort control and high-tech foil heat barrier that blocks more than 90% of radiant heat.

48"x72" 1-Sided .....P/N 08-01028 .....**$49.50**
48"x72" 2-Sided .....P/N 08-01029 .....**$68.85**

EP

POLY-FIBER AIRCRAFT COATINGS

AIRCRAFT SPRUCE - WORLD'S LARGEST DISTRIBUTOR OF POLY-FIBER PRODUCTS

This FAA approved process utilizing Poly-Fiber Dacron polyester and the unique "Poly" line of finishes assures a beautiful, durable, weather-resistant cover job every time. Documented time tested results by the professionals. The Poly-Fiber Covering Process was issued Supplemental Type Certificate No. SA-1008-WE in 1965 and this number will apply to all aircraft.

Note: Formerly known as Stits covering process. Only Poly-Fiber materials may be used through the topcoat paint to comply with STC requirements. Poly-Fiber finishes are required for approval. Poly-Fiber is approved for use on most certified aircraft. To be sure, check the Master Eligibility List in the latest revision of Poly-Fiber Procedure Manual No. 1.

POLY-FIBER FABRIC



UNCERTIFIED LIGHT

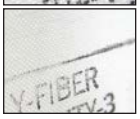
1.87 oz/sq. yard. Lightweight fabric recommended for covering ultralight aircraft. This fabric will be unstamped. It is not approved for certified aircraft except on plywood surface. 72" Width P/N 09-02001 ..... **$8.40 /Lineal Yd.**



MEDIUM WEIGHT

2.79 oz/sq. yard. Standard fabric recommended for normal service on all types of aircraft regardless of speed, wing loading or horsepower.

P/N 09-01600 ..... **$11.95 /Lineal Yd.**



HEAVY DUTY

3.40 oz/sq. yard. Recommended for severe operating conditions and very high wing loading aircraft where a very tough, durable, low elongation, high tension fabric is required and weight is not critical. Great for agricultural, aerobatic and bush planes. 72" Width. P/N 09-01700 **$13.30 /Lineal Yd.**

POLYESTER PADDING

Non -woven, 45" wide, 3 oz. per yard. Used under fabric on wing leading edge and turtle deck to smooth rough surfaces.

P/N 09-01750 ..... **$8.50**

POLY-FIBER POLYESTER PINKED EDGE TAPES

Part No.	Style #	Roll Width	Roll Length	Price.
09-02200	Med.	1"	25 yds.	**$16.05**
09-02400	Med.	1-1/2"	25 yds.	**$17.75**
09-02450	Med.	2"	25 yds.	**$23.20**
09-02500	Med.	2"	50 yds.	**$30.20**
09-02900	Med.	3"	25 yds.	**$27.80**
09-03300	Med.	4"	25 yds.	**$32.40**
09-03350	Med.	6"	25 yds.	**$45.00**
09-02300	Light	1"	25 yds.	**$16.05**
09-02350	Light	1-1/2"	25 yds.	**$17.65**
09-02705	Light	2"	25 yds.	**$23.20**
09-02700	Light	2"	50 yds.	**$30.20**
09-03100	Light	3"	25 yds.	**$27.80**
09-03400	Light	4"	25 yds.	**$32.40**
09-03545	Light	6"	25 yds.	**$45.00**
09-03565	Bias	2"	25 yds.	**$32.50**
09-03570	Bias	3"	25 yds.	**$46.25**
09-03580	Bias	4"	25 yds.	**$57.35**

POLY-FIBER TAPES, CORD & THREAD



	Item	P/N	Yds. Spool	Price
Reinforcing Tape	1/4" Wide	09-03500	60	**$55.00**
	3/8" Wide	09-03600	60	**$56.60**
	1/2" Wide	09-03700	60	**$57.95**
Rib Lacing Cord	(Std. Round)	09-03800	296	**$45.25**
	Rib Cord, Flat	09-03810	500	**$45.50**
Sewing Thread	Machine	09-03900	500	**$15.25**
	Hand	09-04000	250	**$12.00**
Anti-Chafe	1" Wide	09-02110	30	**$17.00**

HEAVY INTER-RIB BRACING TAPE

Non-adhesive polyester twill tape for inter-rib bracing. Twice as strong as cotton tape. 36 yd. rolls.`1/2" Wide P/N 09-40912 ..... **$16.70**

AIRCRAFT FABRIC COVERING



Aircraft Fabric Covering is a must for anyone who wants to cover their own airplane. This 2-hour comprehensive DVD presents every aspect of the Poly-Fiber™ fabric covering process in detail, and in easy-to-understand language. From preparing the airplane for covering to spraying on the colors, you are guided step by step through the entire process by a professional EAA SportAir fabric instructor. When used in conjunction with the Poly-Fiber manual, Aircraft Fabric Covering removes the mystery surrounding this important process in the construction or restoration of your airplane. Information covered includes: • Preparing surfaces • Attaching the fabric •Tightening the fabric • Applying the first coat of Poly-Brush •Tying rib-lacing knots • Applying finishing tapes • Spraying UV-blocking chemical • Poly-Spray •Applying the color coats.

DVD ..... P/N 13-40428 ..... **$39.95**

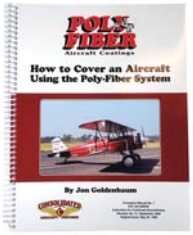
THE POLY-FIBER PRACTICE KIT



If you're thinking of building a fabric-covered airplane but are wondering what the covering process is like, this is the perfect answer. You get a practice frame, fabric, tapes, needles, rib lacing cord, thermometer, instructions, and all the coatings you need to work through the Poly-Spray stage. There's enough of everything to do the entire process twice. You'll see how easy and enjoyable fabric covering really is.

P/N 09-06220 ..... **$62.50**

'HOW TO COVER AN AIRCRAFT USING THE POLYFIBER SYSTEM'



The Official Poly-Fiber how-to manual. It's a whole covering course in a book. A spiral-bound classroom, as the ads say. 151 pages of clear, non-jargon, step-by-step instruction, the entire Poly-Fiber system, from basic materials to blue ribbon. In plain language & has a sense of humor all its own. Entire Poly-Fiber catalog of products is included.

P/N 09-06000 ..... **$10.00**

Poly-Fiber Color Card #50.P/N 09-00234 ..... **FREE**

POLY-FIBER SOLVENTS & CLEANERS



METL-SOL C-2200 METAL SURFACE CLEANER

A strong solvent blend formulated to remove oil, silicone, wax and other contaminants from all metal surfaces before priming. Not for painted surfaces.

Qt. ..... P/N 09-40710 ..... **$18.90**
Gal. ..... P/N 09-40720 ..... **$60.75**



C-2210 PAINT SURFACE CLEANER

A mild solvent blend formulated to remove oil, silicone, wax and other contaminants from all painted or primed surfaces. Also removes tape gum from painted surfaces and acrylic windshield materials.

Qt. ..... P/N 09-40810 ..... **$11.95**
Gal. ..... P/N 09-40820 ..... **$45.00**



310 ALKALINE DETERGENT CLEANER

Highly recommended as an alkaline metal cleaner for removing greases and oils. Also a very good cleaner for interior cabins and vinyl upholstery, as well as a wide variety of household applications to remove waxes, dirt, and stains. Furnished as a concentrate for 32:1 dilution with water. Lemon scented and not harmful to your hands.

Qt. ..... P/N 310-QT **$11.95**
Gal. ..... P/N 310-1G **$32.75**



POLY-FIBER MEK

Solvent used to remove coatings for repairs, for clean up, and to release cemented seams. NOT used to thin or reduce any products.

Qt. ..... P/N 09-40835 ..... **$14.50**
Gallon ..... P/N 09-40845 ..... **$41.50**

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WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

POLY-FIBER AIRCRAFT COATINGS



POLY-BRUSH

FLAMMABLE

A pink translucent, 1 part air drying resin used for the first 2 or 3 coats to penetrate and seal the fabric weave and assure good adhesion. Also used to attach the finishing tapes and reinforcing patches. Brush on initial coat thinned 3:1 with reducer. Subsequent coats are thinned 3:1 with reducer and applied with a spray gun to avoid brush marks & cut application time.

	Tinted		*Untinted*
Quart	P/N 09-04100	**$25.75**	P/N 09-04110 **$25.75**
Gallon	P/N 09-04200	**$85.00**	P/N 09-04210 **$85.00**
5 Gal.	P/N 09-04300	**$420.00**	P/N 09-04350 **$420.00**



POLY-SPRAY

FLAMMABLE

A high-solids aluminum-pigmented, 1 part, air drying resin used after the Poly-Brush preliminary coating to protect fabric from UV and prepare for a smooth finish. Thin 4:1.

Poly Spray (Qt.) ..... P/N 09-04400 ..... **$25.20**
Poly Spray (Gal.) ..... P/N 09-04500 ..... **$83.60**
Poly Spray (5 Gal.) ..... P/N 09-04600 ..... **$413.95**



POLY-FIBER REDUCERS

FLAMMABLE

A blend of solvents used for viscosity and drying control of Poly-Brush, Poly-Spray and Poly-Tone. Blend #R-65-75 is recommended as the standard reducer in normal weather, 65°–75°F. #RR-8500 is a retarder-reducer with slower drying time. Recommended for temp above 85° & warm humid weather.

	#65-75		*#RR-8500*	
Qt.	P/N 09-04700	**$16.00**	P/N 09-04750	**$15.40**
Gal.	P/N 09-04800	**$47.50**	P/N 09-04850	**$48.50**
5 Gal.	P/N 09-04900	**$230.70**	P/N 09-04950	**$230.90**



POLY-FIBER BLUSH RETARDER BR-8600

This blended solvent improves flow-out and prevents blushing under high temperature or high humidity conditions. Improves gloss. Important Notice: All mixed paints are special order and are non-returnable.

FLAMMABLE

BR-8600 (Qt.) ..... P/N 09-40830 ..... **$14.00**
BR-8600 (Gal.) ..... P/N 09-40840 ..... **$49.00**



POLY-TAK CEMENT

FLAMMABLE

Excellent cement for all types of fabrics. Shelf life unopened is 2 years.

Pint ..... P/N 09-05110 ..... **$14.40**
Quart ..... P/N 09-05000 ..... **$27.50**
Gallon ..... P/N 09-05100 ..... **$99.80**



POLY-TONE® FINISH

A durable semi-gloss, 1-part, air drying flexible paint available in over 50 popular aircraft colors. Recommended as the standard finish for the Poly-Fiber cover process. Also may be used over suitably primed metal components of fabric covered aircraft. Fabric damage is more easily repaired when Poly-Tone finish is used. All pigments are non-bleeding or fading. Will not oxidize with age. Poly-Tone is always thinned to 4 to 1with Poly Fiber Reducer (65-75 or 8500).

FLAMMABLE

POLY-TONE FINISHES

4 Whites:	*QUART*	*GALLON*
Insignia White (#105)	**$26.25**	**$88.80**
Juneau White (#110)	**$26.50**	**$86.50**
Glacier White (#117)	**$24.50**	**$88.75**
Daytona White (#120)	**$24.50**	**$89.50**

All other colors (Color Card #50) ..... **No Charge**

TO ORDER POLYTONE: Create the part number for the Polytone you require: *Color*-PQ (for Quart) or *Color*-PG (for Gallon)
Example: 100-PQ is 1 Quart of Color #100

POLY-TONE U.V. BLOCKING

FLAMMABLE

Used for additional UV Protection in ultralight airplanes. 1 fl.oz. blocks 1Quart Polytone

1/2 Pint Blocker (8 fluid oz) ..... P/N 09-02053 ..... **$23.75**

POLY-TONE REJUVENATOR

FLAMMABLE

RJ-1200 Quart ..... P/N 09-05200 ..... **$24.50**
Gallon ..... P/N 09-05300 ..... **$80.50**

IMPORTANT NOTICE:
ALL mixed paints are special order and are non-returnable.



STITS EPOXY PRIMER (GREEN) EP-420/EP-430

FLAMMABLE

This green primer is fast drying, corrosion inhibiting, and has application and curing qualities down to 35°F. It is a heavy duty chemical and solvent resistant amine cured primer. Mixing ratio is 2 parts base, 1 part catalyst. Order in kits.

Quart Kit (Yields2 1/2 quarts)
Incl. catalyst and reducer ..... P/N 09-00352 ..... **$86.00**
Gallon Kit (Yields 2 1/2 Gallons)
Incl. catalyst and reducer ..... P/N 09-00353 ..... **$298.00**

Base:	Quart	P/N 09-05605	**$48.50**
	Gallon	P/N 09-05610	**$166.95**
Catalyst:	Pint	P/N 09-05615	**$21.75**
	Quart	P/N 09-05620	**$36.80**
Reducer E-500 (Reduce 50%)	Quart	P/N 09-01163	**$15.75**
	Gallon	P/N 09-01108	**$58.80**



STITS EPOXY PRIMER (WHITE) EP-420/EP-430

FLAMMABLE

This white heavy duty chemical and solvent resistant amine cured primer, the excellent primer from Stits is fast drying and corrosion inhibiting. It can be applied and cured to temperatures down to 35°F. Mixing ratio is 2 parts base, 1 part catalyst.

Quart Kit (Yields 2 1/2 quarts)
Incl. catalyst and reducer ..... P/N 09-00285 ..... **$86.00**
Gallon Kit (Yields 2 1/2 Gallons)
Incl. catalyst and reducer ..... P/N 09-00438 ..... **$298.00**

Base:	Quart	P/N 09-05625	**$48.50**
	Gallon	P/N 09-05630	**$165.40**
Catalyst:	Pint	P/N 09-05615	**$21.75**
	Quart	P/N 09-05620	**$36.80**
Reducer E-500 (Reduce 50%)	Quart	P/N 09-01163	**$15.75**
	Gallon	P/N 09-01108	**$58.80**



STITS EPOXY VARNISH EV-400/EV-410

FLAMMABLE

An excellent clear gloss epoxy varnish for interior and exterior use. It provides superior weather durability and excellent chemical and solvent resistance. Can be used over a one component varnish primer if desired. Mixing ratio is 2 parts base, 1 part catalyst. Can be ordered as a kit which includes base, catalyst and reducer, or each component separately.

Quart Kit (Yields 2-1/2 quarts)
Incl. catalyst and reducer ..... P/N 09-00349 ..... **$81.00**
Gallon Kit (Yields 2-1/2 Gallons)
Incl. catalyst and reducer ..... P/N 09-00350 ..... **$282.95**

Base:	Quart	P/N 09-05645	**$43.95**
	Gallon	P/N 09-05650	**$155.95**
Catalyst:	Pint	P/N 09-05655	**$18.55**
	Quart	P/N 09-05660	**$31.50**
Reducer E-500 (Reduce 50%)	Quart	P/N 09-01163	**$15.75**
	Gallon	P/N 09-01108	**$58.80**



UV-550 URETHANE VARNISH QT KIT

Important Notice: All mixed paints are special order and are non-returnable. **Kit Includes:** • 09-05665 - UV-550 polyfiber varnish quart • 09-05400 - U-865 Stits catalyst 1/2 pint • 09-05800 - UR-826 urethane retarder quart.

Varnish Only (Quart) ..... P/N 09-05665 ..... **$56.65**
Varnish Only(Gallon) ..... P/N 09-05272 ..... **$184.75**
Varnish & Catalyst Kit(Quart) ... P/N 09-01039 ..... **$103.95**
Varnish & Catalyst Kit(Gallon) .. P/N 09-05272-K ... **$317.00**



EPOXY ACCELERATOR EX-501

FLAMMABLE

A chemical curing accelerator for use in EP-420 Epoxy Primer and EV-400 Epoxy Varnish according to directions on base component listing. Reduces polymerization time, not solvent evaporation.

1/2 Pint ..... P/N 09-04650 ..... **$12.75**



POLY-FIBER ESO ENGINE STORAGE OIL

FLAMMABLE

A fine lubrication and preservative oil used to prevent corrosion in internal combustion engines during extended storage. MIL-21260.

Quart ..... P/N 09-42450 ..... **$24.00**
Gallon ..... P/N 09-42455 ..... **$89.00**



POLY-FIBER 60"X 48" FINE MESH PAINT STRAINER CONES

Poly-Fiber 60x48 filter mesh paint strainer cone.
P/N 09-02115 ..... **$0.76**

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POLY-FIBER AIRCRAFT COATINGS

POLY FIBER AEROTHANE



A tough, flexible, high-gloss two part polyurethane especially formulated for fabric covered aircraft and marine surfaces subject to flexing loads. Recommended as a premium quality fabric finish over Stits Poly-Fiber covered aircraft. Wet look, high gloss. Aerothane requires catalyst, which is sold separately, and will be offered to you at the time of purchase. If you currently have an adequate supply please notify a sales rep or note it on your online order. Aerothane additives are also sold separately, but must be requested as needed.

AERO-THANE (All Paint 3/4 filled cans)			
Size	**Color**	**Part No.**	**Price**
Quart	Insignia White	105-AQ	**$39.80**
Gallon	Insignia White	105-AG	**$130.10**
Quart	Juneau White	110-AQ	**$39.85**
Gallon	Juneau White	110-AG	**$129.95**
Quart	Glacier White	117-AQ	**$37.75**
Gallon	Glacier White	117-AG	**$128.95**
Quart	Daytona White	120-AQ	**$40.25**
Gallon	Daytona White	120-AG	**$130.95**
CLEAR AERO-THANE AO-100 (All paints 3/4 filled cans)			
Size	**Color**	**Part No.**	**Price**
3/4 Quart Paint	Clear	AO-100-QT	**$44.75**
3/4 Gallon Paint	Clear	AO-100-1G	**$151.00**

AERO-THANE ADDITIVES			
Description	**Size**	**Part No.**	**Price**
Urethane Catalyst U-865	1/2 Pint	09-05400	**$23.75**
Urethane Catalyst U-865	Quart	09-05500	**$65.50**
Urethane Reducer UE-820	Quart	09-05600	**$20.00**
Urethane Reducer UE-820	Gallon	09-05700	**$67.00**
Urethane Retarder UR-826	Quart	09-05800	**$25.75**
Urethane Retarder UR-826	Gallon	09-05900	**$86.85**

TO ORDER AEROTHANE:
Create the part number for the Aerothane you require: Color-A-Q(quart) or G (gallon). Add -K (kit) if catalyst is required. Example: 100-A-Q-K is 1 quart of color #100 with catalyst included.

POLY-TONE/AEROTHANE ENAMEL FLATTENER

Used to make Aerothane and Enamel match the semi gloss finish of Polytone, or to make either Aerothane, Polytone and Enamel Full Military Flat.
Use 1 Pint, to flatten 1 Quart .....P/N 09-02052 .....**$22.75**
Use 1 Qt. & 1 Pint, to flatten 1 Gallon.....P/N 09-02051 .....**$43.70**



CALIBRATION THERMOMETER

Thermometer is accurate from 100°F to 400°F / 50°C to 200°C. Easy-to-read dial. Adjustable pan clip. Durable stainless steel.
P/N 09-37475 .....**$14.50**

BLACK BARON FABRIC IRON



The Black Baron Iron was designed specifically for use on small aircraft. The exclusive "roll bars" fit into fillets and undercambers. The flat sole is for sheeted and open structures, and its beveled edges provide constant heat without marks. The toe is rounded and flat best performance. The coating is 100% blackstone making the iron slide like butter, even on tacky surfaces with almost no adhesive buildup. An advanced hi-tech thermostat reduces temperature drift to only 5° – Ordinary irons can vary up to 40°, causing surface bubbles. Get the best – get Black Baron.
110V .....P/N 09-37411 ..... **$22.70**

COVERITE FABRIC IRON 220V



Used to apply fabric or film on model plane kits. Built-in solid-state thermostat maintains heat within 3°F of dial setting. Temperature range of 150 to 410°F (65 - 210°C). 100% Blackstone shoe coating resists scratches & adhesive build-up. 220 volt.
P/N 09-37401 .....**$44.95**

AIRCRAFT FABRIC SEALING IRON 110V



A digital thermostatic controlled sealing iron with easy to read LCD display. 110 Volt Sealing Iron.
P/N 09-04837 .....**$54.95**

VISCOSITY CUP



The Ford #4 viscosity cup is used for measuring the viscosity of paints and finishes to ensure a flawless finish.
P/N 09-04776 .....**$9.95**

POLY-FIBER COLORS AVAILABLE

Each color group in chart below is listed from light to darker shades. Free Poly-Fiber color chart available on request. Color Card #50.

CLEAR
100.....(Aerothane Only)

WHITE
105.....Insignia White (Eagle White)
110.....Juneau White
117.....Glacier White (Federal 17038)
120.....Daytona White

CREAM
132.....Sun Valley Ivory
125.....Tucson Cream
131.....Diana Cream

YELLOW
242.....Ag Cat Yellow
136.....Lemon Yellow
139.....Federal Yellow
145.....Lockhaven Yellow
240.....Champion Yellow Titanine Yellow
140.....Orange Yellow (Schweizer Yellow) (Thrush Yellow) (Orange Yellow)
143.....Cub Yellow
146.....J3 OEM Yellow

ORANGE
142A .....Eagle Yellow (Orange)
182.....Pumpkin Orange
183.....International Orange
180.....Cruiser Orange

RED
189.....Madrid Red
187.....Eagle Red
191.....Pontiac Red (Toreador Red)
190.....Tennessee Red (Federal 11136) (Insignia Red)
195.....Santa Fe Red (Maroon)
196.....Boston Maroon
197.....Stinson Maroon

PURPLE
361.....Eagle Purple

BROWN
205.....Bermuda Tan
203.....Elsinore Brown

BLUE
165.....Lakeland Blue
170.....Bahama Blue
173.....AN Blue (True Blue) (Federal 15102)
318M.....Piper Trainer Blue
177.....Eagle Blue
176.....Insignia Blue (Federal 15044 Blue)

GREY/SILVER
210.....Polar Grey
220M.....Nevada Silver
213A .....Federal 36321 Grey
213.....Ag Cat Grey
219.....Jasper Grey
222M.....Rancho Silver

BLACK
215.....Dakota Black (Eagle Black)

MILITARY CAMOUFLAGE
212.....Oak Green
208.....Federal 14087 (Olive Drab)
208A .....Federal 24064 Green

GREEN
157.....Cuby Sport Trainer (Green)
151.....Everglades Green
156.....Portland Green
160.....Forest Green
208.....Federal Green

GOLD
301M.....Reno Gold

TO ORDER POLY-FIBER COLORS:
Simply specify Poly-Fiber color number from chart above, either PolyTone or AeroThane, and quart or gallon.

IMPORTANT NOTICE: ***Poly-Fiber and Randolph Coatings are now manufactured by Consolidated Coatings Co. and current colors do NOT all match original Randolph colors. If matching an old color is required, please match it to a current color card or send in a sample of old color for custom matching.***

ALL mixed paints are special order and are non-returnable.



BLACK & DECKER THE CLASSIC IRON

With a classic design and a wide range of convenient features, The Classic™ iron brings simplicity and style back to ironing. A SmarTemp™ indicator light ensures you're ironing at the right temperature, while the 3-way auto shutoff provides added security and peace of mind. Wrinkle-Fighting Power. Aluminum Soleplate. Steam On/Off Button. Ironing Made Easy. 3-Way Auto Shutoff. Anti Drip. Fabric Guide. Button Groove. Pivoting Cord. Heats up to 374 degrees. P/N 09-00980 .....**$35.65**



IRON KIT

Includes: • 09-37400: Hobbico Fabric Iron 110V • 09-03785: 360 degree Fabric Iron • 09-37450: Silicone Heat Sink Compound 1oz syringe • 09-37475: Poly-Fiber Calibration Thermometer P/N 09-37420 ..... **$115.95**



SILICONE HEAT SINK COMPOUND

For more accurate thermal transfer during iron calibration. 1 oz. Syringe P/N 09-37450 ..... **$16.00**

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Prices Subject to Change Without Notice



POLY-FIBER MARK II FOR METAL

(NOT FOR USE ON FABRIC) - Use Mark II for Metal is available in the same 50 colors as Poly-Fiber Poly-Tone and Randolph Colored Butyrate Dope. Mark II is used over primed metal or composite parts and is too brittle to be used over fabric. Mark II is a tough, long-lasting top-coat paint. Although Mark II is a two-part catalyzed paint, it is not catalyzed with an isocyanate, thus normal safety equipment (a charcoal filtered spray mask) is sufficient. You do not have to use a supplied air respirator when spraying Mark II. Packaging: Mark II comes in three-part kits: part one is a can of the colored paint; part two is a separate can with an equal volume of Mixing Liquid, and part three is a thinner to be used to prevent orange peel.

Color	Quart	Price	Gallon	Price
Clear Base for Tinting	09-03869	**$53.35**	09-03871	**$165.05**
Metallic Base for Tinting	09-03872	**$53.35**	09-03873	**$165.05**
105 Insignia White	09-03876	**$108.95**	09-03877	**$331.95**
110 Juneau White	09-03878	**$108.95**	09-03879	**$358.95**
117 Glacier White	09-03880	**$53.25**	09-03881	**$358.95**
120 Daytona White	09-03882	**$114.95**	09-03883	**$360.95**
125 Tucson Cream	09-03884	**$113.95**	09-03885	**$356.95**
131 Diana Cream	09-03886	**$113.95**	09-03887	**$358.95**
132 Sun Valley Ivory	09-03888	**$113.95**	09-03889	**$357.95**
136 Lemon Yellow	09-03890	**$123.95**	09-03891	**$398.95**
139 Federal Yellow	09-03892	**$116.95**	09-03893	**$370.95**
140 Orange Yellow	09-03894	**$121.95**	09-03895	**$388.95**
142A C. Eagle Yellow/Orange	09-03896	**$117.95**	09-03897	**$375.95**
143 Club Yellow	09-03898	**$117.95**	09-03899	**$374.95**
145 Lockhaven Yellow	09-03901	**$115.95**	09-03902	**$367.95**
146 J3 OEM Yellow	09-03903	**$117.95**	09-03904	**$375.95**
151 Everglades Green	09-03905	**$121.95**	09-03906	**$388.95**
156 Portland Green	09-03907	**$118.95**	09-03908	**$377.95**
157 Cuby Sport Trainer Green	09-03909	**$122.95**	09-03910	**$394.95**
160 Forest Green	09-03911	**$116.95**	09-03912	**$368.95**
165 Lakeland Blue	09-03913	**$113.95**	09-03914	**$359.95**
170 Bahama Blue	09-03915	**$116.95**	09-03916	**$369.95**
173 AN (True) Blue	09-03917	**$116.95**	09-03918	**$370.95**
176 Insignia Blue	09-03919	**$119.95**	09-03920	**$381.95**
177 Christen Eagle Blue	09-03921	**$118.95**	09-03922	**$379.95**
180 Cruiser Orange	09-03923	**$120.95**	09-03924	**$385.95**
182 Pumpkin Orange	09-03925	**$118.95**	09-03926	**$380.95**
183 International Orange	09-03927	**$119.95**	09-03928	**$383.95**
187 Christen Eagle Red	09-03929	**$123.95**	09-03930	**$399.95**
189 Madrid Red	09-03931	**$121.95**	09-03932	**$390.95**
190 Tennessee Red	09-03933	**$124.95**	09-03934	**$402.95**
191 Pontiac Red	09-03935	**$126.95**	09-03936	**$408.95**
195 Santa Fe Red	09-03937	**$123.95**	09-03938	**$398.95**
196 Boston Maroon	09-03939	**$123.95**	09-03940	**$396.95**
197 Stinson Maroon	09-03941	**$124.95**	09-03942	**$401.95**
203 Elsinore Brown	09-03943	**$112.95**	09-03944	**$355.95**
205 Bermuda Tan	09-03945	**$113.95**	09-03946	**$357.95**
208 Olive Drab	09-03947	**$113.95**	09-03948	**$356.95**
208A Federal Green	09-03949	**$113.95**	09-03950	**$359.95**
210 Polar Grey	09-03951	**$113.95**	09-03952	**$357.95**
212 Oak Green	09-03953	**$114.95**	09-03954	**$361.95**
213 AG Cat Grey	09-03955	**$112.95**	09-03956	**$355.95**
213A Federal Grey	09-03957	**$113.95**	09-03958	**$358.95**
215 Dakota Black	09-03959	**$111.95**	09-03960	**$349.95**
219 Jasper Grey	09-03961	**$113.95**	09-03962	**$358.95**
220M Nevada Silver	09-03963	**$105.95**	09-03964	**$327.95**
222M Rancho Silver	09-03965	**$106.95**	09-03966	**$328.95**
240 Champion Yellow	09-03967	**$113.95**	09-03968	**$358.95**
242 AG Cat Yellow	09-03969	**$117.95**	09-03970	**$373.95**
301M Reno Gold	09-03971	**$140.95**	09-03972	**$464.95**
318M Piper Trainer Blue	09-03973	**$111.95**	09-03974	**$351.95**
361 Christen Eagle Purple	09-03975	**$122.95**	09-03976	**$396.95**

POLY-FIBER REPAIR KIT

Includes:
1 ..... 1" Dope Brush
1 Pint ..... Poly-Tak
1 Quart ..... Poly-Spray
1 Quart ..... Poly-Brush
1 Quart ..... Reducer (Specify 65-75 or 8500)
1 Yard ..... Medium Fabric
4 Sheets ..... #400 Sandpaper
1 ..... 3" Curved Needle
10 Feet ..... 2" Surface Tape
1 ..... Thread

With #65-75 Reducer ..... P/N 09-06210 ..... **$94.75**
With #8500 Reducer ..... P/N 09-06215 ..... **$94.75**

CECONITE FABRIC REPAIR KIT

Ceconite 101 ..... P/N 09-00299 ..... **$147.95**
Kit Includes:

1	1" Brush	1 quart	286 Nitrate Thinner
1	3"Curved Needle	1 quart	Super Seam Fabric Cement
1	3M Wetordry Sandpaper 413	2 quarts	286 Butyrate Thinner
1 quart	G-6302 Rand Nitrate Dope Grain	1 quart	W-8350 Non-Taut Butyrate
1 yard	Ceconite 101 (3.4) 70"	1 Yard	Stits Hand Sewing Thread
1 quart	Rand O- Fill G6303	5 Yards	2" C102 Straight Tape 2"

Ceconite 102 ..... P/N 09-06225 ..... **$146.95**
Kit Includes:

1	1" Brush	1 quart	Nitrate Thinner
1	3" Curved Needle	1 quart	W-8350 Non-Taut Butyrate
1 yard	Ceconite 102 (2.6oz)	2 quarts	Butyrate Thinner 970
1 sheet	3M Wetordry Sandpaper 413	1 quart	Rand-O-Fill G-6303 QT
1 quart	Super Seam Fabric Cement	6 Yard	C102 Straight Tape 2"
1 quart	G-6302 N/T Nitrate Dope Grain	1	Ceconite Hand Thread 250



FABRIC COVERING TOOL KIT

This kit includes the items most commonly needed to complete your Poly-Fiber covering project. **Kit Includes:** 4 - 1" Disposable Brushes, 3 - 2" Disposable Brushes, 4 - 2" opening 6" long Spring Clamps, 1 - CB-9 Pinking Shears, 10 - 1/2" Glue/Acid Brushes, 1 - Black & Decker Classic Iron, 1 Hobbico Fabric iron 110V, 1 - Silicone heat sink compound, 1 - Thermometer, 1 - 12" Straight Needle, 1 - 12" Curved Tip Needle, 1 - 6" Curved Needle, 2 - Gallon Paint Saver Lids, 1 - V-plore 330 series mask only, 1 - X-plore P100 Combo cart pkg. P/N 09-06230 ..... **$193.95**



POLY FIBER COVERING KIT

The Poly Fiber Covering Kit includes all of the materials generally required to recover a wide variety of small aircraft (see list below) except the fabric and topcoat. Poly-Fiber offers both Polytone and Aerothane topcoats in many colors. When you order this Covering Kit, you can also order the presewn fabric envelope or fabric yardage you will need to cover the aircraft. We are the best choice for your covering materials requirements. Count on Poly Fiber's largest distributor ...Aircraft Spruce!

Note: This kit is for aircraft requiring about 45 yards of fabric. Quantity required vary by aircraft. Verify quantity shown are correct for your aircraft before ordering kit.

P/N 09-02046 ..... **$2,607.00**



POLY-FIBER MARK II MIXING LIQUID

Mixing liquid is a combination of catalyst and thinner to be used only with Mark II for Metal paint. Included in Mark II kits above, but also available separately. See directions for mixing, thinning, and application above. Shelf life is two years in unopened package.

Quart ..... P/N 09-03695 ..... **$45.15**
Gallon ..... P/N 09-03696 ..... **$149.50**



POLY-FIBER MARK II THINNER

Used to thin Mark II for Metal paint after it has been combined with Mark II Mixing liquid. Included in Mark II kits above, but also available separately. thinning is generally unnecessary when Mark II is sprayed. However, if orange peel results, you may use Mark II Thinner with 5 parts mixed Mark II paint. Shelf life is four years in unopened storage.

Pint ..... P/N 09-03697 ..... **$9.00**
Quart ..... P/N 09-03698 ..... **$14.00**
Gallon ..... P/N 09-03699 ..... **$53.00**

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PRE-SEWN POLY-FIBER AND CECONITE ENVELOPES

Presewn envelopes are much easier to install than fabric yard goods. The envelopes are sewn to fit each individual surface depending upon the type of airplane. They can be placed on the surface like a sock. The envelopes are sewn using a special thread and special stitches. Fabric tapes must be placed over all seams. The seams can be sewn chordwise or spanwise for the wings. Individual Pieces Priced Per Each. On presewn envelopes, individual pricing is done by each piece. (i.e. If your airplane is a Stearman, you will have 4 wings. Price shown is per wing - $86.44. Your cost for all 4 would be: 86.44 x 4 =$345.76

PLEASE ORDER BY PART NUMBER - Basic part numbers (09-XXX) are shown in the chart. Complete the part number with 10 for wing, 20 for fuselage, 30 for aileron, 40 for stabilizer, 50 for elevator, 60 for flap, 70 for rudder, or 80 for complete set. ***After the P/N***, add -1 for Heavy Duty 3.4 oz Polyfiber Fabric, -3 for Medium Weight 2.6 oz. Polyfiber Fabric, -5 for Ceconite 101 fabric, or -6 for Ceconite 102 Fabric. ***Prices of envelopes vary based on Fabric selected.*** Example: Complete part number for a Stinson 108-1 complete set in Ceconite 102 fabric would be 09-67380-6. Note: All pre-sewn envelopes are non-cancelable, non-returnable special orders items.

PRICES SHOWN ARE FOR CECONITE 102 ONLY

Aircraft	Part No.	Wing (10)	Fuselage (20)	Aileron (30)	Stabilizer (40)	Elevator (50)	Flap (60)	Rudder (70)	Complete (80)
Aeronca 7AC 2place	09-641	$230.95	$365.95	$52.50	$48.00	$48.00		$45.25	$996.00
Aeronca 15AC	09-642		$399.95	$36.25	$26.50	$45.00		$43.25	$697.00
Beech D175/F17D/E17D	09-643	$213.95	$426.95	$48.25	$57.00	$33.25	$48.25	$48.25	$1,661.00
Beech D18/AT1/Twin	09-644			$60.00		$96.00	$84.00	$60.00	$474.95
[1]Bellanca14-19/14-13	09-645		$375.95						
Bellanca Viking	09-646		$350.95	$59.75	$52.50	$51.75	$59.75	$62.50	$915.00
Cessna 120/140/170	09-647								$417.95
Christen Husky	09-648		$340.95		$48.50	$36.25		$29.75	$1,108.00
Citabria 7, 8	09-649	$230.95	$365.95	$52.50	$52.50	$52.50	$48.25	$42.50	$1,146.00
Douglas DC-3	09-650			$209.95		$175.95		$127.95	$576.00
Ercoupe	09-651	$182.95							$365.95
Fairchild 24G/RW	09-652	$261.95	$401.00	$87.75	$111.75	$52.90		$103.95	$1,383.00
Fairchild 19/23/26	09-653		$248.95	$52.90	$52.90	$52.50		$103.95	$1,016.00
Funk			$266.95						
Great Lakes 2T1	09-654	$147.95	$313.95						$590.00
Howard DGA	09-655		$340.95						
Luscombe	09-656	$178.95							$331.95
Maule 4	09-657		$255.95		$48.00	$48.00		$48.00	$541.00
Maule 5	09-658		$373.95						
Navy N3N	09-659	$153.95	$204.95						$1,488.00
N. American AT6/SNJ	09-660			$63.50		$69.75		$113.95	$242.95
N. American P51	09-661							$33.50	
Piper J2/3, PA-18-95, 150	09-662	$216.95	$365.95	$39.50	$52.50	$52.50		$48.00	$1,066.00
Piper J5/PA 12/14	09-663	$211.95		$31.50	$52.50	$52.50		$48.00	$1,049.00
Piper PA 15/17	09-664	$212.95	$365.95	$48.00	$52.50	$52.50		$48.00	$737.00
Piper PA16	09-665	$221.95	$330.95	$52.50	$39.50	$52.50		$52.50	$659.00
Piper Colt	09-666	$164.95	$306.95	$43.75	$52.50	$52.50		$52.50	$904.00
Piper PA20/22	09-667	$164.95	$365.95	$52.50	$52.50	$52.50	$48.00	$52.50	$956.00
Ryan PT22/STA	09-702	$161.95		$35.75	$48.00	$48.00		$48.00	$766.00
Schweizer 119	09-668	$153.95	$255.95	$25.50	$38.50				$813.00
Schweizer 126	09-669	$63.50	$213.95	$52.50	$69.75	$69.75		$52.50	$748.00
Schweizer 222	09-670	$230.95	$255.95	$52.50	$69.75	$46.50	$31.50		$910.00
Schweizer 233	09-671		$357.95					$43.75	
Stearman PT13/17	09-672	$178.95	$278.95	$96.50	$69.75	$69.75		$69.75	$1,097.00
Stinson 108-1, 2, 3	09-673	$178.95	$399.95						$852.00
Stinson 10A/105/HW75	09-674	$127.95	$383.95	$22.95	$25.50	$82.50	$35.50	$38.50	$1,163.00
Stinson L5	09-675	$115.95	$270.95	$38.50	$51.25	$51.25	$38.50	$36.00	$864.00
Taylorcraft	09-676	$239.95	$365.95	$48.00	$48.00	$48.00		$48.00	$976.00
Waco UPF7	09-677	$169.95	$205.95		$25.50	$25.50		$25.50	$567.00
J-3 Interior	09-678								$164.95
Agricultural Aircraft	**Part No.**	**Wing (10)**	**Fuselage (20)**	**Aileron (30)**	**Stabilizer (40)**	**Elevator (50)**	**Flap (60)**	**Rudder (70)**	**Complete (80)**
[1]Ag Cat	09-679				$113.95	$65.25		$79.25	$282.95
Airtractor	09-680							$77.25	
Callair A9/A9B	09-681	$128.95	$115.95		$25.50	$25.50			$451.95
Piper PA25/Pawnee	09-682	$227.95	$277.95	$48.00	$51.50	$48.00	$48.00	$48.00	$995.00
Snow	09-683	$231.95	$205.95	$64.25	$38.50	$38.50	$64.25	$38.50	$1,071.00
Snow C/D	09-684				$38.50	$38.50		$38.50	$231.95
Thrush	09-685				$130.95	$220.95		$48.00	$644.00
[1]Weatherly	09-686			$38.50				$64.25	$244.95
Homebuilts	**Part No.**	**Wing (10)**	**Fuselage (20)**	**Aileron (30)**	**Stabilizer (40)**	**Elevator (50)**	**Flap (60)**	**Rudder (70)**	**Complete (80)**
Acro Sport I	09-687	$77.25	$289.95	$25.50	$38.50	$38.50		$19.00	$1,123.00
Acro Sport II	09-688	$176.75	$296.95	$25.50	$38.50	$65.25		$48.00	$852.00
Avid Flyer	09-689	$136.95	$324.95		$65.25	$25.50		$25.50	$515.00
Baby Great Lakes	09-690	$96.50	$175.95		$26.50	$35.60		$62.00	$558.00
Bowers Fly Baby	09-691	$196.95	$189.90	$48.00	$62.00	$51.50		$51.50	$502.00
Christen Eagle 1 & 2	09-692	$128.95	$196.95	$25.50	$25.50	$25.50		$25.50	$696.00
Corbin Baby Ace	09-693	$64.25	$115.95		$38.50	$38.50		$38.50	$425.95
Kitfox	09-694	$227.95	$288.95		$25.50	$48.50		$25.50	$835.00
Pitts S1S/S1C	09-695	$140.95	$192.95	$30.75	$48.00	$48.00		$39.25	$944.00
Pitts S2S/S2A	09-696	$199.95	$334.95	$12.50	$25.50	$25.50		$25.50	$1,049.00
Smith Miniplane	09-697	$147.95	$102.95		$12.50	$12.50		$25.50	$380.95
[1]Sonerai II	09-698		$253.95		$52.75	$46.25		$33.25	$528.00
Starduster I	09-699	$64.25	$90.00	$12.50	$25.50	$25.50		$25.50	$600.00
Starduster II	09-700	$166.95	$201.95	$38.50	$54.00	$62.00		$62.00	$731.00
Steen SkyBolt	09-701	$147.95	$115.95	$25.50	$25.50	$25.50		$25.50	$759.00

COMPLETE SETS

Antiques	Part #	Price
Cessna Airmaster	09-705	$709.00
[B]Mooney Mite	09-717	$296.95
Cessna T50/UC78	09-706	$1,252.00
[A]N. American B25	09-718	$192.95
Commonwealth	09-707	$1,046.00
Porterfield 35/70	09-719	$644.00
[B]Culver Cadet	09-708	$399.95
Rearwin Sportster	09-721	$657.00

Antiques	Part #	Price
Skyranger	09-722	$990.00
[A]DeHavilland Heron	09-710	$386.95
Stinson 10/10A/10S	09-723	$1,218.00
Fleet	09-711	$593.00
Stinson AT19/V77	09-724	$1,771.00
Funk	09-712	$1,073.00
Stinson SR5C	09-725	$1,174.00

Model	Part #	Price
[B]Grumman TBMS	09-713	$412.95
Stinson SR9	09-726	$1,325.00
[B]Meyer OTW	09-714	$576.00
Taylorcraft 15	09-727	$1,046.00
Monocoupe	09-715	$606.00
[D]Travel Air 4000	09-728	$309.95
[A]Mooney 20A	09-716	$72.00
Piper PA-18	09-450	$1,193.00

Homebuilts	Part #	Price
[C]Cassutt 111M	09-730	$141.95
[A]Chipmunk	09-731	$179.95
Corbin Jr. Ace	09-732	$399.95
EAA Bipe	09-733	$780.00
Fokker Tri-Plane	09-734	$696.00
Meyer Toot	09-735	$709.00
Pietenpol	09-736	$921.00
Stampe SV4C	09-737	$1,132.00
[D]Volksplane I	09-738	$387.95
[D]Volksplane II	09-739	$425.95
[C]Wittman Tailwind	09-740	$425.95

[1]Does not include fabric for plywood wings - order separately. For individual wing envelope pricing, divide the number of wings on your aircraft into the wing price. [A] Tails Only [B] Plywood Or Metal Fuselage

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Prices Subject to Change Without Notice

ULTRALIGHT SAILS





Our sails are made in the United States by a top flight sail loft. These sails are made from the highest quality 3.9 oz. Dacron, many of them from the original OEM sail patterns. These sails are guaranteed to fit properly. All sail sets come complete with tail feathers and fuselage covers, except where noted. All sail orders are on custom-fabricated basis. Therefore, please allow an average of three weeks for delivery. There are no refunds on sail sets unless they are defective. Non-refundable 100% deposit or credit card purchase required. A wide selection of sail colors are available. Contact Aircraft Spruce for details on colors, patterns, and custom work. Prices subject to change without notice.

Model	Part No.	Price
Star Flight Aircraft		
Hurricane, Avenger & Phantom Aircraft Complete Sail Set	09-01799	**$1,559.00**
Wing Surface Set	09-01801	**$1,281.00**
Aileron Surface Set	09-01802	**$335.00**
Elevator Surface Set	09-01803	**$173.80**
Horizontal Stabilizer Surface Set	09-01804	**$173.80**
Upper Vertical Stabilizer	09-01805	**$85.75**
Lower Vertical Stabilizer	09-01806	**$56.95**
Rudder Surface	09-01807	**$119.95**
Quicksilver Aircraft		
MX Complete Sail Set	09-01736	**$1,125.00**
MX Wing Surface Set	09-01737	**$895.00**
MX Qualifier Complete Sail Set	09-01738	**$1,478.00**
MX Qualifier Wing Set	09-01739	**$1,284.00**
MX Tapered Stabilizer Option	09-01763	**$62.00**
MX Horizontal Stabilizer	09-01765	**$95.00**
MX Rudder Surface	09-01768	**$123.75**
MX-MXL Elevator Set	09-01764	**$116.75**
MX2 Complete Sail Set	09-01740	**$1,156.00**
MX2 Wing Surface Set	09-01741	**$929.00**
MX2 H.P. Complete Sail Set (X-tra Ribs/Tapered Stabilizer)	09-01742	**$1,241.00**
Quicksilver Weight Shift Rudder	09-01769	**$94.99**
Quicksilver Weight Shift Complete Sail Set	09-01743	**$1,023.00**
MXL Complete Sail Set	09-01744	**$1,812.00**
MXL Wing Surface Set	09-01745	**$1,421.00**
MXL Aileron Surface Set	09-01766	**$333.00**
MXL Tapered Stabilizer	09-01767	**$105.75**
Model	**Part No.**	**Price**
MXL Sport 2 Complete Sail Set	09-01746	**$2,102.00**
MXL Sport 2 Wing Sail Set	09-01747	**$1,715.00**
MXL Super Sport Complete Sail Set	09-01748	**$1,886.00**
MXL Super Sport Wing Sail Set	09-01749	**$1,490.00**
Sprint Complete Sail Set	09-01751	**$1,444.00**
Sprint Wing Sail Set	09-01752	**$1,013.00**
Sprint 2 Sail Set	09-01755	**$1,537.00**
Sprint 2 Wing Set	09-01760	**$1,114.00**
GT 400 Complete Sail Set(Includes Pylon Cover)	09-01761	**$2,709.00**
GT 500 Complete Sail Set	09-01790	**$2,732.00**
GT 400 Wing Surface Set	09-01770	**$1,506.00**
GT 500 Wing Surface Set	09-01771	**$1,636.00**
GT 400/500 Wing Flap Set	09-01772	**$309.00**
GT 400/500 Aileron Set	09-01773	**$302.00**
GT 400 Pylon Fairing	09-01774	**$565.00**
GT 400/500 Stabilizer/Elevator Set	09-01775	**$367.00**
GT 400 Rudder	09-01776	**$164.99**
GT 500 Rudder	09-01777	**$261.95**
GT 400 Vertical Stabilizer	09-01778	**$72.75**
GT 500 Vertical Stabilizer	09-01779	**$1,559.00**
GT 500 Door Set (Left & Right)	09-01762	**$825.00**
Rotec Rally Aircraft		
Rotec Ralley Sport Elevator Set	09-01834	**$122.75**

FOR A COMPLETE LISTING OF ULTRALIGHT SAILS, COLOR CHARTS, AND DIAGRAMS, PLEASE VISIT www.aircraftspruce.com

CECONITE – STAR GLOSS

CECONITE FABRIC

Ceconite, 100% polyester fabric is approved for use on most certified aircraft. To be sure to check the master eligibility list in the procedure manual. Visit our website for Data Sheet.

CECONITE 101 Extra heavy-duty fabric recommended for the most severe operating conditions and very high-wing loading aircraft. 3.4 oz/sq yd. Thread Count: 144 X 57/in

70" Width..... P/N 09-00700 ..... **$13.50 /lin. yd**

CECONITE 102 Standard fabric is recommended for normal service and is widely used on all types of aircraft, regardless of wing loading or horsepower. 2.79 oz/sq yd. 73"X65"

P/N 09-00900 ..... **$12.00 /lin. yd**

UNCERTIFIED LIGHT - Light-weight fabric is recommended for covering plywood surfaces on any aircraft and any ultralight aircraft that is not certified. On certified aircraft, it is only approved for covering plywood surfaces. This fabric will be unstamped. 1.87 oz/sq yd. Thread Count – 90 x 76/in. 66" Width..... P/N 09-00921 ..... **$9.00 /lin. yd**

SUPER SEAM FABRIC CEMENT



New Super Seam Fabric Cement. Not compatible with original nitrate-based Super Seam. Used to attach Ceconite Fabric to structures. High solids nitrate based cement approved in the Ceconite STC.

1 Qt. ..... P/N 09-18100 ..... **$27.50**

1Gal..... P/N 09-18200 ..... **$99.80**

POLYESTER THREAD & CORD (FAA APPROVED)



CECONITE **-** D693 waxed, 600 yds.
P/N 09-41300-1 ..... **$45.50**

CECONITE **-** Flat Braided, 500 yds.
P/N 09-00822 ..... **$45.50**

HAND SEWING THREADS **-** 250 yds
P/N 09-41400 ..... **$11.75**

MACHINE SEWING THREAD **-** 5600 yds..... P/N 09-41500.. **$15.50**

INTERIB BRACING TAPE **-** 36 yd roll, 1/2"w .... P/N 09-41560.. **$16.75**

CECONITE REINFORCING TAPES (FAA APPROVED)



Polyester twill with adhesive back. Applied under riblacer, server, or pop rivet to prevent fabric from ripping. 60 yd. length.

1/4" width ..... P/N 09-41230 ..... **$55.00**
3/8" width ..... P/N 09-41238 ..... **$56.60**
1/2" width ..... P/N 09-41212 ..... **$57.95**

CECONITE PROCEDURE MANUAL



STC manual for applying ceconite materials.
P/N 09-01000 ..... **$10.00**

STAR-TAK FABRIC CEMENT



Star-Tak is a vinyl-based cement that is used to cement aircraft fabric to steel, aluminum, wood, or composite surfaces. It is also used to join fabric together in overlapped cemented seams. It dries to the touch in 15 to 20 minutes in normal temperatures. In two hours, it develops a bond strong enough to allow heat shrinking the fabric.

Quart ..... P/N 09-02583 ..... **$27.50**
Gallon..... P/N 09-02584 ..... **$99.80**

STAR GLOSS GRAY SEALERS



Gray Sealer is used to seal Ceconite fabric prior to spraying Silver Urethane Fabric Primer. This coat prevents pinholes in the Silver Urethane Fabric Primer. Gray Sealer is also used to apply Ceconite finishing tapes. It is tinted translucent gray to help see it when applied.

Quart ..... P/N 09-02577 ..... **$26.50**
Gallon..... P/N 09-02578 ..... **$87.75**
5 Gallon..... P/N 09-02579 ..... **$420.00**

STAR GLOSS SEALER REDUCER



Thinner for Gray Sealer. Mix three parts Gray Sealer to one part Sealer Reducer. Shelf Life: Four years, unopened in protective storage. Not affected by freezing.

Quart ..... P/N 09-02580 ..... **$15.90**
Gallon..... P/N 09-02581 ..... **$49.75**
5 Gallon..... P/N 09-02582 ..... **$230.90**

CECONITE TAPES



This FAA approved process utilizing Ceconite polyester fabrics and the Randolph line of finishes assures a beautiful, durable, weather-resistant cover job every time. The Ceconite cover process was issued Supplemental Type Certificate No. SA4503NM in 1997, and this number will apply to all aircraft. Note: Only Randolph materials may be used through the topcoat paint to comply with STC requirements. Randolph finishes are required for approval. Ceconite is approved for use on most certified aircraft. To be sure, check the Approved Model List in the latest revision of Procedure Manual 101 for the Ceconite Aircraft Covering Process.

LINEAR STRAIGHT TAPES (CECONITE 102)

Width	Roll	Part No.	Price
1"	50 yds.	09-41010	**$21.50**
1.5"	50 yds.	09-41015	**$28.65**
2"	50 yds.	09-41020	**$35.00**
3"	50 yds.	09-41030	**$51.90**
4"	50 yds.	09-41040	**$60.85**
6"	50 yds.	09-41060	**$72.60**

LINEAR PINKED TAPES (CECONITE 102)

1"	25 yds.	09-41111	**$16.25**
1.5"	25 yds.	09-41116	**$17.65**
2"	50 yds.	09-41120	**$30.20**
2"	25 yds.	09-41125	**$23.20**
3"	25 yds.	09-41135	**$27.80**
4"	25 yds.	09-41145	**$32.40**
6"	25 yds.	09-41166	**$45.00**

LINEAR PINKED TAPES (CECONITE LIGHT)

1"	25 yds.	09-41251	**$16.05**
1.5"	25 yds.	09-41255	**$17.65**
2"	25 yds.	09-00298	**$23.20**
2"	50 yds.	09-41252	**$30.20**
3"	25 yds.	09-41253	**$27.80**
4"	25 yds.	09-41254	**$32.40**
6"	25 yds.	09-41256	**$45.00**

BIAS PINKED TAPES (CECONITE LIGHT)

For use on curved edges.

2"	25 yds.	09-41165	**$32.50**
3"	25 yds.	09-41170	**$46.25**
4"	25 yds.	09-41175	**$57.50**

STAR GLOSS SILVER URETHANE FABRIC PRIMER



Silver Urethane Fabric Primer is a polyurethane product that serves two purposes: to build the coating over the fabric to prepare for paint, and to protect the fabric from UV radiation. Silver Primer uses a metallic-like flake additive. This proven system results in a positive metallic light block and reflection to both visible and invisible UV without relying on chemical UV light blockers.

Quart ..... P/N 09-02585 ..... **$29.65**
Gallon..... P/N 09-02586 ..... **$104.75**

STAR GLOSS SILVER URETHANE FABRIC PRIMER CATALYST



Silver Urethane Fabric Primer Catalyst is the only catalyst that can be used with Silver Urethane Fabric Primer. Note that unlike other catalysts it is mixed at a four to one ratio of primer to catalyst.

1/2 Pint..... P/N 09-02587 ..... **$35.60**
Quart ..... P/N 09-02588 ..... **$80.75**

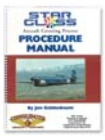
STAR GLOSS SILVER URETHANE FABRIC PRIMER REDUCER



A special blend of solvents specifically formulated for use with Ranthane and Star Gloss Silver Urethane Fabric Primer.

Gallon..... P/N 09-02374 ..... **$50.55**

STAR GLOSS AIRCRAFT COVERING PROCESS PROCEDURE MANUAL



114 pages of step-by-step instruction on how to cover your airplane with the Ceconite/Star Gloss system, helpful photos, great nostalgic cartoons, extra words of wisdom, and a delightful sense of humor. Includes catalog of products, everything from fabrics to top coat paint. P/N 09-02576 ..... **$10.80**

CS

DACRON TAPE / PEEL PLY



A layer of 2.7 oz. Dacron fabric strips or tape laminated into a layup as if it were an extra ply of glass. The peel coat wets out with epoxy like glass cloth and cures along with the rest of the layup. However, the Dacron does not adhere structurally to the glass and when peeled away it leaves a surface ready for glass-to-glass bonding without sanding.
Requirements for Small Aircraft: For Experimental Aircraft.
• 3 Rolls of 1" x 50 Yds. Tape • 2 Rolls of 2" x 50 Yds. Tape • 1 Roll of 3" x 50 Yds. Tape • 1 Roll of 4" x 50 Yds. Tape

Width	Smooth Edge		Pinked	
50 Yd Roll	P/N 09-	Price/ Roll	P/N 09-	Price/ Roll
1"	15000	**$6.75**	15450	**$6.75**
2"	15100	**$13.50**	15500	**$13.50**
3"	15200	**$21.75**	15600	**$19.50**
4"	15300	**$28.50**	15700	**$29.00**
6"	15400	**$44.50**	15800	**$41.50**

Discount Schedule for Dacron Tapes: Less 10% for 12 Rolls (assorted) • Less 15% for 25 Rolls (assorted). Request quote on larger quantities.

DACRON FABRIC / FULL WIDTH PEEL PLY



Poly/Dacron blend is excellent as peel ply for composite lay-ups, and for covering experimental aircraft.
2.7oz. 63-66" #604 ... P/N 09-00300 ... **$5.35/yd.**
1.9 oz. X 60-62" #611 P/N 09-00100 ... **$4.35/yd.**
2.97 oz. X 62" #605 .. P/N 09-00500 ... **$4.35/yd.**

DACRON BIAS TAPE
FOR HOMEBUILT AIRCRAFT



Bias-cut tapes (weave 45° to edge) are especially useful for trimming compound curves on components such as wing tips and tail surfaces. Bias tape will stretch to conform to the contour without wrinkles, without heat-shrinking edges or cutting and notching to remove excess fabric. Stretching reduces the width about 35% so 3" tape should be used to finish areas normally covered with 2" tape. 2" Bias tape will pull to about 1-3/8" width.
2" x 50 Yd . Roll ..... P/N 09-16300 ..... **$27.75**
3" x 50 Yd. Roll ..... P/N 09-16400 ..... **$59.75**
NOT FOR USE ON CERTIFIED AIRCRAFT

COTTON REINFORCING TAPES



Tape	Size	Part No.	Price/Roll
DDD-T-86F	1/2" x 36 Yds.	09-17000	**$15.50**

THREADS & CORDS



Only synthetic threads and rib lacing cords should be used with Dacron covering to insure uniform strength. Waxed linen rib cord Conforms to PMA# TQ0075NM and STC# SA1008WE.

Material	Quantity	Part No.	Price
Dacron Machine Sewing Thread	500 Yds.	09-03900	**$15.25**
Dacron Hand Sewing Thread	250 Yds.	09-04000	**$12.00**

SAIL FABRIC

#1003 Glacier White Sail Fabric. 54" wide. 4.1 oz. Color may vary from sample shown. Sold by the yard. Note: This fabric is for ultralight sails, and will not shrink.

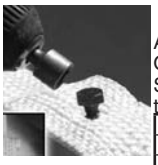
Color	Part No.	Price
1003 Glacier White	15-04587	**$10.85**
192 Lime Green	15-04588	**$16.50**
196 Deep Purple	15-04589	**$11.95**
197 Red	15-04590	**$15.80**
201 Jet Black	15-04591	**$16.50**
232 Hot Pink	15-04592	**$14.65**
309 Emerald Green	15-04593	**$14.65**
310 Royal Blue	15-04595	**$16.50**
360 Key West Blue	15-04597	**$14.60**
566 West Coast Gold	15-04598	**$14.60**

FLORIAN PINKER



One continuous pinked edge while being comfortable for either right or left hand use. Light and compact for easy use and easy storage. Gives that "professional look" to your own creations and easily pinks the most intricate patterns. Made in U.S.A. P/N 09-01400 ..... **$77.50**

DIAMOND BACK TAPE



Advantages: • Save TIME with easy installation • Save OPERATING COSTS with improved energy efficiency • Save REPAIR COSTS with long lasting quality at high temp • Save ON PRICE with quantity discounts

CHARACTERISTICS	
Fibers	Ceramic
Application	Insulation with bolt holes
Weave Style	Drop Warp
Thickness	.125 in
Bolt Diameter	Up to .75 in
Continuous Service	1,800°F
Maximum Use	2,300°F
Durability	High Strength
Coating	Plain or Vermiculite Avail.

Type	Width	Thickness	Roll Length	Part No.	Price
1/8" Thickness - Plain	2"	.125"	100ft.	05-03510	**$113.80**
1/8" Thickness - Vermiculite Coated	2"	.125"	100ft.	05-03511	**$162.99**

PANASONIC IRON MULTI DIRECTIONAL 360 DEGREE



New Concept 360° Quick Steam/Dry Iron with Curved Non-Stick Coated Titanium Soleplate, Multi-Directional Design with Added Steam Vents, 3-Way Auto Shut-Off, Adjustable Steam, Dial Temperature Control, "Stay Clean" Steam Vents and Anti-Drip System. Maximum Temperature 392F (200C). Controls: Choose Steam or Dry Operation: 4 Button Selector. Select "Extra" Jet-of-Steam: Left Pushbutton. Cool Water Spay or Mist: Right Pushbutton.
P/N 09-03785 ..... **$78.90**

FAB-TAC FABRIC CEMENT



A superior quality cement for strong splice joints. Use to cement tapes, rings and grommets to fabric cover.
1 Pint ..... P/N 09-17800 ..... **$12.90**
1 Qt ..... P/N 09-17900 ..... **$17.75**
1 Gal. ..... P/N 09-18000 ..... **$56.75**

CLOTH MASKING TAPE



Has many uses in aircraft maintenance work. Strip over sharp corners under fabric. Strips on parts under doped fabric will prevent fabric from sticking to parts. Pressure-sensitive adhesive backing. Easily applied, easily removed. Leaves no residue. Should not be applied below 32°F.
1" x 60 yds. ..... P/N 09-17100 ..... **$10.50**

SOLDERING IRON



Use to melt drain holes and inspection rings in polyester fabric. 35 Watt, 900°F tip. Tip is replaceable & long life coated. P/N 09-37430 ..... **$84.75**

HEAVY-DUTY HEAT GUN



This soft air velocity of this heat gun increases the surface temperature to the required working temperature much faster than conventional heat guns and maintains a higher temperature for faster completion of the application. Features double insulation, two temperature selections of 570°F and 1000°F, and a unique impact resistant heating element. Operates on 120V AC at 11.6 amps. Air volume 14.8 cu. ft. per minute. Wt. 1-1/2 lbs. ..... P/N 09-00354 ..... **$99.75**

POCKET THERMOMETER



This Pocket thermometer can eliminate 80% of your iron-on covering problems. These problems are caused by your iron's temperature varying as much as 60° while in use, which causes bubbles and sags. If you are using an iron other than Black Baron, this thermometer is a must in monitoring iron temperatures.
P/N 09-37500 ..... **$7.50**

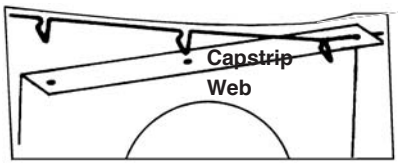
MAULE FABRIC TESTER



A fine quality tool to test fabric covered aircraft for minimum FAA requirements without removing or punching holes in fabric. Also used to test struts for inside rusting as required by FAA on all Piper aircraft with struts.
P/N 09-14900 ..... **$449.00**

CS

MARTIN FABRIC CLIPS



Used to secure fabric to metal ribs in wings and control surfaces. Replaces rib-stitch cord or P-K screws. Provides a more secure and streamlined installation. Drastically reduces covering time. FAA-approved for aircraft listed. Easily adapts to homebuilts with metal ribs. Spacing between clips, 3". Spacing may be reduced to 1-1/2" on high-performance aircraft by using 2 wires, with clips inserted in alternate holes that are spaced 1-1/2" apart. Fabricated from stainless steel wire. Supplied in 25-ft. continuous coils.

NOTE: FAA Approved for some aircraft. Please see our website for complete approval list.

25-Ft. Coil..... P/N 09-19400 ..... **$15.50**

Aircraft Model	STC No.	Part No.	Feet Req'd.
Aeronca-Champion	SA150S0	09-19500	225
Piper — All Models	SA126S0	09-19600	175-250
Stinson	SA615S0	09-19700	175
Taylorcraft	Original Equipment	09-19800	225

INSTALLATION KITS

All install kits $38.95. No clips are included. Order separately.

****If clips are used to secure fabric on controls, add 50 ft.***



CESSNA-TYPE FABRIC CLIPS



Individual spring steel clips used to attach fabric to metal ribs. Eliminates rib stitching.

5% Discount on purchase of 100

P/N 09-19900 ..... **$0.77**

TAC RAGS

Tac Rags pick up dust like a magnet. Use Tac Rags in final cleaning or dusting of surface before applying enamel, lacquer or synthetic paints. Wipe surface gently to remove all dust, lint and fine sand particles from metal, wood or plastic surfaces. Tac Rags are anti-static, epoxy compatible, and remain soft and tacky indefinitely. Individually packaged.Size: 18" x 36".

P/N 09-20000..... **$0.75 ea.**.....**$8.10/Dzn**



3M™ FINE-LINE PAINT TAPE

This 3M™ tape is particularly suitable for pin striping, multicolor and other custom painting applications. It is a thin, conformable green polypropylene film tape with a special finish that resists paint runoff. The adhesive adheres instantly and offers good holding power, resists lifting and curling. Stretchable and easy to handle. Provides an extremely fine color-line separation for decorative painting of aircraft. Scotch No. 218.

1/8" x 60 Yds.....P/N 09-20200 ..... **$14.50**
1/4" x 60 Yds.....P/N 09-20300 ..... **$11.50**
1/2" x 60 Yds.....P/N 09-20400 ..... **$13.95**
3/4" x 60 Yds..... P/N 09-20500..... **$16.50**

Less 10% on 6 Rolls (Assorted) • Less 15% on 12 Rolls (Assorted)



WOOD BRUSHES

Natural, undyed bristle with smooth, unpainted wood handles. Unaffected by paint, dopes, thinners or solvents.

Brush Width	Part Number	Price Each	Brush Width	Part Number	Price Each
1/2"	09-21100	**$0.30**	2-1/2"	09-38825	**$0.75**
1"	09-21200	**$0.45**	3"	09-38803	**$0.85**
2"	09-21300	**$0.59**	4"	09-38804	**$1.99**
Discount: Less 10% on 50, 15% on 100 (per size)					



ACID OR GLUE BRUSHES

Horse hair with metal handle.

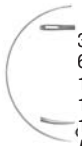
#1- 3/8" Wide..... P/N 09-21400 ..... **$0.29 ea.**...**$3.65/dz.**
#2- 1/2" Wide..... P/N 09-21500 ..... **$0.48 ea.**.. **$3.65/dz.**



DOLLAR PATCHES

Grade B fabric patches for quick repairs on Grade B & Dacron covering. Smooth edge, 2.5" dia. Also available in Dacron which are more durable & less noticeable on aircraft exterior. Less 10% For 12 or More.

Grade A cotton patches..... P/N 09-17700... **$1.50/ea**
Dacron Dollar Patches ..... P/N 09-17705... **$1.56/ea**
Ceconite C101..... P/N 09-00162.. **$1.50/ea.**
Ceconite C102..... P/N 09-00163.. **$1.50/ea.**
PF P-103 Med. ..... P/N 09-18750.. **$1.50/ea.**
P99 Heavy Duty ..... P/N 09-00164.. **$1.50/ea.**



RIB LACING & SEWING NEEDLES

3" ..... Curved ..... Needle 3C ..... P/N 09-18705..... **$1.50/ea**
6" ..... Curved ..... Needle 6C ..... P/N 09-18710..... **$2.30/ea**
12" ..... Curved Tip .... Needle 12C .... P/N 09-18720... **$21.40/ea**
12" ..... Straight ..... Needle 12..... P/N 09-18725..... **$4.50/ea**
18" ..... Curved Tip .... Needle 18C .... P/N 09-18730... **$23.50/ea**

Needle Assortment includes 1 each of the following: 3" curved, 6" curved, 12" curved, 12" straight, 18" straight.

P/N 09-18735..... **$35.75**



RIB STITCH NEEDLES

Made from the highest quality steel. Heat treated, nickel plated.

2-1/4" ..... Curved ..... 18 Gauge .....P/N 09-18300 ..... **$1.38/ea**
4" ..... Straight ..... 15 Gauge .....P/N 09-18400 ..... **$1.55/ea**
10" ..... Straight ..... 13 Gauge .....P/N 09-18500 ..... **$3.50/ea**
14" ..... Straight ..... 13 Gauge .....P/N 09-18600 ..... **$5.50/ea**
18" ..... Straight ..... 12 Gauge .....P/N 09-18700 ..... **$6.50/ea**



"T" HEAD PINS

Used to hold fabric in place temporarily in covering operation.

Plated steel, 1-1/2" L. 100 Pins.....P/N 09-18850..... **$5.85**



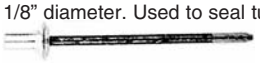
SCREWS

Used on some aircraft models to attach fabric to metal wing ribs and empennage ribs instead of rib lacing. Truss-head, type "A" self-tapping sheet metal screws. Size #4 x 1/4".

Stainless Steel, Phillips Head ..... P/N T4X4.....**$0.03/ea**
Stainless Steel Type A, Phillips ..... P/N 4RX1/2SS...**$0.04/ea**
Stainless Steel Type A, Phillips ..... P/N T4X6.....**$0.04/ea**

AD-41H CLOSED-END BLIND POP RIVET

1/8" diameter. Used to seal tubing vent holes.



P/N 04-01496 .....**$0.12/ea**



BLIND RIVETS

Use these 1/8" dia. "Pop" rivets to attach fabric to the ribs on Champion/Bellanca aircraft. 100 Rivets. P/N 09-18900 .....**$22.35**



WASHERS

Aluminum washers may be use in place of original plastic washers under screws and pop rivets to attach fabric to metal wing or empennage ribs.

Plastic, 1/8" I.D. x 1/2" OD
P/N 09-19000 .....**$29.50**
Aluminum, 0.128" ID x 1/2" OD x 0.016
P/N 09-19100 .....**$7.30**

DRAIN GROMMETS

Manufactured from virgin cellulose acetate butyrate resin.

Grommet Type	Part No.	O.D.	I.D.	Price each
Flat	AN231-1	1-1/4"	3/8"	**$0.24**
Flat	AN231-2	3/4"	5/16"	**$0.20**

Grommet Type	Part No.	O.D.	I.D.	Price each
Seaplane*	AN231-4	1-1/8"	—	**$0.18**
Aluminum	09-19110	3/4"	1/4"	--

****Depressed center — LESS 15% ON QTY. OF 100 (per Part No.)***



INSPECTION RINGS

Clear plastic rings, 4-5/8" O.D. x 3-1/2" I.D. x .050" thick, molded from virgin cellulose acetate butyrate resin. To be cemented to fabric as inspection plate retainer. ***20% Discount on 100 or more.***

P/N 09-19200.....**$0.67 ea**

INSPECTION RING PATCHES

Glued over inspection rings to prevent accidental removal.

P/N 09-18750.....**$1.50 ea**



INSPECTION PLATES

DOMED - Concave aluminum snap-type plate has single clip riveted across full diameter. Snaps to the ring at 2 contact points. Plate is 4.75" dia.

P/N 09-19300..... **$2.25ea**.....**$191.25/100**

RECESSED - Recessed center and flanged-edge design will not creep off center due to vibration in propwash areas. 4-3/4" dia. x .020 aluminum. Will not twist or vibrate. P/N 09-18740.....**$5.95 ea**

CS

Prices Subject to Change Without Notice

PTI SPECIALTY PAINTS

PTI Specialty Paint & Coatings, exclusively from Aircraft Spruce & Specialty Co., are featured in space, aerospace and aviation applications throughout the world -- the Space Shuttle and Space Station projects, the Patriot and Stinger missile projects and in refurbishing of landing gear for commercial aircraft. Now, Aircraft Spruce brings PTI products to General and Sport Aviation.

See all PTI Paint Products at www.aircraftspruce.com



PTI COMPLETE SPECIALITY PAINT SYSTEM

1. Paint Strippers
2. Primers: Acid Etch and Epoxy
3. Topcoats: A chemical resistant Polyurethane with UV protectors
4. PTI Polykick™ to accelerate drytime
5. Cleaners

Note: Strong professional recommendation – These products have been specifically formulated to work together. Maximum adhesion, durability and performance is achieved when these products are applied as a system. To Purchase Your Specialty Paint System Simply tell us the make and model of your aircraft, and the Federal 595 Color – see chart on our website at: www.aircraftspruce.com Need a custom color that is not on the chart? – Ask us, we can help you with that too.

SOLVENTS, REMOVERS, & REDUCERS

PTI-MEK is virgin (not recycled) MEK that may be used to clean and prepare the substrate for painting. PTI-MEK may also be used to clean brushes, paint guns and other painting tools. PTI-Acetone is virgin (not recycled) Acetone that may be used to remove lacquer finishes, for cleanup after painting, and to soften lacquers or acrylics that set up in spray guns or hoses. Acetone is not effective on urethanes and should not be used. PTI-Toluene is virgin (not recycled) toluene that may be used as a reducer for enamels and other coatings in the alkyd family.

Description	Part No.	Price
Alkyd&Lacquer Thinner Qt.	09-00943	**$24.99**
Alkyd&Lacquer Thinner Gal.	09-00942	**$52.80**
Mek Qt.	09-00972	**$17.85**
Mek Gal.	09-00971	**$34.50**
Acetone Qt.	09-04129	**$9.50**
Acetone Gal.	09-00973	**$27.50**
Toluene Qt.	09-00976	**$13.50**
Toluene Gal.	09-00975	**$29.50**

EPOXY PRIMER

PTI's Epoxy Primer is a low VOC (volatile organic compounds) epoxy polyamide solvent primer which conforms to the military specification MIL-P-23377 Rev. E. This coating is highly recommended for use on aluminum and all plated or unplated metallic surfaces to insure maximum protection against corrosion. This primer may be used as an interior or exterior primer that insures maximum adhesion of any paint or lacquer finish coats.

NOTE: Before applying, refer to the technical data sheet for this product. *Must be shaken for 15 min. on a paint shaker.



Description	Part No.	Price
Yellow QT KIT	09-00934	**$187.75**
Yellow GAL KIT	09-00932	**$378.00**
Green QT KIT	09-00935	**$187.75**
Green GAL KIT	09-00933	**$359.00**
Epoxy Thinner QT	09-00937	**$24.50**
Epoxy Thinner Gal	09-00936	**$52.75**

ACID ETCH PRIMER

PTI's Air Dry Wash Primer requires no sanding and is a polyvinyl butyral zinc chromate formulation that may be used to prime all plain or plated metallic surfaces. Priming surfaces with this primer will ensure maximum adhesion of all bake or air-dry finish coats (including lacquer finish coats). The finely ground emulsions of zinc chromate pigment, resins and phosphoric acid hardeners are virtually non-settling.



Description	Part No.	Price
Yellow Acid Etch Primer QT.	09-00948	**$59.75**
Yellow Acid Etch Primer Gal.	09-00946	**$99.75**
Yellow Acid Etch Primer 5Gal	09-00944	**$392.00**
Green Acid Etch Primer QT	09-00949	**$57.75**
Green Acid Etch Primer Gal	09-00947	**$98.75**
Green Acid Etch Primer 5Gal	09-00945	**$392.00**
Reducer 1045 QT	09-00951	**$24.95**
Reducer 1045 GAL	09-00950	**$52.75**

EPOXY PROPELLER COATING

PTI Epoxy Propeller Coating is a general purpose epoxy aerosol. It is intended for use over metal and composite surfaces that are bare, scuffed, sanded, abrasive blasted, primed and previously painted surfaces while showing excellent protection. Aerosol.

Color	Part No.	Price	Color	Part No.	Price
Flat White	09-04238	**$18.50**	Flat Red	09-04239	**$18.50**
Flat yellow	09-04240	**$18.95**	Flat Orange	09-04241	**$18.50**
Flat Green	09-04242	**$18.50**	Flat Blue	09-04243	**$18.50**
Flat Gray	09-04244	**$18.50**	Flat Black	09-04245	**$18.50**
Flat Silver	09-04247	**$18.50**	High Gloss Silver	09-04246	**$18.55**
Gloss Silver	09-04674	**$18.75**			



PTI CIRRUS COLORS FOR WING WALK COATING

A non-slip coating used for walkways on exterior aircraft surfaces. PTI Wing Walk is a rough texture non slip. The Wing Walk is a unique formulation of high molecular urethane resins, which cures at ambient temperatures.

Size	Color	Part No.	Price
Pint	Snow White	09-05236	**$67.75**
Pint	Titanium	09-05238	**$64.75**
Pint	Sterling	09-05240	**$67.75**
Pint	Solar Yellow	09-05242	**$85.95**
Pint	Frost Blue	09-05244	**$69.95**
Pint	Gold	09-05246	**$67.75**
Pint	Clear	09-05248	**$59.75**

Size	Color	Part No.	Price
Quart	Snow White	09-05237	**$67.75**
Quart	Titanium	09-05239	**$100.00**
Quart	Sterling	09-05241	**$109.75**
Quart	Solar Yellow	09-05243	**$134.75**
Quart	Frost Blue	09-05245	**$112.75**
Quart	Gold	09-05247	**$109.75**
Quart	Clear	09-05249	**$93.75**

ZINC CHROMATE PRIMER

PTI's Zinc Chromate Primer is formulated to exceed the performance standards in the Federal Specification TT-P-1757. This primer promotes maximum adhesion to bare aluminum and steel and is recommended for that purpose. PTI's zinc chromate primer is a formulation proven to perform.



Description	Part No.	Price
Zinc Chromate Yellow Spray 13 oz.	09-00901	**$17.50**
Zinc Chromate Yellow QT	09-00919	**$95.75**
Zinc Chromate Yellow Gal	09-00922	**$154.75**
Zinc Chromate Yellow 5Gal	09-00952	**$658.00**
Zinc Chromate Green Spray 13 oz.	09-00895	**$17.75**
Zinc Chromate Green QT	09-00917	**$98.80**
Zinc Chromate Green Gal	09-00918	**$156.99**
Zinc Chromate Green 5Gal	09-00953	**$658.00**
1022X66 Reducer QT	09-00956	**$18.50**
1022X66 Reducer Gal	09-00954	**$41.50**

ZINC OXIDE PRIMER - CHROMATE FREE

PTI's Zinc Oxide Primer is formulated to exceed the performance standards in the Federal Specification TT-P-1757. Promotes maximum adhesion to bare aluminum and steel. Formulated to provide a high performance primer that is considered a safer, more environmentally friendly, alternative to the zinc chromate primer.



Description	Part No.	Price
Zinc Oxide Yellow Spray 13 oz.	09-01617	**$17.70**
Zinc Oxide Primer Yellow QT	09-00961	**$109.75**
Zinc Oxide Primer Yellow Gal	09-00959	**$206.95**
Zinc Oxide Primer Yellow 5Gal	09-00957	**$858.00**
Zinc Oxide Green Spray 13 oz.	09-00904	**$17.50**
Zinc Oxide Primer Green QT	09-00962	**$107.75**
Zinc Oxide Primer Green Gal	09-00960	**$200.75**
Zinc Oxide Primer Green 5Gal	09-00958	**$858.00**

PTI SANDABLE PRIMER

PT-573 is a two component epoxy based primer. PT-573 is capable of filling small holes and imperfections before topcoating. PT-573 provides a smooth, sandable base coat that improves the adhesion and appearance of the topcoat. Because of PT-573's unique formula, this primer also provides excellent rust and corrosion protection. This sandable primer is compatible with PTI's epoxy and Polyurethane topcoats.



Description	Part No.	Price
PTI 573 Sandable Primer 2 gallon	09-02311	**$267.95**
PTI 573 Sandable Primer 1 gallon	09-02312	**$166.75**
PTI 573 Sandable Primer Quart	09-02313	**$100.90**

ALL mixed paints are special order and are non-returnable.

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PTI SPECIALTY PAINTS



PTI EPOXY TOPCOAT INTERIOR APPLICATION

Two component catalyst cure epoxy polyamide which meets, and exceeds, MIL-PRF-22750E&F; Type 1. This system cures to an extremely hard, impervious film which resists yellowing and chalking. The Epoxy Topcoat provides the ultimate protection and gives a high quality finished appearance to metal, wood, and most other materials capable of being coated. Intended specifically for interior application to improve longevity and provide durability. This product is available in every color from the 595C Federal Color standard. Custom color matching available upon request.

To Order use "Base Part No." followed by the dash number of desired finish and size listed below.

-43 is for Flat Quart **-53 is for Semi-Gloss Quart** **-63 is for Gloss Quart**
-44 is for Flat Gallon **-54 is for Semi-Gloss Gallon** **-64 is for Gloss Gallon**

Description	Base Part No.	Flat		Semi-Gloss		Gloss	
		Quart (-43) Price	Gallon (-44) Price	Quart (-53) Price	Gallon (-54) Price	Quart (-63) Price	Gallon (-64) Price
Boston Maroon	09-10049	$168.95	$278.95	$168.95	$278.95	$281.95	$471.00
Elisnore Brown	09-10080	$151.75	$250.95	$151.75	$250.95	$218.95	$363.00
Bermuda Tan	09-10324	$110.95	$150.75	$150.75	$250.95	$218.95	$363.00
Madrid Red	09-11120	$168.95	$278.95	$168.95	$278.95	$304.00	$507.00
Tennessee Red	09-11136	$168.95	$278.95	$168.95	$270.95	$304.00	$507.00
Christen Eagle Red	09-11140	$168.95	$278.95	$182.75	$259.50	$326.00	$542.00
Intnl Orange	09-12197	$115.95	$191.95	$115.95	$191.95	$232.95	$386.00
Yellow/Orange	09-12243	$115.95	$191.95	$116.95	$191.95	$247.95	$411.00
Pumpkin Orange	09-12246	$115.95	$191.95	$115.95	$191.95	$247.95	$411.00
Champion Yellow	09-13275	$170.95	$283.95	$170.95	$283.95	$321.00	$530.00
AC Eagle Yellow	09-13415	$170.95	$283.95	$321.00	$530.00	$165.95	$275.95
AG Cat Yellow	09-13432	$321.00	$530.00	$221.95	$368.00	$233.95	$387.00
J3 OEM Yellow	09-13507	$170.95	$283.95	$170.95	$283.95	$321.00	$530.00
Tuscon Cream	09-13523	$170.95	$283.95	$170.95	$283.95	$283.95	$455.00
Cub Yellow	09-13538	$170.95	$318.00	$170.95	$283.95	$321.00	$530.00
Diana Cream	09-13578	$170.95	$283.95	$170.95	$283.95	$231.95	$386.00
lemon Yellow	09-13591	$170.95	$283.95	$170.95	$283.95	$282.95	$471.00
Lockhaven Yellow	09-13637	$110.95	$183.95	$117.75	$183.95	$218.95	$363.00
Federal Yellow	09-13655	$110.95	$183.95	$110.95	$183.95	$218.95	$363.00
Sun Valley Ivory	09-13690	$90.00	$150.95	$90.00	$159.75	$215.95	$362.00
Forest Green	09-14036	$130.95	$216.95	$130.95	$216.95	$261.95	$433.00
Portland Green	09-14062	$130.95	$216.95	$130.95	$216.95	$247.95	$390.00
Federal Green	09-14064	$130.95	$216.95	$130.95	$216.95	$247.95	$411.00
Oak Green	09-14079	$161.75	$267.95	$161.75	$267.95	$232.95	$386.00
Olive Drab Green	09-14084	$130.95	$216.95	$162.80	$216.95	$196.75	$326.00
Lawn Green	09-14090	$130.95	$216.95	$130.95	$216.95	$247.95	$411.00
Everglades Green	09-14110	$130.95	$216.95	$130.95	$216.95	$247.95	$411.00
Cuby Sport Trainer Green	09-14193	$130.95	$216.95	$130.95	$216.95	$247.95	$411.00
Insignia Blue	09-15044	$105.95	$175.95	$105.95	$175.95	$208.95	$351.00
Twilight Blue	09-15052	$105.95	$175.95	$105.95	$175.95	$208.95	$352.00
Christen Eagle Blue	09-15056	$105.95	$175.95	$105.95	$175.95	$208.95	$351.00
AN True Blue	09-15102	$105.95	$175.95	$175.95	$175.95	$144.99	$351.00
Bahama Blue	09-15180	$105.95	$175.95	$105.95	$175.95	$208.95	$351.00
Piper Trainer Blue	09-15182	$105.95	$175.95	$105.95	$175.95	$208.95	$351.00
Lakeland Blue	09-15526	$105.95	$175.95	$175.95	$175.95	$208.95	$351.00
AG CAT Gray	09-16099	$90.00	$150.95	$90.00	$150.95	$85.00	$141.95
Federal Gray	09-16251	$90.00	$226.95	$95.00	$229.95	$193.95	$326.00
Rancho Silver	09-16314	$90.00	$150.95	$90.00	$150.95	$193.95	$326.00
Polar Gray	09-16357	$93.75	$141.95	$90.00	$226.95	$192.75	$326.00
Glacier White	09-16492	$90.00	$150.95	$90.00	$150.95	$193.95	$326.00
Daytona White	09-16555	$90.00	$150.95	$90.00	$150.95	$193.95	$326.00
Insignia White	09-17925	$90.00	$150.95	$135.00	$226.95	$193.95	$326.00
Reno Gold	09-17043	$99.50	$150.95	$97.00	$150.95	$193.95	$326.00
Christen Eagle Purple	09-17100	$100.00	$166.95	$100.00	$166.95	$193.95	$326.00
Nevada Silver	09-17178	$100.00	$166.95	$100.00	$166.95	$195.75	$326.00
Juneau White	09-17886	$100.00	$166.95	$100.00	$166.95	$195.75	$326.00
Clear	09-04678	-	-	-	-	$208.95	$349.00



PTI WATERBORNE EPOXY PRIMER - LOW VOC

Chemical and solvent resistant. TUF/FILM epoxy primer that conforms to MIL-PRF -85582D. It is especially recommended to inhibit corrosion of aluminum and other plated or unplated metallic surfaces, as well as composite surfaces. This primer should be used with PTI topcoats to provide maximum adhesion and corrosion protection.

Light Green Primer Quart ..... P/N 09-02679 ..... **$109.75**
Dark Green Primer Quart ..... P/N 09-02681 ..... **$113.75**
Dark Green Primer Gallon ..... P/N 09-02682 ..... **$213.95**
Catalyst Pint ..... P/N 09-02683 ..... **$33.50**

PTI ENGINE ENAMEL - AEROSOLS

PTI Engine Enamel is a heat resistant enamel aerosol. It is intended for use over metal surfaces and can withstand temperatures of 500°F. The Engine Enamel can be applied over bare, scuffed, sanded, abrasive blasted, primed and previously painted surfaces and shows excellent protection.



Description	Part No.	Price
Flat White	09-04248	$18.50
Flat Red	09-04249	$18.50
Flat Yellow	09-04250	$18.50
Flat Orange	09-04251	$18.50
Flat Green	09-04252	$18.50
Flat Blue	09-04253	$18.50
Flat Gray	09-04254	$18.50
Flat Black	09-04255	$18.50
Flat Silver	09-04256	$18.50
High Gloss Silver	09-04257	$18.50
High Gloss Clear	09-04676	$21.50

PTI NO PEEL™ EPOXY AND POLYURETHANE TOPCOAT ADDITIVE

Formulated to help epoxy and polyurethane topcoats flow to their maximum ability. Keeps the coating "open" to allow bubbles to escape and the surface to flow in high temperature conditions. Refer to the manufactures technical data before using this product.

4 oz..... P/N 09-02672 ..... **$10.95**
8 oz..... P/N 09-02673 ..... **$17.65**
16 oz..... P/N 09-02674 ..... **$25.50**

PTI NO POP™ RETARDER

Used as an additive to slow down the dry time of fast drying paints and primers. During hot and dry temperatures, coatings have a tendency to "solvent pop" and/or "dry spray". This retarder keeps the material wet allowing it to flow, dry, and cure as it should.

4 oz..... P/N 09-02675 ..... **$10.99**
8 oz..... P/N 09-02676 ..... **$17.50**
16 oz..... P/N 09-02677 ..... **$25.50**

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

PTI SPECIALTY PAINTS

SPECIALITY PAINTS POLYURETHANE - ENAMELS - WATERBORNE



POLYURETHANE/CATALYST CURE: Low VOC - Two component topcoat system with built-in U.V. protection. The system has both corrosion and chemical resistance properties with a gloss range > 95%. Comes in all Federal 595C colors. Custom colors available upon request.

ENAMEL: PTI's Enamel is formulated to meet the performance specifications of Federal specification TT-E-489G. This product is a high quality alkyd enamel which performs best when used with PTI's zinc chromate or chromate free primer. It may be applied over wood or metal and is suitable for both interior and exterior applications.

WATERBORNE POLYURETHANE: ZERO V.O.C. general purpose, exterior protective coating for metal surfaces. This product also works great for interior applications. The Waterborne Polyurethane should be applied over top of the PTI Waterborne Epoxy Primer. Available in all Federal 595C colors; custom colors available upon request.

HOW TO ORDER:

Add the following dash numbers after the "Base Part No." listed in the chart for the size and type desired.

For PTI Polyurethane:: Qt. Size add -13, Gal. Size add -14

For PTI Enamel:: Qt. Size add -23, Gal. Size add -24

For PTI Waterborne Qt. Size add -33, Gal. Size add -34

The PTI Polyurethane, Enamel, and Waterborne paints are also available in semi-gloss and flat. Please contact us for current price and availability.

PTI Touch-Up Paint Kits are available in polyurethane, enamel, waterborne, and interior epoxy pants. For more information, see www.aircraftspruce.com.

Gloss Paints	Base Part No.	Poly.Qt. Price	Poly.Gal. Price	Enamel Qt. Price	Enamel Gal. Price	Waterborne Qt. Price	Waterborne Gal. Price
Boston Maroon	09-10049	$167.95	$278.95	$107.75	$163.85	$203.95	$288.95
Elisnore Brown	09-10080	$167.95	$280.95	$107.75	$163.85	$172.75	$248.95
Bermuda Tan	09-10324	$167.95	$280.95	$118.90	$175.75	$172.75	$248.95
Madrid Red	09-11120	$169.75	$280.95	$93.75	$150.75	$200.75	$288.95
Tennesse Red	09-11136	$169.75	$280.95	$107.75	$184.75	$205.95	$299.95
Christen Eagle Red	09-11140	$185.75	$308.00	$103.75	$169.75	$200.75	$288.95
Intnl Orange	09-12197	$167.95	$278.95	$120.75	$198.75	$211.95	$310.00
Yellow/Orange	09-12243	$167.95	$247.95	$107.75	$184.75	$200.75	$288.95
Pumpkin Orange	09-12246	$167.95	$280.95	$93.75	$156.99	$211.95	$310.00
Champion Yellow	09-13275	$167.99	$280.95	$107.75	$184.75	$229.95	$330.00
AC Eagle Yellow	09-13415	$200.75	$336.00	$107.75	$184.75	$229.95	$330.00
AG Cat Yellow	09-13432	$200.75	$299.95	$103.75	$169.75	$229.95	$330.00
J3 OEM Yellow	09-13507	$200.75	$336.00	$93.75	$156.99	$229.95	$330.00
Tuscon Cream	09-13523	$184.75	$307.00	$107.75	$185.75	$172.75	$248.95
Cub Yellow	09-13538	$199.75	$307.00	$103.75	$169.75	$229.95	$330.00
Diana Cream	09-13578	$169.75	$278.95	$103.75	$170.75	$172.75	$248.95
lemon Yellow	09-13591	$202.95	$336.00	$109.75	$184.75	$229.95	$330.00
Lockhaven Yellow	09-13637	$167.95	$278.95	$103.75	$169.75	$229.95	$330.00
Federal Yellow	09-13655	$241.95	$404.00	$109.75	$184.75	$229.95	$330.00
Sun Valley Ivory	09-13690	$167.95	$278.95	$107.75	$185.75	$199.75	$291.95
Forest Green	09-14036	$167.95	$278.95	$103.75	$152.90	$199.75	$291.95
Portland Green	09-14062	$184.75	$307.00	$107.75	$182.99	$199.75	$291.95
Federal Green	09-14064	$167.95	$278.95	$93.75	$137.85	$199.75	$291.95
Oak Green	09-14079	$167.95	$278.95	$93.75	$137.85	$199.75	$291.95
Olive Drab Green	09-14084	$169.75	$247.95	$107.75	$182.99	$199.75	$291.95
Lawn Green	09-14090	$167.95	$278.95	$93.75	$137.85	$199.75	$291.95
Everglades Green	09-14110	$167.95	$278.95	$103.75	$150.75	$199.75	$291.95
Cuby Sport Trainer Green	09-14193	$184.75	$310.00	$103.75	$150.75	$199.75	$287.95
Insignia Blue	09-15044	$184.75	$307.00	$103.75	$169.75	$199.75	$291.95
Twilight Blue	09-15052	$195.75	$323.00	$93.75	$139.75	$199.75	$291.95
Christen Eagle Blue	09-15056	$200.95	$336.00	$118.90	$177.75	$199.75	$327.00
AN True Blue	09-15102	$167.95	$278.95	$103.75	$169.75	$193.95	$327.00
Bahama Blue	09-15180	$167.95	$280.95	$103.75	$169.75	$199.75	$326.00
Piper Trainer Blue	09-15182	$167.95	$280.95	$107.75	$184.75	$193.95	$327.00
Lakeland Blue	09-15526	$167.95	$278.95	$118.90	$198.75	$193.95	$327.00
AG CAT Gray	09-16099	$166.75	$280.95	$118.90	$176.75	$193.95	$327.00
Federal Gray	09-16251	$167.95	$280.95	$120.75	$198.75	$169.75	$278.95
Rancho Silver	09-16314	$167.95	$281.95	$118.90	$195.75	$199.75	$327.00
Polar Gray	09-16357	$167.95	$280.95	$103.75	$170.75	$167.95	$280.95
Oak 52 Gray	09-16375	$167.95	$278.95	---	---	$166.85	$278.95
Glacier White	09-16492	$135.75	$222.95	$96.80	$155.75	$167.95	$278.95
Daytona White	09-16555	$135.75	$222.95	$107.75	$185.75	$167.95	$280.95
Insignia White	09-17925	$135.75	$222.95	---	---	$172.75	$278.95
Reno Gold	09-17043	$185.75	$273.95	---	---	$193.95	$327.00
Christen Eagle Purple	09-17100	$244.95	$404.00	---	---	---	---
Nevada Silver	09-17178	$185.75	$310.00	---	---	$193.95	$327.00
Juneau White	09-17886	$135.75	$222.95	---	---	$167.95	$280.95
Clear	09-04675	$167.75	$278.95	---	---	---	---



PTI POLYKICK™

Other products used with: Use only with PTI Polyurethanes. Typical Uses: PTI PolyKick is formulated to accelerate the cure time for PTI's polyurethane formulations.

4 oz..... P/N 09-02670.....**$11.50**

8 oz..... P/N 09-02671.....**$16.65**



PTI POLYURETHANE PAINT KIT

This kit will provide all the materials needed to paint any RV or similar size aircraft.

The kit consists of: • Green Acid Etch Primer & Reducer • Yellow Epoxy Prime, Catalyst, & Reducer • Polyurethane White topcoat, with catalyst & Reducer -Clear coat sold separately

Additional colors are available upon request, for an additional cost.

Paint KIT.....P/N 09-02074 .....**$1,584.00**

Clear Coat Kit .....P/N 09-02073 .....**$339.95**



PTI COLOR CHART

These samples are an approximate computer representation of the actual color and are to be used for reference only. P/N 09-01969.....**FREE**

ALL POLYURETHANE PAINTS REQUIRE CATALYST TO CURE!

Always refer to Technical Data before use for mixing instructions and curing times.

Description	Size	PN	Price
Polyurethane Catalyst	Gal	09-01256	$225.95
Polyurethane Catalyst	Qt	09-01964	$133.75
Polyurethane Thinner	Qt	09-01657	$25.50
Polyurethane Thinner	Gallon	09-01658	$52.75



PTI WING WALK COATING

PTI Wing Walk Coating is a non-slip coating used for walkways on exterior aircraft surfaces. PTI Wing Walk is a rough texture non slip. The Wing Walk is a unique formulation of high molecular urethane resins, which cures at ambient temperatures. This product is a high performance, two component polyurethane topcoat designed for exterior and interior use on high performance general aviation, business jet, and commercial aircraft.

Size	Color	Finish	Part No.	Price
Pint	White	Gloss	09-04386	$77.75
		Semi-Gloss	09-04387	$48.50
		Flat	09-01228	$87.75
Quart		Gloss	09-04392	$106.75
		Semi-Gloss	09-04393	$105.80
		Flat	09-01227	$114.75
Gallon		Gloss	09-04398	$130.75
		Semi-Gloss	09-04399	$130.75
		Flat	09-01226	$341.00
Pint	Black	Gloss	09-04388	$46.80
		Semi-Gloss	09-04389	$67.75
		Flat	09-01231	$87.75
Quart		Gloss	09-04394	$77.75
		Semi-Gloss	09-04395	$102.75
		Flat	09-01230	$154.75
Gallon		Gloss	09-04401	$129.75
		Semi-Gloss	09-04402	$194.75
		Flat	09-01229	$340.00
Pint	Gray	Gloss	0-04390	$56.75
		Semi-Gloss	09-04391	$96.80
		Flat	09-01234	$87.75
Quart		Gloss	09-04396	$87.75
		Semi-Gloss	09-04397	$87.75
		Flat	09-01233	$140.75
Gallon		Gloss	09-04403	$145.75
		Semi-Gloss	09-04404	$145.75
		Flat	09-01232	$340.00

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DOPES – THINNERS – SOLVENTS

FAA/PMA
In January 2005, Certified Coatings Products received FAA-PMA (Federal Aviation Administration Parts Manufacturing Approval) for use on Ceconite fabric. The products have always been approved for use on any other fabric. (PMA#PQ2435NM)

FLAMMABLE

Certified Coatings

DOPES, THINNERS, AND SOLVENTS

Product Description	Part No.	Quart Price	Part No.	Gallon Price	Part No.	5 Gal. Price	Part No.	54 Gal. Drum Price
Nitrate Dope, Clear	09-09400	**$32.50**	09-09500	**$54.90**	09-09600	**$209.95**	09-09700	**$1,334.00**
Nitrate Dope, Blue Tint	09-09000	**$29.95**	09-09100	**$64.75**	09-09200	**$188.95**	09-09300	**$1,491.00**
Nitrate Dope, Clear, Non-Tautening	09-09900	**$31.65**	09-10000	**$52.75**	09-10100	**$211.95**	09-10200	**$1,396.00**
Nitrate Dope, Blue Tint, Non-Tautening	09-03999	**$32.50**	09-04001	**$59.75**	09-04002	**$262.95**	09-04003	**$1,772.00**
Butyrate Dope, Clear	09-10400	**$36.95**	09-10500	**$62.75**	09-10600	**$239.00**	09-10700	**$1,718.00**
Butyrate Dope, Clear, Non-Tautening	09-10900	**$43.75**	09-11000	**$73.75**	09-11100	**$289.00**	09-11200	**$2,107.00**
Nitrate Thinner	09-11400	**$25.50**	09-11500	**$39.85**	09-11600	**$159.75**	09-11700	**$1,070.00**
Butyrate Thinner	09-11900	**$26.95**	09-12000	**$43.50**	09-12100	**$167.75**	09-12200	**$825.00**
Retarder, Nitrate*	09-12400	**$28.50**	09-12500	**$22.85**	09-04275	**$151.90**	---	**---**
Retarder, Butyrate*	09-12800	**$35.50**	09-12900	**$58.75**	09-13000	**$229.95**	---	**---**
Toluene	---	**---**	---	**---**	09-14300	**$103.75**	---	**---**

Add 5% to 10%, as needed, of this blend of fast-cutting, high-boiling solvents to prevent dope blushing under conditions of high humidity. Also improves flow by slowing drying time.
Certified Coatings offers only a limited number of colors in butyrate dope which have been selected as standards.

CERTIFIED COATINGS SPECIAL SOLVENTS

Product	P/N 09-	Quart	P/N 09-	1 Gal.	P/N 09-	5 Gal.
Toluene Paint Remover	05702	**$19.70**	05711	**$80.75**	---	**---**

CERTIFIED COATINGS COLORED BUTYRATE DOPE



Product Description	ModelNo.	Quart	Gallon	5 Gallon
Chrome Yellow	8520	**$55.95**	**$98.75**	**$458.00**
Daytona White	8125	**$49.75**	**$97.65**	**$398.00**
Juneau White	8415	**$48.75**	**$89.90**	**$594.00**
Miami Blue	8611	**$56.75**	**$99.75**	**$352.95**
Insignia Blue	8124	**$82.50**	**$141.99**	**$309.95**
Cub Yellow	8522	**$64.75**	**$98.75**	**$380.95**
Tennessee Red	8321	**$69.95**	**$283.95**	**$277.95**
Madrid Red	M189R	**$76.95**	**$124.75**	**$531.00**
Insignia Red	8350	**$78.95**	**$116.75**	**$569.00**
Plain White	8120	**$51.85**	**$87.75**	**$265.95**

FLAMMABLE

To Order: Use Product # plus "QT" for Qt., "1G" for Gal. and "5G" for 5 Gal.

CERTIFIED COATINGS COLOR CHART

Ask for Certified Coatings Products Co. color chart. .....P/N 09-02118 ..... **FREE**



CERTIFIED COATINGS A134 ALUMINUM PASTE

ALUMINUM PASTE - Mix 4 ounces of Aluminum Paste to 1 gallon of Certified Coatings N/T Butyrate Dope.
1 Lb. ..... P/N 09-02417 ..... **$107.85**
Quart ..... P/N 09-03996 ..... **$176.95**



CERTI-FILL SILVER

This non-tautening butyrate UV barrier can be sprayed or brushed over nitrate or butyrate coatings for optimum ultra-violet ray protection.
Quart ..... P/N 09-12300 ..... **$48.50**
Gallon ..... P/N 09-12310 ..... **$76.65**
5 Gallon ..... P/N 09-12320 ..... **$313.00**



SURE SEAM FABRIC CEMENT

Sure Seam is a high quality, high tack fabric cement which has excellent bonding properties.
Quart ..... P/N 09-13330 ..... **$47.85**
Gallon ..... P/N 09-13340 ..... **$79.65**



AIRCRAFT SPRUCE ACETONE

Use to remove lacquer finishes, for cleanup after painting, and to soften lacquers or acrylics that have set up in spray guns or hoses. It has little effect on polyurethane which has cured in the lines.Use only virgin acetone as recovered acetone can damage virtually anything on which it is used.
Pint ..... P/N 01-01077 ..... **$6.50**
Quart ..... P/N 01-01078 ..... **$9.75**
Gallon ..... P/N 01-01079 ..... **$20.85**

NOTE: DO NOT MIX CERTIFIED DOPES & THINNERS WITH RANDOLPH AS THEY ARE NOT ALWAYS COMPATIBLE.



SURE STRIP PAINT REMOVER

Removes urethanes, epoxies, lacquers, primers, enamels, vinyls, varnishes, acrylics, shellac and polyesters. Washing off with water leaves a clean film-free surface that is ready for refinishing. Product of Certified Coatings Products Co.
1 Qt. ..... P/N 09-05701 ..... **$19.95**
1 Gal. ..... P/N 09-05710 ..... **$33.85**
5 Gal. ..... P/N 09-05715 ..... **$145.75**
55 Gal. ..... P/N 09-03995 ..... **$1,037.00**



CERTIFIED COATINGS AIRCRAFT, MARINE, AND AUTOMOTIVE PAINT REMOVER

1 Qt. ..... P/N 09-05702 ..... **$19.70**
1 Gal. ..... P/N 09-05711 ..... **$80.75**
5 Gal. ..... P/N 09-03987 ..... **$126.75**
55 Gal. ..... P/N 09-03988 ..... **$1,195.00**

FABRIC REJUVENATORS

A blend of deep cutting solvents which penetrates the dope finish and restores some of the original flexibility. Use on old fabric in fair condition. Do not use on weak or rotted fabric. Specify type of finish. Rejuvenator Type Certified Coatings Nitrate Rejuvenator Butyrate Rejuvenator Stits Poly-Fiber RJ-1200

FLAMMABLE

1 Gallon		5 Gallon		1 Quart	
Part No.	Price	Part No.	Price	Part No.	Price
09-22500	**$36.50**	09-22600	**$143.75**	09-01263	**$23.99**
09-22700	**$45.75**	09-22800	**$173.85**	09-01264	**$27.65**
09-05300	**$80.50**				

ALL mixed paints are special order and are non-returnable.

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Prices Subject to Change Without Notice

RANDOLPH AIRCRAFT COATINGS

Randolph coatings are the FAA-approved coatings for the Ceconite STC covering process. ***Do not mix Randolph Dopes & Thinners with Certified Coatings Products as they are not always compatible.***

210 NITRATE DOPE, TAUTENING, CLEAR, HI-SOLIDS



Used only on Grade A cotton or Irish Linen. A premium high solids nitrate dope that tightens natural fabric as it dries. Not for use on Ceconite or heat-shrunk synthetic fabrics. Thin 1:1 w/286 Nitrate Thinner.

FLAMMABLE

Quart.....P/N 210-QT.....**$15.50**
Gallon.....P/N 210-1G.....**$45.10**
5 Gallons.....P/N 210-5G.....**$212.35**

W-7868 NITRATE DOPE, TINTED, NON-TAUTENING (BLUE)



Initial coating for Ceconite or heat shrunk polyester fabric. Additional plasticizers slow shrinking after application. Thin 1:1 with 286 Nitrate Thinner.

FLAMMABLE

Quart.....P/N W-7868-QT.....**$16.55**
Gallon.....P/N W-7868-1G.....**$49.50**
5 Gallons.....P/N W-7868-5G.....**$238.95**

E-4964 NITRATE DOPE, CLEAR,NON-TAUTENING



Initial coating for Ceconite or heat shrunk polyester fabric. For use on open cockpit aircraft where tinted dope is not desired. Thin 1:1 w/286 Nitrate Thinner.

FLAMMABLE

Quart.....P/N E-4964-QT.....**$16.70**
Gallon.....P/N E-4964-1G.....**$49.25**
5 Gallons.....P/N E-4964-5G.....**$237.95**

G-6302 RAND-O-PROOF NITRATE DOPE (GREEN)



Special formulation of nitrate dope and additives for the initial coat on Ceconite fabric and for applying tapes. This is the recommended first coat in the Ceconite/ Randolph system. Thin 1:1 with 286 Nitrate Thinner.

FLAMMABLE

Quart.....P/N G-6302-QT.....**$16.75**
Gallon.....P/N G-6302-1G.....**$49.90**
5 Gallons.....P/N 09-01017.....**$240.95**

286 NITRATE THINNER



Used 1:1 to thin nitrate dopes & Rand-OProof.

FLAMMABLE

Quart.....P/N 286-QT.....**$11.50**
Gallon.....P/N 286-1G.....**$43.85**
5 Gallons.....P/N 286-5G.....**$219.95**

9701 BUTYRATE DOPE, TAUTENING, CLEAR



Used only on Grade A Cotton or Irish Linen to tighten the fabric as it dries. Not for use on Ceconite or heat-shrunk synthetic fabrics. Thin 1:1 with 9703 Butyrate Thinner.

FLAMMABLE

Quart.....P/N 9701-QT.....**$16.50**
Gallon.....P/N 9701-1G.....**$48.50**
5 Gallons.....P/N 9701-5G.....**$224.95**

W-8350 BUTYRATE DOPE TINTED, NON-TAUTENING (TAN)

This non-taughtening butyrate dope features an increased level of plasticizer and will not tauten excessively. Takes longer to dry than standard butyrates. Tinted. Used to apply finishing tapes. Additional plasticizers slow shrinking. ***TINTED LIGHT TAN BUT DRIES CLEAR.*** Recommended initial build butyrate coating to follow Rand-O-Proof in the Ceconite/Randolph system. Thin 1:1 with 9703 Butyrate Thinner.



FLAMMABLE

Gallon.....P/N 09-00788.....**$51.75**
5 Gallons.....P/N 09-00789.....**$253.95**

55 Gallon Drums - For 55 gallon drum of Randolph product, use basic P/N D55 - Example: 210-D55

J3000 BUTYSOLV REJUVENATOR



Used to soften older dope coatings which exhibit cracking or ring-worming. Restores plasticizers in aged finishes to add flexibility. Only works on aircraft painted with butyrate dope; will not work on polyurethane topcoat finishes.

FLAMMABLE

Quart.....P/N 09-14505.....**$28.50**
Gallon.....P/N 09-14510.....**$84.25**
5 Gallons.....P/N 09-14515.....**$400.15**

G-6303 RAND-O-FILL BUTYRATE (SILVER)



Rand-O-FillG-6303 is a non-tautening butyrate material designed as the aluminum spray coat over Rand-OProof G-6302, over Nitrate Clear Dope or Butyrate clear Dope. Allow to dry. Wet sand to desired smoothness. Wash and allow surface to completely dry before applying following coat. Thin as needed with Butyrate Thinner.

FLAMMABLE

Quart.....P/N G-6303-QT.....**$19.50**
Gallon.....P/N 09-01018.....**$57.50**
5 Gallons.....P/N 09-01019.....**$273.95**

701 ALUMINUM PASTE



A fine mesh paste which is easier to use than powder. Mix 4 oz. by weight of paste to one gallon of clear butyrate dope before thinning.

FLAMMABLE

1 Lb.....P/N 09-14500.....**$22.50**

9703 BUTYRATE THINNER



FLAMMABLE

Used 1:1 to thin butyrate dopes & pigmented butyrate colors.

Quart.....P/N 9703-QT.....**$11.90**
Gallon.....P/N 9703-1G.....**$44.80**
5 Gallons.....P/N 9703-5G.....**$216.95**

Y-9910 UNIVERSAL RETARDER



FLAMMABLE

Prevents blush in nitrate and butyrate products. Also used to slow nitrate and butyrate drying in high temperatures.

Quart.....P/N Y-9910-QT.....**$15.50**
Gallon.....P/N 09-01048.....**$46.75**
5 Gallons.....P/N 09-01049.....**$220.95**

A-1690 BUTYRATE DOPE, NON-TAUTENING (CLEAR)



For use as a build coat after E-4964 Non-Tautening Nitrate (Clear) on open cockpit aircraft where tinted dope is not desired. Thin 1:1 with 9703 Butyrate Thinner.

FLAMMABLE

Quart.....P/N 09-00817.....**$17.50**
Gallon.....P/N 09-00818.....**$51.75**
5 Gallons.....P/N 09-00819.....**$248.95**

MATERIAL REQUIREMENTS FOR AVERAGE SIZE AIRPLANE

USING RANDOLPH FINISHES AND CECONITE FABRIC

- 45 yds. 70" Ceconite 102
- 5 gals. Rand-O-Proof
- 10 gals. NT Butyrate
- 3 gal. Universal Finishing Retarder
- 13 rls. Pinked Ceconite Tape
- 2 rls. 1/2" Reinforcing Tape
- 30 Inspection Rings
- 5 gal. Nitrate Thinner
- 10 gal. Rand-O-Fill
- 30 gal. Butyrate Thinner
- 10 gal. (White) Butyrate Dope
- 1 rl. Ceconite Rib Lacing Cord
- 100 Plastic Drain Grommets
- 1 gal. Rand-O-Bond

TOTAL (Estimate)..... $ 3,500

RANDOLPH FLOAT LACQUER

This specialty product is used as a spray on the bottom of aluminum floats on amphibious aircraft to protect them from marine growth. Reduce with Randolph 286 Nitrate Thinner.

FLAMMABLE

Qt.....P/N 09-00830.....**$17.50**
Gal.....P/N 09-00831.....**$53.75**
5 Gal.....P/N 09-00832.....**$258.05**

RANDOLPH ACID-PROOF BATTERY BOX BLACK PAINT #345



Battery Box Black Paint is an asphaltic coating used to provide protection from battery acid in battery boxes and compartments. It is generally applied with a brush or roller to any metal area that may be exposed to leaking battery acid. Shelf life: Guaranteed 2 years from date on manufacture in sealed container in protected storage. Coverage: 225 square feet per gallon with one coat. Mixing: Stir well before use.Thinning: Use out of the can. If thinning is necessary, thin five parts paint to one part 286 Nitrate Thinner. Application: Apply with a brush. Three coats will provide the best possible protection to epoxy primed metal surfaces.Qt.....P/N 344-QT.....**$17.50**

FLAMMABLE

ALL mixed paints are special order and non-returnable.

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RANDOLPH FINISHES



RANDOLPH COLOR PRODUCTS

RANDOLPH COLORED NON-TAUTENING BUTYRATE DOPE - The final color coat applied over fabric in the Ceconite/Randolph system. Available in 50 standard colors. Thin one to one with 9703 Butyrate Thinner. One thinned gallon covers approximately 200 sq ft with one coat.

RANTHANE POLYURETHANE FINISH

Ranthane is a low viscosity, very high solids polyurethane material resulting in low film weight providing a lasting high gloss. Will withstand most chemicals, engine oils, and hydraulic fluids. Has superb adhesion and abrasion resistance as well as high temperature resistance. For fabric and primed metal.

RANTHANE HIGH SOLIDS CATALYST -
Pint ..... P/N 09-00328 ..... **$36.25**
Use w/ High Solid Polyurethane
Qt. ..... P/N 09-00400 ..... **$65.25**

RANTHANE ACCELERATOR - Qt. ..... P/N D-7201-QT **$46.50**

RANTHANE REDUCER - Qt. ..... P/N G-4200-QT **$14.50**
Gal. ..... P/N G-4200-1G **$50.55**

The FAA has approved the use of Ranthane over Poly-Fiber. To order Ranthane colors, please specify Randolph color from chart on right and specify quart or gallon.

NOTE: Randolph paints are now manufactured by Consolidated Coatings and will not exact match old Randolph colors. If you are ordering to match old Randolph colors, please provide a paint sample that can be matched by the factory.

MARK II FOR METAL
(NOT FOR USE ON FABRIC)

A tough, long-lasting, two-part topcoat paint catalyzed with a non-isocyanate catalyst. Supplied air respirator not required when spraying. Available in same 50 colors as Colored Butyrate Dope and Ranthane for use over primed metal or composite parts. Mix 1:1 with Mark II Mixing Liquid. Sold as kits.

MARK II MIXING LIQUID - Combination of catalyst and thinner to be used with Mark II for Metal paint.
Qt ..... P/N 09-02193 ..... **$45.15**
Gal ..... P/N 09-02194 ..... **$149.75**

MARK II THINNER - Used as needed to thin Mark II for Metal after combining with Mark II Mixing Liquid to increase flow out.
Pt ..... P/N 09-02195 ..... **$9.50**
Qt ..... P/N 09-02196 ..... **$14.00**
Gal ..... P/N 09-02197 ..... **$55.75**

FAST-DRY ENGINE ENAMELS

Formulated to be heat resistance and maintain good gloss and color retention. For use in the painting of engine crank cases and cylinders, after major overhaul or for general maintenance. Can also be used on engine mounts and supports. Service temperature is 300-350 degrees F. Reduction: Thin to correct spray viscosity with #257 Enamel Thinner(approximately 20% reduction). Application: Spray two coats. Allow to dry to the touch between coats.

Color	Quart		Gallon	
	Part No.	Price	Part No.	Price
303 Black	303-QT	**$23.25**	303-1G	**$71.75**
D-5973 Continental Gold	D-5973-EQ	**$22.70**	D-5973-EG	**$65.95**
G-5436 Lycoming Gray	G-5436-EQ	**$22.75**	G-5436-EG	**$67.99**



RANDOLPH ENAMEL THINNER

Fast drying thinner for use with Randolph Aircraft Enamels and Fast Dry engine Enamels.
Qt. ..... P/N 257-QT **$13.25**
Gal. ..... P/N 257-1G **$47.50**

RANDOLPH ENAMEL HARD GLOSS 9313



Special drier/ additive that modifies enamel into a stronger film that dries faster and creates an even, glossier surface. Adding 2 fluid ounces per thinned quart improves the gloss and removes the tendency for enamel to remain slightly tacky for long periods. P/N 09-01164 ..... **$34.50**

RANDOLPH COLOR SELECTIONS AND PRICES





COLORS	BUTYRATE For Fabric Only		Mark II For Metal Only		Ranthane	
	Qts.	Gals.	Qts.	Gals.	Qts	Gals
Reds						
B-3534 Madrid Red	$28.25	$107.95	$119.95	$382.95	$79.50	$261.95
B-9163 Colorado Red	$29.75	$113.95	$121.95	$392.95	$80.50	$265.95
M-9522 Tennessee Red	$31.50	$120.95	$125.95	$408.95	$84.50	$260.95
M-9530 Vermillion Red	$30.00	$115.95	$122.95	$396.95	$80.00	$263.95
W-3665 Pontiac Red	$32.25	$123.95	$127.95	$414.95	$83.25	$260.95
J-9555 Cadillac Red	$31.25	$119.95	$125.95	$406.95	$86.75	$290.95
H-9150 Santa Fe Red	$31.00	$118.95	$132.95	$404.95	$86.75	$290.95
X-5680 Boston Maroon*	$31.25	$123.95	$126.95	$413.95	$86.25	$288.95
X-5749 Stinson Maroon	$30.75	$120.95	$125.95	$407.95	$84.25	$280.95
Standard Colors						
M-9526 Cruiser Orange	$30.00	$114.95	$122.95	$395.95	---	$255.95
C-2065 Ocala Orange	$28.25	$107.95	$119.95	$381.95	$72.75	$234.95
E-6427 Aeronca 7AC Yellow	$25.25	$99.95	$114.95	$364.95	$68.00	$215.95
M-9512 Lemon Yellow	$31.00	$107.95	$124.95	$404.95	$83.25	$254.95
M-9501 AN Orange Yellow	$27.50	$104.95	$117.95	$375.95	---	$251.95
F-6285 Cub J-3 Yellow	$28.75	$108.95	$117.95	$383.95	$73.00	$302.95
M-9521 Lock Haven Yellow	$27.25	$103.95	$116.95	$373.95	$71.50	$229.95
Y-5783 Dallas Yellow*	$29.25	$106.95	$120.95	$388.95	$77.00	$251.95
D-9270 Ag Cat Yellow	$29.75	$107.95	$123.95	$399.95	$76.00	$247.95
N-3353 Federal Yellow	$27.25	$107.95	$118.95	$380.95	$74.00	$239.95
F-2406 Federal Green	$25.50	$99.95	$114.95	$365.95	$68.50	$216.95
F-5830 Montego Green*	$27.75	$105.95	$117.95	$376.95	$72.75	$233.95
Y-6350 Forest Green*	$27.50	$109.95	$66.75	$215.95	$75.50	$245.95
W-3554 Lakeland Blue	$31.00	$99.95	$114.95	$365.95	$83.00	$182.25
W-9506 AN True Blue	$26.75	$105.95	$117.95	$376.95	$72.50	$233.95
H-9170 Bahama Blue	$28.50	$108.95	$119.95	$384.95	$83.00	$240.95
X-5700 Miami Blue	$30.75	$104.95	$117.95	$375.95	$82.75	$244.95
M-9502 Insignia Blue	$29.00	$110.95	$120.95	$387.95	$82.75	$238.95
Z-7245 Sun Valley Ivory	$26.25	$98.75	$114.95	$363.95	$67.75	$259.95
M-9518 Diana Cream	$26.75	$103.95	$116.95	$373.95	$69.75	$232.95
X-5260 Tucson Cream*	$24.25	$98.50	$114.95	$362.95	$83.25	---
Q-1050 New Insignia White	$23.50	$83.75	$114.95	$364.95	$58.25	$174.80
W-9170 Tropic White	$23.75	$87.25	$114.95	$364.95	$60.00	$183.95
K-7641 Vestal White	$23.75	$87.25	$114.95	$364.95	$56.00	$183.95
B-4243 Juneau White	$23.75	$86.50	$115.95	$367.95	$60.00	$169.95
J-9545 Daytona White	$23.25	$88.50	$115.95	$366.95	$59.50	$184.95
Q-1916 Randolph White	$23.75	$81.50	$59.75	$364.95	$59.75	$182.95
F-7790 AG Cat Gray	$25.00	$98.50	$113.95	$361.95	$67.50	$212.95
R-4870 Neutral Gray	$25.25	$99.95	$114.95	$364.95	$67.50	$213.95
R-8174 Platinum Gray	$31.00	$101.95	$116.95	$370.95	$67.75	$214.95
Y-6100 Polar Gray	$30.75	$106.95	$113.95	$368.95	$60.70	$259.95
H-6117 Black	$30.75	$105.95	$112.95	$355.95	$82.25	$257.95
R-8175 Sandalwood*	$31.00	$100.95	$115.95	$368.95	$67.50	$213.95
Y-9775 Hickory Brown	$23.50	$101.95	$115.95	$369.95	$82.75	$221.95
R-4869 Olive Drab* (Glossy)	$25.50	$99.95	$114.95	$365.95	$68.75	$217.95
E-6428 Aeronca 7AC Orange	$28.50	$111.95	$121.95	$389.95	$77.50	$253.95
P-8600 Cessna Tiger Orange	$28.75	$108.95	$120.95	$386.95	---	$247.95
Metallic Colors						
W-8427 Tampa Green*	$27.50	$104.95	$115.95	$367.95	$69.50	$228.95
W-8430 Newport Blue*	$30.75	$103.95	$115.95	$368.95	$69.75	$229.95
M-9514 Silver	$30.25	$77.50	$105.95	$327.95	$60.70	$252.95
B-9916 Reno Gold	$38.50	$152.95	$141.95	$470.95	$107.95	$374.95

How to Order: Use these dash #s to complete Randolph color part #s:
Butyrate: Qts -BQ, Gallons -BG; Example: P-8599-BG
Mark II: Qts -MQ, Gallons -MG; Example M-8599-MG
Ranthane: Qts-RQ, Gallons-RG Example:B-3534-RG

ALL mixed paints are special order and are non-returnable.

Randolph Color Card..... P/N 09-00401 ..... **FREE**

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WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

SUPERFLITE FABRIC COVERING



SUPERFLITE FABRIC COVERING

Superflite manufactures everything you need to cover your airplane-fabric, tapes, accessories, glue, primer, and paint - and it's all approved for use on certified aircraft.

FABRIC

Description	Superflite No	Part No	Price
Cert. 2.7 oz/sq yd - FAA Approved (72" wide)	SF102-2.7 -CERT	09-03132	$9.95
Cert. 3.7 oz/sq yd FAA Approved (72" wide)	SF101	09-03133	$11.60
Non Cert. 1.8 oz/sq yd (71" wide)	SF104A	09-05364	$7.75

SF102 SURFACE TAPES

PINKED 102

Size/Unit	Superflite Part No	Part Number	Price
1" x 50 yd	SF102-1P	09-03134	$21.50
1-1/2" x 50 yd	SF102-15P	09-03135	$29.75
2" x 50 yd	SF102-2P	09-03136	$31.95
3" x 50 yd	SF102-3P	09-03137	$53.85
4" x 50 yd	SF102-4P	09-03138	$67.75
6" x 50 yd	SF102-6P	09-03139	$63.75

STRAIGHT 102

Size/Unit	Superflite Part No	Part Number	Price
1" x 50 yd	SF102-1S	09-03140	$17.95
1-1/2" x 50 yd	SF102-15S	09-03141	$20.95
2" x 50 yd	SF102-2S	09-03142	$27.95
3" x 50 yd	SF102-3S	09-03143	$44.80
4" x 50 yd	SF102-4S	09-03144	$55.95
6" x 50 yd	SF102-6S	09-03145	$65.95

PINKED BIAS CUT 102

Size/Unit	Superflite Part No	Part Number	Price
2" x 25 yd	SF102-2PB	09-03146	$35.65
3" x 25 yd	SF102-3PB	09-03147	$51.95
4" x 25 yd	SF102-4PB	09-03148	$68.95

STRAIGHT BIAS CUT 102

Size/Unit	Superflite Part No	Part Number	Price
2" x 25 yd	SF102-2SB	09-03149	$21.90
3" x 25 yd	SF102-3SB	09-03150	$39.78
4" x 25 yd	SF102-4SB	09-03151	$52.78

PRE SHRUNK TAPES 102

PINKED 102-HS

Size/Unit	Superflite Part No	Part Number	Price
1" x 50 yd	SF102-1P-HS	09-03152	$15.95
1-1/2" x 50 yd	SF102-15P-HS	09-03153	$21.95
2" x 50 yd	SF102-2P-HS	09-03154	$28.95
3" x 50 yd	SF102-3P-HS	09-03155	$43.95
4" x 50 yd	SF102-4P-HS	09-03156	$58.95
6" x 50 yd	SF102-6P-HS	09-03157	$91.95

STRAIGHT 102-HS

Size/Unit	Superflite Part No	Part Number	Price
1" x 50 yd	SF102-1S-HS	09-03158	$14.95
1-1/2" x 50 yd	SF102-15S-HS	09-03159	$21.87
2" x 50 yd	SF102-2S-HS	09-03160	$27.95
3" x 50 yd	SF102-3S-HS	09-03161	$41.95
4" x 50 yd	SF102-4S-HS	09-03162	$55.95
6" x 50 yd	SF102-6S-HS	09-03163	$84.95

SF104 SURFACE TAPES

PINKED 104

Size/Unit	Superflite Part No	Part Number	Price
1" x 50 yd	SF104-1P	09-03164	$21.75
1-1/2" x 50 yd	SF104-15P	09-03165	$27.95
2" x 50 yd	SF104-2P	09-03166	$28.50
3" x 50 yd	SF104-3P	09-03167	$54.95
4" x 50 yd	SF104-4P	09-03168	$74.95
6" x 50 yd	SF104-6P	09-03169	$92.75

STRAIGHT 104

Size/Unit	Superflite Part No	Part Number	Price
1" x 50 yd	SF104-1S	09-03170	$13.95
1-1/2" x 50 yd	SF104-15S	09-03171	$19.95
2" x 50 yd	SF104-2S	09-03172	$25.95
3" x 50 yd	SF104-3S	09-03173	$38.95
4" x 50 yd	SF104-4S	09-03174	$52.95
6" x 50 yd	SF104-6S	09-03175	$80.95

PINKED BIAS CUT 104

Size/Unit	Superflite Part No	Part Number	Price
2" x 25 yd	SF104-2PB	09-03176	$27.65
3" x 25 yd	SF104-3PB	09-03177	$39.78
4" x 25 yd	SF104-4PB	09-03178	$51.95

STRAIGHT BIAS CUT 104

Size/Unit	Superflite Part No	Part Number	Price
2" x 25 yd	SF104-2SB	09-03179	$24.95
3" x 25 yd	SF104-3SB	09-03180	$36.75
4" x 25 yd	SF104-4SB	09-03181	$47.95

PRE SHRUNK TAPES 104

PINKED 104-HS

Size/Unit	Superflite Part No	Part Number	Price
1" x 50 yd	SF104-1P-HS	09-03182	$11.95
1-1/2" x 50 yd	SF104-15P-HS	09-03183	$16.75
2" x 50 yd	SF104-2P-HS	09-03184	$21.50
3" x 50 yd	SF104-3P-HS	09-03185	$31.95
4" x 50 yd	SF104-4P-HS	09-03186	$42.95
6" x 50 yd	SF104-6P-HS	09-03187	$66.95

STRAIGHT 104-HS

Size/Unit	Superflite Part No	Part Number	Price
1" x 50 yd	SF104-1S-HS	09-03188	$10.95
1-1/2" x 50 yd	SF104-15S-HS	09-03189	$15.98
2" x 50 yd	SF104-2S-HS	09-03190	$21.50
3" x 50 yd	SF104-3S-HS	09-03191	$30.95
4" x 50 yd	SF104-4S-HS	09-03192	$41.95



6" x 50 yd	SF104-6S-HS	09-03193	$63.95

ACCESSORIES

ANTI-CHAFE & REINFORCEMENT TAPE

Description	Superflite No.	Part No.	Price
1/4" Sticky Back Tape	SF-REINFTAPE-1/4	09-03196	$12.75
3/8" Sticky Back Tape	SF-REINFTAPE-3/8	09-03197	$13.65
1/2" Sticky Back Tape	SF-REINFTAPE-1/2	09-03198	$14.80
3/4" Sticky Back Tape	SF-REINFTAPE-3/4	09-05363	$15.85
1" Sticky Back Tape	SF-REINFTAPE-1	09-03199	$15.60

RIB BRACING TAPE

Description	Superflite No	Part No.	Price
1/4" Twill Inner Rib Brace Tape	SF-TWILL-1/4	09-03194	$11.85
1/2" Twill Inner Rib Brace Tape	SF-TWILL-1/2	09-05362	$15.50

RIB LACING CORD

Description	Superflite No	Part No.	Price
Round Rib Lacing Cord - 400 yd roll	SF693-400	09-03200	$31.65
Flat Rib Lacing Cord - 500 yd roll	SF694-500	09-03201	$35.95

SEWING THREAD

Description	Superflite No.	Part No.	Price
Hand Sewing Thread - 250 yd	SF-207	09-03202	$9.70
Machine Sewing Thread - 1200 yd	SF-69	09-03203	$31.05

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SUPERFLITE SYSTEM 7 PAINTS



Superflite now has System 7, an all-urethane system, which is the most technologically advanced covering system in the world. System 7 has more durability, flexibility, and affordability than anything else on the market today. We've designed an aircraft covering system that's geared toward the aircraft enthusiast – it's easy to apply, easy to repair, and it provides you with a show-quality finish at a price that's 20% less than the major competition.

SYSTEM 7 URETHANE REDUCERS

Product Description	Part No.	Price
Cool Temperature Reducer: 60-70º	01-01250	**$62.75**
Medium Temperature Reducer: 70-80º	01-01251	**$79.75**
Warm Temperature Reducer: 75-85º	01-01252	**$86.75**
Hot Temperature Reducer: 85º and up	01-01253	**$92.85**

SYSTEM 7 TOPCOAT CATALYST

Product Description	Part No.	Price
Urethane Paint Catalyst	09-03249	**$42.60**

SYSTEM 7 FABRIC PRIMER

Product Description	Part No.	Gallon Price	Part No.	Quart Price	Part No.	Pint Price
Fabric Primer Base	01-01256	**$196.75**	01-01257	**$102.75**	--	**$59.99**
Fabric Primer Catalyst	--	--	--	--	01-01258	**$41.95**

SYSTEM 7 URETHANE TOPCOAT

Product Description	Part No.	Gallon Price	Part No.	Quart Price	Part No.	Pint Price
Champ Yellow	09-03250	**$396.00**	09-03251	**$102.75**	09-04771	**$59.99**
Diana Cream	09-03252	**$351.00**	09-03253	**$93.95**	09-04769	**$53.75**
Lakeland Blue	09-03256	**$275.95**	09-03257	**$74.75**	09-04768	**$41.55**
Juneau White	09-03258	**$304.00**	09-03259	**$84.80**	09-04773	**$47.50**
Piper Cub Yellow	09-03260	**$444.00**	09-03261	**$111.75**	09-04772	**$64.75**
Lemon Yellow	09-03262	**$444.00**	09-03263	**$111.75**	09-04770	**$64.75**
Bahama Blue	09-03264	**$256.95**	09-03265	**$67.75**	09-05371	**$33.50**
Pepsi Blue	09-03266	**$256.95**	09-03267	**$67.75**	09-05372	**$33.50**
Polar Gray	09-03268	**$275.95**	09-03269	**$73.75**	09-05373	**$41.55**
AN Orange Yellow	09-03270	**$350.00**	09-03271	**$93.75**	09-05374	**$53.75**
Lockhaven Yellow	09-03272	**$444.00**	09-03273	**$111.75**	09-05375	**$64.75**
Insignia Blue	09-03276	**$444.00**	09-03277	**$111.75**	09-05376	**$65.85**
Intense Black	09-03278	**$256.95**	09-03279	**$66.75**	09-05377	**$33.50**
Maule Yellow	09-03280	**$396.00**	09-03281	**$102.75**	09-05378	**$60.00**
Ocala Orange	09-03282	**$396.00**	09-03283	**$102.75**	09-05379	**$60.00**
Lime Green	09-03284	**$397.00**	09-03285	**$103.75**	09-05380	**$60.00**
Sacramento Green	09-03286	**$256.95**	09-03287	**$67.75**	09-05381	**$33.50**
Spitfire Red (Metallic)	09-03288	**$444.00**	09-03289	**$111.75**	09-05382	**$64.75**
Champ Orange	09-03290	**$397.00**	09-03291	**$103.75**	09-05383	**$60.00**
Cessna Tiger Orange	09-03292	**$397.00**	09-03293	**$103.75**	09-05384	**$60.00**
Insignia White	09-03296	**$303.00**	09-03297	**$84.75**	09-05385	**$47.50**
Starlight Blue	09-03298	**$275.95**	09-03299	**$74.75**	09-05386	**$41.55**
Oracle Red	09-03301	**$444.00**	09-03302	**$112.75**	09-05387	**$64.75**
Cessna Sunset Red	09-03303	**$444.00**	09-03304	**$110.75**	09-05388	**$64.75**
Matterhorn White	09-03305	**$304.00**	09-03306	**$85.75**	09-05389	**$47.50**
Daytona White	09-03307	**$304.00**	09-03308	**$84.80**	09-05390	**$47.50**
Spruce Metallic (Metallic)	09-03309	**$304.00**	09-03310	**$85.75**	09-05391	**$47.50**
Cruiser Orange	09-03311	**$397.00**	09-03312	**$103.75**	09-05392	**$60.00**
Insignia Red	09-03313	**$444.00**	09-03314	**$110.75**	09-05393	**$64.75**
Cessna Vestal White	09-03315	**$304.00**	09-03316	**$82.85**	09-05394	**$47.50**
Sun Valley Ivory	09-03317	**$275.95**	09-03318	**$74.75**	09-05395	**$41.55**
Inca Gold (Metallic)	09-03319	**$304.00**	09-03320	**$85.75**	09-05396	**$47.50**
Cadillac Red	09-03321	**$351.00**	09-03322	**$92.75**	09-05397	**$53.75**
Matador Red	09-03323	**$397.00**	09-03324	**$103.75**	09-05398	**$60.00**
Sandalwood	09-03325	**$304.00**	09-03326	**$84.75**	09-05399	**$47.50**
Aztec Silver (Metallic)	09-03329	**$304.00**	09-03330	**$85.75**	09-05401	**$47.50**
Stinson Maroon	09-03331	**$444.00**	09-03332	**$111.75**	09-05402	**$64.75**
Fed-Ex Purple	09-03333	**$275.95**	09-03334	**$74.75**	09-05403	**$41.55**
Hickory Brown	09-03337	**$351.00**	09-03338	**$93.95**	09-05404	**$53.75**
Silverado Silver (Metallic)	09-03339	**$304.00**	09-03340	**$84.75**	09-05405	**$47.50**
Olive Drab	09-05406	**$347.00**	09-05407	**$92.75**	09-05408	**$53.75**
Meadow Green	09-05409	**$347.00**	09-05410	**$92.75**	09-05411	**$53.75**
Medium Gray	09-05412	**$272.95**	09-05413	**$73.85**	09-05414	**$41.55**
Atlas Gray Metallic	09-05415	**$253.95**	09-05416	**$66.75**	09-05417	**$33.50**
Royal Blue	09-05418	**$253.95**	09-05419	**$66.75**	09-05420	**$33.50**

Prices Subject to Change Without Notice

REALCLEAN REAL SHINE DE-ICE BOOT SEALANT



Real Shine Boot Sealant offers an unmatched high-gloss shine while conditioning de-ice boots to prevent drying and cracking. Real Shine De-Ice Boot Sealant also protects boots from harmful UV Rays which over time will damage the boots. Keep your de-ice boots looking their best with the Real Shine System. P/N 09-03771 ..... **$42.95**

REALCLEAN REAL SHINE DE-ICE BOOT PREP



Real Shine Aircraft Deice Boot Prep is formulated for easy stripping of old sealant and dressings from aircraft boots. Real Shine is easy to use and will completely strip and clean the boot surface to reveal a clean bare surface ready for the Real Shine Sealant application.

P/N 09-03770 ..... **$24.95**

REALCLEAN TURBINE SOOT MASTER



Turbine Soot Master is a carbon soot cleaner and degreaser designed to effectively address carbon exhaust build-up and staining that plagues most turbo-prop aircraft. Our streak-free formula safely dissolves carbon, grease and oil revealing a clean surface with very little effort. This product is rinse-free and does not require any water. Just spray on and wipe the surface clean with a micro-fiber or terry cloth. This Product may be diluted 1 part Turbine Soot Master to 1 part Water for lighter exhaust soot, soils or grease cleaning.

32 oz. .....P/N 09-03768 ..... **$29.85**
1 Gallon.....P/N 09-03769 ..... **$79.50**

REALCLEAN STREAMLINE SPEED WAX



Streamline Speed Wax is a high gloss aircraft polish and waterless dry wash cleaner that offers unmatched performance by any other aviation wax. Streamline is specially designed to be thin enough for spray on application yet still maintain and exceed the cleaning and high gloss characteristics of the heavier, hard to use waxes available. Streamline is silicone-free to prevent P Static build-up and offers excellent UV protection (UV is the leading cause of oxidation in aircraft paint) Streamline is safe for all aircraft paint and interior polished wood trim. If you're looking for the ultimate aircraft appearance and ease of use, try Streamline Speed Wax. 32 oz. .....P/N 09-03772 ... **$24.95**
1 Gallon .....P/N 09-03773 ... **$69.95**

REALCLEAN POST FLIGHT INTERIOR / EXTERIOR CLEANER



Post Flight is a high performance Interior and Exterior liquid cleaner and polish that is safe for all surfaces. It is designed for light duty ultra-fast post flight and quick turn cleaning. Just spray Post-Flight on any surface and wipe away, leaving a clean beautiful shine. Post-Flight contains micro-waxes that clean and shine paint, aluminum, Plexiglas, polished wood and plastic to a beautiful high gloss finish. Use to quickly remove bugs, soot, dirt, dust, and fingerprints between flights. Post Flight Aircraft Detailing Spray is the quickest way to keep your aircraft interior and exterior clean and looking great between flights. Post Flight leaves surfaces fingerprint resistant. Not recommended for use on flight instruments or displays.

32 oz. .....P/N 09-03774 ..... **$19.75**
1 Gallon.....P/N 09-03775 ..... **$53.95**

REALCLEAN ADVANTAGE CARPET UPHOLSTERY CLEANER



Advantage Carpet and Upholstery Cleaner and Stain remover.

32 oz. .....P/N 09-03778 ..... **$14.95**
1 Gallon.....P/N 09-03779 ..... **$39.95**

REALCLEAN PREMIUM MICROFIBER DETAILING CLOTHS



Quality microfiber cloths are designed to make cleaning easier and faster, due to the millions of microscopic fibers that make up the fabric. Real microfiber fabric is 100 times finer than human hair and have almost 100 thousand fibers per square inch. Use microfiber cloths for wax removal, cleaning windows, dry washing, polishing wood, cleaning leather and upholstery. Our microfiber cloths are safe for all surfaces including aircraft windows as they are ultra soft, scratch and lint free. Just wash and reuse. P/N 09-03780 ..... **$8.95**

SUNMIGHT WATERPROOF SANDPAPER



Sunmight Waterproof is made with quality water resistant paper backing for flexibility and outstanding finish. Special resin technology reduces possible curling problem during wet sanding operations. Features:Wet or dry sanding for all surface, Finest finishing even under wet sanding, Long durability without tearing or curling, Superior cutting for hand sanding. Specifications: Grain: Grit 220~800 Aluminum Oxide; Grit 1000~2000 Silicon Oxide, Backing: Latex Paper, Bond: Resin over Resin, Coating: Closed Coat, Grit Range: 220-2000. Sold Each.

Grit	Part No.	Price ea.
220	09-03108-1	**$0.72**
280	09-03110-1	**$0.73**
320	09-03111-1	**$0.73**
400	09-03113-1	**$0.76**

Grit	Part No.	Price ea.
600	09-03114-1	**$0.73**
1000	09-03115-1	**$0.84**
1500	09-03117-1	**$0.85**
2000	09-03118-1	**$0.84**

SUNMIGHT 5" VELCRO DISC SANDPAPER



Sunmight Film is a premium product with strong and even surface film backing that allows better surface finish and longer life. It is also great for corner and edge sanding without problems with tearing. Specifications: Grain: Premium Aluminum Oxide, Backing: Polyester Film, Bond: Phenolic Resin, Coating: Open Coat, Grit Range: 80-320. Sold Each.

Grit	Part No.	Price ea.
80	09-03797-1	**$0.63**
120	09-03798-1	**$0.57**

Grit	Part No.	Price ea.
220	09-03799-1	**$0.57**
320	09-03801-1	**$0.57**

SUNMIGHT P.S.A. GOLD DISCS



Sunmight God is a premium paper product made with high quality grain, latex paper and strong resin. This provides better performance and longer life. Features: Aluminum Oxide resin paper, Open coat, Tear resistance, Good Sharpness and longer lasting life, High performance without clogging, Excellent finish. Specifications: Grain: Premium Aluminum Oxide, Backing: Latex Paper, Bond: Phenolic Resin, Coating: Open Coat, Grit Range: 80-320. Sold Each

5" DICS		
Grit	Part No.	Price ea.
80	09-03099-1	**$0.36**
120	09-03102-1	**$0.33**
220	09-03105-1	**$0.33**

6" DICS		
Grit	Part No.	Price ea.
80	09-04664	**$0.45**
180	09-04662	**$0.36**
220	09-04663	**$0.36**
320	09-04667	**$0.45**

SUNMIGHT 5" P.S.A. FILM DISC - SANDING PAPER



Sunmight Film is a premium product with strong and even surface film backing that allows better surface finish and longer life. It is also great for corner and edge sanding without problems with tearing. Features: Open coat stearated, Excellent Cutting Performance, Longer lasting life with durability, Perfect sanding surface, Especially excellent for contour sanding without folding. Specifications: Grain: Premium Aluminum Oxide, Backing: Polyester Film, Bond: Phenolic Resin, Coating: Open Coat, Grit Range: 80-320. Sold Each.

Grit	Part No.	Price ea.
80	09-03092-1	**$0.50**
100	09-03093-1	**$0.47**
120	09-03094-1	**$0.45**

Grit	Part No.	Price ea.
180	09-03095-1	**$0.42**
220	09-03096-1	**$0.45**
320	09-03098-1	**$0.45**

SUNMIGHT 6 INCH NO HOLE FILM PSA FILM DISC - SANDPAPER



Sunmight Film is a premium product with strong and even surface film backing that allows better surface finish and longer life. It is also great for corner and edge sanding without problems with tearing.

Grit	Part No.	Price
20	09-04748	**$0.56**
80	09-05270	**$0.65**
180	09-04747	**$0.56**
320	09-04749	**$0.56**

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SEM INTERIOR REPAIR PRODUCTS



AEROSPACE SEM SOAP

First step cleaner gravitates into the substrate and floats contaminants to the surface. AEROSPACE SEM SOAP can be used on all substrates. Use AEROSPACE SEM SOAP to clean vinyl and leather seat covers prior to restoring with AEROSPACE SURE-COAT™ or AEROSPACE COLOR COAT P/N 09-03588 .....**$16.50**



SEM AEROSPACE PLASTIC & LEATHER PREP

Leaves plastic substrates clean for coating, will not soften or distort plastic; removes contaminants such as mold, release agents, fingerprints and grease. Aerospace Plastic & Leather Prep can be used on all plastics and leather. 12 oz. Aerosol.
P/N 09-03587 .....**$17.50**



SEM LOW VOC RUBBERIZED UNDERCOATING

40523 SEM Low Voc Rubberized Undercoating is a paintable, fast-drying, asphalt free coating for rust proofing, sound deadening, chip resistance and corrosion protection. Less than 40% VOC. 24 oz Aerosol. P/N 09-03581 .....**$13.50**



SEM TRIM BLACK

SEM Trim Black 39143 is the industry standard for restoring faded and peeling exterior trim parts. This paint coating offers maximum adhesion on stainless steel and chrome. 15 oz. Aerosol.
P/N 09-03579 .....**$15.50**



SEM SELF ETCHING PRIMER

Easy to spray, sands quickly and easily, offers superior adhesion. Excellent coverage and hiding, increases production. Great for spot repairs and overall refinishing.

Black.....P/N 09-03594 .....**$22.50**
Gray.....P/N 09-03595 .....**$20.90**
Green.....P/N 09-03596 .....**$22.50**



SEM COLOR COAT

SEM COLOR COAT is formulated to match, restore or change color on most vinyl surfaces, flexible and rigid plastics, carpet and velour. Fade resistant and flexible, COLOR COAT is not a dye, but a permanent paint coating. 12 oz. aerosol.

Color	Part No.	Price
15003 Phanton White	09-03556	**$16.50**
15013 Landau Black	09-03557	**$16.50**
15043 Shadow Blue	09-03558	**$16.50**
15103 Super White	09-03559	**$16.50**
15143 Sandstone	09-03561	**$16.50**
15163 Presidio	09-03562	**$16.50**
15173 Camel	09-03563	**$16.50**
15183 Warm Gray	09-03564	**$16.50**
15233 Gloss Black	09-03566	**$16.50**
15243 Satin Black	09-03567	**$16.50**
15283 Pescadero Sand	09-03568	**$16.50**
15303 Graphite	09-03569	**$16.50**
15393 Medium Gray	09-03571	**$16.50**
15603 Sailcloth White	09-03572	**$16.50**
15763 Storm Gray	09-03573	**$16.50**



SEM CLASSIC COAT

SEM CLASSIC COAT uses advanced technology to provide superior adhesion and flexibility when changing or restoring the color of most leather and vinyl. CLASSIC COAT is a fade resistant coating that won't chip or peel and is available in many of today's popular OEM colors. 12 oz.

Color	Part No.	Price
17013 Midnight Black	09-03537	**$17.50**
17033 Lt. Parchment	09-03538	**$17.50**
17043 Med Graphite	09-03539	**$17.50**
17053 Med Parchment	09-03541	**$17.50**
17083 Dk Graphite	09-03542	**$17.50**
17093 Black	09-03543	**$17.50**
17103 Dark Gray	09-03544	**$17.50**
17013 Lt Gray	09-03546	**$17.50**
17123 Lt Neutral	09-03547	**$17.50**
17133 Med Dk Pewter	09-03548	**$17.50**
17163 Med Gray	09-03549	**$17.50**
17173 Shale	09-03551	**$17.50**
17203 Very Dk Pewter	09-03552	**$17.50**
17223 Taupe	09-03553	**$17.50**
17243 Ivory	09-03554	**$17.50**



SEM LEATHER & VINYL REPAIR COMPOUND

Successfully repairs cuts and abrasions on leather or vinyl. This product has exceptional strength, flexibility and can also be used to fill minor imperfections.
P/N 09-03578 .....**$26.55**



SEM SOLVE

38373 SEM SOLVE removes adhesives, wax, road tar, grease and paint overspray. 20 oz. Aerosol.
P/N 09-03577.....**$12.50**

SEM SAND FREE

38363 SEM SAND FREE softens the substrate promoting adhesion on difficult to sand areas. 16 oz. Aerosol.
P/N 09-03576 .....**$17.95**

SEM VINYL PREP

SEM Vinyl Prep 38343 cleans soil, wax and grease from vinyl substrates while it softens and prepares the surface for adhesion of topcoat. Great for use with SEM flexible coatings. 16 oz. Aerosol.
P/N 09-03575 .....**$16.50**

SEM HIGH BUILD PRIMER SURFACER

Provides superior adhesion, film build and flexibility when priming automotive metal, aluminum, urethane, plastic and other similar substrates. 20 oz. Aerosol. Gray.....P/N 09-03787 .....**$21.50**
White .....P/N 09-03788 .....**$21.90**



SEM SCUFF & CLEAN

38338 SEM SCUFF & CLEAN prepares bumpers or panels when refinishing or blending. It's abrasive action improves adhesion of repair and refinishing materials. Pint.
P/N 09-03574 .....**$22.85**



SEM MANUAL APPLICATOR GUN 1.7OZ

An easy loading applicator for dispensing 1.7 oz dual mix cartridges. Material is dispensed quickly and consistently.
P/N 09-03792 .....**$68.75**



SEM QUICK SET NOZZLE 1.7 OZ

Ensures proper mix ratios for 1.7 oz dual cartridges. Quantity 6 per package. P/N 09-03793 .....**$13.50**

SEM QUICK SET



Black, fast curing urethane adhesive designed for automotive plastic repair. With a 20 or 50 second work time, an excellent choice for quickly repairing bumper brackets, tabs, headlight buckets and grills. It may also be used for bonding backer panels, moldings emblems and most small plastic, metal and aluminum parts

20 Second..... P/N 09-03790.....**$25.50**
50 Second..... P/N 09-03791.....**$23.55**



SEM PLASTIC REPAIR ADHESIVE

Bumper Repair 1oz cartridge, bonds to most automotive bumpers and problem plastics. P/N 09-03789 .....**$18.50**

SEM INTERIOR GRAINING PADS



Achieve the perfect repair with interior graining pads! These graining pads represent 6 of the most popular leather and vinyl grains in the automotive industry. For use with leather & vinyl repair compound. P/N 09-03794 .....**$10.95**

SEM AEROSPACE SURE-COAT FLATTENER



Restores aircraft interior leathers, vinyl and plastics at a fraction of the cost of replacement.Cleans, repairs, and restores interiors to a like new condition without changing the aircraft's burn certification. P/N 09-03586 .....**$64.75**

SEM AEROSPACE SURE-COAT PINT MIXING SYSTEM



A waterborne coating system offering excellent flexibility and outstanding adhesion for a variety of interior and exterior automotive, marine, aerospace and commercial applications. Allows the user to change or enhance the current color while maintaining the texture and look of leather, vinyl and plastic. It will not get brittle with age nor soften or crack within normal temperature ranges. Contains 9 toners and 3 clears that can be mixed to match almost any color and dries quickly when brushed or sprayed. Also includes: Pint labels and A70034 Fleet Color Selector

Gallon Kit.....P/N 09-04435 .....**$1,321.00**

Individual Colors

Black Pint.....P/N 09-03746 .....**$50.85**
Red Pint.....P/N 09-03747 .....**$50.85**
Quindo Red pint.....P/N 09-03750 .....**$57.75**
White Pint .....P/N 09-03748 .....**$49.95**
Yellow Oxide Pint .....P/N 09-03751 .....**$49.70**



3M™ STIKIT™ DISC PAD 05575

For use with 5 diameter Stikit™ Discs. Has medium density foam and a 45° tapered edge for flexibility. These lightweight, shock-resistant pads have a vinyl face (blue) that provides excellent disc adhesion yet allows quick, easy removal.

Color	Size	Part No.	Price
Blue	5" x 3/4"	09-01535	**$29.50**

3M™ STIKIT™ DISC HAND PAD 11063



Use with 5 diameter Stikit™ Discs. Made with soft density foam for conformability. Has 1 inch wide strap for holding the pad to the operators hand.

Size	Part No.	Price
5" x 1"	09-01448	**$15.80**

3M™ STIKIT™ PAPER DISC ROLL 236U



Constructed of durable aluminum oxide; works well for most wood species. The open coat feature provides a more aggressive cut than a comparable closed coat abrasive of the same grade and a special loading resistant coating makes this disc a good choice when loading is a problem. The C weight, paper backing is more durable for extended disc life and harsher sanding applications.

Style #	Grade	Weight	Size	Qty.	Part No.	Price
236U	P80	C	5" x NH	100	09-01572	**$55.75**
236U	P100	C	5" x NH	100	09-01573	**$35.50**
236U	P120	C	5" x NH	100	09-01574	**$56.75**
236U	P180	C	5" x NH	100	09-01576	**$37.65**
236U	P220	C	5" x NH	100	09-01577	**$63.75**
236U	P240	C	5" x NH	100	09-01578	**$54.75**
415U	120	A	5" x NH	125	09-01560	**$42.75**
415U	180	A	5" x NH	250	09-01562	**$88.75**



3M™ SCOTCH-BRITE™ GENERAL PURPOSE HAND PAD

Most universally used in a variety of applications. Excellent starting point to clean, finish, grain, denib and defuzz. May be used by hand, with a hand pad block, or on an in-line sander.

Grade	ID	Part No.	Price
VFIN	7447	09-01503	**$1.40**
Box of 20 pads.....P/N 09-01503-20.....			**$26.00**



3M™ SCOTCH-BRITE™ HEAVY DUTY HAND PAD

Tight and dense, this pad is the most aggressive and durable web. Excellent for heavy cleaning, deburring, and finishing. May be used by hand, with a hand pad block or on an in-line sander.

Grade	ID	Part No.	Price
MED	7440	09-01504	**$3.75**



3M™ SCOTCH-BRITE™ LIGHT DUTY CLEANSING PAD

Conformable web and fine mineral are excellent for fine finishes, light cleaning. Among our least aggressive abrasive hand pad. May be used by hand, with a hand pad block or on an in-line sander.

ID	Grade	Part No.	Price
7445	SFIN	09-01415	**$1.33**



3M™ SCOTCH-BRITE™ SR RADIAL BRISTLE DISC

Bristles are idea for cleaning, blending and deburring.
2".....P/N 09-01416..... **$4.80**
3".....P/N 09-01417..... **$5.55**



3M ROLOC DISC PAD

Backup pad designed to support 3M™ Roloc™ abrasive discs. Conveniently mounts directly to tools with 1/4-20 EXT threaded shafts or used with Roloc™ shank to fit collet chuck tools. 1.5".....P/N 09-02131.... **$15.99**

SCOTCH-BRITE™ ULTRA FINE HAND PAD 7448



Use for cleaning, scuffing, deburring and finishing by hand with water or solvents. Will never rust.
P/N 09-01753..... **$1.29/ea**

3M™ WETORDRY™ PAPER SHEET 431Q



A silicon carbide Wetordry™ abrasive product constructed on a C weight, intermediate paper backing. Can be run wet or dry.9"x11" sheets.

Grade	Part No.	Price
600	09-01446	**$1.75**
400	09-20900	**$1.23**
320	09-20800	**$1.25**
280	09-20700	**$1.18**

Grade	Part No.	Price
240	09-01529	**$1.80**
220	09-20600	**$1.25**
150	09-01532	**$1.75**
120	09-20550	**$1.95**
100	01-37700	**$1.60**



3M™ SCOTCH-BRITE™ CLEAN AND FINISH

Flexible web for finishing, blending, and polishing. Conformable for access to hard-to-reach areas. Great for general use on a variety of materials. Use manually or on an in-line sander.

Description	Size	Part No.	Price
3M Clean and Finish Medium	4" x 30 FT. Roll	09-01500	**$127.85**
3M Clean and Finish Fine	4" x 30 FT. Roll	09-01501	**$79.95**

3M™ ROLOC™ DISC PAD ASSEMBLY



Rubber backup pads available in different degrees of hardness for varying grinding applications. Backup pad designed to support 3M™ Roloc™ abrasive discs. This pad has a ¼-20 INT thread which allows it to be mounted directly to tools with ¼-20 EXT threaded shaft or the included 1/4" diameter shank that fits 1/4" collet chucks or drill chucks.

Description	Part No.	Price
45902 - 3" Med. Disc Pad and Shank	09-02129	**$24.60**
Replacement Parts	**Part No.**	**Price**
1/4 inch Diameter shank	09-01557	**$2.95**



3M™ SCOTCH-BRITE™ ROLOC™ TR SURFACE CONDITIONING DISC

A non-woven abrasive product used for cleaning, finishing, blending and deburring applications. A threaded attachment system secures the disc to the holder.

Grade	Size	Part No.	Price	Grade	Size	Part No.	Price
ACRS	1.5"	09-01510	**$0.91**	AVFN	2"	09-01505	**$1.35**
AMED	1.5"	09-01511	**$0.93**	AMED	3"	09-01509	**$2.58**
AVFN	1.5"	09-01512	**$1.45**	ACRS	3"	09-01508	**$2.65**
ACRS	2"	09-01506	**$1.33**	AVFN	3"	09-01507	**$2.45**



3M™ SCOTCH-BRITE™ ROLOC™ TR EXL UNITIZED WHEEL

High performance and durability for deburring and finishing applications. Threaded attachment system secures the wheel to the holder.

Size	Grade	Part No.	Price
2"	MED 2A	09-01514	**$4.65**
2"	MED 6A	09-01516	**$4.90**
3"	MED 6A	09-01517	**$8.50**



3M™ SCOTCH-BRITE™ ROLOC™ BRISTLE DISC

Brush-like bristle disc removes coarse coatings from the large, open areas of a work piece. Works on right angle tools quickly and easily with little or no pressure.

Size	Grade	Part No.	Price
2" x 5/8"	Tapered 120 GRDE	09-01520	**$9.50**
2" x 5/8"	Tapered 50 GRADE	09-01518	**$8.75**
2" x 5/8"	Tapered 80 GRADE	09-01519	**$9.50**

3M PERFECT-IT FOAM POLISHING PAD



Double sided foam polishing pad with quick connect. Provides high-gloss shine. For use with A Quick Connect Adaptor. High Performance Black Foam Polishing Pad. Removes compound swirl marks and fine paint surface defects. Unique quick connect design. The Perfect-It brand means this is 3M's highest performing double sided foam polishing pad.
P/N 09-03809 ..... **$29.65**

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3M™ GREEN CORPS™ CUT OFF WHEEL

Wheel is designed to provide high cut rates and long life on most all materials including fiberglass, stainless steel, mild steel and aerospace alloys. Ideal for use on a wide variety of utility type cut off tools. Do not use on tools without guards.

ID	Size	Part No.	Price
01985	3"x1/32"x3/8"	09-01521	**$6.95**
01994	4"X1/32"X3/8"	09-01524	**$5.30**
82238	3"X1/32"X1/4"	09-01570	**$6.85**
88755	4"X1/32"X1/4"	09-01580	**$5.55**
01986 5 Pack	3"X1/16"X3/8"	09-01523	**$32.65**

3M™ SCOTCH-BRITE™ DEBURRING WHEEL



Two Styles Available: Cut & Polish/Unitized Wheel-7A Medium grade (harder) Use to radius and deburr edges of aluminum parts. These wheels give a uniform brushed satin finish to parts and deburr quicker and easier than hand finishing. These wheels are discs of Scotch-Brite web compressed and bonded to form a rugged, dense wheel. Wheel size: 6" dia. x 1" wide x 1/2" thru hole.

P/N 12-00875 .....**$88.75**

Light Deburring Wheel-7S Fine Grade (Softer)
Light deburring 7S Fin 6 x 1 x 1. This wheel has a 1" thru hole. To fit 1/2" order P/N 12-01585.....P/N 12-00948 .....**$77.75**
3M Flange Adapter 3 45035 1/2".....P/N 12-01585 .....**$5.35**

3M™ ROLOC DISC PAD



3M™ Roloc™ Disc Pad TR 45092, Medium 3" 1/4-20 Internal. 3M™ Roloc™ Disc Pad optimizes the performance of Roloc™ discs and bristle discs by providing the right backup system and a secure attachment for grinding applications. Plus it saves time by eliminating the need to align edges of the disc with the disc pad—the screw aligns the disc, making disc changes quick and easy.

P/N 09-01554.....**$21.65**



3M 5 INCH 80 GRIT SANDING DISC

3M SandBlaster 5" 8 Hole Sanding Disc. 80 grit disc, designed for moderate stripping and surface leveling. Premium Cubitron™ ceramic mineral. Clog-resistant. Designed for use on random orbital sanders. Stays significantly sharper longer to sand faster than 3M conventional sandpaper of comparable grit. Use on wood, oil enamel, latex primer, lacquer, sanding sealer and other coatings.

P/N 09-05427.....**$1.33**



3M™ REPOSITIONABLE 75 SPRAY ADHESIVE

3M™ Repositionable 75 Spray Adhesive is a versatile pressure sensitive adhesive spray, suitable for temporary holding or positioning of lightweight materials for display or prior to final assembly. It adheres in seconds, yet has an extra-long tack range that allows lifting and repositioning of materials.

P/N 09-01377.....**$22.50**



3M™ SCOTCH-WELD™ URETHANE ADHESIVE DP601/ DP601NS

3M™ Scotch-Weld™ ***DP601*** is a self-leveling, gray, rapid setting, two-component polyurethane adhesive. It is packaged as 1:1 ratio liquids in duo-pak cartridges. With the squeeze of the trigger, the components are automatically mixed and easily dispensed as a bubble-free liquid. ***DP601NS*** is the same as the DP601 except it is a non-sag, gray, rapid setting, two-component polyurethane adhesive.

Description	Size	Color	Part No.	Price
DP601NS (Non-Sag)	50 mil	Gray	09-01412	**$14.95**



3M™ HI-STRENGTH 90 SPRAY ADHESIVE

3M™ Hi-Strength 90 Spray Adhesive is a fast-drying, transparent spray adhesive that bonds on concrete, wood, MDF, laminates, polyethylene and more. Its extremely strong bond gives you fast results to keep projects moving forward. This industrial grade formula is easy to dispense and apply directly to surfaces and materials and provides the added benefit of high heat and moisture resistance.

Size	Part No.	Price
24 oz	09-01376	**$22.50**



3M™ SCOTCH-WELD™ EPOXY ADHESIVE DP125 DUO-PAK

Two-part epoxy adhesive with a 1:1 mix ratio, 25 minute work life and exhibits very high peel strength. Moderately flexible and the gray version has exceptional shear adhesion. Use to bond rubber, metal, wood, plastics, and masonry products.

Size	Color	Part No.	Price
1.7 oz	Gray	09-01403	**$26.50**
1.7 oz	Translucent	09-01402	**$26.50**



3M™ SCOTCH-WELD™ EPOXY ADHESIVE DP100 PLUS

Exhibits much higher shear and peel strengths compared to DP100 Adhesive. It has a 1:1 mix ratio, a 4 minute work life, and is slightly flexible when cured. Clear in color. 1.7 oz. package.

P/N 09-01401 .....**$23.65**



3M™ SCOTCH-WELD™ EPOXY ADHESIVE DP190 DUO-PAK

A flexible, two-part adhesive that cures at room temperature and provides high strength bonds with good performance in shear and peel. Can be used to bond rubber, metal, wood, most plastics, and masonry products.

Size	Color	Part No.	Price
1.7 oz	Gray	09-01375	**$23.65**



3M™ SCOTCH-WELD™ EPX™ PLUS II APPLICATOR

This Plunger is for the Scotch-Weld™ EPX™ Plus II Applicator. The Scotch-Weld™ EPX™ Plus II Applicator is used to Dispense 3M™ Scotch-Weld™ Adhesives in Duo-Pak Cartridges. The applicator is a low-cost portable, self contained metering, mixing and dispensing machine that simultaneously meters and mixes two-part adhesives as the material is applied.

50 mL Mixing Nozzle 9742 ..... P/N 09-01372 .....**$2.67**



3M™ SCOTCH-WELD™ EPX™ APPLICATOR NOZZLE

Applicator nozzle designed for both the 200 mL and 400 mL applicators. P/N 09-01408 .....**$3.70**



3M™ HEADLIGHT LENS RESTORATION SYSTEM

With the 3M™ Headlight Lens Restoration System, you will use a 1200-1600 rpm drill equipped with a backup pad and sanding discs to remove the yellowed layer from the headlight lens surface. A higher rpm drill could generate excessive heat and can cause damage to the headlight lens that is difficult to remove. A lower rpm drill does not work efficiently for this process. Two sanding steps will follow to refine or reduce the sand scratches that are made when removing the yellowed layer. Finally, 3M™ Headlight Lens Polish and a foam pad will remove the fine scratches and put the final clarity on the headlight lens. Kit Includes: 1 - Disc Pad Holder 1 - 3M™ Soft Interface Pad 6 - 3M™ Sanding Discs 4 - 3M™ Finishing Discs 1 - 3M™ Trizact™ Disc 1 - 3M™ Headlight Lens Polish, 1oz 1 - Buffing Pad 1 - Step by Step Directions

PN 09-02109.....**$19.90**

Prices Subject to Change Without Notice

3M™ ADHESIVES



3M™ SCOTCH-WELD™ EPOXY ADHESIVE 2216 B/A

A flexible, two part, room temperature curing epoxy with high peel and shear strength. Scotch-Weld epoxy adhesive 2216 B/A is identical to 3M™ Scotch-Weld™ Epoxy Adhesive EC-2216 B/A in chemical composition. Scotch-Weld epoxy adhesive EC-2216 B/A has been labeled, packaged, tested, and certified for aircraft and aerospace applications. Scotch-Weld epoxy adhesive 2216 B/A may be used for aircraft and aerospace applications if proper Certificates of Test have been issued and material meets all aircraft manufacturer's specification requirements. 24 month shelf life.

SIZE	COLOR	DESCRIPTION	PART NO.	PRICE
2 oz.	Gray	Adhesive 2216 B/A	02-00045	**$52.75**
Pint	Gray	Adhesive 2216 B/A	02-00113	**$165.75**
Quart	Gray	Adhesive 2216 B/A	02-00114	**$219.95**



3M™ SCOTCH-WELD™ INSTANT ADHESIVE CA40H

One-part, high strength, very fast setting adhesive cures at room temperature. Adheres to difficult to bond substrates such as EPDM rubber, aluminum, and flexible vinyl. Comes in a 1 oz. Bottle. Clear.

P/N 09-01368 ..... **$30.95**



3M™ SCOTCH-WELD™ INSTANT ADHESIVE CA8

This instant adhesive has a fast set time of 5 to 40 seconds. Excellent adhesion on metal, plastic and rubber. Bonds resist shock and impacts. A cyanoacrylate adhesive. Comes in a 1 oz. bottle.

P/N 09-01366 ..... **$32.50**



3M™ SCOTCH-WELD™ INSTANT ADHESIVE SURFACE ACTIVATOR

It is ideal for use with all 3M Cyanoacrylate Adhesives for a broad range of industrial and electronic applications. It is also ideal for use with CA-5, CA-9, or CA-50 Gel for many wire tacking and coil terminating applications.

P/N 09-01407 ..... **$16.50**



3M SCOTCH-GRIP HP CONTACT ADHESIVE 1357

A high performance contact adhesive that provides a long bonding range and excellent initial strength.

1357 Grey/OLIV..... P/N 09-01362..... **$106.90**



3M™ SCOTCH GRIP RUBBER ADHESIVE 1300

Lower viscosity, sprayable version of Scotch-Weld Neoprene High Performance Rubber and Gasket Adhesive 1300. Has excellent adhesion to metal, baked enamel, wood, most plastics, and neoprene, reclaim, SBR, and butyl rubber. not for EPDM rubber.

Color: Yellow

Attention: Volatile Organic Compounds (VOCs) Government Regulations: Product cannot be purchased, sold or used in the states listed below. CA, CT, DC, DE, IL, IN, ME, MD, MA, MI, NH, NJ, NY, OH, PA, RI, VA

Viscosity	UPC	Size	Part No.	Price
Low	1300L	1 qt	09-27220	**$51.90**
	1300L	Gallon.	09-01712	**$149.75**
	1300L	5 Gallon	09-01713	**$574.00**
High	1300	5 oz.	09-01708	**$19.80**
	1300	Quart	09-01709	**$59.75**
	1300	Gallon	09-01710	**$152.95**
	1300	5 Gallon	09-01711	**$579.00**



3M™ SCOTCH-GRIP™ CONTACT ADHESIVE

A brushable, neutral-colored contact adhesive for bonding many decorative laminates, aluminum, steel, plywood, panels, wood and wood veneer, masonry, rubber, canvas and other porous and non-porous materials to each other or to themselves.

P/N 09-01364 ..... **$31.50**



3M SCOTCH-WELD GRAY

3M™ Scotch-Weld™ Metal Bonder Acrylic Adhesive DP8407NS is a gray structural adhesive with high overlap shear and peel strength with good impact resistance and durability. This adhesive was designed to bond permanently to bare metals with minimal surface preparation, but also bonds well to wide variety of other materials, including most plastics.

45ml ..... P/N 09-04774..... **$15.40**
490ml ..... P/N 09-04775..... **$65.75**

3M™ SCOTCH-GRIP™ RUBBER AND GASKET ADHESIVE 847



This fast drying adhesive develops strength very quickly. It has excellent heat resistance; temperature performance is from -5 to 300F. Meets specification requirements of MIL-A-1154C. Bonds neoprene, reclaim, SB-R, and butyl rubber to metal, wood, most plastics, and many other products. 5oz. Tube. reddish Brown in Color.

P/N 09-01361 ..... **$19.80**

SUPER DOOR SEAL ADHESIVE



Super adhesive for door seals and other applications. Many customers have had difficulty finding EC1300L adhesive (or equivalent). Search no more! This super adhesive has exceptional bonding strength, is fast drying, and firmly bonds the seals making your installation easier! They recommend you order the adhesive when you order your new seals. One tube is enough for installing all the seals on your aircraft when applied in accordance with the seal installation instructions. A free acid brush is included with each order. P/N 09-27200 ..... **$7.50**

3M SCOTCH BRITE GENERAL PURPOSE PAD 96



Non-rusting and resilient high quality synthetic fibers to provide pad durability and long lasting usage. Abrasive minerals selected to provide superior scouring for common cleaning jobs. Abrasive mineral particles evenly distributed throughout the pad to help ensure effective, consistent, and long lasting performance throughout the life of the pad. High quality bonding resin system designed to provide resistance to degradation from exposure to hot water, detergents and normal cleaning liquids.

P/N 09-05365 ..... **$1.24**

3M SCOTCH BRITE HEAVY DUTY PAD 86



Tough fibers and abrasives to clean grills and ovens and remove baked-on food from pots and pans. Fiber: the product contains durable synthetic fibers that are crimped and heat set to develop a strong open web. Mineral: the product contains abrasive particles that are effective in scrubbing operation. These particles are evenly distributed throughout the pad to help ensure consistent performance. Resin: the product is constructed with resin that resists degradation from exposure to hot water, detergents and normal cleaning liquids

P/N 09-05366 ..... **$3.35**

CS

3M™ PRODUCTS-CLEANERS



3M™ PERFECT-IT™ SHOW CAR PASTE WAX

Ultra high gloss paste wax with exceptional durability for use on automotive paints. Shines and protects new and like new pint finishes, producing a deep high gloss, lustrous, durable, "wet look" finish.

P/N 09-01443.....**$21.50**



3M™ PERFECT-IT™ BACKUP PAD

Enables 3M™ Superbuff™ Compound Pad users to use the 3M™ Perfect-It™ Foam Polishing Pad without having to remove the 3M™ Superbuff™ Adaptor 05710 from the shaft of the polisher. Fits all standard 5/8 in shaft slow-speed polishers. 7" x 3/4".

P/N 09-01426..**$56.75**



3M™ WHITE GREASE 8875 (LITHIUM LUBE)

Long-lasting lubrication, easy spray viscosity. Won't drip or run. Resists "washing out" if exposed to road spray. 10.5 oz. Can.

P/N 09-01445.....**$8.50**

CS



3M™ OVERSPRAY PROTECTIVE SHEETING MASKER

Portable masker designed to dispense Overspray Protective Sheeting (PN06727). Can be used horizontally, vertically or wall mounted. Spring loaded end frame designed for easy loading of Overspray Protective Sheeting. Paper is not included with masker.

P/N 09-01441.....**$102.50**



3M™ LIGHTWEIGHT BODY FILLER

Cures tack-free in 15-20 minutes — reduces sandpaper loading. Creamy texture. Smooth spreading. Easy smoothing. Vacuum processed to minimize pinholes.

1 Qt. .....P/N 09-01428.....**$14.80**
1 Gal. .....P/N 09-01429.....**$29.95**



3M™ FLOWABLE FINISHING PUTTY

Tack-Free and Stain Resistant. Two component, self-leveling putty designed for use as a "skin" coat over plastic filler to fill pinholes, sand scratches, low areas or other imperfections. Available in quart and handy squeeze dispenser — no mess. Fills pinholes in body fillers and small imperfections in metal and fiberglass. Cures tack-free in 30 minutes. Flowable, brushable. Easiest sanding 3M™ Polyester Putty. Minimizes staining that can occur with basecoat/clearcoat systems over body filler. Vacuum processed to minimize pinholes. Excellent adhesion to galvanized, aluminum and thoroughly cured and sanded factory-applied paint surfaces.

P/N 09-01432.....**$44.50**



3M™ SHORT STRAND FIBERGLASS REINFORCED FILLER

Contains chopped fiberglass. Repairs holes, cracks and tears in fiberglass. Repairs holes in metal. Smooth spreading. Waterproof. Can be used with Fiberglass Mat (PN05837) or Fiberglass Cloth (PN05838) to reinforce large repair areas.

1 Gal. Can .....P/N 09-01431 .....**$58.75**



3M™ SPREADERS

Designed for spreading body and fiberglass fillers, finishing putties, and resins. Sharp edge. Flexible. Durable. Easy to clean. Cured fillers pops off easily. Available in 4" or Assortment (1 each 4, 5 and 6).

4".....P/N 09-01435 .....**$1.07**
Assortment.....P/N 09-01436 .....**$6.50**



3M™ ADHESIVE REMOVER CITRUS BASE

Provides easy clean up of most types of adhesives. Quickly removes waxes, road tars, grease, oil and similar materials. Will not harm paint, vinyl or fabrics when properly used. 24 oz. Can. Pale yellow in color. P/N 09-01379.....**$32.50**



3M™ ADHESIVE REMOVER CITRUS BASE

A liquid cleaner/degreaser that can be used to dissolve and remove dirt, grease, tar, and many non-curing type adhesives. It can also be used to degrease substrates for adhesive bonding in place of many chlorinated or petroleum-based solvents. 24 oz. Can. Clear in color.

P/N 09-01393.....**$37.50**



3M™ 5-WAY PENETRANT

Multi-purpose product that is effective as a demoisturant - displaces moisture and "dries out" electrical apparatus. 24. oz. Can. Light Amber in color.

P/N 09-01370.....**$19.50**



3M™ SCOTCHGARD SPOT REMOVER AND UPHOLSTERY CLEANER

Designed to clean carpets and upholstery. Releases both oil- and water-based soils from carpet and upholstery. Aerosol foam is sprayed directly on spot with minimum of overspray. Requires no rinsing. Wipe or blot area with a clean, absorbent cloth. P/N 09-01722 .....**$11.75**



3M™ STAINLESS STEEL CLEANER AND POLISH

Ideally suited for stainless steel, chrome, laminated plastics and aluminum surfaces. With a high-gloss formula, it wipes clean with no streaks or buildup, resists fingerprints and masks surface blemishes. Pleasant lime fragrance. Contains no petroleum distillates.

P/N 09-01721 .....**$13.85**

3M™ SCOTCHMATE™ VELCRO FASTENING TAPES

RECLOSABLE FASTENER HOOK



Its as simple as pressing together and pulling apart. When your product calls for thousands of easy openings and closings, 3M™ Scotchmate™ Reclosable Fasteners pull through for you. Tiny, stiff hooks mesh with pliable loops for quick secure fastening. In addition, provide a solution as strong as you need. No adhesive, nylon and sewable hook so can be easily attached to many substrates. Sold by the foot.

Velcro Fastening Tape 2" Black.....09-22223 ..... **$3.30**
Hook 2" SJ3402.....09-01388 ..... **$1.75**
Loop 2" SJ3401 .....09-01387 ..... **$1.64**

VELCRO FASTENING TAPES



Consists of a set of 2 mating 1" wide black Nylon tapes, which, when pressed together, lock tightly and hold until peeled apart.Tapes have pressure-sensitive adhesive backs. Ideal for use in cockpit to mount pilot supplies or as an upholstery and rug attachment. An effective fastening material - applications are unlimited. Sold by the yard.

Velcro Fastening Tape 1" Black.....09-31400 ..... **$8.25**
Loop 1" SJ3571 .....09-00251 ..... **$3.95**
Hook 1" SJ3572.....09-00250 ..... **$4.60**

3M SCOTCHMATE 2" LOOP SJ3572



It's as simple as pressing together and pulling apart. When your product calls for thousands of easy openings and closings, 3M ™ Scotchmate ™ Reclosable Fasteners pull through for you. Tiny, stiff hooks mesh with pliable loops for quick secure fastening. In addition, Scotchmate reclosable fasteners are backed with 3M adhesive technology expertise which range from rubber adhesives to high performance, double-coated foam tape which can be adhered to most surfaces to provide a solution as strong as you need. Premium performance nylon hook with VHB ™ Tape for high temperature resistance and great shear performance. Sold by the foot.

Velcro Fastening Tape 2".....09-01656 ..... **$15.95**
2" Loop SJ3572.....09-01653 ..... **$7.95**
Hook 2" SJ3572.....09-01652 ..... **$8.75**

3M™ SAFETY WALK SHEET



A durable, mineral coated, non-slip fabric for wing walks. Waterproof, weatherproof and unaffected by vibrations, heat, cold, gasoline or oil. Assures safe footing. Pressure-sensitive backing should have additional coating of 3M 1300L to assure adhesion for aircraft applications.

COMFORMABLE TREADS		
Description	**Part No.**	**Price**
Safety Walk 510 2" W	09-01485	**$2.35**
Safety Walk 510 4" W	09-01486	**$2.46**
GENERAL PURPOSE		
Description	**Part No.**	**Price**
Safety Walk 24 INCH W	09-31675	**$10.75**
Safety Walk 610 2" W	09-01482	**$1.80**
Safety Walk 610 4" W	09-01483	**$1.95**
Safety Walk 610 12" W	09-32250	**$5.80**
Safety Walk 610 18" W - General Purpose	09-05320	**$7.50**
Safety Walk 610 24" W - General Purpose	09-31675	**$10.75**

3M™ EAR PLUGS 1100



Smooth dirt resistant surface, tapered design to fit the ear canal, provide added comfort and hygiene. Hypo-allergenic material. Each box contains 200 pairs, and each package is easy to dispense. Noise Reduction Rating: 29dB*.

P/N 09-01493.....**$0.25**

3M FLAME RETARDENT VELCRO FASTENER



Flame resistant, rubber adhesive, nylon, woven loop reclosable fastener and meets F.A.R. 25.853 paragraph (a)(1)(i) 60 second vertical burn test. Mates with SJ3519FR, black.

This flame resistant product is coated with a unique flame resistant synthetic rubber based adhesive. High temperature performance. Bonds wells to paper and cardboard, paint, bare and painted metal, glass, sealed wood and many plastics.

Hook 2" x 50 yds. ..... P/N 09-02598 .....**$259.95**
Loop 2" x 50 yds..... P/N 09-02597 .....**$246.95**

3M™ GLASS CLOTH TAPE 398FRP



Flame Retardant Sealing Tape 398FRP is a glass cloth tape with an acrylic adhesive for many applications requiring high adhesion, an abrasion-resistant backing and flame retardant properties. The tape meets flame retardancy requirements of F.A.R.

2"x36 yards
P/N 09-01728.....**$57.75**
3"x36 yards
P/N 09-02135.....**$81.75**

3M™ CARPET TAPE 9377 2 INCH X 25 YARD



3M 9377 Tape has a differential adhesive system with a high-tack acrylic that bonds to the top-layer substrate and a rubber-based adhesive system that attaches to the flooring material. One side is black and attaches to the flooring material with an acrylic-based adhesive. The white side of the tape is a rubber-based adhesive that provides a bond to the floor surface. Firm application pressure helps develop better adhesive contact and improve bond strength. The bond strength will build over time reaching maximum strength at 72 hours. FAR-25-.853

P/N 09-02133..... **$41.75**

3M PPS STARTER REFILL PACK STANDARD FILTERS



The PPS™ Starter Kit Refill Pack provides an economical way to begin experiencing the benefits of the PPS system: minimal use of cleaning solvent, increased technician efficiency, decreased material consumption, reduction of cycle time. 3M PPS™ Starter Refill Pak Standard Size contains12 disposable lids and liners with 125 micron filters and 1 bag of sealing plugs; for Automotive over the counter sales

125 micron filters are ideal for most water-based paint systems: base-coat; can be used with primers, sealers,and clear coats. Please refer to paint manufacturer's recommended filter size.

P/N 09-04614..... **$39.75**

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3M™ TAPE - MASKING

3M™ SCOTCH® FINE LINE TAPE 218



This 3M tape is particularly suitable for pin striping, multicolor and other custom painting applications. It is a thin, conformable green polypropylene film tape with a special finish that resists paint runoff. The adhesive adheres instantly and offers good holding power, resists lifting and curling. Stretchable and easy to handle. Provides an extremely fine color-line separation for decorative painting of aircraft. Scotch No. 218.

Width	Length	Part No.	Price
1/8”	60 Yards	09-20200	**$14.50**
1/4”	60 Yards	09-20300	**$11.50**
1/2”	60 Yards	09-20400	**$13.95**
3/4”	60 Yards	09-20500	**$16.50**
1”	60 Yards	09-01348	**$21.75**

3M™ ALUMINUM FOIL TAPE 425



Dead-soft aluminum foil tape. Applications include masking of sensitive components to protect from damage during aircraft paint stripping. In white goods appliances, tape provides an excellent moisture barrier, helps reflect and dissipate heat.

Size	P/N	Price
1.5” x 60 Yards	09-01382	**$45.50**
1” x 60 Yards	09-01381	**$29.95**
2” x 60 Yards	09-01383	**$65.75**
3” x 60 Yards	09-01385	**$93.75**

3M™ VHB™ TAPE 4950



45.0 mil thick, white closed cell acrylic foam carrier with all purpose acrylic adhesive and paper liner. High strength, handling convenience, cushioning, damping and impact resistance. UL listing 746C.

Size	Color	Part No.	Price
1”x36yds	White	09-01360	**$114.75**
2”x36yds	White	09-01389	**$247.95**

3M™ VINYL TAPE



3M™ Vinyl Tape 471, ideal for masking, wrapping or sealing many curved or irregular surfaces, excellent for many lane and safety marking applications, ideal for color coding, abrasion protection, decoration and splicing applications

Color	Size	Part No.	Price
Black	2” x 36 Yards	09-02179	**$39.50**
White	1” x 36” Yards	09-02076	**$20.95**

3M™ DOUBLE COATED FILM TAPE 415



A medium-firm, acrylic, pressure sensitive adhesive that featuring an excellent balance of good initial adhesion (quick stick) and good shear holding power. It is ideal for bonding together a wide variety and dissimilar materials such as metals, glass, wood, paints, and many plastics.

Size	Color	Part No.	Price
2”x36yds	White	09-01343	**$50.95**

3M™ SCOTCH® HIGH PERFORMANCE MASKING TAPE 232



A high performance paper masking tape to be used in the medium temperature paint bake operation. A smooth crepe paper tape that is treated with a heat and solvent resistant coating.

Size	Part No.	Price
48MM	09-01340	**$6.50**
72MM	09-01331	**$8.75**

3M MASKING POLY TAPE 5903 (RED)



5903 is a poly tape comprised of heavy duty polyethylene film and synthetic rubber adhesive. It is UV weather resistant and removes cleanly for up to a month with little or no adhesive residue on most opaque surfaces without deteriorating or fading. Used for window and door masking, outdoor holding and protecting surfaces including stucco, concrete, brick, and a variety of construction surfaces where removability is important.

P/N 09-02136.....**$11.50**

3M ALUMINUM PROP TAPE



3M™ Aluminum Foil Tape 427, dead-soft aluminum foil backing, excellent heat and light reflection to protect against high temperatures and U.V. degradation. The foil also serves as an excellent barrier against moisture, dust, flame, and certain chemicals as used in aircraft paint stripping masking. Acrylic adhesive supplies superior temperature, U.V. and solvent resistance. It provides excellent age life and is ideal for harsh, long-term outdoor environments. Meets F.A.R 25.853(a), O447 **Sold by the Foot**

P/N 15-04831 .....**$0.67**

3M™ SCOTCH® SAFERELEASE™ BLUE PAINTERS MASKING TAPE 2090



Ideal for long-term masking projects when tape must be left on for up to a week. Removes cleanly and easily for up to seven days without leaving adhesive residue.

Size	Part No.	Price
1”	09-01421	**$9.50**
1-1/2”	09-01422	**$6.90**

Size	Part No.	Price
2”	09-01423	**$8.50**



3M™ SCOTCH® STEEL GRAY MASKING PAPER

Strong, flexible and pliable. Formulated to resist penetrations of solvents, lacquers or enamels. Comes in 1000 rolls.

Description	Part No.	Price
Gray Masking Paper 12”	09-01353	**$68.75**
Gray Masking Paper 18”	09-01354	**$103.75**
Gray Masking Paper 24”	09-01355	**$124.85**
Gray Masking Paper 36”	09-01356	**$205.95**

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3M™ NOVEC™



3M™ NOVEC™ FLUX REMOVER - Effectively removes rosin solder fluxes, waxes and similar contaminants found in electronics manufacturing and repair. Based on proprietary 3M solvent technology; it is non-flammable, non-ozone depleting and contains no HCFCs, HFCs, nPB or HAPs. 12oz can, 6 can per case.
PN 09-01702 ..... **$21.65**



3M™ NOVEC™ CONTACT CLEANER - Effectively removes light oils, greases, silicones, dust and particulates from sensitive electrical and electronic equipment. It is compatible with plastics, is non-flammable, non-ozone depleting and contains no HCFCs, HFCs, nPB or HAPs. 11oz can, 6 can per case
PN 09-01704..... **$21.75**



3M BODY FILLERS

3M premium fillers with adhesion promoters, offer the very best in all-around performance. Our premium fillers adhere to virtually any surface including wood, metal, aluminum, galvanized steel, fiberglass and concrete. They are also non-staining, non-shrinking, creamy and are great for building plugs, patterns, molds, prototypes and general repair to composite parts. 3M premium fillers are easy to sand and are manufactured with only the highest quality ingredients.

Description	Size	Part No.	Price
Marson™ Platinum™ Body Filler	Gallon	01-01091	**$47.99**

STANDARD BODY FILLERS



3M standard fillers are the economical choice for gap filling, fairing, smoothing and general repair. They are also great for plug, pattern and tooling departments for creating and building shapes, curves and intricate elements to molds and patterns. They are easy to mix, apply, and sand, and have a quick cure time. Great for quick repairs to fiberglass, wood, metal concrete and aluminum.

Description	Size	Part No.	Price
Dynatron ™ Dynalite™ Body Filler	Quart	01-01072	**$14.80**
Dynatron ™ Dynalite™ Body Filler	Gallon	01-00368	**$28.99**

3M™ PAINT PREPARATION SYSTEM (PPS™) CUP AND COLLAR, 16023



3M™ PPS™ Cup and Collar, 16023 Large hard cup that supports and holds the PPS large flexible liner, part number 16024. If filled to the top, this cup will hold 32 fl oz.
P/N 09-01717..... **$25.50**

3M™ PPS™ MINI CUPS & COLLARS 16115



Hard cup that supports and holds the PPS mini flexible liner, part number 16114. If filled to the top, this cup will hold 6 fl oz.P/N 09-01720..... **$30.50**

3M™ PPS™ MIXING CUP AND COLLAR, 16001



Small, hard cup that supports and holds the PPS small flexible liner, part number 16000.
P/N 09-01715..... **$34.90**

3M™ PPS™ ADAPTOR, 16054, TYPE 18



Adaptor converts DeVilbiss TGHV 530 Siphon Feed and all Full Size Siphon Feed Guns with North American 3/8 Female-18 Thread NPS guns for use with 3M™ Paint Preparation System.
P/N 09-01716.....**$31.50**

3M PPS LARGE MICRON FILTER KIT



PPS™ is a complete painting system from 3M™ which produces cleaner jobs, saves on solvent usage and gun cleaning time and can improve operator efficiency by as much as 15%. Specifically designed adapters allow painters to use the PPS™ system with virtually any spray gun.
Kit contains 25 disposable lids with 200 micron filters, 25 disposable liners, and 10 sealing plugs. The 200 micron filters are recommended for traditional solvent based paint or primer applications. Graduated measurement to 28 oz/840 mL - with mix ratio film insert - . Maximum capacity of 32 oz/950 mL when filled to within 1/8 inch of rim. P/N 09-01718..... **$76.80**

3M PPS MINI MICRON FILTER KIT

Kit contains 50 disposable lids with 200 micron filters, 50 disposable liners, and 20 sealing plugs. The 200 micron filters are recommended for traditional solvent based paint or primer applications. Graduated measurement to 5 1/2 oz - with generic mix ratio film insert - . Max. capacity of 6 fl oz. P/N 09-01719..... **$99.65**

REINFORCED FILLERS



3M's line of reinforced filler products offers users a unique and flexible array of repair solutions. Each product is reinforced with short fiberglass strands, long fiberglass strands or milled fiberglass. These reinforced fillers are significantly stronger than regular fillers and are waterproof. Great for repairing fiberglass and rust holes in metal.

Description	Size	Part No.	Price
Dynatron ™ Dyna-Glass™ Reinforced Filler	Quart	01-01073	**$19.90**
Dynatron ™ Dyna-Hair™ Reinforced Filler	Gallon	01-01103	**$56.75**

3M™ PRODUCTS – WINDSHIELD REPAIR

3M ACCUSPRAY GUN SYSTEM



All inclusive spraying solution providing the equivalent of multiple brand new spray guns on demand, for a fraction of the cost. The innovative Accuspray™ replaceable atomizing head spray gun eliminates spray gun maintenance kits and the replaceable transparent atomizing heads allow the user to visually confirm the spray gun is clean.
In the box: • Kit contains 1 each Accuspray™ ONE Spray Gun with color indicator rings 4 Accuspray™ atomizing heads in sizes 1.4 and 1.8mm • 1 airflow control valve • 5 each liners and lids (1 each w/ 125 micron filter, 4 each w/ 200 micron filter) • 1 each standard size 22oz PPS™ hard cup and retaining ring • 1 mixing/measuring insert and an instruction manual
P/N 09-04613 .....**$214.00**

3M ACCUSPRAY ATOMIZING HEADS



Approved 3M replacement part. Use with any 3M™ Accuspray™ Replaceable Nozzle Series Spray Gun. The transparent atomizing head offers visual confirmation that the gun is clean. Head can be removed, discarded and replaced for the performance of a brand new spray gun on demand. Works with solvent-based and waterborne materials for 1.4mm applications (eg sealer or paint).

Boosts Productivity
Lowers application time
High delivery rates
Eliminates costly gun maintenance
Builds mil thickness quickly
Maximizes Benefits of the 3M™ PPS™ System
Reduces spray gun cleaning time
Uses less solvent for clean up
Decrease hazardous waste disposal cost
Reduces Coating Consumption
Minimizes overspray
Reduces coating waste
1.4mm ..... P/N 09-04640.....**$7.90**
1.8mm ..... P/N 09-04641.....**$7.50**
2mm ..... P/N 09-04638.....**$27.50**



3M™ ROLOC BRISTLE DISK KIT

Convenient introductory packs containing 50, 80, and 120 grade discs. A disc pad is also included to optimize performance and alignment.
2" Disc ..... P/N 09-03014 .....**$89.65**
3" Disc ..... P/N 09-03015 .....**$115.95**



WINDOW INSPECTION PRISM POLISHING KIT

Window inspection prisms are primarily used by shops and owners of pressured aircraft to look inside window panes and examine for cracks around the mounting holes.
Naturally, these prisms must be perfectly transparent so that examiners have a clear view when performing inspections. However, prisms get scratched over time and need to be polished to remove any damage and regain their transparency. Such care is not only a cost-effective means of prolonging a prism's life, but it's a big plus for safety as well.
Aircraft Window Repair (AWR) believes that many of the prisms currently in use are in desperate need of polishing..... P/N 09-05328 .....**$49.95**

2-STEP AVIATION WINDOW RESTORATION SYSTEM KIT



Note: Step 3 is not included in this kit and not recommended.
Removes scratches, hazing and other imperfections from acrylic and polycarbonate aircraft windows. Restores clarity and keeps windows looking "factory-new!"
The Aviation Window Restoration System by Clearfix™ Aerospace is an easy to use, two-step process designed specifically for use on acrylic and polycarbonate aircraft windows.
The two steps restore clarity and optical properties by removing scratches, hazing and other imperfections incurred in normal use, degradation due to suncaused oxidation, and scratching from sand and salt crystals.
Just prep, apply and fly!
With this easy-to-use system, your windows can be restored to like-new condition without the hassle of removing them. And it's fast – 60 minutes after application, you're ready to fly! ..... P/N 13-13064 .....**$288.95**



3M™ FINISHING GLAZES

3M finishing glazes are the right choice when contouring and finishing surfaces or repairing minor surface imperfections prior to painting. Each product is self-leveling and easy to apply and sand. They will not stain/bleed through paint and adhere to most surfaces, including primed and painted surfaces.

Description	Size	Part No.	Price
Dynatron ™ Xtra Glaze™ Finishing Glaze	24fl. oz Tube	01-01095	**$18.50**



3M™ SPREADERS

A special, flexible spreading edge makes precise application of body fillers, putties and glazes a breeze. Cured body filler will easily pop off the spreader, allowing it to be reused.

Description	Color	Size	Part No.	Price
Dynatron ™ Spreader	Yellow	3" x 4"	01-01105	**$0.72**



3M™ MIXING BOARDS

Clean, wax-free surface for mixing body filler. Cured body filler can be easily removed, allowing repeat uses or use the disposable paper board that offers a non-porous, wax-free surface and easy disposal.

Description	Size	Part No.	Price
Dynatron ™ Mixing Board	12 " x 11.5"	01-01107	**$5.65**
Marson ™ Disposable Paper Mixing Board	100 - 10" x 10"	01-01108	**$19.65**

ORDER ONLINE!
www.aircraftspruce.com
• 100,000 Parts!
• 24 Hour Access!
• Fast, Easy Navigation!

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MEGUIAR'S PRODUCTS



MEGUIARS ULTIMATE PROTECTANT

For superior UV protection and shine on rubber, vinyl and plastic that lasts weeks, look no further than Meguiar's Ultimate Protectant. Utilizing break-through UV clear-coat technology, Ultimate Protectant offers superior UV protection with shine that significantly outlasts conventional products, creating a rich shine and darkness on interior surfaces, while bringing new life to exterior trim, moldings and tires. Quantity: 16 ounces.

P/N 09-03437 .....**$8.95**



MEGUIARS ULTIMATE BLACK

Makes trim and plastic look like new, with extended durability that lasts for weeks! Restore new life to all exterior plastic, vinyl and rubber trim such as bumpers, moldings, door handles, rearview mirror housings and windshield cowlings. Utilizing breakthrough UV clear-coat technology, Meguiar's Ultimate Black significantly outlasts conventional protectants and trim-care products. This durable formula dries almost instantly and, once cured, will not streak when treated surfaces get wet. Quantity: 12 ounces.

P/N 09-03442 .....**$8.95**

MEGUIARS PROFESSIONAL DA POLISHER 110-127V



Born out of the desire to give professional detailers and body shops the very best solutions to deliver flawless results time after time is Meguiar's MT300 Dual Action Polisher. Designed by professionals, for professionals, the MT300 delivers features that pros demand. From the lightweight, ergonomic form, to the billet counter weight with multi bearing design, to Meguiar's Digital Torque Management speed controller, the MT300 is destined to be the workhorse polisher in shops around America. When used as the system foundation for our new, low-profile Soft Buff Foam Discs or our breakthrough DA Microfiber System, Meguiar's enables you to start achieving the results that you expect & need! Wide 3000 – 7500 OPM speed range for maximum control. 8mm throw optimized for compounding, polishing and waxing on both large surfaces & in tighter contours. Digital Torque Management ensures proper torque to maintain load speed level. Machine does not include backing plate or pads.

P/N 09-04525 .....**$279.95**



MEGUIARS ROTARY FOAM CUTTING PAD 7 INCH - Improved foam technology cuts through moderate surface defects with less swirls. Reduced operating temperature. 7" pad size reduces chatter resulting in smooth, easy buffing. Recessed backing for easy centering. For use with rotary polisher and WRBP (09-04522) backing plate.

P/N 09-04523..... **$15.55**



MEGUIARS ROTARY FOAM FINISHING PAD 7 INCH - Improved foam technology eliminates minor surface defects while restoring a luxurious high-gloss finish. 7" pad size reduces chatter resulting in smooth, easy buffing. Recessed backing for easy centering. For use with rotary polisher and WRBP (09-04522) backing plate.

P/N 09-04524..... **$15.55**



MEGUIARS ROTARY BACKING PLATE - Designed for 7" & 8" Soft Buff™ rotary pads. Allows quick and easy pad changes with hook & loop attachment system. Self-centering system guarantees pad balance. Fits all rotary polishers with 5/8" diameter shaft.

P/N 09-04522..... **$25.50**



MEGUIAR'S MIRROR GLAZE

PLASTIC POLISH (NO. 10) - Safely restores and maintains optic clarity to all clear plastics. This complete one-step product keeps new and like-new transparent plastics in perfect condition with a static-free coating that repels dust. Meets Military Spec MIL-C-5547 and MIL-C-18767A(ASG).

8 Oz. P/N 09-23300 .....**$7.50**



PLASTIC CLEANER (NO. 17) - Safely removes fine "hairline" scratches and grime from clear plastic windows and windshields, acrylic and polycarbonate surfaces. Follow with an application of Plastic Polish (No. 10) to restore perfect clarity.

8 Oz ..... P/N 09-23500.....**$7.50**



CLEAR PLASTIC CLEANER/POLISH (NO. 18) - Mirror Glaze #18 restores optical clarity and removes surface residue. Its anti-static formula repels dusts and its one-step action saves maintenance time. Just spray on and wipe dry to safely remove surface contaminants and restore optic clarity.

8 oz. .....P/N 09-23800.....**$7.50**



FINAL INSPECTION (NO. 34) - Mists on and wipes off to remove fresh contaminants and maintain a showroom shine... anywhere, anytime. High lubricity formula removes dust, fingerprints, contaminants and fine scratches. Contains optical brighteners for a high gloss shine. It is "paintable", safe for use in a paint shop environment and safe on all paint finishes, including clear coats.

16 Oz. .....P/N 09-00446.....**$7.50**
1 Gal. .....P/N 09-00445.....**$29.95**



VINYL & RUBBER CLEANER/CONDITIONER (NO. 40) - Gives a clean, natural looking luster to rubber and vinyl surfaces. Cleans the surface while restoring its original color. Prevents fading, cracking & drying. Avoids typical synthetic shine of conventional protectants. Contains UV protectants to extend life of vinyl & rubber. Great for use on tires, rubber trim, under hood detailing. Perfect for vinyl surfaces, including dashboards, door panels, vinyl tops and interiors.

16 Oz. .....P/N 09-23450.....**$11.50**
1 Gal. .....P/N 09-23460.....**$34.85**



POLYMER SEALANT (M-20) - Polymer Sealant outshines any other wax or polymer product. It has a unique blend of polymers, silicones and imported waxes which create a brilliant high gloss finish that outlasts all other waxes. Polymer Sealant is safe and effective on all paint finishes, including clear coats. 16 oz..... P/N 09-00764 ....**$20.50**
64 oz..... P/N 09-00185 ....**$41.75**



MEGUIARS DA FOAM CUTTING DISCS - Improved foam technology cuts through moderate surface defects with no swirls. Low profile for optimized performance Advanced finishing results from increased disc and tool efficiency. For use with Dual Action Polisher and DBP5 (09-04559) / DBP6 (09-04533) backing plate.

5" ..... P/N 09-04536..... **$9.65**
6" ..... P/N 09-04526..... **$11.50**



MEGUIARS DA FOAM FINISHING DISCS - Improved foam technology eliminates minor surface defects while restoring a luxurious high gloss finish with no swirls. Low profile for optimized performance. Advanced finishing results from increased disc and tool efficiency. For use with Dual Action Polisher and DBP5 (09-04559) / DBP6 (09-04533) backing plate.

5" ..... P/N 09-04534..... **$9.65**
6" ..... P/N 09-04528..... **$11.50**



MEGUIARS DA BACKING PLATES - Distributes pressure for smoother sanding and finishing. Precisely tuned outer edges for ideal disc contouring over flat and curved surfaces. Quick and easy disc changes with micro hook and loop attachment system. Fits all DA Polishers with 5/16" diameter shaft.

5" ..... P/N 09-04559..... **$20.95**
6" ..... P/N 09-04533..... **$19.90**



MEGUIARS DA FOAM POLISHING DISCS- Meguiar's innovative low profile Soft Buff DA Foam Polishing pads are optimized for advanced polishing results from increased pad and DA polisher efficiency. Improved foam technology eliminates minor surface defects while restoring gloss with no swirls.

5" ..... P/N 09-04535..... **$9.65**

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MEGUIAR'S PRODUCTS

MEGUIAR'S GOLD CLASS



GOLD CLASS CAR WASH SHAMPOO & CONDITIONER - Meguiar's® Gold Class™ Car Wash Shampoo & Conditioner is a rich and luxurious product designed to both wash and condition paint in one easy step. The premium formula gently foams away tough dirt, road grime and contaminants without compromising wax protection. Ultra rich paint conditioners clear away debris to reveal color and clarity, leaving paint looking radiant

64oz. ..... P/N 09-02331 ..... **$10.75**



GOLD CLASS WAX - Elegant, timeless, premium...Since its introduction, Meguiar's® Gold Class™ Liquid Wax has inspired automotive enthusiasts worldwide to pamper, condition and protect their treasured investments. Our unique and proprietary blend of conditioners nourish and enrich paint to create clear, deep reflections and brilliant shine. Carnauba and polymer protecting agents reflect damaging UV rays, remove fine swirls, and create strong, long-lasting protection to preserve your finish.

Liquid ..... P/N 09-02333 ..... **$14.85**
Paste..... P/N 09-02334 ..... **$16.95**



GOLD CLASS™ RICH LEATHER LOTION, SPRAY & WIPES - Meguiar's® Pamper and protect your leather in one easy step with Meguiar's improved Gold Class Rich Leather Cleaner & Conditioner Lotion, Spray and Wipes. The enhanced, premium blend of moisturizers and nutrients - now with aloe for improved conditioning - quickly absorbs into leather for a natural, nongreasy finish. The convenient spray format is great for large areas or when working on perforated leather. The wipes feature 25 thick, textured wipes saturated with our enhanced, premium blend of moisturizers and nutrients deeply nourish fine leather. Each contains advanced sun-blocking agents and UV sunscreens to help defend against premature wear and fading.

Lotion P/N 09-02346 ..... **$7.65**
Spray ..... P/N 09-02316 ..... **$8.50**
Wipes..... P/N 09-02317 ..... **$6.50**



QUIK INTERIOR DETAILER - The fastest way to clean all interior surfaces. Use every time you wash or Quik Detail your paint to give your interior that "just detailed" look. In just 5 additional minutes, your entire interior will look sharp and smell fresh. Quickly and easily maintains the look and feel of interior plastics, vinyl, leather, rubber, metal and even audio/video equipment. The safe, high lubricity formula lifts off dust, ashes, dirt, grime, spills and fingerprints without build-up. And, unlike traditional protectants that leave an artificial greasy feeling, Quik Interior Detailer leaves your interior surfaces looking natural and revitalized.

Spray ..... P/N 09-02339 ..... **$5.95**
Wipes ..... P/N 09-02340 ..... **$5.95**



SUPREME SHINE PROTECTANT - With the addition of Supreme Shine Protectant to the Meguiar's® line-up, Meguiar's now has a protectant family that offers users the ability to choose from two different levels of shine. For those who love shine, Supreme Shine Protectant is the fastest and easiest way to create a hi-shine surface on vinyl, rubber, and plastic surfaces.

450ml ..... P/N 09-02349 ..... **$5.55**



NATURAL SHINE PROTECTANT - Maintain that "like new" look on dashboards, trim, tires and more. Natural Shine's complex formula includes mild cleaning agents that help remove daily dirt and grime and restore the original, natural finish. Includes UV blockers to help reduce the effects caused by the sun. P/N 09-02342 ..... **$5.40**

MEGUIAR'S CLASSIC



DEEP CRYSTAL® CAR WASH - Contains special ingredients that extend the life of the suds. Dirt and grime are quickly loosened and removed while wax protection is preserved. For unparalleled performance, use with Meguiar's® Microfiber Wash Mitt.

P/N 09-02337 ..... **$5.75**



CLEANER WAX - Meguiar's® most versatile, one step wax specially formulated to produce eye-dazzling results on all finishes. Rich conditioning oils and legendary gentle cleaning ability make it an excellent choice for daily drivers exposed to the elements.

Liquid ..... P/N 09-02318 ..... **$9.85**
Paste..... P/N 09-02319 ..... **$10.50**



DEEP CRYSTAL® SYSTEM CARNAUBA WAX - Creates a strong, protective barrier on your paint that locks in shine and gloss. Our long-lasting, tried-and-true formulation utilizes the highest grade of carnauba to protect all paint surfaces, including clear coats.16oz. P/N 09-03426 ..... **$8.50**



SMOOTH SURFACE® CLAY KIT - Removing above surface bonded contaminants and restoring a smooth surface to your paint finish is easily accomplished by using this Clay Kit. The non-abrasive clay bar safely, easily and instantly removes bonded contaminants as you rub it across the surface of your car using a mist & wipe product, like Meguiar's Quik Detailer® as a lubricant. Meguiar's Smooth Surface Clay Kit contains everything you need to create a smooth surface! Clay Kit includes: two 50 gram clay bars, individually wrapped & in a moisture-seal case, Quik Detailer for use as a clay lubricant, Cleaner Wax sample & Meguiar's Supreme Shine® Microfiber Towel.

Clay Kit ..... P/N 09-02338 ..... **$22.80**



QUIK DETAILER® - Keeps a waxed car looking "just waxed". Clear coat safe, Meguiar's Quik Detailer removes harmful contaminants before they damage your finish. Use Quik Detailer right after your car is sprayed by a water sprinkler, hit by a bird dropping, or exposed to any other condition that ruins your "just waxed" appearance. Details a full sized car in less than 15 minutes!

16oz. ..... P/N 09-02322 ..... **$6.95**
32oz. ..... P/N 09-02323 ..... **$8.95**



MEGUIAR'S QUIK WAX - This wax creates a brilliant gloss and adds wax protection. Use on wet or dry surface. Quickly and easily maintains gloss between periodic waxings. Suitable for use on fiberglass, painted surfaces, stainless steel, clear plastic and other non-porous surfaces (Do not use on glass windows). Use wax only after the surface has been cleaned and restored to a "like new" or "average" finish. 24 oz.

P/N 09-04564 ..... **$6.95**



MEGUIAR'S DETAILER SYNTHETIC XPRESS SPRAY WAX

Meguiar's® Synthetic X-Press™ Spray Wax uses a unique blend of Hydrophobic Polymer Technology™ to produce durable deep rich gloss with easy application and instant wipe off. VOC FREE Formula.

- Create deep dark wet-look shine
- Can be applied in direct sunlight
- Dries clear on plastic trim
- Fast wet or dry car application

Gallon..... P/N 09-04689 ..... **$30.80**

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MEGUIAR'S PRODUCTS

MEGUIAR'S CLASSIC



SWIRLX - Car Guys are constantly asking how to best remove swirl marks/spider webs/holograms to restore crystal clear reflections and have a flawless, show-car shine. SwirlX Swirl Remover effortlessly removes swirl marks while improving color and clarity. SwirlX can be applied by hand or with our DA Polisher, and is a non-abrasive formula that gently smoothes away micro-fine swirl marks so you can have a flawless finish on all paints.16oz. P/N 09-02357 ..... **$8.50**



SCRATCHX® 2.0 - Keep ScratchX® 2.0 close at hand for quick removal of isolated paint scratches or blemishes … whenever they occur. Competitive products either hide the blemish or scratch the finish. Meguiar's® exclusive micro-abrasive system enables ScratchX 2.0 to remove paint blemishes fast while restoring brilliant high gloss. The new and improved formula can be applied by hand or with a DA.

P/N 09-00304 ..... **$9.95**



PLASTX CLEAR PLASTIC CLEANER & POLISH - This easy-to-use, rich gel formula quickly restores optical clarity to both rigid and flexible clear plastics. Cutting-edge advancements in Meguiar's® exclusive Microscopic Diminishing Abrasive™ Technology (MDAT) remove light oxidation, chemical degradation, surface contamination, stains and light surface scratches with ease. Special highly water resistant polymers provide long lasting durable protection to keep your clear plastics clear and beautiful longer. We recommend applying PlastX with a High Tech Applicator Pad or Ultra Plush Super Terry and using an Ultra Plush Super Terry or Supreme Shine® Microfiber for the final wipe-off.

P/N 09-02324 ..... **$7.75**



MEGUIARS ENDURANCE AEROSOL TIRE SPRAY

Our best performing, longest lasting aerosol! Endurance is a significant advancement in tire protection technology. Proprietary macropolymers and copolymers protect against UV damage and tire browning. The end result is that your tires stay black – with a rich, dark, high-gloss shine – for weeks longer than ordinary tire-shine products. See for yourself why Endurance is the enthusiast's favorite for high-gloss shine that lasts! Quantity: 15 ounces.

P/N 09-03440 ..... **$9.50**



MEGUIARS HOT RIMS METAL POLISH

Meguiar's® Hot Rims™ Metal Polish is formulated to quickly restore dull metals to a brilliant mirror-like finish. With advanced SMAT (Super Micro Abrasive Technology) you will get a significant cut and a fine finish without scratching or micro marring that is safe and effective on all uncoated metals and chrome. Hot Rims Metal polish will also provide amazing results by hand or when paired with Meguiar's Hot Rims Wheel Polisher. 10 oz.

P/N 09-05343 ..... **$8.60**



SUPREME SHINE® MICROFIBER TOWEL

Meguiar's® Supreme Shine® is an incredibly plush microfiber towel for producing swirl free, mirror-like results. The thick, deep dual-sided microfiber pile absorbs two times more than traditional terry towels providing faster wipe off with less strokes.

3-pk..... P/N 09-02354 ..... **$6.50**



MICROFIBER WASH MITT - Meguiar's® extra thick Microfiber Wash Mitt is the ultimate choice for show car perfect finishes. The clear coat safe Microfiber lifts and traps dirt and grime for a brilliant, swirl-free finish. The comfort-fit cuff and soft inner lining make this wash mitt a pleasure to use.

P/N 09-02355 ..... **$5.35**

EVEN COAT™ MICROFIBER APPLICATOR PADS

- Meguiar's® Even Coat™ microfiber applicator is the ultimate pad for swirl free, show car perfect results. Gentler than a foam pad, this applicator is ideal for ultra fine polishing and waxing. Its large, 5 inch surface area allows for faster polishing and waxing. P/N 09-02356 ..... **$4.35**



MEGUIAR'S NXT GENERATION



NXT GENERATION® TECH WAX® 2.0 - NXT Generation® Tech Wax® 2.0 is a scientific breakthrough that introduces a new dimension of gloss and protection. This improved formula produces unbelievably deep, vibrant color and a dramatically clear wet-look. New Hydrophobic Polymer Technology™ provides relentless water beading and protection against oxidation, corrosion, UV rays and surface degradation. "Hydrophobic" means "water-fearing" and this new breakthrough technology builds such incredible protection and surface tension that water beads up and just glides off your paint finish, wash after wash!

Liquid..... P/N 09-02328 ..... **$19.70**

AERO WASH WAX MOP KIT



Wash Wax Mop Kit: ALL you need to get started with the New Waterless Wash Wax Mop. The Wash Wax Mop was specifically designed for aircraft and is the only mop with two sides. One wet and one dry. Now you can waterless wash and wax with the reach and leverage of an extension pole. This allows you to clean a much larger area faster and with less effort, all from the safety of the ground. No ladder needed. Customers report time savings up to 50% over waterless hand application. Simply spray Wash Wax ALL on the Wet Side of the mop, wipe the aircraft with the wet side, flip the mop over, and wipe dry with the dry side. Includes: (1) Mop head with two (2) Microfiber Mop pads , (1) Deluxe Mop Pole, (1) Pack of four (4) Microfiber Mop pads, (1) Pack of four (4) Aero Towels (1) Gallon of Wash Wax ALL, (1) 16oz spray bottle, (1) 16oz Wash Wax ALL (Degreaser), (1) Aero Scrubber Pad with Handle and an Aero Bag to store and carry the kit.

Wash Wax Mop Kit ..... P/N 09-03502 ... **$199.95**
Replacement Waterless Mop Pads (4)..... P/N 09-03503 ..... **$29.95**

PERMASHINE BUMPER AND CLADDING COAT TEXTURED PLASTIC RESTORER

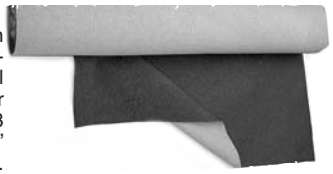


PermaShine is designed to protect new textured plastics from fading and to restore the appearance of faded textured plastics. PermaShine will provide permanent protection and gloss enhancement for textured TPO plastics, and it sticks so well that a pressure washer cannot blow it off. PermaShine can be applied by spray gun or roller for added convenience. **Features**: • There is nothing else on the market that works like PermaShine - it is totally unique. • Permanently restores the appearance of faded textured plastics; not the quick-fading shine that silicone dressing provide. • PermaShine's adhesion to textured plastic is so good that it cannot be blasted off with a pressure washer.

11OZ Aerosol ..... P/N 09-02408 ..... **$21.50**
Quart..... P/N 09-02407 ..... **$59.95**
Gallon ..... P/N 09-02406 ..... **$199.95**

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FOAM CUSHIONING



Foam Cushioning is a dense* open cell foam that can be used for glare shield padding, side panel padding, seat cushioning and for soundproofing. Meets FAR 25.853 burn requirements. Width is 48" and is sold by the linear yard. Available in 1/8" and 1/4" and thickness. *Density (pcf)+/-.5 pcf=5

1/8" Foam cushioning ..... P/N 11-02062..... **$55.75/yd**
1/4" Foam cushioning ..... P/N 11-02063..... **$79.75/yd**

ABS PLASTIC SHEETS



ABS thermoplastic fire-rated sheet material can be used as a base material for making of glare shields and side panel backing. Easily cut, drill, saw, and grind this ABS sheeting. The plastic sheets have an excellent ductility and formability. Meets FAR 25.853 burn requirements. Smooth flat surface on one side and a matte finish on the other side. Color: Black. Sheet size is .063" x 23.5" x 54".

P/N 11-02054..... **$98.75**

FAUX LEATHER UPHOLSTERY MATERIAL



Superior Panel Technology's offers the latest technology in Faux Leather without the leather cost.
It can be used for seats, wall panels and headliners. It meets FAR 23.853(a) flammability requirements. It provides superior wear resistance (100,000 cycles), stretchable (which is great for headliners), abrasion resistance and excellent tailorability.
Width is 54", weight is 28 oz/linear yard and it is available in seven colors. See additional image for color chart or download PDF below.
Pricing is per linear yard. Request the sample by color number. Burn certificate is included with each order.

Faux Upholstery			Color Samples		
Color	Part No.	Price	Color	Part No.	Price
Sand 220	11-10641	**$45.75**	Sand 220	11-11140	**FREE**
Cream 500	11-10651	**$45.75**	Cream 500	11-11143	**FREE**
Coffee 800	11-10649	**$45.75**	Coffee 800	11-11141	**FREE**
Iron (Gray) 410	11-10638	**$45.75**	Iron (Gray) 410	11-11145	**FREE**
Blueberry 600	11-10642	**$45.75**	Blueberry 600	11-11146	**FREE**
Onyx Black 910	11-10656	**$45.75**	Onyx Black 910	11-11142	**FREE**
Cranberry 710	11-10652	**$45.75**	Cranberry 710	11-11144	**FREE**

COLOR-BOND LEATHER, VINYL & HARD PLASTIC REFINISHER



Color-Bond restores or changes the color of leather, vinyl, ABS plastic, PVC, polycarbonate, acrylic, fiberglass, lexan and thermal plastic urethane permanently. It is dry to the touch in 45 seconds and fully bonded in 10 minutes. It will not crack, flake or peel & gives complete grain simulation. You can change color over and over and never obscure the grain or affect the hand. It is now OEM approved by the Ford Motor Company. After 3-1/2 years of testing, the specification that Color-Bond passed is the first of its kind and is approved for worldwide use. Color-Bond will be distributed to the 5,200 Ford Quality Service Parts dealers of North America. It will also be used for repair of instrument panels, door panels and seats in all of the assemble plants. Color-Bond is excellent for restoration of aircraft seats, side panels, glare shields, and other items. Aircraft Spruce & Specialty Co. has been appointed as the aviation distributor for Color-Bond.



Color	Size	Part No.	Price
#3 Eggshell White	6 oz. Spray	13-01496	**$14.75**
#106 Black	12 oz. Spray	13-01495	**$19.50**
#108 Prairie Tan	12 oz. Spray	13-01497	**$12.75**
#105 White	12 oz. Spray	13-01499	**$19.00**
#107 Gray	12 oz. Spray	13-01498	**$17.50**

The color chart can be viewed on our website at: www.aircraftspruce.com

KLEAR-TO-LAND LIQUID CLEANER



"KLEAR-TO-LAND" is formulated primarily for aircraft windscreens – however, it can be and is used extensively for aircraft interior cleaning, including upholstery cleaning, fabric, plastic and leather.

Size	Part No.	Price
9 oz. Aerosol	09-04445	**$6.95**
1 Gallon	09-04446	**$27.85**
5 Gallon	09-04447	**$99.75**
55 Gallon	09-04449	**$889.00**

AERO PREP 500



"Aero-Prep #500" is unexcelled for safety and quickly removing exhaust stains as well as emulsifying and removing heavy grease and soil deposits before shampooing. It is a synergistic product that has many different applications such as removing and emulsifying grease from engines as well as removing grease from concrete floors. Biodegradable, nonflammable and nontoxic. Rinse free of film and residues.

Size	Part No.	Price
1 Gallon	09-04454	**$21.95**
5 Gallon	09-04455	**$75.95**
35 Gallon	09-04456	**$465.00**
55 Gallon	09-04457	**$349.00**

DEFLUSH 300



"De-Flush" is an effective deodorant, which neutralizes and destroys toilet waste odors. Dilutes instantly with water to form blue solution. Unique bubble gum scent. Biodegradable.

Size	Part No.	Price
1 Gallon	09-04450	**$16.95**
5 Gallon	09-04451	**$74.75**
35 Gallon	09-04452	**$309.00**
55 Gallon	09-04453	**$518.00**

AERO WASH AND WAX



Davies " Aero Wash N Wax" is a chemical breakthrough in liquid aircraft wash technology. It makes it possible to thoroughly wash and wax your plane in one operation! This amazing chemical discovery simply hoses to a bright luster, no chamoising is required, just apply with a sponge or soft brush, and hose it off. "Aero Wash N Wax" is recommended for all types of finishes.

Size	Part No.	Price
1 Gallon	09-04458	**$18.50**
5 Gallon	09-04459	**$85.75**
35 Gallon	09-04460	**$387.00**
55 Gallon	09-04461	**$555.00**

TOP GUN HANGAR CLEANER



Davies "Top Gun" is the 'best of the best' when it comes to cleaning Aircraft hangar floors. A special detergent is compounded into this highly built and buffered chemical system to remove tenacious soils associated with aircraft storage and maintenance. "Top Gun" is highly concentrated, and very cost effective for use. Pleasant, tropical aroma.

Size	Part No.	Price
1 Gallon	09-04462	**$17.50**
5 Gallon	09-04463	**$81.75**
35 Gallon	09-04464	**$355.00**
55 Gallon	09-04465	**$381.00**

SAFE MELT LIQUID



Features fast ice melting action, even at very low temperatures (-20° F). This product is a non-corrosive, safe on the environment, and complies with ASME 1435 and FAA specs. SAFE-MELT - liquid contains no glycol, therefore is less slippery than glycol based runway deicers.

Size	Part No.	Price
1 Gallon	09-04466	**$39.90**
5 Gallon	09-04467	**$137.80**
35 Gallon	09-04468	**$957.00**
55 Gallon	09-04469	**$1,479.00**

SAFE-MELT GRANULAR



Features fast ice-melting action, even at very low temperatures (0° F). This product is a non-corrosive, safe on the environment, and complies with FAA specs. SAFE-MELT - granular contains no glycol, and is less slippery than glycol based runway deicers.

Size	Part No.	Price
25 lbs.	09-04470	**$158.95**
275 lbs	09-04471	**$1,087.00**

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SUPER LID WITH SPOUT FOR 1 GALLON CONTAINERS

This two piece aqua lid has a wide mouth spout for easy pouring. Works with just about any 1 gallon paint can.

P/N 09-03784 ..... **$5.35**

55 GALLON LATCHING DRUM LIDS



Unique design makes it easier to access drum, minimize vapor emissions and meet haz-waste regulations. For 55-gal. New & Reconditioned Open-head Steel Drums. Hinged with One Hand Latch. Latching handle easily opens and closes with one hand. Nitrile gasket and locking mechanism seal lid to help reduce vapor emissions and keep drum contents dry and secure. Easy-access lid closes securely to help you meet haz-waste regs. Hinge stops keep funnel lid upright when open. Durable, chemical-resistant powder coat helps ensure long service life. Lockable latch helps prevent unauthorized access. Hinge pin is made for easy lid removal without loosening band around drum. Multiple lid color options allow you to segregate drums for safe, compliant filling.

Black..... P/N 08-07708 ..... **$298.95**
Red..... P/N 08-07709 ..... **$298.95**
Yellow..... P/N 08-07710 ..... **$298.95**

POURING PAL



Just Snap It On! One size fits pint, quart, gallon and 4 liter paint cans. Snaps onto inner rim of paint can to keep paint out of the gutter and ensure a goo seal after use. P/N 09-22210.....**$0.86**

PAINT STIRRING PADDLE



P/N 09-22205 .....**$0.19**

EXTEND-A-LUBE SUPER STRAWS (PACKAGE OF 3)

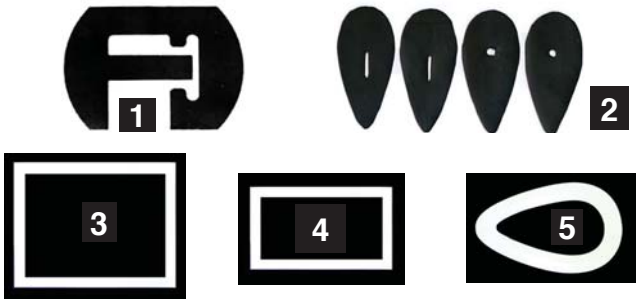


Super Straws reduce or eliminate messes from overspray. The high grade plastic is extremely chemical resistant and can be used with various lubricants, harsh degreasers, and compressed gases. Super Straws increase the range and utility of aerosol products by using a 16" high grade plastic tube to access those hard to reach places.

Easily cut to any length using a knife or scissors, Extend-A-Lube Super Straws are proudly manufactured, packaged, and sold in the U.S.A.! P/N 09-02398..... **$3.50**

STARTEX COATINGS

Description	Part No.	Price
TT-T266B Lacquer Thiner Gallon	09-03026	**$24.95**
TT-T266B Lacquer Thiner Five Gallon	09-03025	**$86.80**
O-A-51 Acetone Gallon	09-03028	**$20.60**
O-A-51 Acetone Five Gallon	09-03027	**$61.75**
Toluene TT-T-548 Quart	09-03035	**$9.95**
Toluene TT-T-548 Gallon	09-03034	**$15.85**
Toluene TT-T-548 Five Gallon	09-03033	**$77.75**
Naphtha TT-T-95 Quart	09-03038	**$16.50**
Naphtha TT-T-95 Gallon	09-03037	**$20.50**
Alcohol TT-I-735A Quart	09-03042	**$10.50**
Alcohol TT-I-735A Gallon	09-03041	**$19.95**
Alcohol TT-I-735A Five Gallon	09-03039	**$77.85**
Mineral Spirits P-D-680 Five Gallon	09-03044	**$84.75**
Denatured Alcohol Gallon	09-03049	**$17.50**
Denatured Alcohol Five Gallon	09-03048	**$86.50**



PIPER INSPECTION FRAMES

1-Front & Rear Strut Opening Reinforcements .. P/N 09-00334... **$2.20/ea.**
2-Naugahyde Cable Seal Kit - 2 slotted fuselage and 2 aileron punched cable seals ..... P/N 09-00335... **$9.55/ea.**
3-Front Trim Yoke Inspection Frame ..... P/N 09-00336... **$1.65/ea.**
4-Underwing Inspection Ring Grommet..... P/N 09-00337... **$3.75/ea.**
5-Tear Drop Reinforcement..... P/N 09-00338... **$2.78/ea.**

POLYESTER FLANNEL

45" width. For leading edge..... P/N 09-01750.... **$8.50/yd**



PAINT STRAINERS

Cone type strainer. Medium mesh (48x36), for filtering all pigmented finishes.

P/N 09-22200... **$0.10ea.**



FLIGHT GLOSS 4 INCH ROLLER TRAY

Small tray fits the 4-inch roller. Bucket has a built-in roller board for quantity application.

P/N 09-00146..... **$3.50**



ECONOMY ROLOC DISC PAD ASSEMBLY

3 in. Disc Holder with 1/4 in. Shank. This flexible disc holder is made of reinforced rubber for a long service life. Twist-lock attachment works with conditioning and sanding discs. Nylon reinforced backing plate. Cast aluminum core plate. Twist-lock disc attachment. P/N 12-03769..... **$6.85**

3M™ PARTICULATE RESPIRATORS



P/N 09-01496

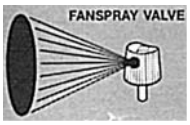


P/N 09-01497

Helps provide worker protection against certain non-oil based particles. Comfortable, easy to use, and promotes greater worker acceptance increasing wear time. Features 3M's patented filter media, nose foam, and adjustable noseclip that helps provide a secure seal and helps reduce eyewear fogging. Workplace applications: woodworking, grinding, sanding, sweeping, bagging, other dusty operations.

Description	Part No.	Price
8210 Standard dust mask	09-01496	**$1.15**
Vented dusk mask	09-01497	**$2.54**

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AIRCRAFT SPRAY COATINGS

All Tempo spray products feature the exclusive adjustable Fanspray valve which offers a professional spray pattern so anyone can "paint like a pro". The extra-width pattern evenly coats about 3 times the area with each pass compared with an ordinary spray valve. Packaged in 11 oz. to 16 oz. cans, depending on product.

Discount: 10% on 6 cans, 15% on 12 cans, 25% on 24 cans. (May be assorted.)

ULTRA-HIGH TEMPERATURE PAINTS

Exceptional durability up to 1200°F. Will not burn off, chip or peel when properly applied. No primer required. Ideal for exhaust stacks. Ultra-High Temperature paints air-dry in minutes but require curing at temperatures over 650°F.

White ..... P/N 13-1 ..... **$8.75**
Black ..... P/N 13-2 ..... **$8.95**
Aluminum ..... P/N 13-8 ..... **$9.65**



TEMPO MAINTENANCE & SPECIALTY PRODUCTS

Fluorescent Paint (Red/Orange) — Up to 4 times brighter than other colors. Ideal for aircraft, boat - wherever visibility is vital. For best results, use over light colored base.

P/N #18-1301 ..... **$7.85/ea.**

Chrome Paint — restores new chrome appearance to chromed surfaces. P/N#20-199 ..... **$7.85/ea.**

Scratch Filler Primer — Ideal for filling nicks, scratches, and minor surface imperfections. They dry fast, are sandable, and provide a smooth uniform surface for top coats.

P/N#7-3500 - Red Oxide ..... **$8.55/ea.**
P/N#7-4500 - Platinum Gray .. **$7.90/ea.**



PREMIUM SELF-ETCHING PRIMER

Etches and primes in one easy step. Can be used under all today's automotive finishes. Perfect for spot repairs. Creates superior adhesion on most plastics, fiberglass, bare steel, aluminum and stainless steel. Color: Green. 12oz. Spray Can P/N 09-02099 ..... **$9.85**



CAN-GUN

Can-Gun is an aerosol spray can trigger handle which makes painting, cleaning, and lubricating jobs safer and easier. The user-friendly form-fit handle and trigger eliminates finger fatigue and provides the user with accurate control over the amount, speed, and direction of spray. The built-in safety shield insures no more messy hands or fingers. Sprays virtually all spray paints, lacquers, polishes, cleaners, lubricants, sealers, and adhesives and Can-Gun fits most spray cans. P/N 09-14760 ..... **$1.85 ea.**



EPOXY PROPELLER COATING

Extends blade life. Tempo's Epoxy Propeller Coating is formulated with the extra adhesion and abrasion resistance needed to protect propellers from corrosion and wear. Compared to standard enamel and lacquer paints, our epoxy formula stays on the blade more flying hours; hence, with regular use, this formula can extend blade life.

Flat Black ..... P/N 09-00982 ..... **$8.95**
Med. Gray ..... P/N 09-00983 ..... **$8.95**
(Matches Hartzell OE Gray)
White ..... P/N 09-00992 ..... **$8.95**



KRYLON AEROSOL HIGH HEAT PAINT

Krylon High Heat & Radiator Paint is ideal for mufflers, radiators, and engine blocks. Withstands temperatures to 1200F. Guards against rust. Available in three colors. 12 oz. aerosol cans. 12 oz. Aerosol.

Aluminum ..... P/N 15-05467 ..... **$14.50**
White ..... P/N 15-08254 ..... **$15.95**
Black ..... P/N 15-08255 ..... **$12.75**



AIRCRAFT ENAMEL

Excellent adhesion to aluminum and steel

Tempo's Aircraft Enamel has been especially formulated to adhere to aluminum and steel; providing excellent corrosion resistance. Recommended applications are all interior and exterior aluminum and steel surfaces, including wheels, landing gear and inside door hatches. For propeller blades, we recommend Epoxy Propeller Coating.

P/N 09-00985 ..... Black **$8.50**
P/N 09-00989 ..... Gloss White **$8.50**
P/N 09-02070 ..... Flat Black **$8.50**
P/N 09-00988 ..... Flat White **$6.95**



TEMPO ENGINE ENAMEL

Resists heat to 500°F . Tempo's Aircraft Engine enamel withstands the high heat demands of aircraft engines. This modified chain-stop alkyd enamel formula has excellent corrosion and fuel resistance.

All Tempo spray products feature the exclusive adjustable Fanspray valve which offers a professional spray pattern so anyone can "paint like a pro". The extra-width pattern evenly coats about 3 times the area with each pass compared with an ordinary spray valve. Packaged in 11 oz. to 16 oz. cans, depending on product.

WARNING: POSSIBLE LINK BETWEEN CHROMATE PIGMENTS AND LUNG CANCER

Several independent technical studies have suggested that excessive inhalation of zinc chromate dust may cause lung cancer. If conditions are such that this limit may be exceeded, additional protective equipment is required. A respirator that has a NIOSH/MESA approval TC-23C. See catalog for respirators that meet this requirement.

Universal Gray ..... P/N 09-01268 ..... **$6.95**
Lyc. Gray ..... P/N 219 ..... **$8.50**
Olds Cont. Gold ..... P/N 239 ..... **$8.50**
Gloss Black ..... P/N 09-00995 ..... **$8.50**
Chevy Orange Engine ..... P/N 09-02405 ..... **$6.95**



AIRCRAFT LACQUER

Dries in under 15 minutes

Tempo's Aircraft Lacquer is ideal when a very fast dry is required. This blended nitrocellulose lacquer formula can be applied to all interior and exterior aluminum and steel surfaces, including wheels, landing gear and inside door hatches. When additional corrosion protection is required, we recommend Tempo Aircraft Enamel.

Blk Acrylic ..... P/N 09-01032 ..... **$7.50**



ZINC PHOSPHATE PRIMERS

Maximum adhesion to bare aluminum and steel

Tempo's Zinc Phosphate Primers are recommended for priming bare metal. These primers provide maximum bonding to bare aluminum and steel. Tempo's Primers have been the workhorse in the aviation industry for many years.

The A-701 Yellow and A-702 Green Zinc Phosphate Primers meet the performance standards outlined in Federal Specification T-P-1757A. They also exceed the 800 hours of salt spray fog test (ASTM #B117). A-701 will replace A-901 Yellow and A-702 will replace A-902 Green.

Yellow (12oz.) A-701 ..... P/N 09-02128 ..... **$9.95**
Green (12oz.) A-702 ..... P/N 09-02127 ..... **$9.95**



SUPERFLITE AIRCRAFT ENGINE ENAMELS

Superflite engine enamels are fast-drying enamels developed specifically for air-cooled aircraft engines used in light duty aviation industries. The Superflite enamels feature superior adhesion, heat resistance, and a gloss finish. Cure Schedule: Dry to touch: 15 minutes, Dry to handle: 60 minutes Dry through: 24 hours To recoat: Before 60 minutes , or after 72 hours Benefits: Topcoat - Air dry or low temperature cure, For use on bare metal or painted surfaces Specifications: Shelf Life: 12 months at recommended storage temperatures, Heat Resistance: Up to 400 degree F.

Lyc. Grey Paint Quart ..... P/N 09-02558 ..... **$51.75**
Lyc. Grey Paint Spray ..... P/N 09-02556 ..... **$9.60**
TCM Gold Paint Quart ..... P/N 09-02557 ..... **$34.00**
TCM Gold Paint Spray ..... P/N 09-02550 ..... **$10.50**
Gloss Paint Black Quart ..... P/N 09-02559 ..... **$30.80**

Prices Subject to Change Without Notice

PREKOTE SURFACE PRETREATMENT



PreKote® Surface Pretreatment from Pantheon Chemical, is a non-chromated surface pretreatment utilizing a safe, hazard-free technology that is flying on over 1,500 United States Air Force aircraft. PreKote® offers superior adhesion, improved paint flexibility, and advanced corrosion protection on painted surfaces, relative to traditional chromate and conversion pretreatments (such as alodine). PreKote® has passed stringent testing by the U.S. Department of Defense, the Boeing Company and other coating industry leaders. By eliminating the need for chromated conversion coatings (such as alodine), acid etches, solvent washes and other toxic processes, PreKote® can reduce paint preparation time and costs by up to 40%. PreKote® can be used on a wide range of surfaces including aluminum, steel, magnesium, titanium, CRES, galvanized surfaces, composite and plastic surfaces. Consistent, high performance results are achieved with a variety of paints and primers. PreKote® is non-toxic, non-corrosive, non-flammable, CFC free, ODS free, odor free, and readily biodegradable upon disposal. FEATURES: • Easy & safe process • Quantified superior results • Immediate cost reductions • Reduces hazardous waste • Decreases material, labor, and hazardous handling costs • Results in a high-performing surface finishes • No short and long term health risks.

Quart.....P/N 09-00825 ..**$33.95** Gallon..... P/N 09-00826 .....**$65.75**
5 Gallon .P/N 09-00827 **$288.95** 55 Gallon. P/N 09-00828 **..$1,775.00**
Prekote Large area repair kit..... P/N 09-00829.....**$89.75**

ALUMINUM PREPAINT PRODUCTS

ALUMIPREP USED FIRST MAKES THE PAINT FINISH LAST!



Use on unpainted aluminum aircraft, truck trailers, house trailers, boats, garage doors, outdoor furniture, etc.

BONDERITE C-IC 33 AERO – Use to clean, brighten and transform badly corroded aluminum to its natural appearance. Covers 400 sq.ft. per quart. **HAZARDOUS**

Qt. ..... P/N 09-01621 .... **$17.85**
Gal. ..... P/N 09-01620 .... **$41.65**



BONDERITE M-CR 1001 AERO – An invisible coat to provide in-depth corrosion proofing to the brightened aluminum surface and act as a firm barrier against the elements and continued corrosion. Covers 250 sq.ft. per quart.

Qt ..... P/N 09-01628 .... **$24.95**
Gal. ..... P/N 09-01629 .... **$46.80**



BONDERITE C-IC 79 AERO – A non-flammable multi-purpose phosphoric acid based cleaner and prepaint conditioner for most metals. Leaves the surface chemically clean and corrosion free. Can be used to deep clean and etch a metal surface prior to paint or to prepare a surface for a subsequent chemical coating like that produced by GALVAPREP® SG on zinc and steel or ALODINE® 1201 on aluminum surfaces. **HAZARDOUS**.

Qt.....P/N 09-01625.....**$26.85**
Gal. .....P/N 09-01624.....**$39.95**

BONDERITE M-CR 1201 AERO – After precleaning with Alumiprep 33 or Metal Prep 79, rinse with water. Apply Alodine without dilution by brushing or swabbing with sponge. Rinse with water and surface is ready for paint. This is a visible coating which leaves the surface with a golden coloration. The alodized surface provides protection against weather and firmly bonds paint. One quart treats about 100 sq. ft. **HAZARDOUS**.



Qt. .....P/N 09-01619.....**$25.85**
Gal. .....P/N 09-01618.....**$44.50**

ALODINE TOUCH-N-PREP 1132



Touch-N-Prep Alodine 1132 no-rinse conversion coating effectively phosphates most metals including aluminum, ferrous and galvanized substrates. Doesn't require rinsing, and can be air dried or force dried with hot air or an infra-red lamp. High density acrylic tip of the Touch-N-Prep applicator can be modified with a single edge razor blade to form any shape. The application method controls the amount of coating applied to the surface. Covers 20 sq.ft. P/N 09-01630.....**$94.85**

AKZO FAST DRYING INTERIOR EPOXY PRIMER



AKZO interior epoxy primer #463.12-8 is a chemically cured 2-component epoxy primer designed to provide maximum protection from various chemicals, hydraulic fluids, aviation fuels, hydraulic fluids, and corrosive causing media. Drying time to touch is 15 minutes and to recoat is 1-24 hrs. Shelf life: 2yrs, Color: Green. Used extensively in military and aerospace applications and popular with aircraft builders. Uses 1 gallon of primer and 1 gallon of catalyst.

2 gal. kit .....P/N 09-24735 ..... **$189.00**
TR-19 Thinner.....P/N 09-00439 ..... **$111.75**

RANDOLPH W-2248 EP-420W EPIBOND EPOXY PRIMER (WHITE)

Epibond Epoxy Primer W2248 is a 3-component primer system for metal surfaces. Off-white in color. An excellent base coat under white or light colored combinations. Kit Contents: • Primer Base • Catalyst • Reducer.



Product	Part No.	Quart Price	Gallon Part No.	Price
W2248/EP420 Primer White kit	09-00573	**$85.25**	09-00574	**$293.95**
Epoxy White base	09-00564	**$48.50**	09-00565	**$165.75**
Rand E-500 Reducer	09-00566	**$15.50**	09-00567	**$60.75**
Rand EP430 Catalyst (pt)(qt)	09-00570	**$21.65**	09-00571	**$36.50**

RANDOLPH B-6433 RAND-O-PLATE EPOXY PRIMER (DARK GREEN)

This green primer is solvent resistant, anime cured, fast drying, and corrosion inhibiting. Can be applied & cured to temperatures down to 35 F. Mixing ratio is 2 parts base primer 1 part EP-430 Catalyst. Kit Contents: • Primer Base • Catalyst • Reducer.



Product	Quart Part No.	Gallon Price	Part No.	Price
Rand B6433 PrimerGreen kit	09-00575	**$85.25**	09-00576	**$298.95**
Epoxy Green base	09-00568	**$48.55**	09-00569	**$165.75**
Rand E-500 Reducer	09-00566	**$15.50**	09-00567	**$60.75**
Rand EP430 Catalyst (pt)(qt)	09-00570	**$21.65**	09-00571	**$36.50**

RANDOLPH EPOXY VARNISH EV-400/EV-410



An excellent clear gloss epoxy varnish for interior and exterior use. It provides superior weather durability and excellent chemical and solvent resistance. Can be used over a one component varnish primer if desired. Mixing ratio is 2 parts base varnish: 1 part EV-410 Catalyst. Order in kits.

Quart Kit (yields 2.5 qts) Incl. EV-410 Catalyst & E-500 Thinner P/N 09-00670..... **$77.25**
Gallon Kit (yields 2.5gal) - Incl. EV-410 Catalyst & E-500 Thinner P/N 09-00671..... **$265.95**
Base: Quart .....09-00666 ..... **$44.50**
Gallon.....09-00667 ..... **$146.70**
Catalyst: Pint .....09-00668 ..... **$18.80**
Quart .....09-00669 ..... **$30.55**
E-500 thinner (Reduce 50%)
Quart .....09-00566 ..... **$15.50**
Gallon.....09-00567 ..... **$60.75**

RANDOLPH EPOXY ACCELERATOR EX-501



A chemical curing accelerator for use in W-2248 EP-420W Epibond Epoxy Primer, B-6433 EP-420G Rand-O-Plate Epoxy Primer, and EV-400 Epoxy Varnish according to direction on base component label. Reduces polymerization time, not solvent evaporation.

1/2 Pint .....P/N 09-04650 ..... **$12.75**

RANDOLPH C-2210 PAINT SURFACE CLEANER



A mild solvent blend formulated to remove oil, silicone, wax, and other contaminants from all metal surfaces before priming. Also removed tape gum from painted surfaces and acrylic windshield materials.

Qt.....P/N 09-40810 ..... **$11.95**
Gal .....P/N 09-40820 ..... **$45.00**

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STEWART SYSTEMS EVERSHIELD CERAMIC SURFACE TREATMENT

An Easy-To-Apply Glass-Like Finish With Many Incredible Protective Properties For Almost Any Aircraft Surface. STEWART SYSTEMS EVERSHIELD is a two-component, ceramic clearcoat/chemical treatment system designed for Original Equipment Manufacturers (OEM) to protect the substrate over which it is applied from corrosion and oxidation. Will not yellow, chip, crack, or peel. If gouged or damaged, the finish will not experience creepage and is repairable. A low VOC and EPA compliant coating. Considered non-hazardous by EPA definitions and does not contain lead or chromates.

Size	Part No.	Price
2 oz.	09-00465	**$37.90**
4 oz.	09-00466	**$55.75**
8 oz.	09-00467	**$76.75**



STEWART SYSTEMS WATERBASE STEEL CONVERSION COATING

A water-based product that eliminates rust. First, rust is converted to ferric iron, a black organic compound. Second, a coating of clear acrylic is formed over the coated area. The surface that remains after the transformation can be either left black or coated with Stewart Systems wide range of products for the desired outcome. Product tests have shown that it has extended the life of equipment or products for several more years after probable replacement. Can be used on all rusted surfaces. P/N 09-00482.....**$51.80**



STEWART SYSTEMS EKOBOND

Stewart Systems EkoBond EkoBond is a revolutionary water based cement for the application of fabric. EkoBond has extreme bond strength for fabric to fabric and fabric to non-fabric surfaces in both peel and shear tests. EkoBond is very user friendly since it has very little odor and can be used in a closed shop with no health or fire hazards. EkoBond dries quickly and will not attack primers or enamel paints. EkoBond is non-flammable and environmentally friendly.

Quart.....P/N 09-41195 .....**$76.85**
Gallon .....P/N 09-41200 .....**$214.95**

EKOBOND LINEN - For the look of old linen with the convenience of Dacron. EkoBond linen will make the fabric look just like old cotton, while giving you not only the antique look, but also the strength and durability of EkoBond. Quart.....P/N 09-03064 .....**$69.95**
Gallon .....P/N 09-03065 .....**$233.95**



STEWART SYSTEMS EKOFILL

Part of the Stewart Aircraft Covering System, Stewart Systems EkoFill seals the fabric, provides UV protection, fills the weave and acts as a primer for application of EkoPoly. On fabric airplanes, all covering, rib stitching and tapes are complete and the fabric has been cleaned with EkoClean before applying EkoFill. EkoFill is used on Dacron/polyester fabric, glass cloth, gel coat and composite materials. It has excellent adhesion, superior high build properties and is an outstanding UV barrier on fabric and composite surfaces. EkoFill dry sands very easily with open coat sand paper. EkoFill is non-flammable, has little odor and is water cleanup. **Attention:** Cold weather warning for shipping: It is possible for product to freeze based on weather conditions.

Grey Quart.....P/N 09-06700 .....**$64.75**
Grey Gallon.....P/N 09-06800 .....**$211.95**



STEWART SYSTEMS EKOCRYLIC TOP COAT

EkoCrylic is a tough, durable, and easy to apply top coat paint designed for metal, wood, and composite surfaces. EkoCrylic is applied with a modern style spray gun with a 1.2 to 1.4 mm nozzle.

VISIT OUR WEBSITE FOR COLORS, PART NUMBERS, AND PRICES.



STEWART SYSTEMS EKOPOLY PREMIUM TOP COAT

An especially versatile high performance coating for metal, composite and fabric surfaces. EPP provides a wet look glossy, flexible and durable top coat that retains its flexibility and gloss under the most adverse conditions. Resistant to fuels, oils and solvents, EPP will keep your airplane looking like new for years. Easy to apply following the written and video directions. A HVLP spray gun is recommended for EPP application. EPP is non-hazardous, low odor and EPA compliant. EPP is non-flammable in the bottle and on your airplane. EPP May be used on all substrates (fabric, wood, fiberglass and metals) when properly prepared.

VISIT OUR WEBSITE FOR COLORS, PART NUMBERS, AND PRICES.



STEWART SYSTEMS EKOSTRIP

Stewart Systems EkoStrip is an environmentally safe paint stripper that can be sprayed, brushed or rolled on your painted surface. EkoStrip is not solvent borne and does not dry out and stop working overnight. In most cases the stripping action will take place in 2-4 hours. EkoStrip has no harsh odors, is not caustic and is biodegradable.

1 Gallon ..... P/N 09-03080 .....**$77.75**
5 Gallon ..... P/N 09-03081 .....**$359.00**



STEWART SYSTEMS EKOPOXY

Stewart Systems EkoPoxy Primer/Sealer is a high quality water based Epoxy primer for use on many substrates. Stewart Systems EkoPoxy can be used on interior and exterior surfaces where there is more chance of corrosion from the environment. Excellent adhesion to bare metals, resists flash rusting which can occur with latex based primers. Superior chemical resistance, is fast drying and mar resistant. Low in VOCs and compatible with a wide range of top coats including EkoPoly Top coat. Nonhazardous, nonflammable and water cleanup, Stewart Systems EkoPoxy is your best choice for Primer.

Quart White .....P/N 09-03066 .....**$67.80**
Quart Smoke Grey .....P/N 09-03068 .....**$68.75**
Quart Charcoal Grey .....P/N 09-03070 .....**$69.95**
Quart Green .....P/N 09-03072 .....**$89.75**
Gallon White.....P/N 09-03067 .....**$253.95**
Gallon Smoke Grey.....P/N 09-03069 .....**$258.95**
Gallon Charcoal Grey.....P/N 09-03071 .....**$262.95**
Gallon Green .....P/N 09-03073 .....**$279.95**



STEWART SYSTEMS EKOPRIME PRIMER/SEALER

Stewart Systems Primer Sealer is a high quality, water-based single component primer, not requiring any catalyzing agent. Performance obtained is equal or superior to that of two-component, catalyzed epoxy systems. Primer Sealer offers good coverage, excellent durability, and ease of application.

Quart White ..... P/N 09-00464 .....**$46.75**
Quart Smoke Grey .....P/N 09-03074 .....**$49.50**
Quart Charcoal Grey .....P/N 09-03076 .....**$49.50**
Quart Green .....P/N 09-03078 .....**$61.85**
Gallon White.....P/N 09-00481 .....**$157.95**
Gallon Smoke Grey.....P/N 09-03075 .....**$159.75**
Gallon Charcoal Grey.....P/N 09-03077 .....**$156.75**
Gallon Green .....P/N 09-03079 .....**$179.85**



STEWART SYSTEMS ALUMINUM ETCH / CLEANER

EkoEtch Aluminum Etch is a concentrated combination acid based detergent and degreaser. Removes scale, corrosion, light oil, processing fluids and brightens aluminum. A non-hazardous, water reducible and non-flammable. Use it to prepare both old and new aluminum surfaces before applying Stewart Systems Primer/ Sealers. P/N 09-00473.....**$28.50**



STEWART SYSTEMS EKOCLEAN

EkoClean Heavy Duty Cleaner/Degreaser concentrate is used with the Stewart Covering System to clean fabric before application of EkoFill. For cleaning fabric, EkoClean is diluted 15-1 with water, and lightly applied with a spray bottle, and rinsed with clear water. EkoClean is a non-butyl, water soluble, concentrated degreaser and general purpose cleaner. In stronger concentrations EkoClean attacks grime, exhaust stains and grease spots from painted surfaces. EkoClean does not contain phosphates and is USDA approved. Quart..... P/N 09-03089.....**$17.50**
Gallon ..... P/N 09-03090.....**$56.80**

STEWART SYSTEMS EKOSEAL E1800/E1850



E1800 - EkoSeal is a water dispersible top coat, offering outstanding coverage, durability and ease of application. EkoSeal is a low VOC, EPA compliant coating. Use on wood spars and plywood before installation of fabric. Wood sealer is resistant to UV yellowing in exterior applications. Size: 1 quart.

Quart Clear ..... P/N 09-03082.....**$61.75**
Quart Satin..... P/N 09-03083.....**$66.75**

E-1850-EkoSeal Sanding Wood Sealer E1850 is a wood sealer with a sanding filler added to fill light voids and grain in wood products. After sanding, apply EkoSeal Wood Sealer or any other top coat. Size: 1 quart. Quart Clear ..... P/N 09-03084.....**$74.75**

STEWART SYSTEMS PROCEDURES 21 MANUAL



A complete written manual for the Stewart Systems Covering Process. It includes product application, painting instructions, continued airworthiness and more. Also contains many helpful hints for each step of the process.

P/N 09-03091.....**$21.90**

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Prices Subject to Change Without Notice

NUVITE POLISH - PROTECTANT SYSTEMS

NUGLAZE SUPER PAINT GLOSSER



Nuvite introduces NuGlaze to create a super high gloss "show quality" finish for paint in new or excellent condition, and it adds a U/V and sealant protection . It will put that final "wet-look" finish on good paint, and can be used as a final step for maximum gloss after using a drywash cleaner/polish such as Nuvite NuPower II. With regular NuGlaze use, a continuing surface barrier against most of the effects of airborne chemicals and ultraviolet radiation is created. Paint can be maintained in "new" condition longer and maintain the color balance intended by the manufacturer with regular use. Bugs and normal soil remove easily from a NuGlaze surface, and the added gloss keeps the "new paint" look longer. NuGlaze is simple to use and avoids complicated setups and special application or buffing equipment. Proven techniques and continuing technology advancement from Nuvite have come together to produce NuGlaze - the best thing you can do to maintain and protect your near-new or "new-looking" paint.

1Gal ..... 09-01224 ..... **$65.75**
5Gal ..... 09-01225 ..... **$251.95**

NUVITE CITRI-CUT CLEANER



NuVite CitriCut is a citrus based airframe wetwash and wipedown cleaner. Pleasant citrus smelling wet wash or wipe down cleaner that is especially friendly to the environment. Works great for standard wet washing with mops or scrub pads. When used as a wet wash, water sheets off, minimizing water spotting. CitriCut is also handy for hand debugging or hand wipe down without need for rinse -so there is no need for water or floor cleanup. Spray CitriCut at 1:8 from hand trigger sprayer for hand debugging or wipedown and wipe with terry towel until clean. Use a clean towel to buff up surface shine. No need to rinse surface. Supplied as concentrate—use 1:8 for hand wipe down or 1:16 in wet wash water. P/ N 09-00584..... **$17.50**

NUVITE C-49 SUPERCLEANER



Nuvite C-49 SuperCleaner is the most versatile and effective cleaner you can buy when you want to clean fabrics, leather, carpet, plastics, laminates and even metals! In other words, for cleaning all types of surfaces generally found in commercial & private aviation, building or institutional interiors, RV, truck and marine interiors, or even home interiors!

P/N 09-02089 ..... **$8.00**

NUVITE SS9-3 CLEANER



Nuvite SS-9-3 is the championship-caliber answer to the need for an effective and safe all-purpose liquid alkaline cleaner. It will clean the toughest of underbelly grease, oils and fluid leakage at full strength, or can be diluted to 1:12 to make an easy-to-use debugger and whole-airframe wipedown fluid that leaves a beautiful squeaky-clean and shiny surface that does not need to be rinsed. It works great for in-place cleaning during other airframe or engine maintenance.

Quart ..... P/N 09-02084..... **$8.60**
Gallon ..... P/N 09-04072..... **$24.85**
5 Gallon ..... P/N 09-04074..... **$97.75**
55 Gallon ..... P/N 09-04075..... **$912.00**

NUVITE LEATHER GUARD



Nuvite Leather Guard helps you keep that brand-new, supple, fine finished leather look and feel for luxury aircraft, RV or automotive seating, fine furniture or institutional use. Leather Guard is the finest enrichening formula available for leather nutrition .

P/N 09-02091 ..... **$14.00**

NUVITE 20/20 SWIPE PLASTIC CLEANER & POLISH



Formulated specifically for aircraft transparent plastic windows, 20/20 SWIPE has been used on military aircraft for decades. Meeting MIL-C-18767A(ASG) and AMS 1535C specifications, 20/20 SWIPE is popular with many government agencies, and a favorite of helicopter pilots, air racers, and motorcyclists, among many others. Benefits Beyond Clean Regular polishing with 20/20 SWIPE delivers additional benefits. Its UV protectant formula inhibits UV induced crazing and discoloration. It also deposits an anti-static barrier prohibiting dust, ash, lint, and other atmospheric particulates from statically adhering to transparency surfaces. P/N 09-05314..... **$41.50**

NUSHINE FLANNEL POLISHING CLOTH



This is the 13 ounce 100% cotton-face virgin cotton flannel ("sweatshirt material") used with orbital buffers with Nuvite NuShine II Grade S to get that final "Nuvite Look" of extreme depth and image in your polished metal. See Detailed Metal Polishing Procedures for recommended use. Package of 10 20" X 30" (approx.) sheets gives many "polishing positions" on each sheet for economy. P/N 09-05346..... **$84.00**

NUVITE POLISH/PROTECTANT SYSTEMS

Nuvite's surface finish enhancement and protection technology offers the highest-performance surface maintenance and protection systems available. These products are designed to be used on your aircraft, boat, recreational vehicle, truck, auto or other vehicle anywhere, anytime. Nuvite has the answer for your operations in an EPA-sensitive environment.

NUPOL POLISH / RESTORER / UV PROTECTANT



Same easy wipe on, let dry, wipe off surface cleaner with enhanced cleaning and oxidation removal capabilities. Ideal for tough cleaning due to long intervals between cleanings. Leaves a beautiful shine and an effective UV protective barrier.

Qt. .....P/N 09-00583 ..... **$16.75**
Gal. .....P/N 09-00582 ..... **$46.80**

NUPOWER II POLISH/UV PROTECTANT



Dry Wash Cleaner and Polish (Routine dry wash cleaning with gloss enhancement and UV protectant barrier) - Use for routine cleaning where wetwashing is not possible or gloss enhancement is desired. Contains non-abrasive media to remove even stubborn soiling. Cleans dirt, carbon and oil and leaves a protective barrier against UV deterioration of paint. Can also be used to clean bare metal surfaces. Apply with mop, spun cotton pad, towel or by hand. Agitate uniformly over area to be cleaned, spreading material to a very thin layer. Let dry completely and buff off by hand with clean terry towel. Supplied ready-to-use.

Qt. .....P/N 09-00581 ..... **$16.50**
Gal. .....P/N 09-00580 ..... **$45.70**

NUSHINE II POLISH/ SYSTEM



Nuvite engineers have formulated a system of polishes to meet the needs for almost any metal and paint polishing project. New metal to antique, the formulations in the NuShine II Polishing System will give superior definition, highlights, imagery, clarity, and will retain the finish longer than normal polishes. Nuvite's NuShine II graded polishes use high technology materials with programmed abrasive characteristics and are blended with superior carriers to offer the ability to produce cutting action when needed, yet offer micron-level finishing in the finer grades that produces highest reflectance and image excellence.

Grade S (for final finishes) – The finishing grade that gives the really deep, clear image when used as a final finish over a properly prepared, oxidation-free surface. 0.5 Lb. jar.....P/N 09-00578 ..... **$47.50**



Grade G6 (SS & titanium or heavily oxidized aluminum) – When a heavy cut of the surface is needed, G6 may be a good answer. G6 has a high-tech abrasive system that is designed to do a quick, aggressive cut, and immediately break down to a finer cut, similar to Grade C. Use when there is heavy oxidation on the surface of aluminum, or even when very light corrosion is evident. Can also be used to blend surface scratches in aluminum. Can also be used for polishing stainless steel. 0.5 Lb. jar.....P/N 09-00586 ..... **$47.50**



Grade C (for unpolished aluminum and repolishing degraded brightwork) - C is a cutting grade polish that we recommend to prep for using Grade S. Use Grade C to begin polishing on clad aluminum that has never been polished. Will also remove the cloudy/hazy white background found in many otherwise good polish finishes.

0.5 Lb. jar.....P/N 09-00587 ..... **$47.50**
1 Lb. .....P/N 09-05341 ..... **$73.80**
10 Lb. Pail .....P/N 09-05345 ..... **$550.00**

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POLISHES – CLEANERS

AERO GLOSS



Aero Gloss polish is used by 80% of the world's major airlines. It is now available to the general aviation and experimental aircraft market. Removes turbine soot and exhaust stains from paints. It is an excellent plexiglass polish and can be applied with a power buffer. It takes 1-2 pints and 3-4 hours to polish an average Cessna 182 with Aero Gloss.

Pint .....P/N 09-38100 ..... **$19.95**
Gallon .....P/N 09-38101 ..... **$63.75**
5 Gallon.....P/N 09-02180 ..... **$289.95**

STAR BRITE AIRCRAFT POLISH



This exceptional new polish cleans off dirt, stains and oxidation and restores the original bright color of the aircraft leaving a dazzling shine. StarBrite also cuts fuel consumption and boosts speed by reducing drag an amazing 5.5%. Contains no wax, oils or acids. 16 fl.oz. ..... P/N 09-23900 ..... **$24.50**

SKYWASH DRYWASH & WAX



High quality waterless cleaner with protective finish. SKY-SE1™ cleans and leaves a high gloss, protected, surface shine. Reduces maintenance time and produces no contaminated water run-off. A solution that preserves paint life, protects against corrosion and leaves the aircraft surface in aerodynamically clean condition. Approvals: Boeing D6-17487 REV R, AMS 1650C, CSD-1, Airbus AIMS 09-00-002-3 specifications. SKY-SE1™ Drywash with paint protection is a waterless cleaning method that is safe to use in the same area where maintenance can be done at the same time, reducing maintenance downtime and turnaround time. Aircraft cleaning - without water - odorless. Economic and safe Problem-free and safe application, waterless, multifunctional, high efficiency. Made in the USA

16 oz. .....P/N 09-03805 ..... **$12.95**
1 Gallon .....P/N 09-03806 ..... **$69.95**
5 Gallon .....P/N 09-03807 ..... **$292.95**

TOP GUN ULTRA FINISH



One-step product for all aircraft finishes. Removes surface contaminates and oxidation though a unique chemical process, rather than using harsh abrasives. The coating left behind is not a wax, but an extremely hard and durable sealant. This affords superior long term protection (up to 12 months or longer), and easier cleaning of your finish. Once applied, bugs and corrosive elements remove more easily. Very effective in restoring clarity to plexiglass windshields, side windows, and lenses. 16 fl. oz. Made in the U.S.A. 16 oz. .....P/N 09-00192 ..... **$21.50**

AUTO GLOSS POLYMER WETCOAT



Polymer Wetcoat removes mild oxidation leaving your auto's finish protected for one full year. No other product can make that claim. A combination of polymeric resins and 100% premium carnauba creates the most durable finish on the market.

16 FL. OZ. .....P/N 09-00157 ..... **$10.50**

MASTER FORMULA - SEALER GLOSS



Master Formula Sealer Gloss Protective Sealer waterproofs, protects and seals any hard surface. It leaves a durable, glossy protective coating that's easily maintained and lasts up to one full year. Master Formula Sealer Gloss is excellent for use on any metal or painted surface. These surfaces include all car finishes including clear coasts, gel coasts, plastics fiber glass. They also include all metal surfaces such as aluminum, chrome, brass, stainless steel, gold, silver and more. 16oz..... P/N 09-02077 ..... **$22.75**

MET-ALL



An aluminum polish which removes and prevents pitting. Makes aluminum shine with mirror-like brilliance. Non-toxic, non-abrasive and non-flammable. A non-silicone product which resists further corrosion. Meets military specifications.

1 Lb. Can .....P/N 09-24200 ..... **$11.95**
2 Lb. Can .....P/N 09-24300 ..... **$22.75**

BUG BLASTER SPRAY



Dissolves and removes bugs without scrubbing - no elbow grease is required! This is a quick, time saving product. Just spray, wait and wipe. Finally a product that solves messy problems without being messy!! Unlike other formulations, when sprayed, Bug Blaster instantly attacks bug proteins and acids. You will not have the dripping, messy run-off you have with conventional bug removers. Perfect for use in paint shop environments where run-offs need to be avoided.

32 OZ .....P/N 09-02080 ..... **$19.80**
1 GALLON .....P/N 09-02081 ..... **$41.65**

MET-ALL DETAIL POLISHING KIT



Met-All's Detail Polishing Kit will produce a show room finish on bare metal, painted surfaces and fiberglass using Met-All polishes and premium bonnets. Each bonnet features a recessed loop back so the edge and face can be effectively used with less concern for marring the finish. Change pads quickly and easily. Ideal for polishing aircraft, cars, motorcycles, boats etc.

P/N 09-00448 ..... **$36.75**

BLUE MAGIC METAL POLISH



Blue Magic produces a deep mirror shine. The oxide residue left after polishing is easily wiped off with a rag. A small amount will polish a large area. Airshow aerobatic pilot Chuck Lischer, Jr., whose high performance Swift is shown here, recommends Blue Magic as the best polish available for polished aluminum aircraft.

#500 1 lb. Can.....P/N 09-24600 ..... **$14.90**

210® PLASTIC CLEANER/ POLISH



•Anti-static, Anti-fog • Will remove marks from crayons, magic markers and paint oversprays • Removes residue glue from protective backings and masking tape • Evaporating properties in the formula - cleaning is quick and easy without leaving any streaks or swirl marks • Resists fingerprints • Seals pores in plastic and leaves a protective coating • Pleasant clean aroma • Gives plastic a clear, lustrous look.

7 oz..... P/N 09-00518 ..... **$10.75**
14 oz..... P/N 09-00517 ..... **$12.65**

210® PLUS PLASTIC SCRATCH REMOVER



•Extremely mild abrasive compound, with anti-static and anti-fog properties in its formula • Ideal for the removal of surface scratches and blemishes from windshields or heavy cleaning of all plastic materials • Water soluble, excess can be wiped off with a wet sponge or cloth •Easy to use.

15 oz. ..... P/N 09-00519 ..... **$14.50**

210® WINDSHIELD CARE KIT



Recommended by LP Aero Plastics and other leading aircraft windshield manufacturers, our 210® Plastic Cleaner & 210® Plus will help keep your windshield crystal clear and scratch free for safe, enjoyable flying. Our Windshield Care Kit Contains: (1) 7 oz. 210® Anti Static/Anti-Fog cleaner & polish, (1) 7.5 oz. 210® Plus Anti-Static plastic scratch remover, (100) 9"x 16" Sontara Aircraft Wipes. P/N 09-00521 ..... **$44.75**

CLEAR VIEW PLASTIC POLISH AND PROTECTANT



Clear View™ makes clear plastics look like new. It is designed to fill in fine scratches on plastic windshields and windows, leaving a perfect like new finish. It leaves no residue, just spray it on and wipe it off. It is safe on all plastics and is non-abrasive. 13 oz. ..... P/N 09-00531 ..... **$7.95**

EASY ALUMINUM POLISH



EASY ALUMINUM POLISH – Imagine a metal polish so brilliant that billet aluminum looks like chrome! How about achieving these results in seconds with no effort! And what if this "mirror" shine you've just created lasted for an unbelievably long time before needing touch-up? This is PPC's EASY POLISH! Months of tedious research and formulation led to the development of this incredible product – easiest to use, shiniest by far, longest-lasting protection in the industry. Find out why EASY is the metal polish most endorsed by both wheel manufacturers and auto enthusiasts! Dazzling Shine in Seconds! Polishes without scratching. Removes hazing, discoloration and water spots. Restores depth, gloss, clarity. Protects with acrylic polymer barrier. Works on all metals, even jewelry.

32 oz. .....P/N 09-04365 ..... **$39.85**

XHAUST & SOOT REMOVER



A powerful, concentrated, multipurpose aircraft cleaner / degreaser formulated to clean the toughest exhaust soot, belly grime and bug splats – all while being gentle on all aircraft surfaces. MEETS BOEING D6-17487 REVISION R. Earth friendly! It is water soluble, nonflammable, nontoxic and biodegradable. It will not harm rubber, insulation, plastics or wiring.

1 Gallon.....P/N 09-03836 .....**$18.85**
5 Gallon.....P/N 09-03837 .....**$89.78**
30 Gallon.....P/N 09-03838 .....**$484.65**
55 Gallon.....P/N 09-03839 .....**$789.53**

AERO GLIDE DRY WASH



One-Step Dry Wash, Polish & Friction Reducer. Leaves a high gloss protective finish on aircraft and other vehicles that reduces surface friction and exhaust stains. Apply either directly onto the surface to be cleaned or pour a small amount onto a cloth and wipe on. Any soft, lint free cloth will work fine. Microfiber rags or applicator pads are excellent for this purpose. As you wipe away dirt, grime and exhaust away, Aero-Glide will leave a bright lustrous brilliant shine.

16 oz. .....P/N 09-03815 .....**$17.96**
1 Gallon.....P/N 09-03816 .....**$64.76**
5 Gallon.....P/N 09-03817 .....**$305.78**
30 Gallon.....P/N 09-03819 .....**$1,834.65**
55 Gallon.....P/N 09-03821 .....**$3,165.53**

MR DETAIL INSTANT DETAILER



The instant detailer that cleans and shines like magic. Get that 'just detailed' look between regular washing and waxing (or RejeX-ing). Quickly and easily removes dust, road film, fingerprints, streaks and water spots safely from most vehicle surfaces. Make sure surface to be treated is cool to the touch. Mist Mr. Detail onto a small area (approximately 1-8 square feet). Wipe until area is clean and shiny, and Mr. Detail is absorbed into the cloth. Do not allow excess product to dry on the vehicle.

16 oz. .....P/N 09-03822 .....**$8.06**
32 oz. .....P/N 09-03823 .....**$14.36**
1 Gallon.....P/N 09-03824 .....**$26.96**
5 Gallon.....P/N 09-03825 .....**$125.78**

NVIRO SOLVE AIRCRAFT BELLY CLEANER / DEGREASER



A bio-based organic cleaner made from various plant and fruit derivatives. Removes baked-on oil deposits, as well as heavy grease, from painted or unpainted surfaces. Totally biodegradable when rinsed with water. Can be diluted 3:1 with water to dissolve lighter accumulations.

16 oz. .....P/N 09-03826 .....**$13.46**
1 Gallon.....P/N 09-03827 .....**$38.66**
5 Gallon.....P/N 09-03828 .....**$184.28**
30 Gallon.....P/N 09-03829 .....**$997.65**
55 Gallon.....P/N 09-03830 ....**$17,779.53**

PRO WASH RX PH NEUTRAL SOAP



Super-concentrated, pH balanced, shine enhancing soap. Contains special rinsing agents that help eliminate spotting and streaking. Apply with a sponge or soft bristled brush, and agitate the rich foamy suds, rinse, and towel dry or air dry.

1/2 Gallon.....P/N 09-03831 .....**$13.46**
1 Gallon.....P/N 09-03832 .....**$22.46**
5 Gallon.....P/N 09-03833 .....**$103.28**
30 Gallon.....P/N 09-03834 .....**$556.65**
55 Gallon.....P/N 09-03835 .....**$938.03**

XTREME FINISH DRY WASH & WAX



Professional Grade Dry Wash & Wax. Designed to clean and provide short-term, high gloss protection for vehicle finishes – all in one step! As you wipe the dirt away, Xtreme Finish will leave a bright, glossy shine.

16 oz. .....P/N 09-03840 .....**$16.16**
1 Gallon.....P/N 09-03841 .....**$55.76**
5 Gallon.....P/N 09-03842 .....**$274.28**

5 STAR FOAM MULTI PURPOSE CLEANER



Use on interior smudge marks, nicotine stains, oily fingerprints and food stains. On exteriors, will effectively clean carbon exhaust, oil and bugs. Can also be used on vinyl, leatherette, plastic, sinks, enameled, varnished and similar surfaces.

P/N 09-03843 .....**$11.66**

A-PLEX PLEXIGLAS CLEANER



A-Plex is an anti-static aircraft and marine Plexiglas cleaner, protectant and polish. A-Plex produces a microscopic, high luster, soil retarding, water repellant finish. A-Plex dries with no smears, no smudges and no oily residue. Can be applied in seconds. 19 oz. aerosol.

P/N 09-03844 .....**$10.76**

SKYWASH COCKPIT CLEANER



Aircraft Cockpit Cleaner with disinfection - environmentally safe biodegradable. For cleaning aircraft interiors and fuel tanks. Safe on vertical or overhead surfaces, non - flammable, no flash point, pleasant odor, vapors non toxic. Safe on aluminium, high strength steel, magnesium and other metals, plexiglass, most plastics and good quality of paint, retards corrosion of aluminium and magnesium structures. Controls odor, is lavender scented.

16 oz. .....P/N 09-03848 .....**$9.95**
1 Gallon.....P/N 09-03855 .....**$59.95**
5 Gallon.....P/N 09-30856 .....**$299.95**

SKYWASH WINDOW CLEANER



Environmentally safe. Aircraft Window Cleaner with disinfection – biodegradable. A clear liquid solution for cleaning acrylic and glass windows. Free rinsing and fast drying without streaking. Safe on acrylic and glass.

16 oz. .....P/N 09-03851 .....**$10.75**
1 Gallon.....P/N 09-03852 .....**$59.95**
5 Gallon.....P/N 09-03853 .....**$299.95**

SKYWASH CABIN CLEANER



Aircraft Cockpit Cleaner with disinfection - environmentally safe biodegradable. Multifunctional water-soluble effective special cleaner, deodorant and disinfection product for cleaning aircraft interiors and fuel tanks. Safe on vertical or overhead surfaces, non - flammable, no flash point, pleasant odor, vapors non toxic. Safe on aluminium, high strength steel, magnesium and other metals, plexiglass, most plastics and good quality of paint, retards corrosion of aluminium and magnesium structures. Controls odor, is lavender scented.

16 oz. .....P/N 09-03848 .....**$9.95**
1 Gallon.....P/N 09-03849 .....**$59.95**
5 Gallon.....P/N 09-03850 .....**$299.95**

SKYWASH LEATHER CLEANER



Environmentally safe, biodegradable - non-flammable, solvent free. Cleans and maintains in one step. Removes things like coffee, cocoa, tea, fruit juices, tomato juice, Coca Cola, wine, sparkling wine, beer, Cognac, pen, environmental dirt etc. Leather surfaces remain natural.

16 oz. .....P/N 09-03863 .....**$18.95**
1 Gallon.....P/N 09-03864 .....**$119.95**
5 Gallon.....P/N 09-03865 .....**$495.95**

SKYWASH POLISH & SEALANT



Can be used on all surfaces painted or unpainted, cleans, gently protects, and conserves at the same time. Particularly well on aluminum and chromium plated surfaces. Protects long term against harsh environment, salt, acid rain, other pollutants, UV-rays and oxidation.

16 oz. .....P/N 09-03860 .....**$39.95**
1 Gallon.....P/N 09-03861 .....**$289.95**
5 Gallon.....P/N 09-03862 .....**$1,295.00**

BUGSLIDE® CLEANER POLISH & BUG REMOVER



BugSlide® is a complete waterless detailer that cleans, shines and degreases while removing bugs and other surface contaminants with ease. No water needed. Non-abrasive and free of wax, petroleum products, silicone, Teflon, solvents or harsh chemicals. Contains UV protectants. Won't yellow and safe to use in direct sunlight. Remove Bugs and Debris on Exteriors: Windshields • Propellers • Leading Edges Tail Fins & Landing Gear. Cleans and Polishes Interiors: Instrument Panels • Control Wheels • Windows • GPS Screens • Leather Seats • Doors Latches.

Cleaner Polish & Bug Remover .....P/N 09-04723 .....**$24.99**
32 oz. Refill .....P/N 09-04724 .....**$34.99**

BUGSLIDE® PLUSH MICROFIBER CLOTH



BugSlide® Plush Microfiber Cloths with 350 thread count, you can rest assured this cloth will treat your plane nice. When using with BugSlide Cleaner Polish: Remove Bugs and Debris on Exteriors: Windshields • Propellers • Leading Edges Tail Fins & Landing Gear as well as Cleans and Polishes Interiors: Instrument Panels • Control Wheels • Windows • GPS Screens • Leather Seats • Doors Latches.

16x16 Microfiber Cloth.....P/N 09-04726 .....**$14.99**
14x14 Microfiber Cloth.....P/N 09-04727 .....**$9.99**

BUGSLIDE®X-TREME CLEAN MESH MICROFIBER CLOTH



BugSlide® X-Treme Clean Microfiber Cloth for the areas that need a little X-Treme clean.

P/N 09-04725 .....**$7.99**

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ROLITE METAL AND FIBERGLASS POLISH



Rolite Metal and Fiberglass Polish will restore the original brilliance of virtually any metal surface, as well as being ideal for fiberglass and plexiglass parts. Rolite products are preferred by many EAA members maintaining bare aluminum aircraft as well as by commercial airlines and prop shops worldwide. Will create a mirror-like shine like you have never seen. Recommended for maintaining brilliant propellers and spinners.

1 Lb. Can.....P/N 09-42555 ..... **$19.50**
2 Lb. Can.....P/N 09-42560 ..... **$33.75**

ROLITE SUPRA 90 ALUMINUM POLISH



Researched and developed for the commercial aircraft industry. This precision polish is widely used by many domestic airlines. Manufactured to meet all Boeing and McDonnell Douglas Specifications (Boeing D6-17486; CSD-1, Type 1 &V). Supra 90 will give you a mirror-like shine on your metal surface that was never before believed possible!

2 Lb. Can.....P/N 09-42420 ..... **$65.75**

ROLITE PREMIUM POLISH AND SEALANT



A World-Class, One-Step Product. Silicone and wax free, easy-to-use, one-step cleaner, polish, and sealant. This product produces a lasting, brilliant shine never believed possible. It is uniquely formulated with polymers to level the surface, seal in the shine, and protect the painted finish from UV rays, calcium, salt, and other pollutants. Safe for all painted surfaces, including clear coat. It is superb on non-porous materials like fiberglass, plastic, and stainless steel. Because it is formulated for aviation, it is a step above any off-the-shelf product available for autos, trucks, RVs, motorcycles, off-road vehicles, boats, and watercraft. P/N 09-00385 ..... **$24.65**

MAAS METAL POLISH



Maas polish removes fine scratches, prevents clouding on plexiglass windshields and windows, reduces air resistance, and repels moisture. It is used by major air carriers and has provided them with a 10% savings on fuel due to Maas' ability to substantially reduce parasitic drag and friction on the leading edges of the aircraft. Excellent for use on anodized or bare aluminum, painted surfaces, plastics, plexiglass, and fiberglass. 1 lb. can..... P/N 09-23545 ....**$23.50**

ROLITE PREMIUM PROTECTANT



"The Sun Protector". Protect your aircraft interior by using Rolites' maximum sun block formula. Contains no solvents, silicone oils, or petroleum distillates. Its anti-static formula will produce a shine on your vinyl or leather seats without being slippery or tacky. And will actually repel dust! Comes in spray pump bottle. 8 oz. Bottle ..... P/N 09-42435..... **$10.50**

VOODOO WAX™ RACING FORMULA



Developer for high speed aircraft applications. Voodoo Wax™ is the wax of choice for Team Voodoo's P-51 Mustang Unlimited Air Racer. The Voodoo Wax™ formula is ideal for application on aircraft, boats, automobiles and motorcycles.

Voodoo Wax™ Cleaner Polish contains the finest blends of ultra fine polishing agents, polymers and imported waxes.

Voodoo Wax™ Cleaner Polish rapidly cleans and removes fine and medium scratches, oxidization, water spots and environmental contaminates leaving a deep, rich luster and durable finish. Safe for clear coat and non-clear coat finishes, cleans and restores Lexan and Plexi-Glass.

Voodoo Wax™ Cleaner Polish is the ideal companion product to use prior to Voodoo Wax™ Racing Formula.

P/N 09-01594 ..... **$22.50**

VOODOO WAX™ CLEANER POLISH



Voodoo Wax Cleaner Polish contains the finest blends of ultra fine polishing agents, polymers and imported waxes.

Voodoo Wax Cleaner Polish rapidly clans and removes fine and medium scratches, oxidization, water spots and environmental contaminated leaving a deep, rich luster and durable finish. Safe and clear coat and non-clear coat finishes. Cleans and restores Lexan and Plexiglass.

Voodoo Wax Cleaner Polish is the ideal companion product to use prior to Voodoo Wax Racing Formula. P/N 09-01593.....**$22.50**

NEWSTAX AIRCRAFT EXHAUST POLISHING KIT



Restores polished aircraft exhaust stacks to a flawless mirror finish, fast! Specifically developed to allow anyone to achieve a professional grade finish without the high cost or downtime associated with sending the exhaust stacks to the manufacturer for polishing. 2 step nonabrasive process. This complete kit contains everything needed to revitalize and polish 4 exhaust stacks.

P/N 09-04024 ..... **$185.75**

PLAS-TEC® ACRYLIC SHEET/ PLASTIC CLEANER



Plas-Tec® cleans, shines, and protects today's high-tech plastics. Plas-Tec® is a non-aggressive, optically clear cleaner that lifts fingerprints and smudges, leaving a protective, anti-static coating that resists dirt build-up. Plas-Tec® is excellent for use on acrylic, Lexan, or Plexiglass windshields and windows as well as aircraft instrument panels, and many other applications.

4 oz. Can.....P/N 09-00308 ..... **$4.75**
16 oz. Can.....P/N 09-00309 ..... **$9.95**
1Gal. Can .....P/N 09-00310 ..... **$29.95**

REJEX SOIL BARRIER & STAIN PROTECTOR



RejeX™ is an advanced polymer system that seals painted surfaces to guard against corrosive exhaust gas, oil, and bug stains. It forms a slick, long-lasting, glass-like barrier that allows easy removal of turbine and piston-engine exhaust stains with mild detergents. Bugs can be removed quickly and easily with just a stream of plain water. On paint in good condition, RejeX eliminates the need for waxes and polishes, and one application will last a minimum of 4 months. Surfaces to be protected should be clean, dry, and cool to the touch and the product should not be applied in direct sunlight. Damaging contaminants, such as bug acids and exhaust stains will no longer be a problem. High Gloss Finish

12oz. Can.....P/N 09-01729 ..... **$13.46**
16 oz. Can.....P/N 09-00303 ..... **$17.95**
1 gal. Can.....P/N 09-00924 ..... **$116.96**

BRILLIANIZE



Brillianize makes shiny surfaces brilliant. The cleaned surface resists finger marking, has anti-static properties, repels dust. It is a nonflammable and nontoxic liquid. Use it to clean Plexiglas, Lexan, mirrors, chrome - any shiny surface. Apply and polish with Kleenmaster shop towels.

8 oz. spray bottle .....P/N 09-24000 .....**$10.65**
#128P -1 gal. plastic bottle .....P/N 09-24100 .....**$42.95**

KOZAK SUPER DRY WASH



The world's only patented cloth specially treated to clean fine dust and dirt WITHOUT SCRATCHING or leaving behind any streaks or residue. Used to maintain the world's most prestigious collections. 3.8 sq ft and saves 5,000 Gallons of Water per cloth - MADE IN USA

P/N 09-00345 .....**$10.50**

SPEED CLEAN™ -PLASTIC CLEANER/PROTECTOR



Just spray it on, let it work, and gently wipe off with a soft cloth. The surface is clean, protected and will be even easier to clean the next time! Now you can safely Clean and protect just about anything in your life that gets messy.Plastic surfaces, are found everywhere. Aircraft, autos, watercraft, kitchens, motorcycles, watches, and the list goes on. Once you clean the surface, Speed Clean™ leaves an invisible velvety smooth surface that helps dust and dirt from sticking to it. Cleaned surfaces will be static & dust free for weeks, and everything will be even easier to clean the next time. 16 oz. bottle..... P/N 09-01962 .....**$14.85**

ACTION CHIPKIT

FIXES PAINT CHIPS AND SCRATCHES



The Action Chipkit stops rust around paint chips and scratches and produces repairs which are flush with the rest of the paint. The kit includes the Eliminator rust remover which is used to prepare the surface, and then the kit's clear paint sealer is applied. The kit's microfine sanding papers and sanding block are used to create a smooth and flush finish. Extrafine polishing compound completes the job by removing irregularities and restoring gloss. Everything you need for small paint chip repairs is included in the easy-to-use Action ChipKit.

P/N 09-27225..... **$16.50**

Prices Subject to Change Without Notice

ROLITE POLISHING PRODUCTS

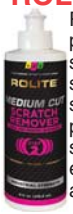
ROLITE HEAVY CUT SCRATCH REMOVER



Repairs, Polishes and Protects – this innovative heavy cut compound is specifically formulated to remove P1200 and finer scratches including abrasion marks and provide a superior gloss finish for painted surfaces in one easy step. Thanks to the high performance 'smart' technology polishing with abrasive grit, this scratch remover can be used on large surfaces. Highly effective for all types of automotive clear-coat paints. Produces an extremely fine finish. Easy to use and wipe off.

8 OZ. ..... P/N 09-04789.....**$15.95**
32 OZ. ..... P/N 09-04791.....**$29.95**

ROLITE MEDIUM CUT SCRATCH REMOVER



Restores, Polishes and Protects – this innovative medium cut polish is specifically formulated to remove compound scratch and swirl marks and provide a superior high gloss finish for painted surfaces. Rolite Medium Cut Scratch Remover is our high gloss step utilizing the finest high performance 'smart' technology polishing aggregates that diminish to one of the smallest particle sizes measurable, yielding a swirl free finished surface. Highly effective for all types of automotive clear-coat paints. Produces an extremely high gloss finish.

8 OZ. ..... P/N 09-04790.....**$15.95**
32 OZ. ..... P/N 09-04792.....**$29.95**

ROLITE ULTRA FINE SCRATCH REMOVER



Refines, Polishes and Protects – this innovative ultra fine finish is specifically formulated to remove microfinishing scratch and swirl marks and provide a superior deep gloss finish for painted surfaces. Rolite Ultra Fine Scratch Remover is our deep gloss step utilizing the microfinishing high performance 'smart' technology polishing aggregates that diminish to one of the smallest particle sizes measurable, yielding the ultimate swirl free finished surface. Highly effective for all types of automotive clear-coat paints. Produces an extremely deep gloss finish.

8 OZ. ..... P/N 09-04793.....**$15.95**
32 OZ. ..... P/N 09-04794.....**$29.95**

ROLITE ALL-SURFACE DETAILER



Cleans, Shines, and Protects – unique formulation that instantly shines ALL surfaces, including: aluminum, carbon, chrome, clear coats, fiberglass, gel coats, glass, moldings and trim pieces, painted surfaces, plastic parts, rubber, tiles, vinyl and much more. Helps repel dust and water without leaving an oily or greasy residue. Not recommended on fabric or suede leather. DO NOT use on vehicle controls such as steering wheels, handlebars, throttles, brake/gas pedals, motorcycle/personal watercraft seats, and surfaces critical to safe operation.

P/N 09-04788.....**$4.95**

ROLITE PREMIUM POLISH AND SEALANT



A wax free, easy-to-use, one step polish & sealant that gives you a tough, long lasting, brilliant shine that exceeds today's standard finishes. This unique formula contains special polymers to level the surface, seal in the shine and protect the finish even from ultraviolet rays and acid rain. Contains no harsh abrasives, acids or solvents that can harm painted finishes. Special cleaners remove oxidation, dirt and pollutants to restore the original luster. Safe for all auto finishes, domestic and foreign, including acrylics, baked enamels, clear coats and metallics. It can also be used with confidence on stripes and decals. Superb for aluminum, chrome, fiberglass, plastic, stainless steel and other non-porous surfaces. Not recommended for use on flat black paint or black textured trim. Always check colorfastness of decals and stripes before applying.

8 OZ. ..... P/N 09-04785.....**$12.95**
32 OZ. ..... P/N 09-04786.....**$34.95**

ROLITE PRE-POLISH



Refines, Prepares and Cleans – Use as a pre-polish with Rolite Metal Polish on aluminum, brass, bronze, chrome, copper, nickel, paint-and gel-coated fiberglass and stainless steel for the removal of heavy oxidation, stains, discoloration and corrosion. Not recommended for use on plated metals.

P/N 09-04780.....**$20.95**

ROLITE ALUMINUM POLISH



Cleans, Polishes and Protects – Produces a brilliant shine on all aluminum and bare metal surfaces.

P/N 09-04782.....**$25.95**

ROLITE FIBERGLASS POLISH



Cleans, Reconditions and Protects – Produces a brilliant shine on all fiberglass and clearcoat surfaces. Gently removes water spots, staining, oxidation, and hairline scratches from acrylic and polycarbonate surfaces. Also used as an excellent metal polish for brass, copper, bronze, platinum, aluminum, stainless steel, chrome, gold, nickel, and a deoxidizer of painted surfaces. Rolite Fiberglass Polish restores a brilliant shine to the finish – and there's no need to wax over it. P/N 09-04783.....**$18.95**

ROLITE CHROME CLEANER



Cleans, Shines and Protects – Produces a brilliant shine on all chrome plated surfaces in one easy quick step. P/N 09-04784.....**$21.95**

SUPRA90 AIRCRAFT METAL POLISH



Use Supra 90 on painted and plastic surfaces, and on stainless steel, aluminum, and titanium. Excellent for Jet Blast & Fuel Stain Removal. Conforms to commercial aviation requirements Boeing (D6-17487) Revision R and Airbus (AIMS-09-00- 002) Conforms to 14CFR AC No. 43.13-1B, Chapter 6, Section 7; Par 6-117 a. Acceptable Cleaners, Polishes, and Brighteners. Recommended usage: Commercial aircraft. Boeing certified. Made in U.S.A.

4.5 OZ. ..... P/N 09-04823.....**$14.95**
1 Lb. ..... P/N 09-04824.....**$39.95**
2 Lb. ..... P/N 09-04825.....**$64.95**

ROLITE SUPRA AIRCRAFT SCRATCH REMOVER 3 STEP SERIES



The Supra Series is a line of professional aircraft polishing products – ideal for painted surfaces. The Supra Aircraft Scratch Remover product line is a 3-step system that range in coarseness: Heavy Cut, Medium Cut and Ultra Fine. To achieve the ultimate shine, apply these specially formulated aircraft scratch remover products together in sequence to discover a synergistic effect in both the depth and clarity. The beauty builds from one application to the next, producing luster and long-lasting protection that cannot be beat. The Supra90 Aircraft Metal Polish is specially formulated for jet blast and fuel stain removal and makes metal shine like never before. Discover a new class of superior quality aircraft polishing perfection with the Supra Series Aircraft Polishing Products!

Description	Part No.	Price
Heavy Cut Scratch Remover - 16 Oz.	09-04813	**$23.95**
Heavy Cut Scratch Remover - 32 Oz.	09-04814	**$34.95**
Cut Scratch Remover - 4 Oz Medium	09-04815	**$9.95**
Cut Scratch Remover - 8 Oz Medium	09-04816	**$16.95**
Cut Scratch Remover - 16 Oz Medium	09-04817	**$23.95**

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SPRAYWAY FAST TACK 55 FOAM AND FABRIC ADHESIVE

Effectively bonds fabric to foam, metal, or wood surfaces, and to itself. Bonds urethane and latex-type foams to themselves in butt-splicing, knife edging, laminating, boxing, and edge turning operations as well as to metal, rigid plastic, and wood surfaces. Offers quick tack and high coverage, while providing a strong bond. It does not darken, nor does it leave a residual odor. Not recommended for bonding vinyl. P/N 09-04707.....**$10.50**



SPRAYWAY FAST TACK 85 GENERAL PURPOSE WEB ADHESIVE

High performance web adhesive used for both temporary and permanent bonding applications. Waterproof, flexible, transparent, and non-staining. Ideal for porous or non-porous substrates. Contains no chlorinated solvents.
P/N 09-04708.....**$8.50**



SPRAYWAY FAST TACK 92 HI TEMP TRIM ADHESIVE

Formulated for the automotive professional. Easily bonds heavier-weight materials to metals, woods, and plastics. For high-temperature, heavy-duty bonding of vinyl tops, headliners, and hood silencer pads. Excellent heat and water resistance; has longest bonding range; allows repositioning during assembly.
P/N 09-04709.....**$12.50**



SPRAYWAY C-60 SOLVENT DEGREASER

Removes oil and grease stains, ink, and fresh paints easily. Very effective for cleaning oily and greasy parts while servicing, repairing, or replacing them. Can be used on metal parts prior to painting or soldering. Will not short motors, generators, compressors, condensers, or other electrical equipment.
P/N 09-04710.....**$11.65**



SPRAYWAY CARBURETOR AND CHOKE CLEANER

Removes gum & varnish deposits. Eliminates stalling; increases gas mileage. Washes fuel injection systems. Leaves no sticky film. Cleans carburetor throat, automatic choke butterfly valve, PCV valve, linkage, etc P/N 09-04711.....**$8.50**



SPRAYWAY BIO ENZYMATIC CARPET AND UPHOLSTERY CLEANER

Fast-acting enzymes safely remove stubborn stains & odor-causing organic matter. Inverted spray with foaming action penetrates deep into carpet and upholstery fibers. Attacks spots, stains and odors in two ways: First, by a new unique chemical system that dissolves and suspends the embedded foreign matter. Second, by enzyme-generating bacteria that breaks down organic residues thereby eliminating stains and odors. Effective on spots caused by coffee, milk, wine and other mishaps.
P/N 09-04712.....**$7.50**



SPRAYWAY ORANGE POWER PLUS HEAVY DUTY DEGREASER

Heavy duty, non-chlorinated degreaser. Effective for removal of grease, oil, ink, adhesive, tar, wax, exhaust fume residue, resins and certain graffiti. Use to replace products containing acetone, trichloroethylne, butyl cellosolve and other chlorinated solvents.
P/N 09-04713.....**$12.50**



SPRAYWAY VINYL AND LEATHER CLEANER

Perfect for automotive, furniture and upholstery professionals. Cleans, protects, and restores leather upholstery and vinyl tops to "like new" appearance. Leaves a finished touch of elegance - contains oil of mink. Easily removes stains, smudges, fingerprints, salt and dirt. Ideal for use on naugahyde, vinyl and leather. P/N 09-04714.....**$5.70**



SPRAYWAY LEATHER CLEANER AND CONDITIONER

Cleans, Conditions, Renews and Preserves Leather Surfaces. Contains No Silicones. Provides Water Repellent Treatment. Like-New Leather Fragrance.
P/N 09-04715.....**$6.75**



SPRAYWAY PRECISION CONTACT CLEANER

This precision cleaning product prevents corrosion by displacing moisture. Helps prevent electrical malfunctions caused by water penetration, humidity and condensation. Ideal for applications where lower flash point and higher evaporating solvents may be used. Non-staining. Non-corrosive. Safe for food packaging and processing equipment. Quick drying. Leaves no residue. Safe on most plastics. Effectively removes soil & other contaminants from electronic components. P/N 09-04716.....**$9.50**

AP AIRCRAFT METAL POLISH 5 STEP SERIES



The AP Series is a 5-step system of professional aircraft metal polishing products – ideal for aluminum and bare metal surfaces. These 5 easy steps range in coarseness: Extra Coarse, Coarse, Medium, Fine and Ultra Fine. To achieve the ultimate shine, apply these specially formulated aircraft metal polishing products together in sequence to discover a synergistic effect in both the depth and clarity. The beauty builds from one application to the next, producing luster and long-lasting protection that cannot be beat, validated by gloss meter results. Discover a new class of superior quality aircraft polishing perfection with the AP Series 5-step system!

Description	Part No.	Price
Ap100 Aircraft Metal Polish - Extra Coarse 4.5 Oz.	09-04796	**$19.95**
Ap100 Aircraft Metal Polish - Extra Coarse 1 Lb.	09-04795	**$54.95**
Ap100 Aircraft Metal Polish - Extra Coarse 2 Lb.	09-04797	**$95.95**
Ap200 Aircraft Metal Polish - Coarse 4.5 Oz.	09-04798	**$19.95**
Ap200 Aircraft Metal Polish - Coarse 1 Lb.	09-04799	**$54.95**
Ap200 Aircraft Metal Polish - Coarse 2 Lb.	09-04801	**$95.95**
Ap300 Aircraft Metal Polish - Medium 4.5 Oz.	09-04802	**$19.95**
Ap300 Aircraft Metal Polish - Medium 1 Lb.	09-04803	**$54.95**
Ap300 Aircraft Metal Polish - Medium 2 Lb.	09-04804	**$95.95**
Ap400 Aircraft Metal Polish - Fine 4.5 Oz.	09-04805	**$19.95**
Ap400 Aircraft Metal Polish - Fine 1 Lb.	09-04806	**$54.95**
Ap400 Aircraft Metal Polish - Fine 2 Lb.	09-04807	**$95.95**
Ap500 Aircraft Metal Polish - Ultra Fine 4.5 Oz.	09-04808	**$19.95**
Ap500 Aircraft Metal Polish - Ultra Fine 1 Lb.	09-04809	**$64.75**
Ap500 Aircraft Metal Polish - Ultra Fine 2 Lb.	09-04810	**$95.95**

PLEXIGLASS CLEANERS & POLISHES



NOVUS PLASTIC POLISH #1 CLEANS & PROTECTS

Novus Plastic Polish #1 gently cleans all plastics without scratching and leaves a lustrous shine that resists fogging, repels dust, and eliminates static. Leaves a shield that resists fingerprints and smudging, and is nontoxic and free of strong odors. Contains no abrasives or harsh chemicals.

8 oz.. ..... P/N 09-38110..... **$5.65**
64 oz. ..... P/N 09-38115..... **$15.50**



NOVUS PLASTIC POLISH #2 RESTORES & REFINISHES

Novus Plastic Polish #2 removes fine scratches, haziness, and abrasions from most plastics. With repeated use, it will restore faded and discolored plastics. Contains mild abrasives, but is non-toxic and has no strong odor. Creates a deep shine which resists scratching, marking, and aging.

8 oz.. ..... P/N 09-38120..... **$7.80**
64 oz.. .... P/N 09-38125..... **$29.95**



NOVUS PLASTIC POLISH #3

Novus No. 3 removes heavy scratches and abrasions from most acrylic surfaces. This is an aggressive polish and is not intended for use on coated plastics or polycarbonates. Requires both Novus No. 1 and No. 2 polishes for final finishing.

8 oz.. ..... P/N 09-38130..... **$8.80**
64 oz ..... P/N 09-02397..... **$37.50**

SCRATCH OFF WINDSHIELD REPAIR KIT



Developed by an A&P and manufactured since 1993, Scratch Off has become the leading Plexiglas and Lexan restoration system worldwide and is guaranteed, when used as directed, to permanently improve the clarity of aircraft windows and windshields. Scratch-Off is being used worldwide and highly recommended by airframers, aircraft window/windshield manufactures and enthusiasts to restore optical clarity back to aircraft windshields and windows. The 8 panel instruction booklet walks you through a step by step process on how to determine where to start the process as all four steps are not always needed.

Standard Kit .....P/N 09-42600 ..... **$36.75**
Deluxe Kit.....P/N 09-00252 ..... **$68.75**

Please see our website for a complete list of all kit details.

POLY-SAND SCRATCH REMOVER



This is the original Poly-Sand process. Consists of a series of cloth-backed cushioned abrasives which when used in proper sequence will restore the finish of plastics. Also used for fine finishing of wood and precious metals. Recommended by Rohm & Haas Co., manufacturers of Plexiglas. Kit includes series of Poly-Sand cushioned abrasive cloth tapes, all required accessories and instructions.

PCA Kit #40 .....P/N 09-24800 ..... **$29.50**



UNIGRIT™ SANDING PRODUCTS

Unigrit™ Finishing Papers & Sanding Blocks use precise, uniform grit particles to eliminate deep sanding scratches and the need for compounds. More economical to use because they work faster, last longer and won't load up as quickly as conventional sanding products.

FINISHING PAPERS				*SANDING BLOCKS*			
Grit	**Sheet Size (in)**	**Part No.**	**Price Each**	**Grit**	**Block Size (mm)**	**Part No.**	**Price Each**
1000	5.5x9	09-23580	**$0.85**	1000	60x30x20	09-23640	**$19.65**
1200	5.5x9	09-23590	**$0.85**	1500	60x30x20	09-23650	**$17.00**
1500	5.5x9	09-23610	**$0.92**	2000	60x30x20	09-23660	**$19.85**
2000	5.5x9	09-23620	**$1.10**				



PLEXUS® AIRCRAFT PLASTIC CLEANER, PROTECTANT & POLISH

Plexus®™ was developed for use in aviation, specifically for cleaning and protecting aircraft windshields and painted surfaces. It's quite simply the most effective product you can buy for cleaning, polishing and protecting all clear and colored plastics and painted surfaces. Plexus® is easier to use, and leaves a noticeably cleaner, more lustrous finish than conventional polishes. It protects by actually sealing the pores in plastic making it more resistant to debris, oil, bugs or scratches. Because it's anti-static, it repels dust and lint.

7 Oz. Can .....P/N 09-29715 ..... **$15.85**
Case of 12 7 oz. Cans .....P/N 09-29715-1 ..... **$190.20**
13 Oz. Can .....P/N 09-29710 ..... **$20.80**
Case of 12 13 oz. Cans .....P/N 09-29710-1 ..... **$249.60**



PERMATEX PLASTIC CLEANER

Removes grease, stains and insects. Retards fogging. Rain repellent, anti-static. Cleans Plexiglas, fiberglass, stainless steel and painted surfaces without scratching.

#403D Pint Can.....P/N 09-00344 ..... **$8.75**



NO FILM GLASS CLEANER

Excellent cleaning and polishing glass, mirrors, windshields and windows. This easy-to use, fast acting product uses a clinging foam to break up soils and hold them - even on vertical surfaces. There is no dripping, no running and no streaking. With an exclusive formulation using denatured alcohol and no ammonia, this product cleans thoroughly, dries quickly, requires no rinsing and leaves a pleasant, fresh aroma. Product is best on glass not plexiglass. 20oz aerosol. P/N 09-04696 ..... **$5.35**



LP AERO'S ACRYLIC POLISH SEALANT FOR AIRCRAFT WINDSHIELDS

A superior no-wax, non-yellowing formula containing polyethylene polymers. This product not only gives a super slick surface to your windshield and windows, but can also be used on your entire aircraft, including all the painted gloss surfaces, aluminum & fiberglass. Ease of application and removal is unmatched. Sold in 16 oz. bottles.

P/N 09-42055 ..... **$19.95**



SPRAYWAY #848 PLASTIC CLEANER

Sprayway plastic cleaner contains no chemicals or abrasives that will cause damage to transparent surfaces. This formula is anti-static, anti-fog, fast-drying, non-streaking, and it reduces glare. It also repels finger smudges, dirt, and dust. Great for use on acrylics, plexiglass, lexan, glass, and polycarbonates. No. 848 meets the following military and commercial specifications: • MIL P5425 • MIL P25690A • Douglas Aircraft CSD-1 • ANSI/ASTM F484-77 • Boeing Letter-Lexan 9600. Product is free of ozone-depleting chlorofluorocarbons (CFC's)

P/N 09-42060 ..... **$6.95**



PLEXI-CLEAR ACRYLIC CLEANER

Plexi-Clear is an anti-static aircraft plexiglass cleaner, protectant, and polish. Plexi-Clear produces a microscopic, high luster, soil retarding and water repellent finish to all aircraft plexiglass and plastic and makes small scratches less visible,leaving a surface that is fresh, lustrous, and protected. Plexi-Clear dries perfectly with no smears, no scratches, no smudges, no oily, tacky or sticky residue. Plexi-Clear can be applied in seconds, in one easy step. Boeing and MIL spec Approved.

P/N 09-37960 ..... **$15.50ea**



WINBRIGHT PLASTIC CLEANER

WinBRIGHT is safe to use on any polycarbonate, acrylic, or plexiglass window. Developed for aircraft transparencies, but perfect for any plastic surface:AIRCRAFT, MOTORCYCLE WINDSCREENS, BOATS, AQUARIUMS, CONVERTIBLE WINDOWS, INSTRUMENT PANELS, BIMINI TOPS, SAFETY GLASSES, RVs, CDs This professional strength spray with Micro-Brighteners leaves surfaces sparkling clear and clean. Removes, dust, dirt, stains, smudges and finger prints. Optical clarity improves with extended use. Clean surface with water first, then simply spray WinBRITE onto a dampened flannel cloth and polish into the surface of the window until polish disappears. Contains no wax, solvents or ammonia and leaves no residue or build-up.

8oz. Spray ..... P/N 09-02079 ..... **$13.85**

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MICRO-MESH LEADING EDGE POLISHING KIT

This kit will restore up to 100 sq. feet of unpainted aluminum surface. Perfect for leading edges, vertical and horizontal stabilizers, engine nose cowls and thrust reversers, removes oxidation, corrosion, orange peel, and surface scratches. Provides a uniform high-luster gloss.

Specifications:

- •1 - instructions
- •2 - 5" loop discs, Micro-Mesh 1500 AO..
- •2 - 5" loop discs, Micro-Mesh 1800 AO
- •2 - 5" loop discs, Micro-Mesh 2400 AO..
- •2 - 5" loop discs, Micro-Mesh 3200 AO
- •1 - 16 oz. bottle aluminum cutting fluid...
- •1 - 1/4 lb. container aluminum polish
- • 2 - flannel cloths
- •1 - 5" x 3/4" nap TUFBUF lambswool polishing pad
- •1 - 5" white, loop back foam pad
- •1 - 5" soft interface pad with hook.
- •1 - 5" soft interface pad with hook

P/N 09-00785..... **$151.75**



FW1 AIR & SEA CLEANING WAX

AIR&SEA Formula uses a proprietary combination of lubricants, cleaning agents, and carnauba wax to lubricate and lift dirt and grime leaving nothing behind. Reduce drag, save fuel, increase speed clean and protect your aircraft and watercraft from the elements. AIR&SEA requires no water and can be used on any non-porous surface. P/N 09-04744..... **$14.85**

SUPERBIRD PAINT RESTORATION SYSTEM



The Superbird Paint Restoration System allows you to purchase a complete set of paint restoration system products. This easy-to-use system can be applied by hand using microfiber towels or with an orbital buffing machine, vastly improving the appearance of your aircraft's exterior paint on metal, aluminum, or composite surfaces. This complete Paint Restoration System includes the following: • Dirt, Grime & Black Streak Remover - one (1) spray bottle, 22 fluid ounces • Paint Cleaner - one (1) bottle, 16 fluid ounces • Paint Restorer - one (1) bottle, 16 fluid ounces • Paint Sealant - one (1) bottle, 16 fluid ounces.

P/N 09-05273..... **$99.95**



SUPERBIRD DELUXE PAINT RESTORATION SYSTEM

The Superbird Deluxe Paint Restoration System includes everything in the Super Deluxe Paint Restoration System you need to completely restore your aircraft's paint like a professional - minus the Hi-Buff Deluxe Random Orbital Polisher. The Superbird Deluxe Paint Restoration System includes the following: A complete set of Superbird Paint Restoration System products, a complete set of Superbird Ultra-Premium Microfiber Towels, and a complete set of Superbird Cleaning Accessories. P/N 09-05333..... **$199.99**



SUPERBIRD SUPER DELUXE PAINT RESTORATION SYSTEM

he Superbird Super Deluxe Paint Restoration System includes everything you need to completely restore your aircraft's paint like a professional, making it look like new again for a fraction of the cost of a new paint job! The Superbird Super Deluxe Paint Restoration System includes the following: A Hi-Buff Deluxe Random Orbital Polisher - one (1) machine, A complete set of Superbird Paint Restoration System products, A complete set of Superbird Ultra-Premium Microfiber Towels, and a Complete set of Superbird Cleaning Accessories. P/N 09-05334..... **$449.99**



SUPERBIRD RED ORBITAL POLISHER BUFFING PAD

This high-quality Orbital Polisher Buffing Pad (Red) is used to apply the Superbird Paint Sealant product - the final step of the Superbird Paint Restoration System process. P/N 09-05326..... **$14.95**



SUPERBIRD ORANGE ORBITAL POLISHER MED CUT BUFFING PAD

This high-quality, made-in-the-USA Orbital Polisher Buffing Pad (Orange) is used to apply the Superbird Paint Cleaner and Superbird Paint Restorer products - the second and third steps, respectively, in the Superbird Paint Restoration System process.

P/N 09-05327..... **$14.95**

KPC PRODUCTS, CLEANERS AND PRESERVATIVES



WINDSHIELD SPEED CLEANER & POLISH - KPC Windshield Shield Speed Cleaner & Polish for Transparent Plastic Aircraft Materials. Meets U.S.A. Military Requirements MIL-C-18767A (ASG). This product is non-static, non-glaring, and abrasive free, will help prevent hazing and discoloration of clear plastic materials. Can be used in arid, humid, rain or sunny conditions. Recommended for: plastic windows, windshields, windscreens, and instrument faces, AS-2 safety glass, plexiglas, lexan and mylar, formica and other structural plastics. Safe, quick, easy to use. 12 oz.....P/N 09-00544 ..... **$13.50**
1 gal.....P/N 09-00545 ..... **$49.95**



KPC VINYL COATED CLEANER AND PRESERVATIVE - KPC Vinyl Cleaner and Preservative is a neutral biodegradable spray on - wipe off chemical. The finest chemical available for cleaning and preserving your breathable or solid vinyl, deep grained vinyls, pearlized vinyl, hercolyn, leatherette, naugahyde, or any synthetic fabric. No abrasives, residue, coating, or discoloration. KPC Vinyl Cleaner will not damage cloth, rugs, chrome, painted walls or any of the threads or seals that hold the vinyls together, or any backing of breathable vinyl as used on some of the imported cars. Leaves article soft and pliable. 12 oz.....P/N 09-00542 ..... **$9.44**



3M™ PREMIUM LIQUID WAX

Clear coat safe wax. Use on all cured paint finishes. For use by hand or with an orbital polisher. Produces a high-gloss, deep-luster, durable finish on both new and used car paints. Special formulation is capable of removing road film or light oxidation from car finishes. Heavily oxidized finishes may require compounding with 3M™ Super Duty Rubbing Compound (PN39004) prior to applying wax. Quart Size.

P/N 09-01440..... **$28.50**



THOR AERO BRUSH

This a 10" foam block that is completely filled with a one threaded green nylon. This brush will effectively remove oil, grease, exhaust fumes, and other oily residues. 60" length metal handle not included, order separately.

Thor Aero Brush.....P/N 09-00897....**$16.50**
Handle For Brush .....P/N 09-02097.....**$8.75**



KPC LEATHER CLEANER & PRESERVATIVE - A Premium Cleaner and Preservative Formulated Specifically for Leather. Cleans With a Saddle Soap Base and Preserves With Pure Neatsfoot Oil. Leaves no Oily Residue on the Treated Item. Leather Appearance Stays Natural. Can be Used on All Leather Goods Such as Aircraft and Automobile Interiors, Motorcycle Saddlebags, Baseball and Softball Gloves, Equestrian Saddles and Tack, Briefcases, Handbags and Holsters.

4 oz. .....P/N 09-00550 .....**$6.95**
8 oz. .....P/N 09-00551 .....**$9.95**

AEROSHELL FLIGHT JACKET POLISHES AND CLEANERS



AEROSHELL FLIGHT JACKET POLISH - Frees leather of ground-in dirt. Works well on vinyl, plastic, & rubber. Contains no silicone. P/N 09-00392 ..... **$12.95**



AEROSHELL FLIGHT JACKET PLEXICOAT - Increases visibility of aircraft windows. Protects Plexiglas and glass surfaces from UV yellowing and clouding. Removes and prevents light scratches. Commercial Aviation Certified. Contains no silicone. (16-oz. Bottle)

P/N 09-00393 ..... **$18.50**



AEROSHELL FLIGHT JACKET OIL & EXHAUST REMOVER - Non-abrasive formula removes exhaust residue without removing Aeroshell Flight Jacket Polish or damaging paint. Safe for all paint surfaces.16 oz

P/N 09-00394 ..... **$9.85**



AEROSHELL FLIGHT JACKET INTERIOR CLEANER - Flight Jacket Interior Cleaner frees leather of ground-in dirt and debris. Can also be used on interior trim surfaces including vinyl, plastic and rubber (not recommended for cloth).

P/N 09-00395 ..... **$6.95**



AEROSHELL FLIGHT JACKET INTERIOR CONDITIONER - Moisturizes and protects leather and vinyl from wear and UV rays. Dries without leaving an oily residue. No messy overspray. Contains no silicone. (7.5-oz. Bottle) P/N 09-00396 ..... **$7.95**

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Prices Subject to Change Without Notice

VELOCITY VISION CLEANING PRODUCTS



VELOCITY VISIONS PREMIUM AIRCRAFT WASH

Ideal for cleaning an aircraft's exterior. It is safe on exterior cables, wiring, electrical components, and windows. Chemically formulated to pick up dirt and to not leave any streaks or residue, will significantly decrease maintenance time with all aircraft. Added stabilizers allow the wash to work in hard water and reduces water spotting with its quick rinsing action!

2 Ounces..... P/N 09-05274.....**$11.50**
Gallon..... P/N 09-05275.....**$39.95**



VELOCITY VISIONS AIRCRAFT MULTI PURPOSE CLEANER

Great for all those tough cleaning jobs where soap and water just won't get the job done. Ideal for cleaning items such as stubborn stains, greasy surfaces, bugs, bird droppings, tires, wheels, landing gear, engines, skydrol, soot and more. Serves as a great alternative to harmful degreasers or other caustic fluids.

32 Ounces..... P/N 09-05293.....**$17.95**
1 Gallon..... P/N 09-05294.....**$17.95**
5 Gallon..... P/N 09-05295.....**$75.00**
55 Gallon..... P/N 09-05296.....**$625.00**
250 Gallon..... P/N 09-05297.....**$1,995.00**



VELOCITY VISIONS AIRCRAFT NO RINSE CONCENTRATE

A hyper concentrate that can be used to make the Velocity Visions No Rinse spray wash or as a no rinse aircraft wash solution in bucket. Quick cleaning ability and gloss enhancement! It quickly and safely cleans painted surfaces, chrome, plastic, glass and wheels without the use of excess water. No hoses! No rinsing! This formula not only cleans your vehicle's surfaces, it protects from the harsh elements and harmful UV rays.

16 Ounces..... P/N 09-05284.....**$32.95**



VELOCITY VISIONS AIRCRAFT NO RINSE DETAILING SPRAY

Safely cleans all surfaces without the use of water. This boosted by Polycharger ™ formula not only cleans your aircraft's surfaces, it protects it from the harsh elements and harmful UV rays. Special high lubricating agents encapsulate dirt and grime so that it is safely and easily wiped away without scratching.

4 Ounces..... P/N 09-05285.....**$6.95**
22 Ounces..... P/N 09-05286.....**$19.95**



VELOCITY VISIONS AIRCRAFT MACH 1 OXIDIATION REMOVER

Formulated to remove built up oxidation in the aircraft's exterior surface while having the security of not damaging exterior panels and operational components. By using highly refined and properly fired aluminum oxide, the compound shapes the surface on a molecular level to properly remove defects for good.

12 Ounces..... P/N 09-05276.....**$29.95**



VELOCITY VISIONS AIRCRAFT MACH 2 ONE-STEP SURFACE RESTORE

Formulated to quickly remove swirls, webbing and scratches in the aircraft's surface while having the security of not burning the paint or damaging essential components. By using highly refined and properly fired aluminum oxide, the compound shapes the surface on a molecular level to properly remove defects for good. Once properly applied, the defects will not resurface even after the surface has had time to cool.

12 Ounces..... P/N 09-05277.....**$34.95**



VELOCITY VISIONS AIRCRAFT V1 PROTECTIVE DETAIL AND SEAL

An easy spray on and wipe off sealant that is extremely hydrophobic and glossy. It is formulated to bond and protect the aircraft exterior from harsh elements, fuel and oil leakage, ice build up, UV rays and much more. It can easily be applied in a matter of minutes.

22 Ounces..... P/N 09-05287.....**$29.95**
1 Gallon..... P/N 09-05288.....**$87.50**
5 Gallon..... P/N 09-05289.....**$320.00**



VELOCITY VISIONS AIRCRAFT V2 DEFENDER EXTERIOR SEALANT

Perfect for sealing off your exterior surfaces and giving them protection from hard water, UV, fuel and oil leakage, dirt/grime, ice, and other elements the aircraft may come against while in service. This coating creates a chemical bond with the finished substrate to create and extremely slick and hydrophobic surface that last for up to 6 months. This product is very easy to apply and can be done as often as desired. Use in conjunction with Velocity Visions' V1 Aircraft Protective Detail and Seal for long lasting effects.

12 Ounces..... P/N 09-05290.....**$29.95**



VELOCITY VISIONS AIRCRAFT METAL POLISH

Quickly removes oxidization and restores a brilliant shine to dulled uncoated aluminum and stainless steel. It works great on wheels, exhaust piping, chrome, props, brightwork and more. Applicable by hand or by machine. This ammonia free formula wipes on and off with little effort.

4 Ounces..... P/N 09-05291.....**$12.95**
12 Ounces..... P/N 09-05292.....**$19.95**



VELOCITY VISIONS ALUMINUM CLEANER

Cleans and brightens aluminum in one easy step. It is formulated with specific surfactants and active agents that penetrate tough grime, oxidation and dirt while leaving behind a clean slip-free surface. It can be used on aluminum boat hulls, true chrome, building scaffolding, ladders, trailers, diamond plate, and much more. No prep work required. Simply apply, wipe and rise off.

32 Ounces..... P/N 09-05298.....**$15.95**
1 Gallon..... P/N 09-05299.....**$19.95**



VELOCITY VISIONS AIRCRAFT COCKPIT DETAILER

A detailing asset for the entire interior of the aircraft. It is safe to use on all surfaces, including leather. It is specifically formulated to not leave a slick, oily residue that can damage interior pieces and ruin interior fabric and clothes. This formula leaves a "like new" look while still being anti-static and having the benefits of UV protection.

4 Ounces ..... P/N 09-05305.....**$10.95**
22 Ounces..... P/N 09-05306.....**$19.95**



VELOCITY VISIONS AIRCRAFT LEATHER AND VINYL CLEANER

A pH balanced cleaner that is safe on most pigmented and aniline leather, imitation leather, vinyl, and interior plastic finishes. Our water based formula is able to gently clean without drying or removing the natural sheen of fine leather and vinyl upholstery finishes.

4 Ounces..... P/N 09-05309.....**$8.50**
12 Ounces..... P/N 09-05310.....**$18.95**



VELOCITY VISIONS AIRCRAFT LEATHER CONDITIONER

Formulated to meet the abuse aircraft interiors regularly take from body oils, salts, and UV rays. This emulsion contains natural oils that are readily absorbed by leather to keep it hydrated, supple and in like-new condition. Special polymers maintain flexibility and withstand cracking while maintaining a factory finish. Creates a durable, sealed finish that last for months.

4 Ounces..... P/N 09-05307.....**$7.95**
12 Ounces..... P/N 09-05308.....**$20.95**



VELOCITY VISIONS AIRCRAFT RUBBER CONDITIONER

A water based formula specifically designed to leave a high gloss finish without leaving a residue or slinging product. Because of its concentrated formula it can be diluted with water to meet personal preferences on gloss intensity. This product contains no VOC's or petroleum distillates that can dry out or crack rubber, and it offers substantial UV protection.

12 Ounces..... P/N 09-05311.....**$12.95**
22 Ounces..... P/N 09-05312.....**$16.95**



VELOCITY VISIONS FLY AWAY CLEANING KIT

Velocity Visions "Fly Away Detailing Kit" for every aircraft's detailing needs. Designed to be convenient and storable, this entire kit will fit in a stow away area, under a seat or in another enclosed space to be out of the way but easily within reach when needed. The kit contains everything needed to do quick and easy maintenance on aircraft exteriors and interiors. Every item in the kit is made and tested in the USA. formulated to meet specific needs on the aircraft and comes with in-depth instructions on how to apply it. The products are water based so no worries about damaging effects on aircraft components. All of this allows for quick, stress free cleaning and less downtime for the aircraft and crew during maintenance checks or overhauls. P/N 09-05329..... **$225.00**

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AERO CLEANING PRODUCTS

AERO SHINE DRY WASH AND PROTECTANT



SHINE is a revolutionary new method of washing and shining your aircraft. It provides a protective coating on your paint in minutes, without water. No buckets, no hoses, no rinsing and drying! Simply spray on the surface and wipe dry. The unique formulation dissolves dirt and stains such as tree sap and bugs. Special lubricating agents encapsulate the dirt so that it can easily be wiped off your aircraft's delicate surface without scratching. It also leaves a protective film that provides gloss, color enhancement and smoothness that conventional washes fail to deliver.

16 oz. Spray..... P/N 09-04031 .....**$22.49**
Gallon..... P/N 09-04039 .....**$79.95**

AERO SUDS EXTERIOR SOAP



SUDS Exterior Soap has been specially formulated to powerfully clean your car or aircraft as it protects your wax finish. SUDS is the perfect balance of shielding your wax and protective coatings, while also removing unsightly dirt and road grime. SUDS, the ultimate soap that helps to keep a shine on your paint without harsh stripping agents that can damage surfaces, is environmentally friendly and biodegradable. With SUDS you do not have to worry about water spots or causing "spider web" marks in your paint finish because of its revolutionary lubricating agents to remove the dirt.

2.5 oz. ..... P/N 09-04056 .....**$4.49**
16 oz. ..... P/N 09-04064 .....**$19.99**
Gallon..... P/N 09-04065 .....**$77.50**

AERO FINALE FINAL DETAILER



Water spots, streaks and undesirable dust between washes are a thing of the past once you use FINALE on your aircraft. Formulated for both interior and exterior surfaces. Its lubricating agents encapsulate dirt and grime allowing fragile surfaces on your plane, such as paint, to be safe from scratches. Not only does FINALE add a desirable shine and polished look to your plane, but it also places a thin, protective barrier between your car and the elements.

16 oz. ..... P/N 09-04030 .....**$18.89**
Gallon..... P/N 09-04038 .....**$68.85**

AERO POLISH METAL POLISH



POLISH delivers shine and protection to aluminum, stainless steel, chrome, gold, silver, copper, brass and magnesium. Other paste-type polishes only permit small areas to be shinned at once. Their polishing products cannot be allowed to dry or they become difficult (if not impossible) to remove. But with POLISH, users can polish an entire surface, allow it to dry and simply dust it off. What's left is a beautiful shine without the repetitive rub-on, wipe-off exercise required by other polishes. This product actually has certain proprietary ingredients that allow our POLISH to become finer and finer the more you rub it in.

16 oz. ..... P/N 09-04037 .....**$35.99**
Gallon..... P/N 09-04046 .....**$129.50**

AERO IMMACULATE INTERIOR CLEANER



Trusted to outperform all other interior cleaners. To ensure that Aero's aerospace clients keep their planes looking their best, they recommend they use this product between every major detail service. Now available to you, IMMACULATE is the secret to how flight crews around the globe keep their VIP aircraft looking brand new. Imagine how IMMACULATE your car or aircraft's interior will look after using it.

16 oz. ..... P/N 09-04033 .....**$18.89**
Gallon..... P/N 09-04042 .....**$68.85**

AERO VIEW INTERIOR AND EXTERIOR WINDOW CLEANER



VIEW Glass Cleaner is excellent for cleaning all glass surfaces. It quickly dissolves fingerprints, smudges, dust and dirt while leaving glass and mirrors with a brilliant streak-free shine. This fast acting formula does not streak and will not leave any residue making everything on your plane from plexiglass to lights crystal clear. The ammonia-free product is safe, yet powerful enough to remove unsightly dirt and grime.

16 oz. ..... P/N 09-04048 .....**$17.99**
Gallon..... P/N 09-04041 .....**$63.95**

AERO SPOT CARPET AND UPHOLSTERY CLEANER



SPOT will allow you to maintain your carpet and fabric upholstery just as owners of VIP aircraft have for years. Allows every pilot to have pristine, impeccable carpet and fabric upholstery. Whether using SPOT to treat a large area or a persnickety, set-in stain from juice or stubborn dirt, the results are Spotless. While some carpet and fabric cleaners leave residues that attract dirt for future stains and spots, Does not leave film and will keep the surface looking flawless. Perfect for colorfast carpet and fabric surfaces, is an all-natural cleaner making it both biodegradable and perfect for your plane.

16 oz. ..... P/N 09-04034 .....**$18.89**
Gallon..... P/N 09-04043 .....**$68.85**

AERO SUPPLE LEATHER AND VINYL CONDITIONER



SUPPLE Leather Conditioner was developed to maintain the elite leather seats found on VIP aircraft, and now it is available for your plane. Using SUPPLE will ensure that your leather seats last for the life of your aircraft. Using products containing substances such as silicone and waxes that are not specifically designed to condition and protect delicate surfaces similar to leather. When exposed to the elements and everyday traffic, it is essential to replace natural oils into leather interior to prevent deterioration and aging.

16 oz. ..... P/N 09-04032 .....**$21.59**
Gallon..... P/N 09-04040 .....**$77.85**

AERO AWAY TIRE AND ENGINE DEGREASER



Formulated to remove heavy soil, brake dust and grease found on aircraft safely and effectively, AWAY is an environmentally friendly degreaser. AWAY degreaser will replace a shelf or two of cleaning products in your hangar. It works as a bug & tar remover, a wheel cleaner, a tire cleaner and an engine degreaser. AWAY cleaner is powerful enough to cut through grease on engines and baked-on brake dust… even on roughcast aluminum wheels. Tar, sap, and bugs will break down in just a matter of seconds.

16 oz. ..... P/N 09-04035 .....**$19.79**
Gallon..... P/N 09-04044 .....**$69.95**

AERO PROTECT TIRE AND VINYL POLISH



PROTECT has been designed to penetrate the surface it is applied to. This prevents "SLING" which occurs when products are applied to tires and then "flies off" leaving dirt spots all over your freshly cleaned plane, which means no more dirt spots showing up behind wheel wells or down the side of the fuselage. PROTECT is formulated to recondition a plethora of surfaces. Anything from plastic, fiberglass, vinyl and rubber is a candidate for PROTECT's astounding protection and conditioning. PROTECT also prohibits UV damage and other natural.

16 oz. ..... P/N 09-04036 .....**$22.50**
Gallon..... P/N 09-04045 .....**$79.95**

AERO 6 PACK TRAVEL CLEANING KIT



To add convenience on the go, AERO has packaged six of their top selling interior and exterior products into a customer embroidered AERO carrying case. The set also includes AERO's 300 GSM microfiber towel or towels depending on the size, so pilots have all the necessary tools to clean and detail their plane anywhere. 6 Pack Traveler Series is perfect for that shine on the fly.

Mini 6 Pack Traveler includes 2.5 oz. bottles of: - SHINE, FINALE, AWAY, IMMACULATE, VIEW and SPOT. We also include 1 300GSM Pro Series Microfiber towel, a custom AERO embroidered travel bag and the AERO brochure.
P/N 09-04047 .....**$33.95**

The 6 Pack Traveler includes 16 oz. bottles of: - SHINE, FINALE, AWAY, IMMACULATE, VIEW and PROTECT. Also included are: 4-300GSM Pro Series Microfiber towels, 1-600GSM Pro Series Microfiber towel, a custom AERO embroidered travel bag and the AERO brochure.
P/N 09-04063 .....**$139.99**

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Prices Subject to Change Without Notice

POLISHES & CLEANERS

ALL KLEER



Black Labs Corporation is proud to introduce, All Kleer, the ultimate plastic windshield cleaner and polish. All Kleer was invented by a pilot over 25 years ago for cleaning and maintaining plastic aircraft windshields that require absolute clarity. All Kleer is different than most windshield products on the market as it not only cleans dirt, bugs and grease but leaves a very fine, slick finish. This finish helps to repel water, dust, bugs, and water spotting - making it easier to see and to clean the next time. All Kleer contains no wax, ammonia, or abrasives and does not require the use of any water. A non-pressurized leak proof 8oz bottle is designed to be carried on board if desired. Simply apply All Kleer with a clean towel to a dry windshield cleaning off any bugs and dirt and allow 30-60 seconds for a haze to form. After it has completely dried, wipe off with a clean towel and feel the All Kleer finish.

P/N 09-01602 ..... **$5.85**

PRIST® ACRYLIC, PLASTIC AND GLASS CLEANER: FOR ALL TYPE OF WINDOWS



The convenient 13-ounce can is ideal for use on acrylic, stretched acrylic, poly carbonate, glass, and coated glass. It may also be used for cleaning many other sources including aircraft interiors, goggles, helmets, lenses, and plastic and metal surfaces. Prist® cleaner contains no abrasive cleaning agents and cleans without scratching glass or plastic surfaces. This prevents scratches in acrylic windshields that necessitate costly replacement. Unlike other cleaners, Prist® cleaner dispenses as foam and leaves no residue. The cleaning agent soaks into the dirt, grease and insects to remove them with minimum effort. Suitable for interior and exterior cleaning, Prist® cleaner prevents static charge build-up with regular use.

13oz. Can..... P/N 09-02049..... **$6.95**
Case (12 Cans)..... P/N 09-02049-1..... **$78.00**



MASTER FORMULA CLEANER GLOSS

Cleaner Polish polishes oxidized paint to a mirror finish. Its creamy, smooth texture is grit free yet contains the most powerful polishing ingredients ever formulated. Powerful enough to polish the most severely oxidized surface and smooth enough to leave the surface flawless.

12 Ounce.....P/N 09-05337 ..... **$38.95**

M-RON GLASS CLEANER / WAX



M-Ron Glass is not your ordinary wax. It is a CLEANER & WAX so you are not waxing over a dirty surface or getting a waxy build up. That's why M-Ron Glass gives you such an AMAZING SHINE! Because of how this works, it is recommended that once applied; let it sit and bake in the sun for 15 to 30 minutes. You will get a deeper shine and a higher luster than you would if you were to apply it and take it off right away. It will NEVER bake itself to the surface!

12 oz.....P/N 09-03483 ..... **$15.95**

GLARE PROFESSIONAL POLISH



A non-stick high-gloss all-weather sealant. The finest polish for your car, airplane, boat, motorcycle, glass, stainless steel, fiberglass, chrome, Carbon Graphite, and RV in the world's market. Filters out UV Rays, turns to glass on and within your paint. Contains Glassplexin®. Bonds molecularly to your paint. The most revolutionary polish ever developed. Beyond 22nd century technology. Lasts up to five years.

12oz. P/N 09-01055 ..... **$27.50**

GLARE SPIDER

"Another innovation of Ultra 2000 MFG Int'l, Inc. Beyond 22nd century technology."



GLARE Spider is the most advanced swirl, spider web, and scratch removal product in the market. Ultra high purity metal interlinked fusion of glass particles to Glassplexin forming a unique highly advanced swirl mark remover polish. GLARE Spider fills in permanently, it is NOT a temporary solution - not found anywhere. 12oz. ..... P/N 09-01061 ..... **$26.75**

GLARE ULTRA WASH

"Cleans your vehicle, keeps your shine."



The most advanced wash ever developed. A PH balanced concentrated wash. Safe for all paints and finishes including the new clear-coated paints. New technology that leaves your vehicle clean and glossy like no other vehicle wash can. Contains Glasplexin.

12oz. .....P/N 09-01062 ..... **$11.50**

GLARE VINYL • LEATHER ALL WEATHER PROTECTANT



A special blend of natural ingredients and a chemical formulation called SUPPLEXIN which is designed to beautify, soften, deodorize, preserve, and protect against damaging agents found in the everyday usage of your vehicle's interior. This product cleans, conditions, preserves, and protects in one easy step. Contains no harmful silicons, or adverse active ingredients. Blocks harmful UV rays.

12oz. .....P/N 09-01056 ..... **$27.50**

GLARE TIRE MAGIC



"The ultimate all in one tire appearance protection product!"

Glare Tire Magic will filter out harmful Ultra Violet Rays from the sun. Extreme temperature resistant formula for all climates. Stops tires from cracking and fading. Gives a beautiful rich natural high gloss finish. Splatter resistant formula. Easy to use - just spray and wipe!

16 oz. .....P/N 09-01058 ..... **$10.50**

GLARE TURBO ACTION WHEEL CLEANER



Glare Turbo Action Wheel Cleaner is the most powerful, effective, & fastest working wheel cleaner on the market. Safe for ALL types of wheels - Aluminum, Chrome, Magnesium - as well as clear coated & painted wheels. Makes your wheels look show room bright and shiny the easy and safe way. Removes and dissolves dirt, grime, brake dust, and grease. Spray on Glare Turbo Action Wheel Cleaner to dirty wheels & hose off with clean water to get your wheels looking like new again!

16oz. ..... P/N 09-01063..... **$8.75**

GLARE (GALLON) PROFESSIONAL POLISH • MICRO-FINISH • ULTRA WASH



GLARE Professional Polish – A non-stick high-gloss all-weather sealant. The finest polish for your car, airplane, boat, motorcycle, glass, stainless steel, fiberglass, chrome, Carbon Graphite, & RV in the world's market. Filters out UV Rays, turns to glass on and within your paint. Contains Glassplexin®. Bonds molecularly to your paint. The most revolutionary polish ever developed. Beyond 22nd century technology. Lasts up to 5 years.

GLARE Micro-Finish – "We burn out the competition." – A non-stick high-gloss all-weather sealant that lets paint breathe. Contains Glassplexin®. Ultimate scratch and oxidation removal for Cars, Planes, Boats, Motorcycles, Fiberglass, Plastic, Stainless Steel, Chrome & Polished aluminum. For use with GLARE Professional Polish.

GLARE Ultra Wash – "Cleans your vehicle & keeps your shine" – The most advanced wash ever developed. A PH balanced concentrated wash. Safe for all paints and finishes including the new clear-coated paints. New technology that leaves your vehicle clean and glossy like no other vehicle wash can. Contains Glasplexin ®.

Glare Micro Finish - 12 oz.....P/N 09-02362 ..... **$26.95**
Glare Micro Finish - Gallon .....P/N 09-01065 ..... **$237.95**
Glare Pro Polish - Gallon .....P/N 09-01066 ..... **$239.95**
Glare Ultra Wash - Gallon.....P/N 09-01060 ..... **$105.95**

SUN MAGIC CLEANER 1 PINT TUB



The effective natural cleaning product is safe to use on many different surfaces, from bathroom sinks and mirrors to ovens and automobiles. Customers nationwide enjoy this product because it's free from harsh chemicals, ammonia, and abrasives, leaving surfaces clean and film-free. SUN MAGIC smells better and brings out the natural shine in stainless steel, chrome, porcelain, bathroom tiles, and glass. All it takes is one try using SUN MAGIC in your home or office, and you'll be sold. It can be used in spray bottles, carpet cleaners, or degreasing machines.

P/N 12-05108 ..... **$12.95**

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PLEXIGLASS RESTORATION - LEATHER CARE



MICRO-MESH WINDSHIELD SCRATCH REMOVAL KIT

Micro-Mesh is a cloth backed cushioned abrasive with a resilient layer of material between the back and the abrasive. When pressure is applied, the abrasive crystals recede into the resilient layer and find an even plane for cutting. The result is a smooth shaving action with an ultra fine scratch pattern which restores scratched, discolored, or damaged fiberglass or acrylics to like-new condition. Kit includes everything needed to repair approximately 30 sq. ft.

Standard Kit (restores up to 30 sq. ft.)..... P/N 09-24700 ..... **$25.99**
Large Kit (restores up to 60 sq. ft.) ..... P/N 09-24701 ..... **$50.50**
Professional Kit (restores up to 100 sq. ft.)..... P/N 09-24716 ..... **$77.75**



MICRO-GLOSS POLISH

Safe for use on bare acrylic, bare polycarbonate, and coated polycarbonate. Tests using Micro-Gloss were completed according to ASTM F791 standards and to USAF specification 16ZK002F (Addendum2) at stress levels of 2000 and 3000 PSI in both dry and humid conditions. Approved for use on the inside and outside surfaces of F-16 aircraft. * Removes fine scratches . * Removes swirls created by improper cleaning methods. * Removes haze and milkiness from interior/exterior windows. * Provides a final polish, leaving you with an ultra-clear finish. * Can be applied by hand or machine * Approved for use by Boeing, Spec D6-52021 * Approved for military use, NSN #5350-01-334-89978 oz. .... P/N 09-24710 ..... **$12.50**

MICRO-SURFACE WINDSHIELD RESTORATION KITS

Micro-Surface Finishing Products, Inc. FAA Repair station #KY2R969K, has been a leader in acrylic restoral for the past 30 years. The following kits were developed for use with rotary buffer. Micro-Mesh is approved by Boeing/McDonnell Douglas, the Military and FAA. All kits come with easy to read instructions. Designed to save you both money and time, these kits will restore acrylic back to optical clarity using a minimum of steps. Re-order individual components as you need them. All kits restore up to 100 sq. ft.



ACRYLIC MAINTENANCE KIT - Remove scratches, halos and haze. • 5" White Foam Sponge Pad• 5" TufBuf, All Natural Lambswool Polishing Pad• 5" Back-up Pad• 8 Ounce Bottle Micro-Gloss• 8 Ounce Bottle Anti-Static Cream• 2 Cotton Flannel P/N 09-24715 ..... **$90.75**



LIGHT DAMAGE REMOVAL KIT - Remove minor scratches and scuff. 2-5" Loop Back Discs, Micro-Mesh 1500, 2-5" Loop Back Discs, Micro-Mesh 2400, 2-5" Loop Back Discs, Micro-Mesh 3600, 5" White Foam Sponge Pad, 5" TufBuf All Natural Lambswool Polishing Pad, 5" Back-up Pad, 8 Ounce Bottle Micro-Gloss, 8 Ounce Bottle Anti-Static Cream 2 Cotton Flannel P/N 09-24720 ..... **$116.75**



HEAVY DAMAGE REMOVAL KIT - Remove crazing, scratches, and gouges. 5-5" Loop Back Discs, Wet/Dry 120 Grit, 5-5" Loop Back Discs, Wet/Dry 220 Grit, 5-5" Loop Back Discs, Wet/Dry 400 Grit, 2-5" Loop Back Discs, Micro-Mesh 1500, 2-5" Loop Back Discs, Micro-Mesh 2400, 2-5" Loop Back Discs, Micro-Mesh 3600, 5" White Foam Sponge Pad, 5" TufBuf All Natural Lambswool Polishing Pad, 5" Back-up Pad, 8 Ounce Bottle Micro-Gloss, 8 Ounce Bottle Anti-Static Cream, 2 Cotton Flannel P/N 09-24725 ..... **$131.99**



MICRO-MESH POLYCARBONATE RESTORATION KIT

Excellent for restoring polycarbonate such as Lexan on aircraft, boats, cars, & motorcycles. Will restore up to 100 square feet material. Kit includes: • 5" disc w/ loop 2400 MicroMesh • 5" disc w/loop 3600 MicroMesh • 5" random orbital or drill back-up pad • 5"x 3/4" TufBuf lambswool polishing pad • (2)11.5"x 12" flannel sheets • Instructions • 5" white sponge pad • 8 oz. Micro-Gloss #5 • 8 oz. Micro-Gloss • 8 oz. Final Finish

P/N 09-00490 ..... **$109.75**

MICRO-MESH FINISHING KIT FOR WOOD



This kit is designed for craftsmen for use in hand finishing applications and without the mess of steel wool, rottenstone or pumice. MicroMesh may be used on bare or finished wood with wet or dry application method. A high reflective finish, satin or matte finish can be achieved, depending on how many MicroMesh steps are completed. This makes it an excellent product for spot matching of finishes.

P/N 09-24705 ..... **$43.95**



PLEXIGLASS LENS REPAIR KIT

Protect your investment by restoring crazed, scratched, hazy lenses. Perfect for recognition light lenses, navigation light lenses, and landing light lenses. Lenses can be restored on the plane without removal. Soft Touch pads in this kit fit nicely in your hand and allow you to polish both concave and convex surfaces with ease. Dry pads, store and reuse again and again. P/N 09-01603 ..... **$18.50**

PERRONE LEATHER PRODUCTS



DEEP CLEANER FOR LEATHER

Perrone's Leather Cleaner / Conditioner is a premium blend of gentle cleansers and light conditioners formulated to clean and rejuvenate finished leather, vinyl and plastic surfaces. Perrone's Leather Cleaner/ Conditioner removes dirt, dust and oils without drying or damaging the surface.

Perrone's Leather Cleaner/ Conditioner helps protect leather from weathering and fading. Leaves leather surfaces soft, supple and smelling like new again. The wipes are treated with the same leather cleaner/ conditioner as in the spray bottle.

32 oz. w/Trigger Spray ..... P/N 09-00557 ..... **$20.50**
1 Gallon Refill ..... P/N 09-02062 ..... **$58.75**
Sontara Wipes (45 Wipes)..... P/N 09-00559 ..... **$53.75**



DEEP CLEANER FOR LEATHER

This unique formula is custom blended to clean and rejuvenate fine leather surfaces. Leather Cleaner with Conditioner features a unique protective barrier that, when used regularly, helps to prevent soiling from stains such as dirt, grease, ink, grime and body oils.

P/N 09-02120 ..... **$19.95**



LEATHER CONDITIONER

This unique formula is custom blended to clean and rejuvenate fine leather surfaces. Leather Cleaner with Conditioner features a unique protective barrier that, when used regularly, helps to prevent soiling from stains such as dirt, grease, ink, grime and body oils. 16 oz.

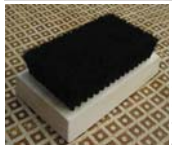
P/N 09-02121 ..... **$18.50**



INK REMOVER

Perrone Ink Remover will help to effectively remove most ink and highlighter stains from finished leather surfaces. Removes lipstick and other stains quickly and effectively. Will not harm the finish system of finished leather. 2oz

P/N 09-02122 ..... **$12.70**



LEATHER CLEANING BRUSHES

Specifically designed for leather cleaning, Perrone's Leather Cleaning Brushes dig out tough soils and stains from the pores of natural and corrected grained leather. For best results use in conjunction with Perrone's cleaning products. Can also be used for suede and nubuck. Sturdy Wood Block with 3-1/2"x2" Bristle Bed..... P/N 09-02123 ..... **$21.50**



PERRONE LEATHER CARE & CLEANING KIT

This kit features the professional-use aviation leather cleaning products in a custom leather bag. KTS-09 Leather Cleaning & Care Kit

P/N 09-04274 ..... **$73.85**

HEADLIGHT REPAIR & SCRATCH-AWAY RESTORE KITS



PLEXIGLASS LENSE REPAIR KIT - Removes crazing, scratches, scuffs, and haze from navigation light lenses, recognition light lenses and landing light lenses. Not necessary to remove lense to restore to optical clarity. PN 09-01603 ..... **$18.50**



SCRATCH AWAY HEADLIGHT RESTORE KIT - This kit will remove haze, cloudiness, and light scratches. Process will resurface the lense rather than fill in scratches. Once the process is complete, damage will not return. This is a spot repair kit. We also have larger kits available.

PN 09-02170 ..... **$16.50**



ACRYLIC HEADLIGHT LENSE RESTORATION KIT - Easy to use double sided MICRO-MESH SOFT TOUCH PADS make removing cloudiness and haze from lenses, lense covers, tail lights, tail light blackouts, and bug deflectors a snap! Each kits contains: 3 IN. x 4 IN. double sided pads in 120/220, 400/1500, 2400/3600, 4000/12000, 1 oz. bottle MICRO-GLOSS liquid abrasive, and 2 cotton flannel cloths. Clean, dry, and reuse over and over - A FANTASTIC VALUE! PN 09-02172 ..... **$37.60**

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Prices Subject to Change Without Notice

GRANITIZE CLEANING PRODUCTS

GRANITIZE METAL POLISH SYSTEM

Simple but effective system of six polishes designed to polish painted surfaces, aluminum 22916T6 & 2024T6 both clad and bare, and other metals including steel and titanium. All polishes are color coded to reduce cross contamination and aid in taking the guesswork out of any polishing procedure. When used properly, The Granitize System will produce a smooth, highly reflective mirror-like surface on brightwork that can be treated with Xzilon molecular adhesion to maintain the finish.



FINISH

XMP-S METAL POLISH (SUPERFINE) - Final polish for a mirror like finish. Can also be used on painted surface

P/N 09-02181..... **$47.60**



XMP-M METAL POLISH (MEDIUM) - For Light oxidation/scratches, Rain Spotting. Can also be used on painted surfaces

P/N 09-02184..... **$47.60**



XMP-F METAL POLISH (FINE) - Color: Yellow. Use on: Swirls, Very fine scratches, Can also be used on painted surface.

PN 09-02183..... **$47.60**



CUTTING

XMP-C METAL POLISH (COARSE) - For Medium oxidation/scratches

P/N 09-02233..... **$52.60**

GRANITIZE HARD SURFACE CLEANER CONCENTRATE



Hard Surface Cleaner is a powerful all purpose cleaner. This blue solution is designed for post flight wipedown or general dry wash cleaning of complete airframe. It is concentrated blend of alcohol and grease cutting agents that contains no soap or ammonia and can be diluted for lighter cleaning jobs. It is economical, easy to use and leaves no residue or streaking. Safe for use on Xzilon 3 coated aircraft. Aviation Industry Certified.

Gallon..... P/N 09-04340 ..... **$29.70**
5 Gallon..... P/N 09-04341 ..... **$132.75**
55 Gallon..... P/N 09-04342 ..... **$998.00**

GRANITIZE WASH AND WAX CONCENTRATE



Wet Wash is a multi-use product that can be used on General, Corporate and Commercial aircraft for new or in-service aerospace paint. This liquid contains carnauba wax and will remove moderate carbon build-up and light stains. It has a low usage cost because it is highly concentrated and can be watered down to meet the specific needs. The pH formulation and low alkalinity has excellent sheeting action, and the high foaming action lifts and holds dirt in suspension for thorough rinsing. Safe for use on Xzilon 3 coated aircraft.

Gallon..... P/N 09-04349 ..... **$25.68**
5 Gallon..... P/N 09-04351 ..... **$115.56**
55 Gallon..... P/N 09-04352 ..... **$983.00**

GRANITIZE ZERO V.O.C DEGREASER



Zero V.O.C. Degreaser is an environmentally friendly, aggressive, concentrated, non caustic all purpose degreaser. It is bio-degradable and effective even when diluted 20:1 which makes it a low usage item. This is the ideal product for cleaning engine cowlings, landing gear, wheel wells and aircraft bellies. This green liquid contains fortified surfactants that help to loosen and remove dirt and grime. It is great as a wipe on, but can be sprayed on and pressure rinsed for a quick effective cleaning. Available in gallon, 5 gallon and 55 gallon containers.

Gallon..... P/N 09-04337 ..... **$28.75**
5 Gallon..... P/N 09-04338 ..... **$128.75**
55 Gallon..... P/N 09-04339 ..... **$965.00**

GRANITIZE OXIDATION REMOVER FOR PAINT



Oxidation remover is formulated as a medium range aggressive cleaner. It is ideal for removing light to medium scratches and oxidation from all painted surfaces. Quickly and effectively removes imperfections while buffing out oxidized paint when detailing which helps to minimize work time. This white crème has medium grade abrasives in it and requires very little product to get the job done. Can be applied by hand or machine. Available in gallons.

Gallon..... P/N 09-04333 ..... **$48.95**

GRANITIZE SPRAY AND SHINE CLEANER / COLOR BRIGHTENER



Spray & Shine is an exterior, light duty cleaner. This pink liquid is a spray on, wipe off formula to clean, enhance and maintain painted surfaces and brightwork. It is recommended for removing bugs, smudges, spotting and light carbon buildup on exterior surfaces. This product is highly recommended for post flight wipe down of leading edge and engine inlet debris. Leave on as a film during coastal or tropical parking to preserve brightwork treated with Xzilon 3. It is also used as a lubricant/cleaner when micro-polishing paint with Grana-Clay Bars. Safe for use on Xzilon 3 coated aircraft. See XC11CL-Q on page 11 for interior use. Aviation Industry Certified.

Gallon..... P/N 09-04334 ..... **$29.95**
5 Gallon..... P/N 09-04335 ..... **$136.75**
55 Gallon..... P/N 09-04336 ..... **$1,055.00**

GRANITIZE HI GLOSS TIRE DRESSING



Hi-Gloss Tire Dressing is perfect for that "Show" aircraft look as it is a highly durable, concentrated, water-based dressing that can be mixed to the desired gloss level. This milky white product leaves a long lasting hi-gloss finish because it contains the highest quality silicone and no harsh solvents. The gloss can be reduced by mixing water with the product. It will shine and protect tires and any other vinyl, rubber or plastic surface. Allow product to dry, or wipe off with a sponge, before rolling wheels.

Gallon..... P/N 09-04353 ..... **$48.50**
5 Gallon..... P/N 09-04354 ..... **$224.95**

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AERO COSMETICS CLEANING PRODUCTS

WASH WAX ALL



Wash Wax ALL is a waterless wash and wax that is safe to use on all aircraft surfaces. Leaves a non-stick anti-static UV protective coating on everything you clean. Removes dirt and bugs without scratching, simply spray on and wipe dry. Safely cleans and protects aluminum, composite, and fabric aircraft. Also excellent on aircraft windows and avionics. Meets (or *conforms to*) Boeing aircraft cleaning specification Exterior D6-17487 and interior D6-7127M. Wash Wax ALL is water based, non-toxic, biodegradable, and contains no alcohol or ammonia. Also use our Wash Wax Mop for hard to reach areas.

Pint..P/N 09-02514 ..... **$9.95**
Quart..... P/N 09-00493 ..... **$16.80**
Gallon..... P/N 09-00494 ..... **$27.80**

WASH WAX ALL DEGREASER



Wash Wax ALL (Degreaser) is a waterless wash and wax. Removes exhaust soot, Carbon residue, oil, and grease from all aircraft surfaces including belly and landing gear. Simply spray On and wipe dry. Safely cleans and protects aluminum, composite, and fabric aircraft. Meets Boeing aircraft cleaning specification Exterior D6-17487 and interior D6-7127M. Wash Wax ALL (Degreaser) is Water Based, non-toxic, biodegradable, and does not contain Alcohol or Ammonia. Use with our Wash Wax Mop for hard to reach areas.

Pint..... P/N 09-02418 ..... **$9.95**
Gallon..... P/N 09-00496 ..... **$27.85**

AERO BELLY SOAP



Belly Wash will clean the dirtiest aircraft bellies. Removes exhaust soot, carbon residue, oil, and grease from all aircraft surfaces including the belly and landing gear. Simply spray on and wipe dry. Safely cleans aluminum, composite, and fabric aircraft. Meets Boeing aircraft cleaning specification D6-17487 and interior D6-7127M. Belly Wash is Water Based, non-toxic, biodegradable, and contains no alcohol or ammonia.

Pint..... P/N 09-02518 ..... **$14.75**
1/2 Gallon..... P/N 09-02410 ..... **$39.75**

AERO PLEXWAX AIRCRAFT WINDOW CLEANER



PlexWAX leaves an antistatic protective coating on all aircraft windows both plastic and heated glass. PlexWAX is also safe to use on cockpit instruments and displays. Water Based, Non corrosive, Alcohol & Ammonia Free. Meets Boeing Spec. D6-17487P & D6-7127M. PlexWAX is water-based, non-toxic, biodegradable, and contains no alcohol or ammonia. • Faster easier clean ups • Water based, Alcohol & Ammonia free • Meets Boeing Aircraft specs. • Safe on all surfaces • Cleans & protects

8 oz. ..... P/N 09-02517 ..... **$9.95**
Gallon..... P/N 09-02519 ..... **$24.90**

AERO CABIN CLEANER



Cleans and removes beverage spills and stains from aircraft carpets, seats, tray tables, side panels, cockpit and galleys. Works well with the Aero Scrubber.

Pint..... P/N 09-00497 ..... **$9.90**
1/2 Gallon..... P/N 09-02520 ..... **$24.80**

AERO SAFESOLV SOLVENT



All purpose citrus solvent. Removes tar, oil, hydraulic fluid, adhesives and gum. A safe, effective alternative to toxic chemicals that is safe to use on paint, plastic, glass, bare metal, carpet and seats.

8 oz. ..... P/N 09-00499 ..... **$11.95**
1/2 Gallon..... P/N 09-02521 ..... **$69.75**

AERO LEATHER SOAP



Leather Soap gently cleans and removes dirt, grease, body oils, and lotions from leather and vinyl. Meets Boeing Aircraft Interior cleaning specification D6-7127M. Condition with Leather Care. For everyday cleaning use Wash Wax ALL (Blue). Water Based, Nontoxic, biodegradable, Alcohol and Ammonia free. Does not contain animal oils, solvents, or petroleum products.

Pint..... P/N 09-00502 ..... **$9.95**
1/2 Gallon..... P/N 09-02516 ..... **$23.50**

AERO LEATHER CARE



Leather Care restores, moisturizes, conditions, and protects Aircraft leather and vinyl. Repels dust and dirt without leaving an oily residue. Provides a long lasting barrier against drying and cracking from damaging ultra-violet rays.

Pint..... P/N 09-00503 ..... **$9.75**
1/2 Gallon..... P/N 09-02522 ..... **$32.50**

AERO RUBBER CARE



Easy to use water-based rubber and de-ice boot care product. Restores and protects rubber, giving that new semi-gloss look without leaving oily residue. Excellent on weather stripping, tires or any rubber or plastic item.

Pint..... P/N 09-00505 ..... **$9.95**
1/2 Gallon..... P/N 09-02515 ..... **$29.55**

WATER SPOT REMOVER



Removes hard water spots from paint, gelcoat, plastic, chrome, aluminum and stainless. Clear Coat safe, waterbased. To prevent water spots, use Wash Wax ALL. Use Aero Scrubber to softly scrub without scratching.

Pint..... P/N 09-00507 ..... **$9.90**
1/2 Gallon..... P/N 09-02523 ..... **$22.70**

AERO POLISH ALL



Polish ALL is an easy-on, easy-off, liquid finishing polish. It will remove oxidation and fine scratches from paint, plastic (Aircraft Windows), aluminum, and other metals. Polish ALL can be applied by hand or with a power polisher. Keep the finish clean and protected after polishing by applying Wash Wax ALL.

8 oz. ..... P/N 09-00508 ..... **$14.90**
1/2 Gallon..... P/N 09-02524 ..... **$52.80**

WASH WAX CLAY



Safely removes surface contaminants such as over spray, tree sap, Acid Rain & Rail Dust allowing wax to bond better. Use on paint, plastic, glass, chrome, gel coat and other surfaces. For use on aircraft, RVs, cars, boats, and motorcycles.

2 oz. ..... P/N 09-00512 ..... **$19.85**

AERO SCRUBBER



The Aero Scrubber is a soft, non-scratching, long-lasting, reusable scrubber pad. Use with Wash Wax ALL to help remove bugs from leading edges or use with Wash Wax ALL (Degreaser) or Belly Wash on tough cleaning jobs such as aircraft bellies, engine areas, wheels and tires.

Pack of 5 Pads P/N 09-00509 ..... **$31.80**

AERO TOWELS



Aero Towels are an All purpose reusable Microfiber towel. Super soft, absorbent, long-lasting and lint-free. The best towel for all of your aircraft cleaning needs. Four (4) washable 16"x16" Aero Towels per package4 pack..... P/N 09-00510 ..... **$9.95**

AERO DIAPER



AeroDiapers are soft, absorbent, lint-free, 100% cotton 1-ply diaper for all your cleaning and polishing needs. 12 washable 16"x18" Aero Diapers per package ..... P/N 09-00511 ..... **$27.50**

AERO STARTER KIT



ALL you need to get started with Wash Wax ALL
Kit includes: 16oz Wash Wax ALL, 16oz Wash Wax ALL (Degreaser), 4oz Belly Wash, Aero Scrubber Pad , Package of 4 Aero Towels
Starter Kit ..... P/N 09-00513 ..... **$33.95**

AERO LEATHER/VINYL KIT



The Leather Vinyl Care Kit is ALL you need to clean, restore, and protect leather and vinyl in one kit. Kit Includes: one 16oz Leather Soap, one 16oz Leather Care, one package of 4 Aero Towels, one mini Aero Scrubber, and a 4oz Wash Wax ALL.

P/N 09-00514 ..... **$33.95**

AERO SCRUBBER PAD KIT



The Aero Scrubber - 3 pads - 1 holder. Soft, non-scratching, long-lasting, reusable scrubber pad. Use with Wash Wax ALL to help remove bugs from leading edges or use with Wash Wax ALL (Degreaser) or Belly Wash on tough cleaning jobs such as aircraft bellies, engine areas, wheels and tires. TIP: Spray Wash Wax ALL on bugs and let soak for 10-15 min. then respray and wipe off. This will make bug removal super easy!! P/N 09-01616 ..... **$25.85**

TRAVEL KIT



4 of our most popular products packaged to fit in your glove box. Kit includes: 4oz Wash Wax ALL, 4oz Wash Wax ALL (Degreaser), One Aero Towel and a mini Aero Scrubber.

Travel Kit ..... P/N 09-00515 ..... **$9.50**

AERO WASH WAX MOP



Specifically designed for aircraft and is the only mop with two sides. One wet and one dry. Now you can waterless wash and wax with the reach and leverage of an extension pole. No ladder needed. Customers report time savings up to 50% over waterless hand application. Simply spray Wash Wax ALL on the Wet Side of the mop, wipe the aircraft with the wet side, flip the mop over, and wipe dry with the dry side.

Wash Wax Mop..... P/N 09-02526 ..... **$94.95**

Prices Subject to Change Without Notice



AEROLIFE AIRCRAFT CLEANER & BELLY WASH

Emulsifies oil and scum, the non-foaming biodegradable formula cleans without "Phosphates". The water-based degreaser also cleans aircraft carpets, upholstery, fabrics and leaves a pleasant fragrance. Economical concentrate 50/50 ratio saves money; one gallon makes two gallons of cleaner and can be applied with a power washer or by hand. Can also be used in the engine compartment and is safe on rubber products and hoses. The ladies love this product for washing machines, as it does a great job removing oil from work clothes. Can also be used to clean up oil spills.

1 oz. ..... P/N 09-02539..... **$2.95**
Gallon ..... P/N 09-02533..... **$28.75**



AEROLIFE AEROWAX AIRCRAFT WAX

AeroWax Aircraft Wax is made from Poly-Carnauba. Easy Application and Aerospace Developed. 16 oz.
P/N 09-02535..... **$14.95**



JET STREAM LEATHER CLEANER

Aircraft Leather Cleaner & Conditioner will effectively clean, condition, and preserve the beauty of new and worn leather. This product will not bleed onto fabric. It contains no silicone or heavy waxes that can damage stitching or become slippery. This product has been enriched with mink oil which is known for its superior ability to preserve and condition leather. 8 oz.
P/N 09-04692..... **$15.75**



COCKPIT & CABIN AIR NEUTRALIZER

This malodorant, deodorizer and air freshener is specially formulated to eliminate cockpit & cabin odors. Odors neutralized instantly and keeps aircraft fresh and fragrant. Attacks odors trapped in carpeting, upholstery, and draperies without staining. Eliminates offensive odors without wet fallout & an essential for the bathrooms. 20oz aerosol,
P/N 09-04697..... **$9.50**



QUICKTURN

Quick Turn keeps aircraft looking just waxed. Will remove harmful contaminants before they damage aircraft surfaces. Use Quick Turn between flights or as often as needed when wet washing or waxing is not required. Product is safe for use on exterior painted surfaces, polished aluminum and de-ice boots. Not intended for interior use.
P/N 09-02657..... **$11.75**



CARPET SPOTTER PLUS

This extra-strength, water-based, universal spot & stain remover is a fast acting spotter reinforced with surfactants and wetting agents that immediately remove most spots. The forceful spray and non-foaming formula quickly penetrate for fast spot removal. Upright valve for fast, forceful penetration. Ideal as a pre-spotter prior to carpet extraction. Use to remove spots caused by: Ink, grease, oil, coffee, pets, cola, shoe, polish, lipstick, etc. 20oz aerosol.
P/N 09-04699..... **$6.50**



UPHOLSTERY FABRIC CLEANER

Cleans effectively without leaving the fabric wet. High foam quickly penetrates and emulsifies soils leaving a pleasant wintergreen aroma. This formulation quickly and effectively removes soils from most upholstered fabrics. 20oz aerosol.
P/N 09-04698..... **$6.75**



DECALIN AIRCRAFT WINDSHIELD CLEANER KIT

Windshield Wash and Microfiber Cloth Kit. **Windshield Wash:** • Removes greasy bugs and grime. • Designed for aircraft use. • Safe on fully cured gel coat and mildly plasticised PVC. • Works very well on Auto and House glass. • Removes the hazy film inside auto windows. • For Acrylic (Plexiglas, Perspex) Polycarbonate (Lexan) and Glass. **Microfiber Cloth:** • 80% Polyester, 20% Polyamide • Will not scratch acrylic or polycarbonate windshields. • Ideal for windshield cleaning, reusable, machine washable. • Big 16 x 16 square cloth. P/N 05-15251..... **$8.75**



PRO-TEC SEALANT POLISH 16 OZ

Seals the Surface to protect it from pollutants, harsh weather, sun glare,UV Rays and saltwater. Easy to apply, leaves a high gloss shine. Pro-Tec Sealant Polish Easy To apply Leaves a High-gloss shine Removes and prevents fading and oxidation Actually Seals the Surface to protect it from pollutants, harsh weather, sun glare and saltwater. Washing will 'Not' remove Product from surface. 16 oz.
P/N 09-04539..... **$15.95**



PRO-TEC NU-PAINT MOISTURIZER

Tested and proven for old or heavily oxidized boats cars or RV's. Restores color and removes oxidation. For old or heavily oxidized boats cars or RV's. Not a wax or compound but an actual oxidation remover that matches color. Rubbing compounds contain harsh abrasives that scratch and even remove the surface fiberglass and gel-coat. The moisturizer contains only MICRO - FINE abrasives that will not harm the surface. After NU-PAINT MOISTURIZER is used, wash and dry, then apply our Pro Tec Sealant Polish to your boat, car or RV for great protection and shine. 16 oz.
P/N 09-04540..... **$15.95**



PRO-TEC SHOWROOM CONDITIONER QUICK DETAIL

Cleans, polishes and enhances the luster on paint, glass, chrome, rubber, Plexiglas, and fiberglass. Neutralizes static electricity so dust will not stick to surface. 16 oz.
P/N 09-04541..... **$9.95**



PRO-TEC VINYL CONDITIONER

Long-lasting VINYL SEALANT is like none other with a sun screen agent and new antifriction agent. Restores color and luster to vinyl, leather, plastic and rubber. Excellent for boats and RV's Restores Color and Luster Protects and seals vinyl, leather, plastic and rubber Dries Completely and Leaves NO OILY Residue. 8 oz. P/N 09-04542..... **$9.95**



PRO-TEC WASH AND GLOSS SOAP

Cleans fiberglass and painted surfaces leaving a microscopic film of protection, enhances shine and repels water. Pro-Tec Wash and Gloss Cleans fiberglass and painted surfaces Leaving a microscopic film of protection Enhances shine and repels water PRO-TEC WASH AND GLOSS can be used in direct sunlight. 16 oz. P/N 09-04543..... **$7.25**



PRO-TEC MIGHTY TUFF CLEANER / DEGREASER

Will not harm carpet or fabric. Great for cleaning vinyl, plastic and rubber. Multi-purpose cleaner/degreaser. Removes blood, coffee, grease and fish formulas. Great for cleaning vinyl, plastic and rubber. Multi-purpose cleaner/degreaser. Multi-purpose cleaner / degreaser is water-soluble Can dilute or use full strength Removes blood, coffee, grease and fish formulas from carpet Will not harm carpet or fabric itself Great for cleaning vinyl, plastic and rubber Even cleans mildew form vinyl seats! 16 oz.
P/N 09-04545..... **$8.95**



PRO-TEC PAINT CARE KIT

The perfect kit to keep paint looking new and protect your investment. The waterproof bag makes it all convenient. For oxidation or dull finish add Nu-Paint moisturizer to your cart not included in the care kit!
P/N 09-04544..... **$44.95**

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POLYGONE 310-AG



PolyGone™ stripping agents are unique formulations that remove polysulfide (PRC) and silicone RTV sealants from metal, ceramic, and some plastic substrates. The top polysulfide producers include PRC DeSoto (now PPG), AC Tech, and Flamemaster. The top silicone producers are GE, Dow, and Wacker. Both polysulfide (polysulphide) and silicone RTV are difficult to remove completely since they actually bond into surface/substrate. The typically, sealant removal method requires scraping that results in damaging the substrate. There are also products that try to "dissolve" the sealants but due to their inertness, this does not work. PolyGone however, reacts with the polymers chemically and breaks them down so they can be rinsed away without damage to the surface/substrate. This offers significant advantages over other removal methods. PolyGone emulsifiers are specialty blended chemistries that wet and penetrate the polymer and relatively quickly emulsify it. This emulsification prevents redeposition of the reaction by-products and allow for water rinsing (except PolyGone 535 which requires an alcohol rinse). The polysulfide (polysulphide) sealant remover is also available as a gel for use in vertical, inverted and non-immersion applications. PolyGone is effective at removing silicone RTV and polysulfide (polysulphide) sealants at room temperature, are fast acting and environmentally friendly as opposed to regularly used solvents. PolyGone is currently being used by several MRO organizations as a sealant remover.

6 oz. ..... P/N 09-03492 ..... **$23.50**
Gallon ..... P/N 09-03491 ..... **$114.75**
5 lb. Tub ..... P/N 09-03493 ..... **$244.00**

POLYWIPES



RPM Technology is proud to introduce a revolutionary product for anyone using sealants, mastics, adhesives, silicones, paints, drilling oils, or greases. PolyWipes contain no solvents or abrasives; no fuss, and no mess! Why clean your hands with a product that has a NFPA heath rating of 1 and is flammable? PolyWipes have a health rating of 0 and are NOT flammable! They safely remove uncured or partly-cured adhesives and sealants by breaking the surface tension between the material and the substrate. The material then transfers to the wipe for disposal. Can be used anywhere adhesives or sealants are applied. To clean up after applying sealant to fuel tanks, access doors, windshields, and any other location where sealants are used. Biodegradable – a "green" product, Non-Toxic – eliminates the need to dispose of hazardous solvents, Not flammable, unlike other wipes, Mild – employees may not need hand protection to use this product, NFPA rating is 0,0,0, Inexpensive – less expensive than cloth towels and solvents.....

Small box (25 wipes) ..... P/N 09-02447 ..... **$27.80**
Large Box (150 Wipes) ..... P/N 09-02448 ..... **$54.75**

EOX AIRCRAFT CLEANER



eOx Aircraft Cleaner (AC) is a specialty product for the aviation industry. eOx AC is suitable for external and internal cleaning of virtually all metal and/or painted surfaces. Completely removes difficult substances such as hydraulic oil, grease, carbon, brake dust, "blue stains", and dirt safely and easily. Removes chemicals and dirt from the grain of the paint thus making it look new and extending its useful life. eOx AC conforms to Boeing D6-17487, Douglas CSD #1, AMS 1525B and AMS 155A. Non-toxic, Non-flammable, Non-hazardous - Not subject to dangerous goods regulations., No phosphates, acids or silicones High biodegradability (tested by the University of Ghent, Belgium), Very economical to use., Contains no phosphates, acids, silicones and is non-butyl., Safe to use on all surfaces including metal, plastic & rubber materials with no stock loss., Fast, intense cleaning action surpasses other cleaners' performance., Cleaned surfaces become slightly antistatic and corrosion inhibitive for up to 4 weeks., Can be effective used as a spray-on & wipe-off process., Safe for use in high-pressure washers, immersion systems and ultrasonic machines., Fresh smell – NOT citrus.

Quart ..... P/N 09-02449 ..... **$11.95**
Gallon ..... P/N 09-02451 ..... **$35.80**

EOX AIRCRAFT HYDRAULIC FLUID REMOVER



eOx Aircraft Hydraulic Fluid Remover (AHFR) is a proprietary cleaner designed to easily remove all hydraulic fluids, baked on carbon, and corrosion protecting compounds. An excellent replacement for chlorinated products and solvent based cleaners. Meets AMS–1526B. Application: specially developed to remove sticky hydraulic oil deposits from the aircraft fuselage, wheel wells, landing gear, wings, and any area or part where hydraulic fluid accumulates. eOx AHFR also removes numerous oils, greases and stubborn carbon deposits; especially from around engine exhaust areas. Ready to use and intended as a spot cleaner on the aircraft. Non-toxic, Non-flammable, Non-hazardous - Not subject to dangerous goods regulations. No phosphates, acids or silicones, High biodegradability (tested by the University of Ghent, Belgium) Neutral pH of 6-8, Very economical to use. Contains no phosphates, acids, silicones and is non-butyl. Fast, intense cleaning action surpasses other cleaners' performance. Can be effective used as a spray-on & wipe-off process. Safe for use in high-pressure washers, immersion systems and ultrasonic machines. Fresh smell – NOT citrus

Quart ..... P/N 09-02452 ..... **$35.55**
Gallon ..... P/N 09-02453 ..... **$69.85**

DIGESIL NC GEL



Digesil NC de-polymerizes uncured and cured silicone elastomers, resins, oils, and greases from components, surfaces, tools, electronics and process equipment used in engineering, construction, and glazing industries. Digesil NC is effective and fast working. It has a high flash point for safety and contains less than 0.2% aromatics. Benefits: Quickly dissolves cured silicone, Leaves a silicone free surface, Chlorinated and fluorinated solvent free, Negligible aromatic solvent content, Environmentally responsible, Low odor for operator comfort, High flash point for safety, Low density for ease of handling, Rinses with water or solvent, Safe on glass, metal, and most plastic (except nylon), Safe on paint and powder coating, Water free. Specifications: Appearance: Liquid, Color: Brown, Odor: Aliphatic-hydrocarbon, Sp.Gr.: 0.82

6 oz. ..... P/N 09-02454 ..... **$22.75**
5 lb. ..... P/N 09-02455 ..... **$204.95**
1 Gallon ..... P/N 09-02456 ..... **$74.75**

DIGESIL NCX



Digesil NC de-polymerizes uncured and cured silicone elastomers, resins, oils, and greases from components, surfaces, tools, electronics and process equipment used in engineering, construction, and glazing industries. Digesil NC is effective and fast working. It has a high flash point for safety and contains less than 0.2% aromatics. Benefits: Quickly dissolves cured silicone, Leaves a silicone free surface, Chlorinated and fluorinated solvent free, Negligible aromatic solvent content, Environmentally responsible, Low odor for operator comfort, High flash point for safety, Low density for ease of handling, Rinses with water or solvent, Safe on glass, metal, and most plastic (except nylon), Safe on paint and powder coating, Water free Specifications: Appearance: Liquid, Color: Brown, Odor: Aliphatic-hydrocarbon, Sp.Gr.: 0.82

Gallon ..... P/N 09-02457 ..... **$87.75**

POLYSCRAPER KIT



Red Canvas Pouch with black trim. Kit contains 10 Polyscrapers, each having its own pocket. Pouch can be rolled and secured with black tie. ..... P/N 09-02458 ..... **$52.75**

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SPRAY NINE CLEANERS & DEGREASERS

SPRAY NINE MULTI-PURPOSE CLEANER



Cleans • Disinfects • Degreases • Deodorizes • Removes Stains ***Tough Task Cleaner -*** Spray Nine's no-nonsense power tackles your worst cleaning jobs, even when others fail. And it does it FAST! ***Money Saver -*** The only product necessary to clean up facilities & maintenance costs. One "does it all" formula reduces chemical use and gets the job done with less labor in less time than the competitors. ***Broad Spectrum Disinfectant -*** EPA-registered disinfectant kills harmful germs like HIV-1, Staphylococcus aureus, Salmonella choleraesuis & E. coli in just 45 seconds. Also helps prevent cross contamination. Authorized by USDA for use in federally inspected meat & poultry plants with an C-1 rating.

2 oz. Multi-Purpose..... P/N 09-01976.....**$7.50**
1 Gallon Multi-Purpose..... P/N 09-01977.....**$23.50**
5 Gallon Multi-Purpose..... P/N 09-01978.....**$87.75**
55 Gallon Multi-Purpose..... P/N 09-01979.....**$657.50**

EARTH SOAP CONCENTRATED CLEANER/DEGREASER
FROM SPRAY NINE



Premium Environmentally Preferable Cleaner Cutting-edge biodegradable technology combines powerful surfactants with low emulsifying action to create Earth Soap, a potent, yet environmentally thoughtful product. Earth Soap's innovative formula dissolves dirt, grease, grime and other hard-to-remove soils from most hard, washable surfaces. This versatile, concentrated cleaner may be "custom-formulated" by diluting in any proportion with water - from 1:1 for heavy soil loads to 50:1 for routine light-duty cleaning. Additionally, Earth Soap contains NO solvents, butyl, phosphates, or other harsh chemicals. Earth Soap is low-emulsifying and will not negatively impact oil/water separators and other pollution abatement systems. ***Corrosion Inhibiting -*** Corrosion-inhibiting formula cleans metal parts without damaging parts or parts washers (metal and plastic, traditional and heated up to 180 degrees F) Ideal uses: Dip Tanks • Engines • Concrete/Hangar Floors • Vehicles (Inside & Out) • Wash Racks • Tools & Equipment • CTK Took Kits • Plastic & Vinyl • Floors & Walls • Parts Washer (both traditional and heated up to 180°F)

32 oz..... P/N 09-01980.....**$8.50**
1 Gallon..... P/N 09-01981.....**$22.80**
55 Gallon..... P/N 09-01983.....**$753.00**

GREZ-OFF HEAVY DUTY DEGREASER
FROM SPRAY NINE



When Nothing Else Cuts It - Grez-Off works hard so you don't have to. This heavy-duty answer to heavy-duty grease and grime leaves engines, machinery, asphalt, garage floors and more whistle clean. ***Top Rated Track Record -*** Twice rated the #1 degreaser in an independent consumer report with top marks for effectiveness, safety and environmental impact. Made With You And Your Environment In Mind - Biodegradable, non-flammable formula hits hard and fast with less impact on user and environment. Finally a water based product that really works!

Ready-to-Use Formula is Gentler to the User: • Non-Flammable • Non-Combustible • No Acids • No Fumes or Unpleasant Odors

32 oz..... P/N 09-01984.....**$10.50**
5 Gallon..... P/N 09-01986.....**$92.75**
55 Gallon..... P/N 09-01987.....**$921.00**

ZI-400 ANTI CORROSIVE AIRCRAFT CLEANER



Zi-400 is restricted & not available for purchase or delivery to: Australia, New Zealand and those surrounding territories known as "Oceania", U.S. territories and other territories ok. Aircraft Cleaning Compound and highly specialized anti-corrosive industrial cleaning chemical. ZI-400 has been approved for use on Space Shuttles and is highly regarded in other aerospace applications as well. ZI-400 has multiple commercial approvals on file for a wide range of industrial applications. Current aircraft specifications include: • Cessna Aircraft, Beechcraft, Bombardier Aircraft • Boeing D6-17487, Revision P (or later) Exterior Cleaning • Boeing D6-7127, Revision M (or later) Interior Cleaning • Douglas CSD No.1, Current Revision, Exterior/Interior Cleaning • AMS 1526B, Exterior Cleaner (Accepted by AIRBUS Industries) • AMS 1550B, Interior Cleaner (Accepted by AIRBUS Industries) • (Re-tested December 2004.) It has also been found that continual usage of Zi-400 on airframes can have a positive, long term effect on painted surfaces as well as the substrate. The recommended dilution ratio for Zi-400 is 1 part product to 30 parts water.

1 gal..... P/N 09-04636.....**$29.95**
5 gal..... P/N 09-04637.....**$135.75**

POLY SCRUB HEAVY-DUTY HAND CLEANER
FROM SPRAY NINE



Industrial Strength Paste-Type Hand Cleaner - Hits hard with millions of dirt busting "poly scrubbers" to dig out and mop up even the toughest soils.

Tough On Dirt, Gentle On Hands - Contains no harsh solvents that dry out hands yet powers off dirt, grease, ink, adhesives, hydraulic fluid, carbon and more while leaving behind a refreshing lemon-lime fragrance.

Fights Foul Odors - Combats fish, onion, garlic, fuel, oil, lubricant & printer's ink odors.

Poly Scrub Easily Removes:

Grease • Oil • Hydraulic Fluids • Glues • Ink • Asphalt • Varnish • Paint • Carbon • Adhesives • Tar • Stains • Cement

26 Pound..... P/N 09-01992.....**$139.75**

COCO SCRUB HEAVY-DUTY HAND CLEANER
FROM SPRAY NINE



Tough On Dirt - Industrial strength hand cleaner formulated with millions of dirt busting poly "scrubbers" that dig out and mop up even the toughest soils.

Easy On Hands - Fortified with emollients to prevent drying & cracking. Leaves behind a pleasant coconut fragrance.

Fights Foul Odors - Combats fish, onion, garlic, fuel, oil, lubricant & printer's ink odors.

Poly Scrub Easily Removes:

Grease • Oil • Hydraulic Fluids • Glues • Ink • Asphalt • Varnish • Paint • Carbon • Adhesives • Tar • Stains • Cement

26 Pound..... P/N 09-01995.....**$145.95**

POLY 500 HAND CLEANER DISPENSING SYSTEM
FROM SPRAY NINE



Economical - Use just one "dollop" of Poly Scrub to clean even the dirtiest hands. Each 4 lb. cartridge packs 500 "dollops" when dispensed through the POLY 500 - so each wash is only "pennies per use!"

Convenient - Simply insert a fresh 3.8 lb. tub - no mess, no waste.

Durable - Rugged injection molded construction and tough, durable plastic components will hold up to the toughest use and abuse.

Lockable - Lockable lid keeps Poly Scrub fresh & Secure

P/N 09-01996.....**$24.75**

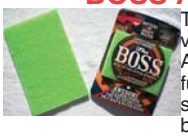
SOLOPOL CLASSIC HEAVY-DUTY HAND CLEANSER



Solopol® Classic PURE is a traditional, solvent-free, pH skin neutral hand cleanser containing scrubbing agent. It features a powerful cleansing action coupled with very good skin compatibility. Solopol® Classic PURE contains a skin protectant and re-fatting agent.

2000ml..... P/N 09-05426.....**$25.80**
Half Gallon..... P/N 09-05425.....**$24.70**

BOSS AIRCRAFT CLEANING PAD



Boss Pad & Holder

The BOSS Aircraft Cleaning Pad is the most advanced aircraft cleaning pad available. The BOSS Aircraft Cleaning Pad will safely clean bugs, carbon, fuel residues, dirt, grime, etc., from all your aircraft surfaces, leaving your plane the cleanest it's ever been or your money back.

- Safe for all paints, clear coat, plastics, graphics, metals, etc.
- Works extremely well with soap & water, waterless cleaners or just a small amount of chemicals!
- Reusable
- Eco-friendly
- Requires no harmful chemicals
- Best product to use to clean leather or vinyl interiors
- The pads chosen to clean the Blue Angels
- Cleans your car just as well as your aircraft

Aircraft Cleaning Pad..... P/N 09-03474.....**$4.99**
Aircraft Pad Holder (flat)..... P/N 09-03475.....**$20.95**
Aircraft Pad Holder (curved)..... P/N 09-03476.....**$20.70**

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COMPOSICLEAN AIRCRAFT CLEANING PRODUCTS



COMPOSICLEAN BUCKET-WASH

Bucket-Wash™ concentrate is neutral pH and safe and effective on all aircraft. Bucket-Wash™ will not attack composite components or assist corrosion. With several cleaning agents, real Carnauba Wax & U.V. protection additives this IS the right stuff. 64 ounce with pump top.

P /N 13-05254..... **$22.75**

COMPOSICLEAN SUPER SPRAY-WAX



Super Spray-Wax™ is neutral pH and SAFE on all aircraft. Will not attack composite components or assist corrosions. With real Carnauba wax and other cleaning and conditioning additives, this product is sure to satisfy. Provides a great shine and superior protection. Try it with one of our MicroFiber cloths. 1 Quart with commercial quality trigger sprayer.

P/N 13-05255 ..... **$19.95**



COMPOSICLEAN MULTI-PURPOSE CLEANER

This multi-purpose ALKALINE cleaner is very effective at breaking down grease, oils, carbon & other stains. Use with brush or rag to agitate for tougher Stains & soils. 1 quart with commercial quality trigger sprayer. This is not a neutral pH product.

P/N 13-05256..... **$10.95**



COMPOSICLEAN HAZE GLAZE

A neutral pH mild abrasive cleaner & polish in one. Removes oxidation haze, surface-stains, swirl marks and paint over-spray. Haze Glaze also removes minor acid rain contamination, light scratches & increases gloss on base coat & clear coat finishes. A great one-step or first step product in the detailing process. Use Composiclean Haze Glaze by hand or with orbital/random style buffers. Use Composiclean Haze Glaze on clean dry surface. Apply Haze Glaze to buffing cloth/pad or directly to surface. Rub or buff in circular motion then flip cloth or change to dry pad for finish buff. 1 quart with flip-top. P/N 09-02065..... **$34.95**



COMPOSICLEAN VIEW POLISH

Composiclean™ View Polish™ will probably be the best glass cleaner you will ever use, try it around the house too. Use View-Polish™ on windscreens, side windows, plastics, Lexan, acrylic and glass. You will see No streaking! View-Polish™ is guaranteed to leave no film. Non-caustic-non-flammable, Non-ammonia formula dries fast and contain no CFC's that deplete the ozone layer. View-Polish™ is also a great bug remover for the leaning edges, wheel pants, car grills etc. Spray product onto area to be cleaned (the thick foam helps it hang there), wait 2 to 3 minutes then wipe clean. Give View-Polish™ a try with our MicroFiber cloths, you'll love it! Offered in big 19oz aerosol can.

P/N 13-05257..... **$9.65**



COMPOSICLEAN LEATHER CLEANER & CONDITIONER

A rich conditioning cream that cleans leather as it brings back softness. Leaves leather looking natural with no greasy residue. 1 quart with flip top. 32oz.

P/N 13-05258..... **$24.95**



AIRCARE INTERIOR CARE KIT

This AirCare Interior Care Kit features four remarkable interior cleaners, micro fiber towels, Purell Hand Sanitizer and complete with an insulated carrying case. Whether your maintenance needs include one aircraft or an entire fleet, you will find the AirCare Interior Care Kit is an essential part of any aircraft cleaning strategy. Includes: • 24- Bioclean Wipes • 24- Glass Wipes • 24- Wood Wipes • 24- Leather Wipes • 2- Bottles Of Purell Hand Sanitizer • 5- Micro Fiber Towels • 1- 24oz Bottle Of Exterior Wash.

P/N 13-18747 ..... **$119.95**

COMPOSICLEAN MICROFIBER CLOTH



MicroFiber is a man-made product that consists of two fibers, Polyester and Polymide. The Polyester is the scrubbing and cleaning fiber, while the Polymide is the absorbing and quick drying fiber. Each square inch in a MicroFiber towel contains approximately 90,000 MicroFibers. MicroFiber is a lint free, non-abrasive, and hypoallergenic products. MicroFiber cloths along with Composiclean™ Super Spray-Wax™ will provide a great streak free deep shine even in direct sun. When buffing off Super Spray-Wax™, it is best to NOT let cloth get to saturated, dryer is better. Try a MicroFiber cloth with Composiclean™ View Polish™ for streak-free window cleaning. P/N 13-05259..... **$16.85**

COMPOSICLEAN SOLAR SCREEN



This is a Composiclean™ Solar-Screen™ statically attached to the inside of a window looking right into the sun. Comes in 6" x 9" and 9" x 12". Great for airplanes, cars, boats, RV's and can be cut to fit inside motorcycle & ski helmets too.

6X9..... P/N 13-05263..... **$5.95**
9X12... P/N 13-05262..... **$8.95**

COMPOSICLEAN PROPER CARE KIT



1 - 64oz Composiclean Bucket-Wash with pump top
1 - 32oz Composiclean Super Spray-Wax with trigger sprayer
3 - Plush 14" x 14" Micro-Fiber cloths
1 - Super-Soft Chenille wash mitt
1 - 11" Composiclean Super Squeegee

P/N 13-05264..... **$59.95**

CLASSIC WATER BLADES



Perfect for planes, cars, trucks and vans with fifteen times less friction than a terry cloth towel so you know your paint is safe. Medical grade silicone and patented T-bar edge conforms to every contour of your vehicle to remove over 90% of the rinse water safely and effectively. The ergonomic handle is easy to hold and operate without fatigue. Handle is tapered in at the sides so you don't accidentally scuff it against your paint. No spots even with hard water!

Description	Part No.	Price
12" Blade, Purple Handle, T-Bar Edge	13-19588	**$19.95**
18" Blade, Yellow Handle, T-Bar Edge	13-19589	**$24.95**
18" Blade, Yellow Handle, Y-Bar Edge	13-19590	**$24.95**
Extension Pole Adapter for Water Blades	13-19591	**$8.75**



HEAVY DUTY CONCENTRATE DEGREASER

Oil Eater® Cleaner Degreaser is "Ultra" concentrated, biodegradable and non-flammable. It safely dissolves grease and oils from asphalt, concrete and much more! This unique non-flammable cleaner has passed the Boeing D6-17487 Rev P Test, is South Coast Air Quality Certified per 2012 standards and USDA approved A1, A4 and A8.

1 Gallon ..... P/N 09-04012 ..... **$15.60**
5 Gallon ..... P/N 09-04013 ..... **$71.75**
30 Gallon ..... P/N 09-04014 ..... **$362.00**
55 Gallon ..... P/N 09-04016 ..... **$499.00**

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Prices Subject to Change Without Notice

K&N POWER KLEEN



K&N Air Filter Cleaner is the only cleaner recommended to clean K&N Air Filter elements. K&N Air Filter Cleaner works to dissolve dirt build up and old filter oil and can be washed away with water. It is environmentally friendly and safe on paint, chrome, cast aluminum, plastic, rubber and vinyl when used as directed (do not use on polished or anodized aluminum). Complete instructions on bottle.

12 oz. Squirt Spray..... P/N 05-01944 ..... **$13.50**
32 oz. Trigger Spray..... P/N 15-06511 ..... **$18.95**
1 Gallon Refill..... P/N 15-05451 ..... **$29.95**
5 Gallon Pail..... P/N 08-07461 ..... **$86.95**

AEROCOAT AIRCRAFT POLISH KIT



Not only does Aerocoat dramatically reduce aircraft cleaning time for pilots and increase flying speed performance but its glass like finish ensures maximum asset protection for owners, restoring old and tired looking paintwork that cannot be penetrated by the elements. The hydrophobic technology provides a hard wearing scratch resistance coat that converts a previously amorphous surface into a super smooth finish that cannot be penetrated by the elements. Aerocoat has been tested in the Arizona desert and is second to none when it comes to UV protection.

P/N 09-05361 ..... **$129.95**

WAX AS-U-DRY



After washing your aircraft leave it wet, then spray Wax-As-U-DRY on the surface. After the water sheets away, you dry the surface with a chamois towel. The result is high gloss shine without spending the afternoon buffing. A one step spray wax is a blend of water reactive polymers and waxes that are safe for all painted surfaces, windows, trim & wheels. P/N 09-00370 ..... **$7.95**

STRIKE HOLD II CLEANER/PENETRANT/LUBRICANT



One of the most significant long term enemies to aviation is corrosion. Strike Hold is a potent anti-corrosive and has a dielectric strength of 38,000+ volts so it can also be used on electrical contacts and connections. It "finds" the small spaces which allow filiform corrosion to form. Its capillary action will quickly encapsulate metals by flowing against gravity and under overlapping sheets of metal.

It is a highly penetrating and mobile liquid with CFC's and is non-flammable by flame projection test as opposed to other liquids containing butane or propane propellants. The lubricant in Strike Hold doesn't harden or become brittle.

It completely seals out water with a shield film. The carrier agent evaporates (unlike ACF 50) and does not leave a dust collecting film to re-contaminate a surface. The flash point is in excess of 450°F and the freezing point is -85°F. This product is heavier than water and does not damage polymers, rubber or plastics. Strike Hold can be used on virtually any surface that is susceptible to corrosion and that needs lubrication.

2 oz. Pump Spray..... P/N 09-02412..... **$5.85**
8 oz. Pump Spray..... P/N 09-02593..... **$10.95**
32 oz. Spray Bottle..... P/N 09-02594..... **$32.50**
1 gallon bottle..... P/N 09-02595..... **$15.95**

AERO WASH WAX MOP KIT WITH BUG SCRUBBER / MINI MOP HEAD



All you need to get started with the Waterless Wash Wax Mop and Bug Scrubber/Mini Mop. Kit includes:

- One 15" wide Mop head
- One 5" wide Bug Scrubber/Mini Mop
- Deluxe Mop Pole
- Two (2) Microfiber Mop Pads
- PLUS a pack of four (4) more Microfiber Mop pads
- Two (2) Bug Scrubber/Mini Mop Pads
- a pack of four (4) Aero Towels
- a gallon of Wash Wax ALL
- a spray bottle
- 16oz Wash Wax ALL (Degreaser)
- 1 Aero Scrubber Pad with Handle Aero Bag

P/N 09-05235..... **$239.95**



STRIKE-HOLD® BRAND MICROFIBER CLOTH

These high quality 16"x16" Microfiber® Cloths are machine washable and won't scratch, mar or streak surfaces. Features; • lint-free • non-abrasive •machine washable • eco-friendly "Green" • inexpensive and long-lasting

P/N 09-02043..... **$2.95**



V & S AIRCRAFT CLEANERS & ADHESIVES

V&S #581 FOAM & FABRIC SPRAY ADHESIVE - V&S 581 Foam & Fabric Spray Adhesive is specially formulated for bonding flexible urethane or latex foams to themselves or most other material (wood, metal, paper, corrugated, fabrics, etc.) Produces bonds with foam-tearing strength.

P/N 09-42650..... **$6.80**



SUPER TRIM ADHESIVE #1081 - A high temp high strength contact type adhesive. Bonds metal, foam, decorative laminates, fabrics, headliners. Variable width spray pattern. Meets Fed. Spec. MMM-A-130B. P/N 09-42652..... **$8.50**



V & S DRY SILICONE SPRAY- Exceptionally high quality dry silicone lubricant that stops adhesion of urethane foam backings, foam rubber and other non-sliding materials to metal, wood or rubber. Non-staining, will not harm painted surfaces.

P/N 09-42654..... **$5.95**



CITRUS CLEANER #609 - Can be used safely on many surfaces to remove adhesives, grease, inks, and residue from various tapes. Environmentally safe, biodegradable and pleasantly scented. P/N 09-42656..... **$14.50**

AERO-600 AVIONICS CLEANER



The secret formula used in the film and photography industry, is now available for the aviation community! Eliminate fingerprints, streaks, dust, dirt, oils, from your avionics, glass cockpit screens, electronic flight bags, GPS screens, Laptop, and plasma screens. Aero 600™ tested for well over three years by professionals in the aviation industry with outstanding results. It's designed to have industrial strength; be powerful, yet mild and gentle to your screens. "We keep a bottle in the side pocket of our corporate aircraft and have been using it exclusively to clean our instruments, laptop screens and even our eyeglasses. It never streaks and helps keep the dust at a minimum."Nina Anderson, Hawker pilot. Aero 600™ is also safe for use on Laptop & TFT LCD screens, LCD, Plasma & Projection TVs (LCD and Projection screens have a soft membrane in place of glass which can easily be degraded by harsh chemicals. Plasma screens have a thin delicate protective coating which also can be damaged.

P/N 09-02040..... **$14.85**

AEROSPACE PROTECTANT



The World's most effective UV-screening product. AAP leaves a like-new, non-oily, anti-static finish that does not attract dust. Protected surfaces not only last much, much longer, but are easier to maintain. AAP treated surfaces repel soiling and stains, clean up easier and stay clean longer. 100% prevention of UV caused slow-fade - Plastics, Plexiglass, Lexan, Door Seals, Wing and Prop De-icing Boots, Tires, Vinyl & Leather Interiors.

2 oz..... P/N 09-02414..... **$3.95**

STEWART SYSTEMS PROPOLISH



Stewart Systems ProPolish is the perfect metal polish to use in conjunction with Stewart Systems EverShield. ProPolish holds its shine longer than most other polishes and is very easy to use. Wipe on, wipe gently until polish is black, and wipe off. Repeat until you achieve the desired shine. Use SS ProPolish on bare metal or chromed surfaces, and then apply EverShield to make the shine permanent. SS ProPolish is available in green for cleaning and white for finishing.

Green 8 oz. ..... P/N 09-02054 ..... **$13.85**
White 8 oz. ..... P/N 09-02055 ..... **$13.85**
Green 16 oz.. ..... P/N 09-02056 ..... **$21.95**
White 16 oz. ..... P/N 09-02057 ..... **$21.95**

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CLEANERS – WIPES

X-IT CARBON REMOVER & CLEANER



Powerful enough for difficult cleaning applications, but safe enough for daily routine aircraft cleaning & maintenance. X-IT™ Carbon Remover & Cleaner is safe on all surfaces (rubber, plastic, metal, painted or unpainted) & quickly removes heavy carbon, dirt, grease, grime and oil. X-IT™ Carbon Remover & Cleaner is non-toxic, non-corrosive, nonhazardous, odorless, and aqueous-based.

32oz. spray bottle ..... P/N 09-00768 ..... **$10.65**
Carb Cleaner &Remover Gal..... P/N 09-00769 ..... **$23.50**
Carb Cleaner &Remover 5 Gal .... P/N 09-00770 ..... **$87.75**
Carb Cleaner &Remover 55 Gal .. P/N 09-00771 ... **$657.00**

HYDRASOLVE



Hydrasolve is a thickened, heavy duty, water soluble gel degreaser formulated for efficiency and performance in a broad range of cleaning and degreasing applications. It will easily and safely remove carbon exhaust, exhaust tracks, hydraulic fluid, thrust reversers, soot areas, oil & bugs. Hydrasolve is a gel product that clings to the surface being cleaned and has the ability to rinse spot free. Meets Boeing & McDonnell Douglas approvals. 1 gal. ..... P/N 09-00528 ..... **$25.75**
5 gal. pail ..... P/N 09-00529 .... **$118.75**

PURPLE METAL POLISH



Purple Metal Polish is in a class of its own. This is truly a no-rub metal polish. When you see just how easy it actually is to polish aluminum, chrome, brass and even plastic, you will be totally amazed. Specially formulated for easability, durability and a super high quality shine. It is a super quick and easy maintenance product. Purple Metal Polish contains a superior abrasive along with Hi-tech cleaners and sealers to safely clean, shine and protect all metal surfaces without scratching! Also removes scratches from acrylic windshields. ..... P/N 09-02860 ..... **$13.85**

FAST WING PAINT SEALANT



T-500 Paint Sealant with PTFE-M is more than a wax or polish. T-500 provides a tough, long-lasting, mirror-like finish that protects paint longer. Works great on aircraft, cars and boats. Fast Wing will increase performance by reducing parasitic drag. The performance of the aircraft actually increased due to the slick surface the Teflon Sealant left on the paint. 100% Satisfaction Guaranteed.

16 oz. (1 pint) ..... P/N 09-00186 ..... **$52.75**

FAST WING CLEANER



Originally designed to remove over spray, Fast Wing T-11 cleans and restores the paint to the original luster without the use of harsh abrasives found in most rubbing compounds. Rubbing compounds almost always use some sort of abrasive material, such as volcanic ash, which can leave microscopic scratches. Abrasives may actually accelerate the oxidation process.16 oz. (pint)..... P/N 09-00187 ..... **$14.95**

FAST WING VINYL & LEATHER PROTECTANT - PINT



Fast Wing T-600 vinyl & Leather Protector wipes dry leaving that lustrous new look finish. It creates a anti-static surface that helps repel dust and dirt, without leaving an oily residue. Fast Wing T-600 leaves a non-glare finish that is especially important to pilots and race car drivers.

P/N 09-00188 ..... **$12.50**

EAGLE ONE A2Z ALL WHEEL & TIRE CLEANER



Any wheel, any tire. Nothing cleans better. The Eagle One A2Z Wheel & Tire Cleaner features a powerful 2-in-1 formula. It clings to the surface of ANY wheel or tire to safely and easily remove brake dust, grime and grease. Manufacturer Recommended. The thick acid-free foam is safe for any type of wheel, hubcap or tire, making for a risk-free clean. No Scrub Formula. Alkaline builders pull dirt and grime from the surface of wheels and tires, breaking up tough deposits without agitation. P/N 10-04938 ..... **$10.90**

SAFETY WASH



Safety Wash is a mild neutral PH water based exterior wash & wax concentrate designed to be gentle on your aircraft. It provides detergency and built-in easy rinse characteristics that will enhance gloss and eliminate the risk of streaking. Formulated for general routing washing of aircraft. Meets Boeing & McDonnell Douglas approvals. Safety Wash is NOT designed to clean heavily soiled areas.

1 gal. ..... P/N 09-00526 ..... **$23.50**
5 gal. pail ..... P/N 09-00527 ..... **$106.95**

WORX INDUSTRIAL WIPES



- 70ct High powered pre-moistened multipurpose cleaner
- Automotive, industrial, manufacturing, construction
- Natural oils and emollients, safe for hands and skin
- Durable non-scratching fabric for maximum cleaning
- Simple to use - just wipe down surface and dispose

P/N 09-02604 ..... **$9.95**

PS WORKPLACE HAND CLEANER TOWEL



- Uniformly premoistened towel
- Superior terpene blend
- Deep cleaning, non-scratching abrasives quickly remove embedded dirt and grime
- Fast acting
- Disposable
- Eliminates the need for soap, water and a sink
- Improves workplace productivity by reducing costly clean-up time
- Does not require water
- Easy to carry and store
- Convenient
- Bucket of 72 Towels

P/N 09-02546 ..... **$15.85**

ROYCO 756 HYDRAULIC WIPE



This 6" by 6" wipe is an excellent choice for cleaning chrome piston cylinders and struts. The wipe is presaturated with top of the line hydraulic fluid: Royco 756. It is lint and static free, made of 100% cotton cloth woven and finished without starch, binders, or any foreign substances. The cloth finish gives this wipe a softer and better dirt-trapping capacity and has incredible retention to minimize fluid drip.

P/N 09-02668 ..... **$2.95**

ROYCO 782 HYDRAULIC WIPE



This 6" by 6" wipe is an excellent choice for cleaning chrome piston cylinders and struts. The wipe is presaturated with top of the line hydraulic fluid: Royco 782. It is lint and static free, made of 100% cotton cloth woven and finished without starch, binders, or any foreign substances. The cloth finish gives this wipe a softer and better dirt-trapping capacity and has incredible retention to minimize fluid drip.

P/N 09-02669 ..... **$2.45**

ALUMINUM DEOXIDIZER



Want a product that really takes the elbow grease out of polishing? This is a very Hi-Tech chemical designed to clean and deoxidize all metal surfaces without streaking, hazing, burning or damaging the surfaces. Removes scale, road film, most acid stains and even rust on Chrome! It is the easiest and safest way to prep the metal before polishing. It really works great!

Can be used with most cream type polishes. If your aluminum has a milky look to it even after being polished, try this Aluminum Deoxidizer before polishing, you will achieve a Crystal Clear Shine.

P/N 09-02859 ..... **$13.85**

FLOOR AND ALL PURPOSE CLEANER



This pre-measured 1.5 Oz Floor & All Purpose Cleaner is Concentrated, Non-Corrosive, and Biodegradable. The superior quality of this product is proven better, use one pouch per mop bucket, it is safe on all surfaces, it won't dull high gloss finishes, and helps keep floors safe.

P/N 09-04017 ..... **$0.67**

WATER SPRITE SYNTHETIC CHAMOIS



Water Sprite is an exclusive PVA material that gently cleans and dries fine finished surfaces. It actually lifts off residual dirt and grime away from the surface, leaving it clean and dry. It is not affected by mildew, bacteria or common household chemicals.

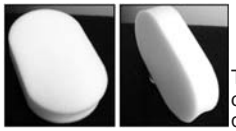
It is used in place of a sponge or towel and when wet, can be used immediately upon removal from its package. It is individually packaged in a reusable plastic tube for convenient storage, moist or dry, in glove compartment or trunk. Size 3.0 square feet. P/N 09-03062 ..... **$14.85**

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AIRCRAFT GRADE MICROFIBER WASH MITT



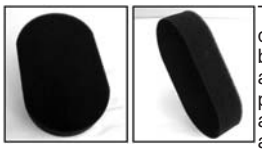
The Aircraft Wash Mitt is made from two of the softest materials available - Chenille and Microfiber. It's an absorbent, super soft, and non-scratching mitt that delivers an amazing wash like no other! The expanded surface area of the Chenille fibers allows the mitt to stay cleaner 3x longer than any other wash mitt.
Clean without worry because this product delivers a premium wash without abrasion. It is safe on all acrylic aircraft or marine windscreens and polycarbonate windows. Also great for custom or collector automotive paint finishes. The mitt can be laundered and re-used for many years!
P/N 09-04087..... **$9.75**



METAL ARMOR MATERIAL APPLICATION PAD (WHITE)

This Pad is made from material that is compatible with Metal Armor Products. It is designed as a by hand applicator for their products. It produces no static and produces scratch free results. Can be washed and re-used many times. Can also be used as applicator for other products. P/N 09-02573..... **$4.65**

METAL ARMOR DETAILING PAD (BLACK)



This pad was designed to act as a removal device of (spent) material after it has been used. The pad is very absorbent and collects the residue before using the polishing cloth. The pad can be washed and re-used many times. It is static free and produces no scratches.
P/N 09-02574..... **$4.60**

MICROFIBER APPLICATOR PAD



Durable foam applicator encased in a soft plush microfiber to gently and evenly apply waxes, polishes, protectants and dressings to any surface. 2-Pack: 4.50" Diameter.
P/N 09-04518..... **$2.50**

TERRY APPLICATOR PAD



Durable foam applicator pad, encased in a soft terry knit, gently and evenly applies wax, polish and protectant safely to any surface. 12-Pack: 4.50" Diameter Each. P/N 09-04519..... **$15.50**

PUREWIPE® TACK CLOTH

G-99-R-17-Tack cloth- Boeing 15-5G/AMS3819 approved- 18"x36" folded/individually polybag- 20x16 thread count- Non hazardous waterbased latex-Boeing approved. Highest quality tack cloth to insure against paint fish eyes and any painting failures using a tack cloth being to sticky. P/N 09-04579 ..... **$0.95**



PUREWIPE® WOODEN DEPRESSOR STICKS

Hardwood depressors made of White Birch providing strength, as well as a clean, smooth finish for stirring mixing, scrapping & peeling.
P/N 09-04578..... **$2.20**



WOODEN COTTON SWABS

Cotton swabs with 6" wooden sticks- ONLY Boeing approved swab in the industry- Ideal for small paint touch up; applying or removing sealants; cleaning around tight corners or removing dust around avionics. Cotton tip will hold up to the harshest solvents. 100 per zip lock bag.
P/N 09-04577..... **$1.15**

BOSS FLAP WELL CLEANING WAND



This patented reusable, wand lets you easily reach & clean "hard to get to" areas such as the flap wells, tail section, around the cowling, etc. They are usable both outside and inside the aircraft and work with any cleaning products such as soap & water, waterless cleaners, or chemicals.
P/N 09-05326..... **$14.95**

RYMPLECLOTH PURIFIED WIPING CLOTH



#301 Purified Rymplecloth® 100% woven cotton rolls low lint-3-ply- 100 pre-cut pcs/roll- Preferred wiping cloth in the aircraft industry- Per Boeing 15-5G/AMS3819-Absorbs 24X its own weight. Holds up to most harsh solvents with no breaking down of fibers.
10"x16" Roll . P/N 09-04573..... **$13.50**

RYMPLECLOTH PURIFIED WIPING CLOTH



#301 Purified Rymplecloth® 100% woven cotton rolls low lint-3-ply- 100 pre-cut pcs/roll- Preferred wiping cloth in the aircraft industry- Per Boeing 15-5G/AMS3819-Absorbs 24X its own weight. Holds up to most harsh solvents with no breaking down of fibers.
10"x14" Roll. P/N 09-04574..... **$12.50**

PUREWIPE®



Purewipe WP-100-#992128- 12"x13"-1/4" folds- Per Boeing 15-5G/AMS3819- For all critical polishing and wiping in paint preparation; composites; metal bonding-55%/45% Polyester/Cellulose. Very low lint; silicone free; Non abrasive-no binding material/ chemically pure-very strong material and can be used on smoother surfaces and rougher surfaces with less chance of snagging or bunching up. Holds up to the harshest solvents. 100 wipes per bag.
P/N 09-04576..... **$10.95**

TACK CLOTH BOEING APPROVED



The tack cloth of choice in the Aerospace Industry and designed specifically for that industry. It is still made with the quality chemicals and fabric that made it #1 and keeps it #1. It is unique because of the materials used and how it is made, as well as the industry-best quality control procedures applied in its making.
White ..... P/N 09-04595..... **$1.25**
Black ..... P/N 09-04596..... **$1.95**

BOEING APPROVED AEROTEX™ BLEACHED WIPING CLOTH



Virtually identical to Rymplecloth®, this aerospace wiper is bleached white. This whiter cloth is preferred by some end-users for critical cleaning and polishing processes. Ideal for general use whenever a wiping or polishing cloth is needed.
10"x14" Roll..... P/N 09-04594..... **$11.95**
10"x16" Roll..... P/N 09-04593..... **$12.95**

PUREWIPE® WHITE WIPERS



100% woven cotton knit/woven wiper: available in B rating or USA grade quality. Ideal for various wiping non abrasive. Cleaning and polishing.
Class B Wipers ..... P/N 09-04597 ..... **$78.75**
Made In USA Wipers ... P/N 09-04598 ..... **$99.75**

BOEING APPROVED CHEESECLOTH 4-PLY



Cheesecloth- 100% woven cotton 4-ply- 128 pre-cut pieces per roll- 24" cut pieces- Per Boeing 15-5G/ AMS3819- Ideal for all critical wiping non abrasive. Cleaning and polishing aircraft windows; painting preparation; composites; metal bonding. Holds up to most harsh solvents with no breaking down of fibers. Certified silicone free. Cotton absorbs 24X its own weight. Very low lint. Wiping down all smoother surfaces P/N 09-04599..... **$39.95**

INSHIELD WIPER



inShield Wiper is the revolutionary cleaning device designed to fit on the BACK of your hand. The patented design of inShield Wiper absorbs the pressure of your knuckles allowing you to use the natural bend of your wrist and hand to quickly and easily clean the inside of your windshield.
Single ..... P/N 09-04585..... **$9.95**
3 Pack ..... P/N 09-04586..... **$27.95**

ICLOTH® AVIONICS WIPES



Specifically engineered for flight deck displays, IFE screens, touchscreen tablets and handheld devices as well as all types of eyewear. Its proprietary cleaning solution easily removes lint, dirt, electrostatic dust, fingerprints etc., and cleans safely and without abrasiveness. The anti-static properties help prevent build-up of lint and dust. iCloth® Avionics does NOT contain damaging NPEs, ethyl alcohol, silicone or ammonia. The liquid formula meets or exceeds required OEM cleaning specs for optical surfaces made by Honeywell Aerospace, Thales Avionics, Rockwell Collins, B F Goodrich Aerospace, and others, and is currently being used on aircraft manufactured by Airbus, Boeing, Embraer and Bombardier.
Pack of 10 ..... P/N 09-04590-10..... **$3.35**
Pack of 100 ..... P/N 09-04590..... **$33.50**

AVL LUBRICANTS & RUST INHIBITORS



AVL LIGHT - The premium light lubricant and rust inhibitor that penetrates and displaces moisture fast, leaving a delicate coating for excellent lubrication and rust protection. A fine, light film that resists the accumulation of dust and dirt. Ideal for drying and protecting electrical connectors and delicate machinery. Can sprays upright or inverted. P/N 09-02106 ..... **$8.65**

AVL MEDIUM - The premium medium lubricant and corrosion preventer is specifically designed to penetrate and displace moisture fast. It leaves a medium weight oily coating for long term lubrication and rust prevention. Can sprays upright or inverted. P/N 13-02963 ..... **$7.50**

AVL THICK - The premium thick lubricant and corrosion preventer penetrates and displaces moisture. It stops corrosion on contact leaving a thick coating for long term lubrication and corrosion prevention. Can sprays upright or inverted. P/N 13-02964 ..... **$4.75**

AVL NO CHLOR CLEANER/DEGREASER



The powerful flushing action and a high solvency formulation makes cleaning metal parts faster and easier. Penetrates quickly into hard to reach areas, cleaning thoroughly. AVL NO CHLOR Cleaner/Degreaser does not contain any 1,1,1 Trichloroethane or any solvents or CFCs known to deplete the stratospheric ozone layer. Evaporates quickly leaving no residue. Removes oil and grease on contact. This is the best non-chlorinated degreaser we have ever produced. 14 oz. P/N 13-02961 ..... **$6.85**

AVL ELECTRO CONTACT CLEANER



The premium aviation cleaner that penetrates fast, cleans and degreases, removes dust and dust buildup without leaving a noticeable film or oil residue. Both penetrate and dry quickly. Ideal for air and ground, electrical and avionics, and sensitive mechanisms. Non-flammable. P/N 13-02958 ..... **$12.65**

AVL FAST ACTING CLEANER/ DEGREASER II



AVL Fast Acting Cleaner/Degreaser II is a highly concentrated solvent designed to remove dirt, grease, oil and grime from metallic and non-metallic surfaces. Cleaning is quick and simple without the danger of injury to working parts. Ideally suited for use on electronic motors even while running, electronic equipment, ignition systems, generators, power tools, etc. It is non-flammable and non-conductive so it can be used while motors and equipment are operating. Cleans & degreases very fast and dries quickly leaving little residue. P/N 13-02960 ..... **$10.50**

MACH #1 DEGREASER/CLEANER



A citrus scented degreaser and cleaner designed for the aircraft industry. This surface degreaser is non-irritating but will remove heavy encrustations. Mach #1 (formally known as Big Orange Plus)combines solvent power with an emulsifier system that removes hydraulic fluids, fuel stains, and exhaust soot. P/N 13-00031 ..... **$34.90**

CLEAR VIEW PLASTIC CLEANER



Clear View™ glass and plastic cleaner is safe on all plastics and glass, contains no ammonia. This foaming cleaner leaves a shiny finish with no residue. It easily removes bugs and grime from windshields and all surfaces. 15 oz. P/N 13-02959 ..... **$8.50**

CRAZY CLEAN ALL PURPOSE CLEANER



Crazy Clean is an all purpose cleaner which is excellent for removing fuel stains, exhaust stains, and grease and grime from your aircraft. Ideal fro removing bugs from leading edges. Crazy Clean produces a clinging foam which cleans and deodorizes and leaves a clean, not waxy surface. Keep a can in the airplane to use when travelling. Recommended by Aviation Consumer. 15 oz. aerosol can. P/N 09-00563 ..... **$6.50**

SIMPLE GREEN WELDING ANTI-SPATTER



Simple Green Anti-Spatter is the easy solution to protect your welding equipment and projects from unwanted spatter. Reduce costly, time-consuming spatter removal. Just spray Simple Green Anti-Spatter on areas to be protected from spatter: nozzles, diffusers & tips, and surfaces adjacent to weld. After welding, rinse with water and dry prior to plating or painting. 32.oz. P/N 09-04486 ..... **$10.50**

SIMPLE GREEN FOAMER UNIT



An easy hose-end attachment that delivers a powerful jet spray of foamed Simple Green® solution for large areas, or a precision stream for smaller, concentrated applications. Foaming provides clinging ability for vertical and hard to reach surfaces and enhances product performance. Bottle holds ½ gallon of concentrate. P/N 09-04485 ..... **$76.75**

EXTREME SIMPLE GREEN AIRCRAFT CLEANER



Unique cleaning & anti-corrosion chemistry delivers superior performance and materials-safety all in one. Cuts through tough, built up grease, oil, dirt, pollution, insect residue & impact soils. Gets its superior cleaning from a unique "triple play" cleaning formula. 2 high performance surfactants and new generation grease lifter/cutter combine to get the soil away from the aircraft surface quickly and keep it away so it can be cleanly rinsed away. Also able to go into oil/water separators and have oil break from solution. Extreme Simple Green's safety upon aircraft materials and precision cleaning surfaces comes from a combination of proven anti-corrosion agents. Time tested coupling agent allows these to work together to battle corrosion & hydrogen embrittlement. This makes it safe to put through pressure washing equipment, rack wash systems, dip tanks & parts washers, without any equipment damage.

32 oz..... P/N 09-00809 ..... **$10.95** Gallon..... P/N 09-00810 ... **$19.95**
5Gal. ..... P/N 09-01236 ... **$82.50**
55 Gallon Drum ..... P/N 09-01606 ..... **$592.00**

SIMPLE GREEN PRO HD CLEANER



Simple Green® Pro HD is a non-toxic, non-corrosive, professional grade product developed for multi-purpose contractor applications including use on floors, walls, industrial equipment, appliances; automotive or recreational vehicle cleaning and degreasing; commercial kitchens and baths; and for pressure washing, parts washing, ultrasonic cleaning, and more. It quickly eliminates tough grease and grime, removes stains, and is safe on metal surfaces. Simple Green Pro HD is your one-stop cleaner and degreaser! P/N 09-02399 ..... **$14.85**

SIMPLE GREEN SAFETY TOWELS



Non-toxic and biodegradable. Pre-moistened, quick and versatile with no color and no added scent. Non-abrasive and abrasive sides. .....09-01297 ... **$13.50**

CRYSTAL SIMPLE GREEN INDUSTRIAL CLEANER/DEGREASER



Use for equipment and machinery degreasing, parts washers and dip tanks, mechanized applicators. Non-toxic & biodegradable, non-abrasive & non-flammable.

1 Gallon .....P/N 09-01299 ..... **$17.85**

SIMPLE GREEN HAND CLEANER GEL



Simple Green® Hand Gel is the safer solution for heavy-duty hand cleaning. With over 25 years of environmental leadership, Simple Green has customized a hand cleaner that has the powerful cleaning ability of Simple Green All-Purpose Cleaner/Degreaser, while being easy on the hands. It contains natural pumice to enhance the cleaning of stubborn dirt and grease; and lanolin for moisturizing and protecting skin.

5 oz.....P/N 09-01301 ..... **$1.65**
1 Gallon (pump).....P/N 09-01302 ..... **$16.95**

SIMPLE GREEN 30 GAL. PARTS WASHER



15" depth soak basin at deepest point). Stainless steel workshelf, flex spigot & nylon flow-thru brush clean out plug for easy draining, includes filter kit and circulating pump. Overall dims: 36"L x 24"W x 39"H. .....P/N 09-01303 ..... **$998.00**

SIMPLE GREEN 4-WAY PROPORTIONER



Assures proper mixing, controls material usage costs, minimizes excessive packaging disposal, and saves time. Dispenses diluted Simple Green® concentrates in four strengths at 1 gallon per minute. Also includes six foot hose with trigger handle for bucket fill and pre-formed tube for bottle fill. .. P/N 09-01304 ... **$149.85**

SIMPLE GREEN FOAMING CRYSTAL INDUSTRIAL CLEANER/DEGREASER



Fragrance-free and color-free solution.

P/N 09-01305 ..... **$4.95**

SIMPLE GREEN CONCENTRATED CLEANER/DEGREASER DEODORIZER



Clean & deodorize grease filters/traps.

24 oz. (Trigger Spray) ..... P/N 09-01306..... **$6.50**
1 Gallon ..... P/N 09-01307..... **$15.75**

SIMPLE GREEN LIME SCALE REMOVER INDUSTRIAL/INSTITUTIONAL DESCALER



Dissolves soap scum & mineral deposits. Deodorizes-contains no bleach, ammonia or phosphorus. Non-abrasive & non-flammable.

Spray..... P/N 09-01308.....**$5.95**
Bottle..... P/N 09-01309....**$12.90**

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Prices Subject to Change Without Notice

MICROFIBER CLEANING TOWELS



These non-abrasive, super absorbent cleaning towels are excellent for cleaning plexiglass, rotors, props, and fronts of aircraft to remove bugs and dirt without fear of scratching. Microfiber needs only water to work due to it's unique construction. Used extensively on aircraft, boats, RVs, and motorcycles. Available in Terry style (16"X16", blue) and in Chamois style (16"X 24", gold).

Terry style .....P/N 09-00272 ..... **$2.75 ea**
Chamois style .....P/N 09-00273 ..... **$6.65 ea**

KIMTEX SHOP TOWELS



The heavy-duty oil and solvent disposable wiper to replace cloth. Excellent for machine shop use.

Each..... P/N 09-03473 .....**$0.37**
Pkg of 10..... P/N 09-02996 .....**$3.85**
Pkg of 50..... P/N 09-02997 .....**$15.25**

MICROFIBER CLEANING CLOTH



The Mystic Maid® Microfiber Cleaning Cloth will clean all hard surfaces to a streak-free brilliance without chemicals. No cleaning agents, soap, or detergent is needed; just the cloth and water. Simply wet the cloth, wipe the surface, and the cloth leaves a brilliant surface that air-dries in seconds. Machine washable and reusable for countless applications. Removes grease, dirt, and dust. Excellent for cleaning the aircraft windscreen and on leading edges for bug removal.

13"x 20" cloth .....P/N 09-00191 .....**$12.80 ea**

SONTARA AIRCRAFT WIPES



Tough Dupont Sontara® AC™ aircraft wipes are the smart choice for both aircraft manufacturing and maintenance. Their strength and durability make them ideal for a wide variety of general purpose & pre-paint applications. Sontara® AC™ wipes leave surfaces clean because they're extremely low-linting. Tackles tough cleaning agents without falling apart. every Sontara® AC™ is clean right out of the box. No chemical residues or stains. Sontara® is specially engineered to resist snagging on metal parts and corners. Superior to paper wipes which snag & tear. Outperforms cheesecloth which leaves strings behind when it snags on a rivet. Sontara® AC™ is great for wiping surfaces dry because it contains no additives that hamper absorbency.

9" x 16' Wipes (Box of 100).....P/N 09-00369 ..... **$19.85**
12" x 16' Wipes (Box of 125).....P/N 09-00368 ..... **$53.75**

DISPOSABLE MICROFIBER TOWELS



These disposable Microfiber Towels are a generous 16 x 17 inch size and are made of the highest quality, aviation-grade Microfiber. Use these scratch-free/lint-free towels with All-Spray (PN: 09-02379) to leave your aircraft windows clean, smooth and brilliant.

Individual towel size:
10 PK 12.5x17"
50 PK 16x17"

10 Pack..... P/N 09-02384.....**$19.85**
50 Pack..... P/N 09-02376.....**$39.90**

AIRCRAFT MICROFIBER POLISHING CLOTH



This Polishing Cloth is an aviation grade, re-usable microfiber cloth designed to remove any residue, dust or fingerprints from aircraft windows. Can also be used to go over painted surfaces and helps restore a brilliant shine. The smaller cloth can be used on avionics and helps remove dust and fingerprints.

Large Cloth: 22" x 25"
Small Cloth: 7.5" x 7.5"

Large Polishing Cloth (22 X 25 inches) ..... P/N 09-02380.....**$17.50**
Small Polishing Cloth (7.5 X 7.5 inches) ..... P/N 09-02377.....**$15.50**



REALCLEAN WINGMAN BUG REMOVER SPRAY

Wingman Bug Remover Spray Fast-acting cleaner Dissolves and lifts insect matter Spray on and wipe-off.

32 Ounces..... P/N 09-05331 .....**$17.95**
Gallon..... P/N 09-05332 .....**$49.95**



NEVR-DULL NATURAL GLASS CLEANER

Nevr-Dull® Glass Cleaner is an environmentally friendly glass and surface cleaner that leaves a streak-free shine. Use on a variety of surfaces that include plastics, glass, mirrors, chrome, automobiles, boats and especially Strata, EZ2CY and Eisen glass. Ideal for use in hospitals, bathrooms and offices. Strong enough to use in commercial and industrial settings, but safe enough to use in the home. P/N 09-02364 .....**$7.25**

NEVR-DULL FOAMING HAND SANITIZER



Nevr-Dull™ Hand Sanitizer is a fast drying, non-sticky foam that contains unique conditioning and moisturizing ingredients. Skin is left feeling soft, silky and smooth, not dry or gooey. Proven to reduce S. Aureus by 99.99% in as little as 15 seconds. 1.7 oz pump bottle size. Fast acting – effective in as little as 15 seconds. Will not stain clothing. Kills 99.99% of most common germs. Biodegradable . No alcohol – non drying . Towel and rinse free use. No polymer thickeners or silicones. Nonflammable. Passes security check points including airports

P/N 09-02369.....**$3.95**

PROTECT ALL POLISH



Protect-All makes everything look better - cleans and polishes in one easy step. Works on vinyl, rubber, plastics, painted surfaces, fiberglass and chrome. Use Protect-All on the entire aircraft, inside and out, including windshields.

6oz. spray can.....09-00556 ....**$3.75**
13.5oz. spray .....09-24900 ....**$9.75**
1/2 Gallon Jug .....09-00599 ..**$34.50**

PRO WASH RX PH NEUTRAL SOAP



Pro Wash RX is a super-concentrated, pH balanced, premium shine enhancing soap designed to provide superior detergency while at the same time being extremely gentle on all vehicle finishes. Pro Wash RX contains special rinsing agents that help eliminate spotting and streaking. It's everything you want in a soap to baby your car, boat, airplane, motorcycle or RV!

Add approximately 2 ounces of Pro Wash RX per 1 gallon of water. Apply with a sponge or soft bristled brush, and agitate the rich foamy suds lightly, allowing Pro Wash RX to release dirt and grime. Rinse thoroughly and either towel dry or air dry.

P/N 09-03835 ..... **$938.03**



PROTECT ALL FIBERGLASS OXIDATION REMOVER & COLOR RESTORER

1-Step Application: Cleans, Polishes, Seals Removes: Oxidation, Wax build-up, Stains, Surface scratches, Hard water spots For: Fiberglass, Gelcoat, Enamel, Polyurethane painted surfaces.

32oz.....PN 09-01659 ..... **$16.90**



AVIAT 3-IN-1 AVATION DRY WASH CLEANER / POLISH / WAX

Aviat 3-1 Aviation Cleaner, Polish, Wax is just that formulated to clean, Polish and enhance the shine by easily spraying and wiping with a premium microfiber towel. It has UV protection and works great for removing bugs, smudges, spotting and light carbon buildup on exterior surfaces. Super easy for a quick impressive post flight wipe down of leading edge and engine inlet debris.

16OZ. ..... P/N 09-05250 .....**$19.95**
1Gal..... P/N 09-05251 .....**$48.95**

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PPC AIRCRAFT CLEANERS

PERFECT DETAIL™ SURFACE ENHANCER



Perfect DetailTM is the nation's leading choice for producing "wet look" shine! A light mist instantly produces maximum depth of gloss and flawless glassy brilliance on clear coat, black, and all other paint finishes. It works especially well on all other non-porous surfaces (such as chrome, glass, etc.) while lightly cleaning and accenting soft surfaces such as vinyl, rubber, and leather. For engine detailing Perfect DetailTM can't be beat! Perfect DetailTM is anti-static and slippery, enabling it to resist dust, dirt, and abrasion better than any product.

18 oz. .....P/N 09-00165 .....**$11.95**
1 Gallon.....P/N 09-00166 .....**$49.65**

BELLY WASH™ DEGREASER



Water-based BellyWashTM is highly concentrated for versatility and cost-effectiveness in any aircraft surface maintenance situation. It can be applied in any manner – spray, brush, wipe, power washer, etc. – and can be diluted with water by as much as 80:1 for routine cleaning in commercial application. Stubborn stains are dissolved almost on contact using full strength Belly WashTM, making it perfect for keeping troublesome aircraft bellies and wheel well areas in like-new condition. When used to remove concealing grime and petroleum-based residues form the aircraft engine area, Belly WashTM makes it possible to perform a more thorough inspection when checking for potential maintenance problems.

18 oz. .....P/N 09-00168 .....**$13.85**
1 Gallon.....P/N 09-00169 .....**$64.85**

WING CLEAN™ LEADING EDGE CLEANER



One major performance factor the aircraft owner/operator can improve upon is complete removal of all parasitic drag resulting from impacted air debris on the leading edges. Wing CleanTM is specifically formulated to both safely and effectively dissolve the problem. Wing Clean'sTM water-based non-solvent "spray-soak-rinse" application dramatically improves an aircraft's flight-ready condition. Routine use of Wing CleanTM, in series with PPC's Perfect DetailTM and/or Prestige Protective Polish, produces a microcellular separation barrier on leading edge surfaces, making future bug removal a progressively easier task.

18 oz. .....P/N 09-00170 .....**$11.75**
1 Gallon.....P/N 09-00171 .....**$39.75**

CRUD REMOVER™



Crud Remover – made with water – is an environmentally safe replacement for heavy-duty petroleum cleaning solvents. It's extremely powerful degreasing and defatting abilities enable it to dissolve diesel fuel, soot, and oily deposits on contact, grease and heavy grime in seconds, and virtually any stain from any surface – including cloth – in a matter of seconds! It also loosens bolts. It can be applied in any manner – spray, brush, wipe, or soak – and simply rinses off with water.

18 oz. .....P/N 09-00172 .....**$10.80**
1 Gallon.....P/N 09-00173 .....**$44.75**



AERO GLAZE DRY WASH & POLISH

Aero Glaze is a high-grade protector and restorer. Removes oxidation, fuel stains, soil, insects and exhaust deposits. Aero Glaze retards corrosion, resists stains and prevents paint deterioration..... 1 Gallon .....P/N 13-00030 ..... **$78.75**



CARBON X CLEANER / DEGREASER

Water soluble, biodegradable, non-flammable, non-toxic concentrate, that can be used in pennies-per-gallon dilutions to outperform other cleaners. Approved for use as aircraft exterior surface cleaner: Douglas Aircraft CSO #1; Boeing D6-17487 Revision L. *When used according to label instructions, this product is approved for use in USDA Inspected Meat and Food Processing Facilities.

1 Gallon .....P/N 13-00029 ..... **$34.50**

FORMULA 2™ CLEANER/PROTECTANT



Formula 2TM Cleaner/Protectant is a chemically unique multipurpose liquid which thoroughly cleans, beautifies, and protects all leather, rubber, vinyl, and finished wood products in one easy step with no greasy film! Due to its unique chemistry, Formula 2TM can also be used on painted and plastic surfaces. When applied sparingly to such surfaces it dries to a slick smooth, invisible coating resistant to mud, fingerprints, food splatters, soap scum, water spotting, etc. On leather, rubber, and vinyl Formula 2TM first dissolves away imbedded grime, then penetrates and softens the material to give it new life and flexibility, at the same time providing a lustrous, weather-resistant finish to prevent future deterioration.

20 oz. .....P/N 09-00174 .....**$11.50**

EASY™ ALUMINUM POLISH



EasyTM Aluminum Polish is a unique liquid formula that produces a "mirror-like" shine in seconds on smooth aluminum, magnesium, stainless, brass, nickel, etc. Its ability to melt oxidation and simultaneously bring up the metal's true brilliance can't be matched by any other polish. The application of EasyTM allows its exclusive acrylic polymer barrier to "lock" onto the metal's polished surface to resist staining, tarnish, and weathering effects indefinitely. The fine "mirror" finish can easily be maintained with a quick "touch up" application of product as desired.

8 oz. .....P/N 09-00177 .....**$11.75**

REAL™ WHEEL CLEANER



RealTM Wheel cleaner is the first detergent-based single product able to clean brake dust and corrosion from any type wheel in seconds! It works on contact to remove corrosion from older unfinished or neglected metals (aluminum, copper, brass, bronze, zinc) and is great for antique restoration. RealTM Wheel Cleaner's exclusive detergent action saves both time and money when detailing any vehicle.

18 oz. ..... P/N 09-00178.....**$9.95**

NATURALLY NEW™ TIRE DRESSING



Naturally NewTM Tire Dressing utilizes PPC's advanced water-based polymer technology to produce an effective, cost-efficient dressing that actually protects rather than destroys the integrity of the sidewall. Naturally NewTM exactly describes the lustrous sheen imparted on contact with this instant action formula. The dry, semi-permanent barrier is both water repellent and resistant to dust, dirt etc. Naturally NewTM Tire Dressing adds maximum beauty while conditioning to keep that "new tire" look during the treadlife of the tires

18 oz. .....P/N 09-00179 ..... **$9.95**

CAVU UV PROTECTANT CLEANER / POLISH 14 OZ



Aviators of all experience levels recognize the importance of unobstructed vision to the safety of flight. That's where CAVU - UV Protectant Cleaner and Polish really shines through. Its unique formula is optimized for all kinds of aircraft surfaces: Windscreens, LCD screens, traditional "steam" gauges, aluminum surfaces, plastic panels, painted surfaces, vinyls, and more. P/N 09-04611.....**$9.85**



BIG ORANGE PLUS

A citrus scented degreaser and cleaner designed for the aircraft industry. This surface degreaser is non-irritating but will remove heavy encrustations. Big Orange Plus combines solvent power with an emulsifier system that removes SKYDROL, hydraulic fluids, fuel stains. exhaust soot.

1 Gallon.....P/N 13-00031 .....**$34.90**



FLEET WASH

Fleet Wash aircraft wash and wax is an effective cleaner that leaves a wax-like surface on the washed aircraft. Contains a high percentage of W-300. Fleet Wash leaves a high luster, water-repellent surface which helps to repel dust.

1 Gallon.....P/N 13-00032 .....**$34.50**

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JET STREAM AVIATION PRODUCTS

POWERFOAM SPRAY & WIPE FOAM CLEANER



An exterior and interior spray and wipe cleaner. On aircraft exteriors, Powerfoam will effectively clean carbon exhaust, engine cowlings, oil and bugs. Excellent for use between wash jobs as a "trip ready" wipe and cleaner. On aircraft interiors, Powerfoam will completely clean smudge marks, nicotine stains, fingerprints and food stains. Can also be used on leatherette, sinks, table tops, woodwork, stainless steel, lavs, painted or similar surfaces.

19 oz. Can .....P/N 09-37970 ..... **$14.95**

SUPREME GLAZE AIRCRAFT FINISH TREATMENT



Supreme Glaze is a semi-flowing paste cleaner wax that cleans, shines, resurfaces, all aircraft painted surfaces while bringing out the brilliance of the original color. Supreme Glaze safely removes light to medium oxidation and scratches. Excellent for use on carbon exhaust stains associated with aircrafts such as King Airs. Supreme Glaze contains color brighteners and will protect against oxidation, salts, UV rays, hydraulic fluid, insect residue and acid rain. Can be used by hand or machine polisher. 16 oz. Bottle.....P/N 09-37980 ..... **$23.50**

FLYERS SPEED-WAX WATERLESS DRY-WASH



SpeedWax is a specially formulated waterless aircraft polish and high gloss protectant Dry-Wash. This product is Carnauba Rich & is easy-on, easy-off. With Flyers there is no need to pre-clean any surfaces before using. Due to EPA regulations, cleaning aircraft with soap and water is becoming more and more regulated. Flyers SpeedWax is the answer to the ever increasing EPA regulations. This product will allow you to clean your aircraft in a reasonable amount of time, leaving the surface of your aircraft highly protected. 16 oz. bottle.....P/N 09-42015 ..... **$16.95**

JET STREAM METAL POLISH



SKAI METAL POLISH - Skai Metal Polish is designed to polish and restore aluminum or stainless steel to a mirror image. Used for polishing aircraft leading edges, spinners, engine inlets, thrust reversers and bare aluminum skins. Also safe for use on aircraft paint for removing heavy oxidation and stains. Skai Metal Polish is also very economical. A one pound container will normally equal several pounds of our competitor's products. Skai makes very little mess when you are polishing and will not sling over the aircraft if used properly. Skai is non-abrasive, fast cutting and quick to clear under a buffer. Surfaces treated with Skai are protected and resistant to oxidations **MIRROR IMAGE -** Mirror Image Brightwork Swirl Remover is designed to remove swirls in polished metal caused by machine buffing. Mirror Image can also be used as a light maintenance polish between machine polishing jobs. Contains corrosion inhibitors and anti-oxidation agents for long lasting protection on all polished metal. Mirror Image will produce 100% protection while sealing the polished metal.

1 Lb. can. Polish .....P/N 09-41713 ..... **$49.50**
Mirror Image 5 oz. roll Swirl Remover.....P/N 09-41715 ..... **$32.95**

AIRCRAFT SQUEEGEE



Neoprene Aircraft Squeegee has been improved by adding locking threads for pole attachment and is now constructed from white plastic instead of metal. Will remove water from un-even aircraft surfaces safely and smoothly. You will save time and dozens of wet towels while completely drying any size aircraft in just minutes. P/N 09-42025 .....**$24.95**

BUFFING / POLISHING PADS



Buffing Pads are made from 100% wool with a 1-1/2 inch pile. These pads can be used for all of your brightwork and paint polishing needs and will cut through oxidation quickly and wear evenly for extremely smooth polishing. Our buffing pads can also be washed and re-used multiple times for long lasting life. They do not have velcro backing and are designed to be used with a threaded nut and backing plate. P/N 09-42035 .....**$13.65**

BUFFING PADS SPUR / CLEANER



Absolutely a must tool when buffing.The Buffing Pad Spur Cleaner is used to break down compound build- up without removing the pad from the machine polisher. When buffing, your pads fill up with polishing compounds not allowing to perform properly. The Buffing Pad Spur Cleaner will quickly and efficiently remove this build-up, restoring the pad to its full potential. P/N 09-42045 ..... **$13.75**

FLITZ FIBERGLASS / PAINT RESTORER



Flitz Fiberglass/Paint restorer safely cleans, polishes, and protects fiberglass, plexiglas, painted surfaces, and plastics. It removes rust, oxidation, tarnish, and tar. It will not harm gel coat or clear coat, anodized or polished aluminum, stainless steel, brass, copper, chrome, and more. Contains no ammonia or abrasive. 8.5 fl. oz. .....P/N 09-01240 ..... **$14.90**

FLITZ SPEED WAXX



This wax is perfect for waxing between flights. This remarkable spray on/wipe off wax is water based. No streak. No Smear. No white residue. Gives a super gloss, super fast.
16oz. trigger spray..... P/N 09-01678 ..... **$14.90**

SPRAY SHINE™ SPRAY-ON CARNAUBA WAX



Spray Shine™ was designed for the finest of finishes, car show enthusiasts, new car dealers and people who really like to take care of their vehicles. Just a quick spray and wipe will give your ride a complete new shine! Use Spray Shine™ on paint, glass, chrome, plastic, tile, lamps stoves, refrigerators, microwaves, mirrors, computer screens, etc.
Spray Shine™ will give a high gloss surface an amazing CLOUD FREE SHINE!

16 oz.....P/N 09-03485 ..... **$10.95**

FLITZ ALUMINUM & FIBERGLASS POLISH



Flitz is a non-abrasive metal polish which can be used on all metal surfaces including polished aluminum, painted surfaces, and fiberglass. It is easy to apply and remove, and leaves a protective film to protect shiny surfaces up to 4 months A very popular multi-purpose polish.

1.76 oz. Tube.....P/N 09-42405 ..... **$9.95**
5.29 oz. Tube.....P/N 09-01676 ..... **$20.06**
1 Lb. Can.....P/N 09-05313 ..... **$39.95**
2.2 Lb. Can.....P/N 09-42415 ..... **$51.75**

FLITZ POLISHING AND BUFFING BALL



The Flitz 8" Polishing & Buffing Ball is made of a viscose felt material which is a cooling material vs. lambs wool or cotton which is a heating material. This way it doesn't burn the paint and can be used to buff leading edges without having to tape them. This ball works wonders with Flitz Products and makes polishing much easier, faster and more effective in less than half the time. It fits all drills and air tools and will buff out scuffs, oxidation tarnish, pitting, corrosion on all metals, paints, fiberglass, plastics, and wood. Re-usable & washable.

P/N 09-00554 ..... **$37.50**

FLITZ MICROFIBER CLOTH



The Flitz microfiber cloths are 30 times finer than cotton and are great for buffing out waxes and polishes by hand. They will wash windows without chemicals (just use water) and will not streak or leave lint. Size: 16"x16". P/N 09-00556 ..... **$3.75**

KOZAK SUPER DRY WASH



Use on metal, painted, or buffed aircraft surfaces to clean and maintain a beautiful shine. Good on spinners and prop blades too! Made from specially woven cotton fibers with a unique cleaning formula that lifts loose dirt and dust up and away from the surface. Use every time you fly to maintain a shine all year round! Reusable more than 50 times. P/N 09-00345 .....**$10.50**

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CYCLO POLISHING PRODUCTS

CYCLO ORBITAL POLISHER MODEL #5



Note: Polishing pads are not included, but are required for use. See "Accessories" tab for available pads.

Precision machined and hand assembled for a lifetime of trouble-free operation, the Cyclo Polisher's dual heads orbit in a random, overlapping motion that mimics fine hand polishing. Leaves a dazzling, swirl-free shine every time.

The Cyclo Dual Head Orbital Polisher is the most effective means of polishing available today. Even in the hands of a novice, it is safe to operate and provides professional results every time. The difference lies in the tool's overall balance and its patented dual heads. The dual heads operate in a synchronized motion, providing the most effective results without fear of heat buildup; damage to trim pieces, moldings and gaskets; swirl marks, holograms and more. The low-vibration and balanced design allow for a more even application and better control when operating.

- Power Supply: 115 Volts, 60 Hertz, 220 Watts
- Motor: alternating current, semi-enclosed 24-bar commutator
- Speed: 3000 orbits/minute
- Output: 1/3 H.P. (.25 Kw)
- Weight: 6.5 lb. (2.9 kg)
- Head Rotation/Diameter: clockwise /4"
- Electric Cord: 10' length, 16 ga/3SJTOW
- Housing: heavy-duty cast aluminum
- Polisher Only P/N 09-35715 ..... **$319.00**

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CYCLO POLISHER BONNETS



WHITE FINISHING PADS - • Extreme Shine • Final Wax Buff • Wax Application • Sealant • Metal Sealant
With Velcro.....P/N 09-35735 ..... **$4.60**



GREEN POLISHING PADS - • Sealant • Paint Polish • Paint Cleaner • Metal Sealant
With Velcro.....P/N 09-35732 ..... **$5.35**
Without Velcro.....P/N 09-35711 ..... **$7.75**
Note Polishing Pads with Velcro require the RUBBER PAD HOLDERS P/N 09-35730 listed with the Cyclo accessories



COTTON TERRY PAD COVER - • Final Wax Buff • Upholstery A 100% cotton terry cover. Perfect for cleaning interior surfaces and for buffing, polishing, and drying exterior surfaces.
P/N 09-35755 ..... **$3.50**

FASTCUT™ 600 GRIT DISC - • Tile and Grout • Ice Hockey Rink Walls • Rust Removal - This coarse nylon pad is strong, durable, and specifically designed for rough surface areas.
P/N 09-35737 ..... **$1.60**

CYCLO BRUSHES

GRAY ULTRA SOFT UPHOLSTERY BRUSH - • Upholstery • Fine Carpets • Fine Interiors P/N 09-00689 ..... **$29.50**

AQUA SOFT CARPET BRUSH - • Fine Carpets • Durable Carpets • Auto & RV Carpets & Upholstery P/N 09-00690 ..... **$24.80**

WHITE STANDARD CARPET BRUSH - • Auto & RV Carpets & Interiors • Tile & Grout • Durable Carpets P/N 09-35742 ..... **$22.50**

BLACK STIFF SCRUB BRUSH - • Tile & Grout • Truck Bed Liners. P/N 09-35740 ..... **$27.50**



CYCLO FREE FLITE™ CLEANER – POLISH

CTI Free Flite™ Cleaner - Polish is an aggressive rubbing compound for badly oxidized aluminum. It removes corrosion, oxidation, and surface film, leaving a hard polished finish. Popular with airlines for decades. For use on metal only.
1QT .....P/N 09-00424 ..... **$32.50**

CYCLO 5-PRO POLISHERS



The Cyclo Toolmakers Model 5-Pro Polisher is 110 volt machine featuring a new solid state variable speed controller, three year warranty and complete Vibration Elimination System&trade set-up. The Model 5-Pro Series Polisher is designated for use in North America and countries that supply 110 V a.c. power.

Cyclo Toolmakers Model 5-Pro Polisher Configurations

Cyclo Toolmakers Model 5-ProPolishers may be ordered pre-configured with one of Cyclo's backing plate or scrub brush alternatives detailed below. Unlike other polishers that are sold with only a standard backing plate.

80-012/C-PG, Model 5-Pro ProGuard Polisher:
Cyclo Model 5-Pro Polisher with ProGuard Orbital Backing Plate, VES Yellow, Silver and Blue Weighted Inserts, L Hex-Key Wrench, Flat Wrench. P/N 09-03743.....**$389.00**

CYCLO POLISHER ACCESSORIES

Flat Wrench .....P/N 09-35745 ..... **$5.55**

CYCLO CTI 1 PASS EXPRESS™ CLEANER - POLISH – SEALANT

CTI 1 Pass Express removes light scratches and environmental contaminants in one operation. Restores showroom color and brilliance, and protects finishes with a brilliant weather resistant silicone film. Excellent on any paint surface, including clear coats.
16 oz.....P/N 09-00417 ..... **$21.50**

AVLAB TKS DE-ICING FLUID



TKS de-icing fluid complies with AL-5 DTD406B and is approved by British Aerospace. Aviation Laboratories aircraft wing de-icer is approved for all TKS systems. Diamond aircraft, HS-125 Hawker, Cirrus, Beechcraft, Cessna, Piper, Mooney, Kodiak, Hawker and many other air crafts are equipped with the TKS weeping wings de-icing systems. TKS wing deicer is sold by the case, pail, and drum and accommodates all users from individual pilots and their aircraft to fleet managers and their growing fleets. TKS wing deicing fluid is tested before and after blending and undergoes strict quality control. Filtered to 1 micron. Certificate of analysis and strict lot control.

Size	Part No.	Price
1 Gallon	09-04827	**$29.50**
2.5 Gallon	09-04828	**$62.75**
5 Gallon	09-04829	**$112.75**
33 Gallon	09-04830	**$407.00**
55 Gallon	09-04831	**$644.00**

DE-ICER PRODUCTS

BF GOODRICH AGE MASTER RUBBER NO. 1 PROTECTIVE AGENT



Age Master #1 rubber protectant helps extend the life of your de-icers so you can cut maintenance costs, slow deterioration and aging, extend service life and save money. Age Master #1 protectant isn't just a surface coat. It penetrates neoprene rubber to help retard damage from ozone, weathering and pollutants to help your de-icers stay strong and flexible. And now it's economical, long lasting and easy to apply. Just follow the simple BF Goodrich guidelines. Wipe or brush on Age Master #1 protectant every 150 flight hours or at least semi-annually, for continuing protection. Age Master #1, the only rubber protectant recommended by BF Goodrich. Meets military specification MIL-P-11520E. Age Master #1 protectant is a staining material. Avoid contact with painted surfaces. Apply sparingly and let dry thoroughly before flying in rain to prevent run-back.

Quart ..... P/N 09-42545 ....**$377.00**

BF GOODRICH ICEX II FOR DE-ICERS



Icex coating boosts your de-icer performance so you fly with greater confidence by helping your de-icers shed ice at peak efficiency. Icex coating chemically bonds with rubber de-icer surfaces and forms a slick film that makes your de-icers slippery. It will lower the adhesive bond between ice and de-icer surfaces so your de-icers break the frigid grip of ice better and faster! Icex coating is easy to apply and economical, too. A single application provides 50 flight hours of added ice fighting protection on leading edge de-icers and 15 flight hours of protection on prop de-icers. Get Icex coating in quart cans for an attractive uniform satin finish on your de-icers. One is enough to treat a complete single or twin-engine aircraft.

Quart ..... P/N 09-42530 ....**$386.00**
16 oz. Spray ..... P/N 09-42531 ....**$239.95**

BF GOODRICH SHINEMASTER PNEUMATIC BOOT TREATMENT



Shinemaster Prep is a surface coating that cleans de-icing boots & prepares the de-icer for Shinemaster. Shinemaster is a wax surface coating that enhances the appearance of pneumatic de-icing boots. Simply clean the boots with Shinemaster Prep per the instructions, then apply a couple of coats of Shinemaster treatment per the instructions. New boots look spectacular and old boots look like new. Compatible with Agemaster No. 1 and Icex products.

Shinemaster Prep (qt) ..... P/N 09-42532 ..... **$74.80**
Shinemaster (pt) ..... P/N 09-00325 .... **$109.95**

JET STREAM PBS BOOT SEALANT



PBS Prep is formulated for use before each PBS Boot Sealant application to avoid dulling and hard to remove build-up. PBS Prep will effectively clean pneumatic de-ice boots of all old treatments assuring the best results possible when applying PBS Boot Sealant. Failure to prepare de-ice boots with PBS Prep may result in dulling due to build-up.

Qt. PBS Prep ..... P/N 09-41711 ..... **$32.70**
Qt. PBS Sealant ..... P/N 09-41712 ..... **$63.85**

SMR-A56BP 1/2 PINT CONDUCTIVE EDGE SEALER



A-56-B Conductive Edge Sealer is used on Neoprene pneumatic deicer boots to form a feathered edge between the edge of the boot and wing. This product is not intended for use with Estane deicers.

P/N 08-13012 ..... **$47.50**

PEERCO ADHESIVE REMOVER - #321



Peerco #321 Adhesive Remover is designed to remove the adhesive residue when replacing de-icing boots. However, #321 will remove 3M 1300L and many other adhesives. This product is environmentally and user friendly as it does not contain ketones like MEK. Peerco #321 Adhesive Remover has a pleasant scent and is made of all natural ingredients. Apply #321 liberally to surface and allow to stand for 10 minutes. You may rinse off with water and wipe dry. 1 gallon.

P/N 02-00234 ..... **$108.75**

AVIATION LABORATORIES ICE BLOCK



AVL Ice Block is an environmentally friendly, safe and effective solution to snow and ice build-up on walkways, stairs, sidewalks and driveways.

P/N 13-18716 ..... **$46.50**

KILFROST TKS406B ICE PROTECTION FLUID



TKS 406B contains a mixture of glycol and alcohol and offers good ice protection capability (freezing point below -60°C). Principally used for in-flight ice protection, TKS 406B can also be applied to remove frozen deposits of snow, ice and frost from stationery aircraft on the ground. TKS 406B is designed for use in cold concentrate form (as supplied) and is available in 2.5 gallon, 5 gallon, 30 gallon, and 55 gallon containers. **Features**: • Ice Protection capability • Fully biodegradable • Simple to use Note: NO HAZ SHIPPING FEES (UP TO 250 GAL)

Description	Part No.	Price
TKS406B Ice Protection Fluid 2.5 gal.	09-02401	**$59.95**
TKS406B Ice Protection Fluid 5 gal.	09-02402	**$139.75**
TKS406B Ice Protection Fluid 55 gal.	09-02404	**$940.00**
TKS406B Ice Protection Fluid 250 gal.	09-02984	**$3,190.00**

TKS FLUID FUNNEL



• Measure then release desired amount • On/off valve • Extension tube

P/N 12-02586 ..... **$12.75**

ICE AWAY - PROP ICE GRIP INHIBITOR



Sooner or later, most pilots get into icing conditions and an ice-free propeller may be the ticket to safety. Years of testing have shown Ice-Away to stay on for several hours in icing conditions. Ice-Away facilitates propeller ice shedding and enhances safety. Simply spray Ice-Away on the propeller leading edges and reapply as necessary P/N 09-00264 ..... **$29.75**

RAIN B GON



Rain B Gon will dramatically improve your wet weather flying, riding or driving visibility. A hydrophobic coating technology that forms a chemical bond and causes the raindrops to bead up and blow away from the windshield. Rain B Gon's innovative technology is designed especially for plastic Acrylic and Lexan windshields, and has no alcohol which can harm plastic. It is safe to use on glass windshields also. Can be applied on painted surfaces, and aids in easy removal of salt, ice, frost, insects and mud. 8 oz. spray bottle P/N 09-03487 ..... **$9.95**

RAIN-X RAIN REPELLENT



Aircraft with bleed air rain removal systems, such as Cessna Citation and Learjet, need to have their windshields treated to help dissipate the rain. Repcom rain repellant was the recommended product, but it is no longer available. Rain-X is manufactured by the same company and it is the same formulation. While not FAA approved, it works well in dispersing water on the windshield. ***Not Recommended for plexiglass or acrylic products, such as, windshields or windows on small general aviation aircraft.*** **Benefits:** • Improves driving visibility • Repels rain • Helps reduce sleet and snow from sticking • Rain-X transparent polymer coating causes rain to "bead up" and roll off glass surfaces.

7 oz. ..... P/N 09-42500 ..... **$8.50**
16 oz. ..... P/N 09-04439 ..... **$11.85**

RAIN AWAY



A protective treatment which leaves a clear, smooth, non-stick surface. Visibility is improved by repelling rain, bugs, frost and road film. Raindrops bead up and are blown away while flying.

P/N 09-01279 ..... **$5.95**

RAIN-X PLASTIC WATER REPELLANT



Rain-X® Plastic Water Repellent provides a superior water beading coating on various plastics including Lexan®, Plexiglas®, Perspex®, Lucite®, Acrylics and Polycarbonate. Watch water bead up and roll away on motorcycle windscreens, goggles, visors and boat windshields for improved visibility! 12 oz.

P/N 09-05319 ..... **$7.50**

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EZCLEAR ALL-SPRAY DETAILERS



The All-Spray Detailer packages All- Spray cleaner and a disposable Microfiber Towel into a portable Wet/Dry combo pack. This on-the-go Detailer is designed for a quick, single-time aircraft window cleaning application. Stow these window detailers in the back of the aircraft or in the glove box. The Detailer measure 3.25" x 4.5" when folded in half. A package of 10 makes a great gift.

P/N 09-02375.....**$3.80**

EZCLEAR ALL-SPRAY CLEANING AND DETAILING GA AIRCRAFT WINDOWS



Detailer's All-Spray is an aviation grade, anti-static detailing spray that will quickly restore a brilliant luster to acrylic surfaces. All-spray is ideal for cleaning aircraft windows, instrument panels, landing light and navigational lenses. It is also great for cleaning clear plastic boat windows, convertible windows, helmet shields, motorcycle windscreens, CD's, aquariums, skylights, displays, and other Plexiglas, Lexan, Acrylite and Lucite plastic surfaces.

32 o.z. ..... P/N 09-02379.....**$35.85**

EZCLEAR INSTRUMENT PANEL CLEAN KIT



This product meets Garmin G1000 Pilot Guide specs for cleaning and is safe to use on glass panels. EZCLEAR Instrument Cleaning provides a safe, effective way to remove fingerprints and dust from glass panels, instruments and more. The kit contains three EZCLEAR Cleaning Packs and one Polishing Cloth; these items have been specifically paired together to ensure safe and effective screen cleaning. Per the instructions, the user wipes the surface with the Cleaning Pack and then dries the area with the Polishing Cloth. The Cleaning Packs are ammonia free, aviation-grade and will not remove or damage any anti-reflective coating. The Polishing Cloth is washable. This kit will last between 3-4 months depending upon frequency of use.

P/N 09-02394.....**$18.50**

EZCLEAR WINDOW POLISH KIT



Complete kitted solution. Used to restore aviation grade acrylic transparent surfaces such as an acrylic aircraft window, transparency, navigational or landing light lens. Removes major (heavy haze or scratches) or minor damage and restores clarity to 99.7%. Leaves clear, distortion free finish. Enough for 1-3 applications (4 sq ft), depending upon damage. Re-stockable EZCLEAR replenishment products available.

NOTE: The Ezclear Starter Demo Kit contains an Ezclear 5" Backing Plate(PN 09-03701). If purchasing the Repair Pack you need to purchase the 5" backing plate separately.

Starter Kit Contents: 1 - EZCLEAR Aviation Restoration Pack:(3) Major Restoration Polish/Disc (10CC + 5" White Disc), (1) Minor Restoration Polish/Pad (2 FL OZ + 5" White Pad),(1) Finishing Restoration Polish/Pad (2 FL OZ + 5" Red Pad), (1) Preparation Spray (16 FL OZ + Trigger Sprayer) 1 - 110V Dewalt Heavy Duty Polisher (includes handle) 1 - EZCLEAR Backing Plate (5", Standard) 1 - EZCLEAR Microfiber Towels (10 towels/pack) P/N 09-03693.....**$314.00**

Repair Pack Contents: 3 - Major Restoration Polish/Disc (10CC + 5" White Disc) 1 - Minor Restoration Polish/Pad (2 FL OZ + 5" White Pad) 1 - Finishing Restoration Polish/Pad (2 FL OZ + 5" Red Pad) 1 - Preparation Spray (16 FL OZ + Trigger Sprayer)

P/N 09-03694.....**$124.75**

5" Backing Plate ..... P/N 09-03701.....**$35.80**

ORANGE CITRUS CRAZY CLEAN DEGREASER



Orange Citrus Crazy Clean is fortified with a natural orange citrus solvent (d-limonene) that cleans and deodorizes most surfaces. Simply spray this foaming product and wipe clean. It contains no chlorinated solvents, petroleum distillates or glycol ethers. This product is safe for use on washable, painted surfaces. Excellent for removing dirty hand prints & grease marks from your aircraft. 20oz aerosol.

P/N 09-04702 .....**$6.95**

RID ODOR SPORT



Rid Odor Sport is a product that nearly every owner of a Single Engine/Multi Engine both pressurized and non-pressurized need! Why? Because there are two things that nearly ever aircraft owner fights, whether they hanger their aircraft or tied down. Moisture and Bacteria are the two major reasons why cabin spaces have terrific problems with "Odors".

Rid Odor Sport is chemically engineered and designed to be attracted to ALL Malodor molecules and the reasons for them being there. Everything that is organic is surrounded by atoms. All atoms have one thing singularly in common and that is that they are oriented with a positive (+) charged molecules. Rid Odor Sport is designed so that the each molecule inside our formula is constructed with a negative (-) charged molecule. When Rid Odor Sport is pump sprayed into the vicinity of all of the" Malodor Molecules (+) ", the Rid Odor Sport Molecules (-) are attracted and drawn in by Malodor molecules. Once they collide, the Sports molecule bonds to the malodor and destroys the malodor molecule. Unlike other products that just mask over the odor, Rid Odor destroys the malodor and leaves the inside of the cabin smelling like new !

2 oz. Pump Spray.....P/N 09-02609 .....**$7.95**

8 oz. Trigger Spray.....P/N 09-02610 .....**$12.75**

AEROKROIL PENETRATING OIL



Corrosion, compression, chemical reactions, thermal variations, and electrical interrelationships are the primary factors which contribute in varying degrees to frozen metal parts. For example, in some instances, loosening a frozen metal part requires that the molecular bond of oxidation be broken at the first molecular level. This requires that a chemical bond be broken in an often-inaccessible location that literally exists in infinitely small spaces.

Based on a unique proprietary formula and manufacturing process, Kano created a molecule which had an inherent means of expedient self propulsion which would penetrate into spaces which are immeasurably small.

In the lab, it was nicknamed Creeping Oil, Kreeping Oil, and finally Kroil. To these penetrating properties were added the ability to disrupt the existing corrosive bond while remaining chemically neutral to the base metal. Since not all frozen parts are caused by corrosion, additional research has provided for the inclusion of other molecular properties assuring that the final molecular architecture would also be capable of loosening frozen metal parts when other factors such as compression were more responsible for the problem. The result is Kroil, the world's largest selling penetrating oil. Guaranteed to penetrate, lubricate, and loosen frozen metal parts or it costs you nothing!

13 oz Aerosol ..... P/N 09-02665.....**$19.65**

16.5 oz Aerosol ..... P/N 09-03022.....**$22.95**

OSM DEGREASER



OSM Natural Concrete Cleaner uses a powerful blend of natural cleaning agents and digesting microbes to effectively remove oil, grease, mildew, mold, and waste stains from listed surfaces without harming people, animals, wildlife, lawns and gardens.

Ideal for oil, grease or food stains on garage floors, parking lots and sidewalks. Perfect for use in power washers.

Gallon P/N 09-04660.....**$17.04**

PTI ANTI-SEIZE COMPOUND



PTI's Anti-seize Compound is a silicone base grease with a high pigmentation of micro fine molybdenum disulfide. It is heat stable and will not decompose or form a gum deposit. It is effective under light or medium bearing loads on steel to bronze, metal babbit, zinc, nylon, Teflon or hard-anodized aluminum surfaces. Normally it is suitable for operating temperatures of -65 F to + 1000 F.

Pint .....P/N 09-02901 .....**$120.85**

Quart .....P/N 09-02902 .....**$169.75**

PTI MOLY SPRAY LUBRICANT



Moly spray is unequaled as a lubricant for machine tools, plastic molding machines, paper and textile making equipment, oven mechanisms, and sheet metal and tube bending operations. Provides lubrication on surfaces for which a "wet" or "liquid" lubricant is undesirable.

P/N 09-02903 .....**$17.50**

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Prices Subject to Change Without Notice

LPS PRODUCTS

LPS LOW SURFACE TENSION (LST)



A deep penetrating formulation attacks rust and corrosion to free "frozen" parts. LST has an extremely low surface tension that combines with a powerful foaming action to provide complete surface coverage, better penetration and improved moisture displacement. LST Penetrant lubricates and protects against rust and corrosion.11 oz. aerosol can.

P/N 09-01916 ..... **$8.95**

LPS COPPER ANTI-SEIZE



Prevents seizure up to 1800°F (982°C). Lead free. Protects against seizure, heat-freeze, galling, rust and corrosion. Brushes easily. Highly adhesive on both wet and dry surfaces. Will not run, drip or settle out. Conforms to Mil-PRF-907E. Ideal for use on stainless steel and for joining dissimilar metals. Copper color

1/2 lb. can ..... P/N 09-02908 ..... **$13.50**

LPS MAGNUM TEFLON LUBRICANT



LPS® Magnum Teflon® Lubricant provides ultra-high lubricity, plus the additive strength of Teflon® for high-temperature, high-pressure environments. In even the most demanding situations, extend equipment life and reduce maintenance.

11 oz.. Spray Can ..... P/N 09-26430 ..... **$13.50**

LPS® HEAVY-DUTY SILICONE LUBRICANT



FLAMMABLE

Meets FDA regulation for incidental food contact. Silicone-rich formula. Water-based formula. Colorless, odorless & non staining. Ideal for rubber and plastic surfaces. Eliminates sticking, binding and squeaking. Does not contain chlorinated solvents. Safe on most surfaces NSF® H1 registered. 13oz. (368g) – aerosol ..... P/N 09-26410 ..... **$11.50**

LPS FOOD GRADE SILICONE LUBRICANT



Food Grade Silicone Lubricant is a non-staining, high quality, lubricant designed especially for the food industry for use as an anti-stick agent for chutes and slides.

10 oz. ..... P/N 09-04052 ..... **$8.70**

LPS® COLD GALVANIZE CORROSION INHIBITOR



FLAMMABLE

* Zinc purity greater than 99% * Works like a hot-dip on ferrous metals indoors and outdoors * Withstands water temperature up to 212°F (100°C) and continuous dry heat up to 750°F (400°C) * Commonly used as a flash rust preventive on welded areas * Long term protection * Flexible coating will not yellow, chalk, crack or peel * Electrochemically protects bare metal * Dries to touch in 3 to 5 minutes * 14oz. (397g) – aerosol P/N 09-26425 ..... **$11.50**

LPS® INSTANT SUPER DEGREASER



FLAMMABLE

* Heavy-duty performance * Power blast spray * Non-flammable * Removes oil, greases, dirt and tar * Non-chlorinated * Fast evaporating * Non-conductive * No rinsing * No residue * NSF® C1 registration #129029: (aerosol); #129028: (bulk) * Canadian Food Inspection Agency (CFIA) approved 20 oz. ..... P/N 09-26415 ..... **$26.75**

LPS KB-88 ULTIMATE PENETRANT



KB 88 has extremely high solvency and special additives to enhance penetration and attack corrosion. It makes the toughest maintenance job easier, faster, safer, and simpler. Formulated to attack and quickly release rusted and corroded nuts, bolts, hinges, and other frozen components. High KB solvency value of 151 and low surface tension and penetrates faster and deeper than most other similar products in the market place. Displaces moisture with an aggressive formula that is NSF® Certified: H2 Registration # 138554 (Aerosol) This product is VOC compliant in all 50 states.

13 oz. ..... P/N 09-04027 ..... **$12.50**

20 oz. ..... P/N 09-04028 ..... **$16.80**

LPS NICKEL ANTI-SEIZE



• Contains no lead, copper or graphite • Prevents seizure up to 2600°F (1427°C) • Protects against rust and corrosion • For use in hostile environments and • extreme temperatures • Acid resistant • Strong resistance to water washoff • Brushable to -18°F (-27°C) • Will not run, drip or settle out • Conforms to MIL-PRF-907E • Silver color.

1/2 Lb. ..... P/N 09-04833 ..... **$17.95**

1 Lb. ..... P/N 09-04834 ..... **$31.50**

LPS® TKX® ALL-PURPOSE LUBRICANT



All purpose, value lubricant which displaces moisture, loosens rusted or frozen parts and protects metal against corrosion. Does not contain chlorinated solvents or silicones. Safe to use on most surfaces. High flash point of 175°F (79°C). Inverta Spray Valve allows user to spray in an upright or inverted position. NSF® H2 registration. 11oz. (312g) – aerosol. ..... P/N 09-00148 ..... **$6.50**

LPS® HDX HEAVY-DUTY DEGREASER *



* Nonflammable * Removes oil, grease, wax, dirt, moisture, tar, brake fluid and other contaminants * Fast evaporating * Low odor * Quick penetration * No residue * Non-conductive * NSF K1 registration # 059809: (aerosol); # 059810: (bulk)

19oz. (539g) – aerosol ..... P/N 09-26407 ..... **$9.95**

LPS 1® PREMIUM LUBRICANT



Provides a dry, thin lubricating film. Resists oil, dust and dirt build-up. Fast acting penetration. Displaces moisture Loosens rusted or frozen parts. Provides a short term, light corrosion resistant barrier. Nonconductive Ideal for delicate mechanisms. Used worldwide in aviation. Safe on paint and most plastics. Inverta Spray Valve allows user to spray in an upright or inverted position NSF® H2 registered .

11oz. (312g) – aerosol ..... P/N 09-25900..... **$12.50**

1 gal. (3.78 l) ..... P/N 09-26000..... **$45.85**

LPS 2® HEAVY-DUTY LUBRICANT



Strong, multi-purpose lubricant and penetrant with added corrosion protection. Provides a nondrying, light, oily film for use on indoor/outdoor equipment. Reduces wear caused by friction and corrosion. Displaces moisture Loosens rusted or frozen parts. Provides up to one year of protection. Nonconductive Safe on paint and most plastics. Inverta Spray Valve allows user to spray in an upright or inverted position. NSF® H2 registered

11oz. (312g) – aerosol ..... P/N 09-26100..... **$12.50**

20 oz. Spray ..... P/N 09-04752..... **$18.50**

1 gal. (3.78 l) ..... P/N 09-26200..... **$47.90**

LPS 3® PREMIER RUST INHIBITOR



* Forms a transparent, soft, waxy film for protection & lubrication * Inhibits rust & corrosion, protects steel parts indoors for up to two years * Penetrates to displace moisture * Does not contain chlorinated solvents or silicone * Nonconductive * Safe on most surfaces * Stops rust and corrosion * Provides non-sling lubrication * Provides anti-seize coating * Safe to use on rubber, fabric, plastics and paints * Inverta Spray Valve allows user to spray in an upright or inverted position * NSF® H2 registered #129027: (aerosol); #059849 (bulk)

11oz. (312g) – aerosol ..... P/N 09-26300..... **$15.95**

20fl. oz. (591ml) – trigger ..... P/N 09-01223..... **$20.50**

1 gal. (3.78 l) ..... P/N 09-26400..... **$68.75**

LPS® QB PRECISION DUSTER *



Patented formula – Patented US #6,342,471. Electrical contact cleaner. Cleans electrical parts without harming plastics. * Non-flammable * Plastic safe * Non-conductive * No residue * Replaces HCFC 141b contact cleaners * Fast evaporating * Conforms to CARB VOC requirements. 10 oz. spray can.

P/N 09-26210 ..... **$18.50**

LPS 2® BELT DRESSING



LPS Belt Dressing is formulated to extend belt life, prevent belt slippage and resist water wash out. Features: • May be used in wet, outdoor conditions • Does not deteriorate drive belts • Eliminates squeaks from slipping belts • Prevents belt slippage on flat, round, and V-belts • NSF® Certified: H1 Registration # 134508 8 Metal detectable plastic components-DETEX™

P/N 09-04434..... **$9.90**

LPS CHAINMATE® CHAIN & WIRE ROPE LUBRICANT



ChainMate® Chain & Wire Rope Lubricant is moly-fortified and will perform under severe loads and extreme temperatures. Fortified with molybdenum disulfide, increases chain and wire rope life, effective under extreme pressure and temperature ranges. Contains water displacing solvents to quickly penetrate into cracks and core of wire rope.

P/N 09-04778..... **$13.50**

*** ATTENTION:** ***Volatile Organic Compounds (VOCs) Government Regulations: Product cannot be purchased, sold or used in the states listed below.***

CA, CT, DC, DE, IL, IN, ME, MD, MA, MI, NH, NJ, NY, OH, PA, RI, VA

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LPS PRODUCTS

LPS® PRESOLVE® ORANGE DEGREASER *



* High performance industrial cleaner that cleans on contact * Ideal for removing grease, tar, oil & adhesives * Fast acting, deep penetration * Natural based * Does not contain chlorinated solvents * Flash point above 100°F (38°C) * Non-conductive * Low residue * Safe on all metals and most plastics * Inverta Spray Valve allows user to spray in an upright or inverted position * NSF® C1 registered #129025: (aerosol); #059830: (bulk)

15oz. (425g) – aerosol.....P/N 09-00311 .....**$15.50**
1gal. (3.78l).....P/N 09-00312 .....**$80.99**
5gal. (18.93l).....P/N 09-00313 .....**$346.00**

LPS® ZEROTRI® HEAVY-DUTY DEGREASER *



* Penetrating action instantly removes oil, grease, wax, dirt, moisture, tar and other contaminants * Removes conformal coatings * No ozone depleting chemicals * Fast evaporating * Safe to use on most surfaces * Does not contain chlorinated solvents * No rinsing, no residue * Inverta Spray Valve allows user to spray in an upright or inverted position * NSF® C1 registered #059845: (aerosol); #059846: (bulk) * Canadian Food Inspection Agency (CFIA) approved

15 oz. spray.....P/N 09-26470 .....**$18.75**
5 Gallon .....P/N 09-05360 .....**$398.00**

LPS® U-10 BRAKE CLEANER



* Low VOC (Volatile Organic * Compounds) content * Complies with CARB/OTC (California Air Resources * Board/Ozone Transport Commission) Rules * Instantly removes brake fluid, dust, grease and oil * Improves brake performance * Helps stop disc brake squeal * Powerful jet spray and high solvency * Can be applied without disassembling the brake unit * No ozone depleting chemicals * Fast evaporating * Does not contain toluene * Does not contain chlorinated solvents * No rinsing or no residue * 14oz. (397g) – aerosol

P/N 09-02119..... **$9.95**

LPS ELECTRO 140 CONTACT CLEANER



LPS Electro 140 Contact Cleaner is the high flash point, fast penetrating, non-residue cleaner alternative to CFCs for fine parts. The Electro 140 Contact Cleaner flash point is above 140°, making it safer to use in areas where flammability may be a concern. It is free of any known stratospheric ozone depleting substances - like CFCs, HCFCs, and 1,1,1 trichloroethane. Electro 140 has a low odor & is effective for flux removal and immersion cleaning.

11 oz.. Spray Can..... P/N 09-26465..... **$14.50**

Warning: Due to VOC Regulations CA, OR, WA, CO states laws prohibit use, sell, or purchase of this product as of 01/2008.

LPS NO FLASH ELECTRO CONTACT CLEANER



LPS NoFlash is a vaporous solvent cleaner alternative to CFC's that's safe to use on most surfaces. It's nonconductive and nonflammable, so it can be used while equipment is in operation to avoid costly downtime. NoFlash Electro Contact Cleaner penetrates and evaporates quickly, dislodging oil, grease, dirt and other materials from precision mechanical and delicate electrical/ electronic parts leaving no residue.

P/N 09-26412 .....**$29.90**

LPS MICRO-X CONTACT CLEANER



Quick penetration. Does not contain any chlorinated solvents. No residue. No rinsing. Fast drying. Safe on metal and plastics. Inverta Spray Valve lets you spray in upright or inverted position. Value Performance. P/N 09-00151 .....**$11.85**

Warning: Due to VOC Regulations CA, OR, WA, CO states laws prohibit use, sell, or purchase of this product as of 01/2008. Replacement P/N for these states is # 09-02045. Listed below.

LPS® LVC CONTACT CLEANER



Reduced VOCs (Volatile Organic Compounds). Conforms to CARB (California Air Resources Board) requirements for. VOC emissions. Fast evaporating. Ideal for electronic and fine parts. Cleans and degreases delicate precision mechanisms. Safe on plastics. Penetrating action removes oil, grease, dirt, flux and other contaminants. Does not contain chlorinated solvents. No residue P/N 09-02045..... **$16.95**

FAST DRYING GRAPHITE SPRAY 50605



Lubricates and protects - MCKAY Graphite Spray lubricates and leaves a fast drying graphite film on all automotive, marine and industrial parts before and after assembly. Leaves a dark metal-like finish that adds a high quality look to all repair work. prevents rust, corrosion and shelf deterioration. Non-abrasive, non-flammable, non-corrosive, non-toxic. Harmless to Anti-freeze and coolants. 12 Oz. Spray P/N 09-25600..... **$4.90**

LPS STRONG STEEL STICKS



Easy-to-use, hand-kneadable stick for immediate repairs to steel equipment and surfaces. Ideal for stopping leaks, even works on underwater applications. Permanently fills gaps and holes in metal, concrete, wood, fiberglass, and ceramics. Has a working time of 4 minutes, and will fully cure in 30 minutes to form a durable mass which can be machined, drilled, and painted. Can be used for many types of repairs, such as plumbing, electrical, ceramic, vehicle, equipment, and machinery. It is ideal for patching holes and cracks in pipes, drums, and tanks.4 oz. stick... P/N 09-26444.....**$10.85**

LPS ELECTRA-X CONTACT CLEANER



A non-flammable contact cleaner that removes oil, grease, dirt and other foreign materials from precision mechanical and delicate electrical/electronic parts. Fast evaporating. No flash point. No rinsing.15 oz.. Aerosol

P/N 09-00153 .....**$20.95**

LPS MICRO-X NU FAST EVAPORATING CONTACT CLEANER



Conforms to the VOC regulations of CARB, OTC , and LADCO. Quick penetration. Safe on plastics. No residue. Ideal for electronic and fine parts. Does not contain any chlorinated solvents. Removes dirt, dust, flux and other contaminants. NSF Nonfood Compounds Program Listed Category Code: K2 Registration # 142149. Inverta Spray Valve lets you spray in an upright or inverted position. Applications: Circuit Breakers , Connectors , Contacts Controls Fluid Systems Generators , Instrumentation , Keyboards , Magnetic Tape Heads , Motors Office Equipment, Printed Circuits , Relays ,Semiconductor Assemblies Sensors , Switch Gears , Switches , Telecommunication Equipment , Telephone Equipment, Terminals , TV Tuners. 11oz aerosol

P/N 09-02563.....**$13.50**

LPS G-49 ORANGE DEGREASER LOW VOC'S



Reduced VOCs. Instant cleaning action, no residue. Excellent for removing grease, grime, oil, and adhesives. High solvent strength. Moderate evaporation. Excellent alternative to Methyl Ethyl Ketone (MEK). Ideal for cleaning equipment. Not a Hazardous Air Pollutant (HAP). No ozone depleting chemicals (ODC). NSF® registered category code C1, registration #142147. Inverta Spray Valve

P/N 09-02372.....**$15.50**

LPS TAPMATIC #1 GOLD



Tapmatic1 Gold Cutting Fluid is excellent tapping applications on all metals, including aluminum. It increases tool life while improving surface finish. #1 Gold does not contain chlorinated solvents, paraffins, water, or inactive fillers. Meets Boeing BAC 5008 Boeing D6-48809. P/N 09-00159.....**$13.70**

LPS PRECISION CLEAN



A multi-purpose concentrated cleaner/degreaser precisely formulated for industry; removes stubborn soils, greases, oils, sludge, and soot. Features: • VOC compliant in all 50 states • Super industrial strength removes tough stains and soils • Does not contain butyl, chlorinated or petroleum solvents, bleach, ammonia, or abrasives • Alkaline formula inhibits flash rusting • Rinses clean • Safe on all surfaces except magnesium • Nonfood Compounds Program Listed Category Code: C1 Registration #059854(Bulk). 5 Gallon. P/N 09-04278.....**$153.95**

LPS DRY FILM PTFE LUBRICANT



Dry Film PTFE is a high performance dry lubricant with strong bonding PTFE that is excellent for severe temperature and pressure applications. It is also a paintable mold release. 11 oz. Aerosol. P/N 09-04832.....**$12.50**

SHERLOCK LEAK DETECTOR FLUID



Neutral solutions formulated for leak-testing lines, cylinders and tanks carrying pure oxygen, but also used widely for testing fuel tanks, pneumatic systems - in fact any product or system that can be leak-tested with air or gas pressure. Contains no oil, grease or any other ingredient that could combine with pure oxygen to form either a flammable or explosive mixture. Thoroughly tested and approved by both governmental and commercial laboratories.

8oz. bottle .....P/N 08-12291 ..... **$6.75**
Gallon.....P/N 08-16215 ..... **$32.90**

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CRC AVIATION MAINTENANCE PRODUCTS



CRC 3-36® MULTI PURPOSE LUBRICANT

FLAMMABLE

A corrosion inhibitor which helps prevent electrical and electronic malfunctions caused by water penetration, humidity, condensation, or corrosion. Displaces moisture and inhibits corrosion. •Appearance-Amber Liquid • Odor-Petroleum Distillate • Base Type-Petroleum • Flashpoint-144°F • Flammability-Flammable11 oz. ..P/N 09-39600 .....**$10.95**



CRC ULTRA-LITE LUBE

Ultra-thin, non-staining lubricant that resists oil, dirt and dust build-up. Seals out moisture and prevents corrosion with protective film. Excellent for drying out electrical/electronic components. • Appearance-Amber Liquid • Odor-Petroleum • Base Type-Petroleum Solvent • Flashpoint-172°F • Flammability-Flammable • Specific Gravity-0.8034 • Plastic Safe-No • Film Type-Ultra Thin and Dry • Film Thickness-0.05 Mils • Working Temp-40 to 300°F 11 oz.....P/N 09-39602 .....**$9.85**



CRC POWER LUBE®

Multi-purpose lubricant that utilizes PTFE and extreme pressure additives• Appearance-Light Amber Liquid w/white precipitate • Odor-Wintergreen • Base Type-Petroleum Solvent • Flashpoint-<20°F • Flammability-Extremely Flammable
11 oz.....P/N 09-39605 .....**$12.65**



CRC QUICK DRY CONTACT CLEANER

An alcohol-based precision cleaner that is 100% free of CFCs. Ideal for applications where lower flashpoint solvents may be used. It evaporates rapidly and completely and is harmless to most plastics. Applications include: •Switchgears • Circuit breakers • Telecommunication equipment • Fusible connecting devices • Motors • Generators •Relays • Terminals • Rheostats • Instrumentation •Communications equipment. Not for use on energized equipment. 11 oz.....P/N 09-39620 .....**$18.70**



CRC PAINT & DECAL REMOVER

A solvent-based, high strength cleaner that effectively loosens and helps remove paint., adhesives and sealants. It helps protect equipment surfaces by eliminating damage caused by excessive scraping. Applications include: •Dissolves and aids removal of paints, lacquers, adhesives and varnish • Removes graffiti from metal and stone •Removes conventional and formed-in-place gaskets on motors, pumps & flanges. Not for use on energized equipment. 12 oz.....P/N 09-39622 ...**$13.50**



CRC SPRAY ADHESIVE

A general purpose quick tack adhesive especially formulated to bond to many foils, plastics, papers, foams, metals, cardboards and cloths. P/N 09-02431 .....**$16.85**



CRC MULTI-PURPOSE SUPER WHITE GREASE

A high purity, NLGI Grade 2 multi-purpose white lithium grease. Provides superior lubrication & durability in any weather and most temperatures. Bright white in color. Ideal for when appearance is important. Applications: Assembly lubes, bearings, break-in lubrication for bearings, cables, chains, chassis points, conveyor bearings, door tracks, garage door channels & openers, hinges, latches, machinery, open gears, overhead door tracks, roller bearings, sleeve bearings. P/N 15-06285 .....**$8.50**



CRC GREEN FORCE MULTI-PURPOSE CLEANER

Formulated to meet strict environmental requirements without sacrificing performance. It is a safe and versatile product for all of your cleaning needs. P/N 09-02419 .....**$33.85**

CRC GREEN FORCE GLASS & SURFACE CLEANER



Ideally suited to clean soiled glass and other hard surfaces. It effectively cuts greasy films and soils, leaving surfaces sparkling clean. 32 oz.....P/N 09-02421 .....**$12.50**
Gallon .....P/N 09-02422 .....**$33.99**



AVIATION DEGREASER

A halogenated solvent-based cleaner/degreaser that is chemically stable and extremely effective in heavy duty cleaning applications. Fast-acting, non-flammable, and evaporates quickly leaving no residue. Extremely effective solvent for cleaning and removing corrosion inhibiting compounds. Contains no HAPs. Removes carbon buildup. High dielectric strength of 26,800 volts. Allows for east visual inspection. Prepares metal surfaces for painting on adhesive bonding. Evaporates fast leaving no residue.
20 oz. aerosol.....P/N 09-39690 .....**$24.50**
Attention:Volatile Organic Compounds (VOCs) Government Regulations: Product cannot be purchased, sold or used in the states listed: CA



CRC REMOVER

A revolutionary alternative to 1,1,1 Trichloroethane and other chlorinated solvents. Cleaner and degreaser that effectively removes grease, oil, dirt and other contaminants from motors, parts and equipment. •Exhaust trails • Hinges • Antenna mounts • Static tubes •Wheel wells • Struts & tubes • Galleys • Seat tracks • Cargo doors • Cargo tracks. Not for use on energized equipment.
20 oz P/N 09-39642 ..... **$19.00**



CRC CORROSION SHIELD

A long-term corrosion inhibitor that provides extended protection for all metal parts and assemblies, both in storage and during shipment. Easily removed with solvent cleaners. • Seat and cargo tracks •Landing gear, wheel wells & keel beam • Fuselage structure • Wing to body fairing • Pins • Hinges • Wing front & rear spar • Lower fuselage interior • Wing interior structure • Horizontal stabilizer • Ground support equipment • Chains and cables • Air conditioning ducts • Lap joints • Skin panel edges • Emergency escape hatches • Bulkheads • Entry and cargo doors. Not for use on energized equipment. 20 oz. P/N 09-39655 ..... **$13.50**



CRC CORROSION SHELL

A long-term indoor and outdoor corrosion inhibitor for machined surfaces and assemblies subjected to long periods of storage or adverse conditions during shipment. Its firm, waxy film is highly resistant to humidity and salt spray and never becomes brittle. Petroleum solvents may be used to dilute the product to vary the film thickness or to remove it after application. Applications include: • Completed assemblies • Seat tracks • Chains and cables • Landing gear •Wheel wells • Faying surfaces• Air conditioning ducts • Lap joints • Skin panel edges • Fuselage • Landing gear and bilges • Emergency escape hatches • Bulkheads • Entry & cargo doors. Not for use on energized equipment.16 oz.
P/N 09-39657 .....**$17.50**



ISOPROPYL ALCOHOL - ULTRA PURE CLEANING SOLVENT

A quick drying light-duty degreaser for use in industrial, electrical, electronic and aviation applications. Its 99% pure formula aggressively dissolves grease, dust, dirt, lint, oils and flux from most non-plastic surfaces. 12oz.....P/N 09-02423 .....**$12.50**



CRC BATTERY CLEANER

Water-soluble formula removes corrosion quickly and economically. Neutralizes acid spills. Restores battery output and reduces voltage leakage due to contaminants. Assures maximum battery current flow and promotes longer battery life. 11 oz.
P/N 09-02424 .....**$9.50**



CRC KNOCK'ER LOOSE PLUS PENETRATING SOLVENT

A unique penetrant that immediately drops the temperature of the area in contact with the spray. The freeze shock action cracks rusted surfaces allowing it to reach deeper & work more effectively than other penetrants. 11.5 oz.....P/N 09-02426 .....**$9.95**



DRY GRAPHITE LUBE

Ideal where a dry lubricant is required or where petroleum products must be avoided. Resists dirt, dust and oil build-up. Wide effective temperature range up to 850°F constant. 10 oz.
P/N 09-02427 .....**$12.50**



CRC WHITE LITHIUM GREASE

Superior lubrication and durability in any weather or temperature. Perfect for use as a break-in lubricant for bearings or as a general purpose lubricant and corrosion inhibitor for tools, machinery and equipment. 10 oz. P/N 09-02428 .....**$12.85**



CRC QD ELECTRONIC CLEANER

A petroleum distillate / alcohol based precision cleaner designed as an alternative to CFC based cleaners. Ideal for apps where lower flashpoint materials can be tolerated. Cost effective, plastic safe & residue free. .....P/N 09-04582 .....**$18.50**

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LUBRICANTS - SEALANTS



LOCTITE THREADLOCKER

Loctite Threadlocker used on a standard fastener can eliminate expensive locking devices while you increase the reliability and quality of your assembly. One drop prevents loosening. 2 removable strengths for large & small applications and permanent strength for locking parts you never want to take apart.

#222 THREADLOCKER ***(permanent, for small screws)***
10 ml..... P/N 09-42605..... **$16.85** 50 ml.....P/N 09-42610 .. **$42.50**
#242 THREADLOCKER ***(removable, for large screws)***
10 ml..... P/N 09-42615..... **$17.50** 50 ml.....P/N 09-42620 .. **$47.55**
#242 THREADLOCKER ***(for locking and sealing of threaded fasteners which require normal disassembly with standard hand tools.)(Blue)***
50 ml..... P/N 15-07264..... **$2.65**
#262 THREADLOCKER ***(permanent, for large screws)***
10 ml..... P/N 09-42625..... **$17.50** 50 ml.....P/N 09-42630 .. **$43.85**
#271 THREADLOCKER (permanent locking and sealing of threaded fasteners up to 1' (25 mm) in diameter) (Red)
10 ml..... P/N 09-04687..... **$17.50**

LOCTITE 515 GASKET ELIMINATOR



Henkel Loctite 515 Gasket Eliminator is a high viscosity, flexible sealant for use on rigid machined flanges. It provides resistance to low pressures immediately after assembly of flanges.
50 mL Tube. .....P/N 09-04568 ..... **$19.95**

LOCTITE® 609™ RETAINING COMPOUND



LOCTITE® 609™ Retaining Compound General Purpose is a low viscosity, rapid-curing anaerobic adhesive that augments the strength of press fit assemblies or slip fit assemblies up to 0.006" in diameter. Adds up to 3,000 psi holding power. Recommended for parts that will need subsequent dismantling, i.e., retention of bearings onto shafts and into housings. Mil Spec (R-46082B) Type I. 50ML. .....P/N 09-04652 ..... **$46.65**

PARKER-O-LUBE



This Lubricant is excellent for use on exposed valve plungers, cylinder rods, and other o-rings. It lubricates without causing deterioration of rubber and is water resistant. Good for low pressure vacuum and pneumatic systems. 2 oz. Tube.
P/N 05-13059 ..... **$8.95**

SEALUBE



Anti-seize sealer for threaded aluminum alloy parts exposed to gasoline, oil, water, air or vacuum. Good lubricating qualities. Will not harden or set. Will not freeze joints at low temperatures. Non-corrosive, insoluble in gasoline, oil or water.
1 Lb. Can ..... P/N 09-25200.....**$46.65**

LUBRIPLATE NO. 630AA



Multi-purpose lubricant. Forms a wearing film on working surfaces. Excellent protection against rust and corrosion. Recommended for controllable pitch props, wheel and magneto bearings, general greasing.
16 oz. Tub..... P/N 09-25400.....**$16.60**
6 Lb.. Container ..... P/N 09-25500.....**$76.95**

12/34 MIRACLE FORMULA LUBRICANT



Meets MIL Spec MIL-C-23411. 12/34 MIRACLE FORMULA® has the most effective ALL-IN-ONE formulation on the market today. Its lubricating, moisture displacing, penetrating and corrosion prevention is unsurpassed in any single product type of its kind. Don't accept substitutes, ask for 12/34 MIRACLE FORMULA® by name. LUBRICATES: Contains highly refined lubricants which provide superior protection and anti-wear properties. REMOVES MOISTURE: Moisture is lifted and displaced rather than trapped. Pores and crevices of surface are freed from moisture and are coated with a thin non-greasy film that prevents additional moisture from clinging or reentering. PENETRATES: Rusted and frozen metal parts - nuts, bolts, studs, pins, etc. - are easily loosened by means of superior "creepability". PREVENTS RUST & CORROSION: Thin film adheres to metallic surfaces, providing positive temporary protection against the formation of rust and corrosion, including electrolysis and galvanic corrosion common in salt environments.
11 oz. aerosol .....P/N 09-04443 ..... **$11.95**



TRI-FLO TEFLON LUBRICANT

Penetrating lubricant with Teflon, corrosion inhibitors, moisture displacers and solvents to soften and remove dirt and corrosion. Will not cause corrosion. Use on aircraft cabin door hinges, landing gear hinges and struts. Loosens rusted bolts and other fasteners. 12oz. aerosol can P/N 09-42540..... **$17.50**



FOAMING SUPERIOR LUBRICANT

Tri-Flow is revolutionizing the way you clean, protect and lubricate all of your moving parts with the introduction of Foaming Superior Lubricant and Foaming Citrus Cleaner Degreaser. Tri-Flow's powerful foaming action clings to both horizontal and vertical surfaces to allow for deep penetration and accurate application. Tri-Flow Foaming products are ideal for use on bicycles, firearms, sporting equipment, manufacturing equipment, and more! P/N 09-02082..... **$12.50**



LIQUID WRENCH

A powerful blend of quick acting solvents to free parts frozen by rust, corrosion or paint. Harmless to metals. 11 oz. Aerosol Spray P/N 09-25800..... **$4.75**



WD-40 PENETRANT/LUBRICANT

Displaces moisture on any metal surface, preventing rust, corrosion or oxidation of the surface. Used on switches pulleys, wheel housings, seam areas. Non-gumming, non-conductive—safe for all electrical systems. 12 oz. Spray
P/N 09-00347..... **$6.85**



EZ TURN LUBRICANT (FUELUBE)

EZ Turn is a specialty lubricant/sealant used for fuel and oil line valves and is resistant to high temperatures. It is especially effective where high octane fuels and aromatics are present. EZ Turn is also extremely efficient as a gasket paste and anti-seize agent. EZ Turn will not gum, crack or dry out. Each shipment is independently tested. Excellent for tapered plug valves, aircraft engine manufacturing, and marine applications. EZ Turn is the functional equivalent of fuel lube.
5 oz. tube.....P/N 09-00306..... **$13.60**
1 Lb. can.....P/N 09-00180..... **$31.50**

DYKEM CROSS-CHECK TORQUE SEAL



DYKEM® Cross-Check™ provides a convenient visual method for identification of vibratory loosening or tampering in nuts, bolts, fasteners, and assemblies. Provides warranty protection against tampering. Marks will be easily broken if parts are tampered with or become loose. Highly visible under ambient light. Excellent adhesion to metal and other substrates. Features: • It's like a wax seal for critical holds and fastening • Tamper-Proof Torque Mark • Safe for most surfaces • Highly visible • Excellent adhesion • Visually detects loose nuts & bolts • Provides warranty protection • Dries to the touch: 1-2 hours • Fully cured: 24 hours • GHS compliant labeling • Two year shelf life • Boeing Specification: BMS8-45 Type II.

Description	Color	Size	Part No.	Price
Cross Check Torque Seal	Red	1 oz	09-02033-1	$4.50
Cross Check Torque Seal	Yellow	1 oz	09-25807-1	$4.50
Cross Check Plus Skydrol Resistant Tamper Evident Lacquer	Yellow	1 oz	09-25811-1	$7.95
Cross Check Torque Seal	Green	1 oz	09-25808-1	$4.50
Cross Check Torque Seal	Blue	1 oz	09-25809-1	$4.50
Cross Check Torque Seal	Orange	1 oz	09-25810-1	$4.50
Cross Check Torque Seal	Gray	1 oz	09-04690-1	$4.50
Cross Check Torque Seal	White	1 oz	09-02411-1	$4.50
Cross Check Torque Seal	Pink	1 oz	09-04444-1	$4.50
Cross Check Plus Skydrol Resistant Tamper Evident Lacquer	Pink	1 oz	09-03486-1	$7.35

DYKEM® CROSS-CHECK™ PLUS AVIATION GRADE TORQUE SEAL - SKYDROL® RESISTANT



DYKEM® Cross Check Plus Skydrol®-Resistant Torque Seal® has been certified to meet the Boeing specification BMS8-45H Type I/III for a Skydrol-resistant, quick-dry tamper proof marker. This specification requires strict adherence to key performance properties such as dry-to-touch time, full cure time, Skydrol resistance, and dielectric strength, along with other critical physical, mechanical, and flammability requirements.

Description	Color	Size	Part No.	Price
Cross Check Plus Skydrol Resistant Tamper Evident Lacquer	Blue	1 oz	09-05509	$7.95
Cross Check Plus Skydrol Resistant Tamper Evident Lacquer	Yellow	1 oz	09-25811-1	$7.95
Cross Check Plus Skydrol Resistant Tamper Evident Lacquer	Pink	1 oz	09-03486-1	$7.65

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Prices Subject to Change Without Notice

BOELUBE LUBRICANTS

A Space Age Lubricant developed by The Boeing Company that fights friction at the interface of the cutting edge and the workpiece.The reduction of friction at these surfaces minimizes heat generation and concurrent chip weld. Tools retain their cutting edge longer, leading to closer tolerances and prime chip yield. Manufactured frompersonal care ingredients, Boelube is non-toxic, non-irritating and biodegradable. Boelube is non-corrosive, non-flammable, chemically stable and free of halogens, heavy metals, sulfur, phosphorus, silicone, petroleum or paraffin wax.



BOELUBE® BL70200-13 SOLIDS LUBRICANT

Provides a cost effective means of producing a high quality finish in a multitude of applications such as: Drilling - Tapping - Reaming - Abrasive Belts - Files - Deburring Tools - Grinding Wheels - Chisels - Band, Circular and Hand Saw Blades. Boelube® Solids improve tool life by reducing heat build-up in belt, disc or wheel grinding operations. Apply the push-up tube to the tool before start up. Individual Boelube Blocks are ideal for grinding operations. 1.6oz Push Tube .....P/N 09-01731 ..... **$4.55**



BOELUBE®HIGH EFFICIENCY MACHINING LIQUID LUBRICANT

Boelube® 70104 / 70106 are a series of proprietary liquid lubricants developed through Boeing manufacturing operations and lubricant experience. In the near dry machining process, Boelube® Liquid can be delivered as fine droplets or spray through one or more nozzles positioned accordingly around the cutting tool. Delivering the Boelube liquid as fine droplets to the cutting edge is necessary in order to reduce friction between the chip, tool, and workpiece, and prevent chips from adhering to the tool cutting edge. Does not contain Silicone, Sulfur, Halogens (such as Chlorine), Phosphorus, Paraffin Wax, Petroleum or Heavy Metals.

4oz Bottle .....P/N 09-01734..... **$9.60**
Gallon .....P/N 09-01733..... **$148.75**



BOELUBE® 70104 HIGH EFFICIENCY MACHINING LUBRICANT

The HHL 70104 is designed to accommodate tools up to 1/4 inch in diameter. It is not unusual to drill a substantial number of holes before having to re-lubricate the drill. Being only 3 inches tall and 1 1/4 inches in diameter, the HHL easily fits in a pocket or tool box. Non-toxic, non-irritating, environmentally safe synthetic lubricant manufactured from personal care ingredients that is effective for machining many types of materials. Greatly reduces friction minimizing heat generation and subsequently the need to remove heat. Most effective when applied sparingly. Non-corrosive, non-flammable, chemically stable, and free of Halogens, Silicone, Petroleum, Paraffin Wax, Sulfur, Phosphorus and Heavy Metals whether added or present in any of its ingredients..... P/N 09-01732 ..... **$10.75**



BOELUBE® BL70307L MEDIUM PASTE

Boelube® Pastes provide excellent lubricity and are extremely cost effective in single point work such as Tapping, Drilling and Reaming. A small amount of Paste applied to the tool is all that is required to obtain a high quality finish and extended tool life with little or no clean-up required. Brush it on or dip tool in paste. Boelube® pastes are also ideal for Forming and Bending as well as in Drop Hammer, Verson Press and Spin Forming applications. Boelube® Pastes provide closer tolerance parts and extended diaphragm and die life. We furnish 70307 medium (blue) paste. 4oz Jar .....P/N 09-01735..... **$9.50**



PERMATEX ANTI-SEIZE LUBRICANT

Prevents galling, seizing and corrosion of metal parts from 65°F to 2000°F. Acts as a low speed lubricant and maintains a corrosion-resistant coating at high temperatures. Makes aluminum and stainless steel joints disassemble quickly, easily. Excellent lubricant for press fit assembly. Works on industrial engine parts, boilers, outdoor motors, cables and internal combustion engines. Conforms to MIL-A-907D. Improves reliability at high temperatures. Saves time, labor.

1 oz. tube .....P/N 09-28410..... **$4.50**



LOCTITE BLACK HIGH PERFORMANCE RTV SILICONE GASKET MAKER

Loctite® 598™ Black High Performance RTV Silicone Gasket Maker retains high flexibility and oil resistance for longer gasket life. Temperature range is -75°F to 625°F (-59°C to 329°C) intermittent. Low odor, non-corrosive. Resistant to most chemicals and solvents. Fills gaps to 0.25". P/N 09-03532..... **$15.50**



MICROLON PRECISION OILER

This oiler has the famous Microlon resin suspended in a lightweight oil to lubricate, penetrate and prevent rust. It is excellent for lubricating bearings, threaded parts, hinges, pocket knives, chains, rollers, fishing gear, chain saws, guns, garage doors.....just about anywhere that friction causes noise and resistance. Furnished in a handy pen size oiler with a pocket clip. .25 Fluid Ounces.

P/N 09-00756..... **$6.95**



LOCTITE QUICKSTIX C5-A COPPER ANTI-SEIZE

Loctite® QuickStix™ C5-A® Copper Grade Anti-Seize Stick provides a shield against high temperature seizing and galling. All mated parts, studs, bolts, flanges and gaskets, remove more easily and in cleaner and better condition. This product can be used on copper, brass, cast iron, steel, all alloys including stainless steel, all plastics and all non-metallic gasketing materials. Protects metal parts to 1800°F. Prevents rust, corrosion, seizing; eases disassembly. Fine or coarse threads.

P/N 09-03533..... **$7.85**



SLICK AIR LOW DRAG COATING

It's not a wax and it's not a polish, it is a coating which was specifically designed to reduce air drag. It is a revolutionary coating that has a non-reactive inert surface that is very slippery. It reduces air drag because it has a very low surface energy which allows the air molecules to slip at the surface. This partial slip condition increases the air velocity at the surface. In a typical boundary layer profile the air velocity at the surface is zero and increases exponentially until, at the outer edge of the boundary layer, it is the same as the free-stream velocity. The shape and magnitude of the boundary layer's velocity profile determines the momentum loss, which corresponds to the drag. The higher the velocity near the surface, the lower the air drag. It is as easy to apply as any liquid car wax but with much less elbow grease required. It is like having three products in one. A cleaner to remove tar, tree sap, stains and pollutants, a micro fine leveling agent to level and remove fine scratches and blemishes on clear coats and dead paint on single stage finishes. ..... P/N 09-03754..... **$33.95**

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LOGO DECALS

AUTHENTIC AIRCRAFT LOGO DECALS

Our full line of authentic aircraft logos are produced on state-of-the-art long lasting UV coated pressure sensitive adhesive vinyl. They are precision cut by a specially programmed computer and have no clear background. Other brands of decals can be produced cheaply but the clear background tends to yellow, rendering unsightly over time. With our custom cut decals, only the letters themselves go on the aircraft giving the lettering a truly professional look which will last as long as the aircraft paint. Please order by part number shown. Many other logos and styles are available, as well as other colors. Call for quotation or send $2.00 for our complete logo and decal catalog. For quote on custom logo decals, send sketch and details.

FOR OTHER LOGOS AVAILABLE. Send $$2.90 FOR COMPLETE LOGO AND DECAL CATALOG P/N 09-43736

AERONCA

5.75"h x 13.25"w
Black... 09-43502 ..... **$9.95**
White .. 09-43504 ..... **$8.95**

DECATHLON

1-5/8"h x 10-3/4"w
Black .. 09-43506 ... **$11.95**
White .. 09-43508 ... **$11.95**

BELLANCA BELLANCA

Black, Gold, White
6"h x 8.75"w
09-43509 ..... **$37.50 pr.**

Citabria

2"h x 9-1/2"w
Black..... 09-43516
White 09-43518
$14.95 ea

Cessna

Black..... 09-43519
White 09-43522
Red..... 09-43524
Blue 09-43526
6"h x 10.5"w **$19.90 /pr**

Cessna 140
Cessna 140

Black..... 09-43528
White 09-43529
Red..... 09-43532
Blue 09-43534
6"h x 10.5"w **$21.50 pr**

cessna

Black..... 09-43536
White 09-43538
2"h x 10.5"w **$12.95 ea**

CESSNA

Black..... 09-43540
White 09-43542
Gold..... 09-43544
2"h x 8.25"w **$12.95 ea.**

Cardinal

Black..... 09-43546
White 09-43548
4-1/4"h x 10"w **$12.95 ea.**

SKYLANE

Black..... 09-43550
White 09-43552
1.75"h x 10"w **$12.95 ea.**

SKYLANE

Black..... 09-43554
White 09-43556
2.25"h x 8.5"w **$12.95 ea**

SKYWAGON 180

Black..... 09-43558
Silver..... 09-43560
1.25"h x 14.5"w **$13.95 ea**

CENTURION

Black..... 09-43562
White 09-43564
1.5"h x 15.5"w **$12.95 ea**



Gold..... 09-43566
6.25" Diameter **$27.90 pr**

Turbo CENTURION II

2.937"hx18.75"w
Black..... 09-43568
White 09-43570
$13.95 ea

SKYHAWK

Black..... 09-43572
White 09-43574
1.5"h x 13"w **$13.95 ea**

Skyhawk

Black..... 09-43576
White 09-43578
4.5"h x 9.5"w **$12.95 ea**



17.5"hx8.875"w
Gold Bkgrnd, Black Border
P/N 09-43580 ... **$37.90 pr.**

Skymaster

Black..... 09-43582
White 09-43584
5"h x 8.75"w **$13.95 ea.**

Mooney

Black..... 09-43586
White 09-43588
1.75"h x 8"w **$11.95 ea.**



Small Black..... 09-43587
Small White 09-43589
4"h x 10"w **$22.75pr.**

Large Black 09-43591
Large White 09-43593
7.75"h x 19"w **$35.90 pr.**



Full Color 09-43598
8.5"h x 7.75"w **$9.95 ea**



Red & Blue
09-43500 ..... **$9.95 ea**
Black
09-43602 ..... **$8.95 ea**
2-1/2"h x 5"w

PIPER

Black..... 09-43604
White 09-43606
2"h x 8.75"w **$10.95 ea**

Piper

Black..... 09-43608
White 09-43609
2.5"h x 11.25"w **$12.95 ea**

CHEROKEE 140

Black..... 09-43612
1.5"h x 11-3/8"w **$13.95 ea**

CHEROKEE 180D

Black/Silver..... 09-43616
White 09-43618
1.5"h x 12.5"w **$13.95 ea**

Archer II PIPER

Black..... 09-43619
White 09-43622
2.75"h x 10"w **$12.95 ea**

Warrior II PIPER

Black..... 09-43624
White 09-43626
3"h x 11"w **$13.95 ea**

Arrow PIPER

Black..... 09-43628
White 09-43629
2.75"h x 6-1/8"w **$12.95 ea**

CHEROKEE SIX E

Black..... 09-43632
Silver..... 09-43634
1.5"h x 13"w **$12.95 ea**

Comanche C

Black..... 09-43636
White 09-43638
1.25"h x 12.75"w **$13.95 ea**

PIPER SENECA

Red&Black w/Silver Bkgrnd
09-43640
2-1/8" x 61/2" **$14.25 ea**

Super Cub

Black..... 09-43642
White 09-43644
1.5"h x 7.75"w **$14.95 ea**

Beechcraft

Black
09-43646 ..... **$13.95 ea**
White
09-43648 ..... **$13.95 ea**
Gold
09-43650 ..... **$18.95 ea**
4-1/8"h x 13-1/2"w

Baron

Black..... 09-43652
White 09-43654
3"h x 7"w **$14.95 ea**

Bonanza

Black..... 09-43656
White 09-43658
3"h x 9"w **$11.95 ea**



Black..... 09-43660
White 09-43662
2.5"h x 8.5"w **$15.95 ea**



Blue on Silver 09-43664
2.5"h x 7"w **$13.95 ea**

MAULE

Black..... 09-43666
White 09-43668
2-7/8"h x 17"w **$13.95 ea**

TURBO

Black..... 09-43670
White 09-43672
2.5"h x 17-3/8"w **$11.95 ea**

TURBO CHARGED

Black..... 09-43674
White 09-43676
1"h x 10-7/8"w **$9.95 ea**

Pitts

Black..... 09-43678
White 09-43680
4"h x 12"w **$12.95 ea**

SPECIAL

Black..... 09-43682
White 09-43684
1"h x 5"w **$8.95 ea**

TAYLORCRAFT

Black..... 09-43686
White 09-43688
2.5"h x 18-5/8"w **$8.95 ea.**

Glasair III

Black..... 09-43690
White 09-43692
2.25"h x 17"w **$14.95 ea**

Glasair

Black..... 09-43694
White 09-43696
2.75"h x 15.75"w **$13.95 ea**

LANCAIR

Black..... 09-43698
White 09-43700
2.5"hx 8.75" **$17.95 ea**

PULSAR

Black..... 09-43702
White 09-43704
3"h x 14.5"w **$13.95 ea**

RANS

Black..... 09-43706
White 09-43708
2"h x 9.5"w **$12.95 ea**

FAIRCHILD

Black..... 09-43709
White 09-43712
3.25"h x 8.75"w **$14.95 ea**

Stearman

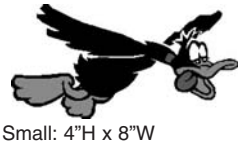
Black 09-43718
White 09-43719
4"h x 19"w **$9.95 ea**

Swift

Black..... 09-43722
White 09-43724
Gold outline on both.
3"h x 5.5"w **$15.95 ea**

WACO CLASSIC

09-43728
(Black, Red, Gold)
2-3/8"hx14.25"w **$13.95 ea**



Small: 4"H x 8"W
Left..... 09-43732-1.. **$14.95**
Right .. 09-43732-2.. **$14.95**

Large: 6"H x 12"W
Left..... 09-43734 ..... **$17.95**
Right .. 09-01955 ..... **$17.95**

LOGO DECALS



3" ..... 09-43740 ..... **$4.95 ea**
4.5" ..... 09-43741 ..... **$6.95 ea**
Not available in lefts and rights only available as shown.



Full Color 09-43748
2"h x 6.75"w **$7.95 ea**



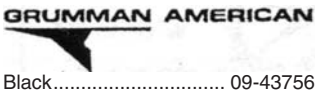
Black & Silver 09-43751
1.25"h x 8-3/8"w **$13.00 ea**



Black 09-43752
4-7/8"h x 12-7/8"w **$15.95 ea**



09-43755(White) ..... **$18.00 ea.**



Black 09-43756
White 09-43757
3.5"hx16-5/8"w **$23.95 ea**



Black 09-43758
White 09-43759
5/8"h x 8.25"w **$9.95 ea**



Black 09-43742
White 09-43743
1"h x 4.25"w **$8.95 ea**



Black 09-43744
White 09-43745
5"h x 12"w **$13.95 ea**



Full Color-screened 09-43764
8.25"h x 9"w **$19.95 ea**



Black, Grey, White, Red . 09-02103
6"h x 1.5"w ..... **$4.50 ea**



Black 09-43746
2.25"h x 6.75"w **$12.95 ea**



Black 09-43780
White 09-43781
9.25"h x 23.5"w **$18.95 ea**



Black 09-43782
3.25"h x 3.25"w **$12.95 ea**



Left, Black 09-43784
Right, Black 09-43785
5.25"h x 5-3/8"w **$10.95 ea**



Black 09-43788
8"h x 16"w **$23.95 ea**



White 09-43791
2-1/8"h x 8.25"w **$10.95 ea**



Black 09-43792
9-7/8"h x 46.75"w **$33.95 ea**



Black 09-43796
White 09-43797
3-3/8"h x 11.5"w **$17.95 ea**



Black & Silver 09-43798
2.5"h x 12"w **$21.95 ea**



B lack 09-43800
White 09-43801
1"h x 9-1/8"w **$8.95 ea**



Black 09-43802
1.5"h x 13"w **$9.95 ea**



Black 09-43806
5.75"h x 13.25"w **$16.95 ea**



Black 09-43808
White 09-43809
2.5"h x 12.75"w **$15.95 ea**



Black 09-43811
1"h x 10"w **$21.75 ea**



Left, Black 09-43813
Right, Black 09-43814
Left, White 09-43816
3"h x 3.5"w **$8.99 ea**



Black 09-43774
4-3/8"h x 10"w **$11.95 ea**



Black 09-43778
White 09-43779
4-3/8"h x 10"w **$11.00 ea**



Black 09-43822
White 09-43823
1.75"h x 8.75"w **$11.95 ea**



Left, Black 09-43824
Right, Black 09-43826
Left, White 09-43827
Right, White 09-43828
4-3/8"h x 5-7/8"w **$13.95 ea**



Black 09-43829
White 09-43831
2.75"h x 19"w **$13.95 ea**



Left,Black 09-43832
Right,Black . 09-43833
1.5"h x 11.75"w **$25.95 ea.**



Left, Black 09-43837
Right, Black 09-43838
1.5"h x 7.5"w **$15.95 ea**



Black 09-43841
White 09-43842
1.5"h x 7.5"w **$9.95 ea**



Black 09-43843
2"h x 12.5" **$10.95 ea**



Black & Gold 09-43845
2.5"h x 10.5"w **$16.95 ea**



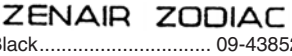
Black 09-43749
White 09-43750
3.5"h x 7.5"w **$16.95 ea**



Black 09-43848
White 09-43849
1.25"h x 8.5" **$9.95 ea**



Black 09-43850
White 09-43851
5"h x 20"w **$17.95 ea**



Black 09-43852
White 09-43853
1"h x 14.25"w **$11.95 ea**

Black 09-43765
White 09-43766
3"h x 6.75"w **$9.95 ea**

CS

LOGO DECALS

CS

CENTURION
CL-311-1-3/16"h x 10-3/4"w
P/N 09-43981 (Blk)
P/N 09-43982 (Wh)
$10.95 ea.

stationair
CL-137 - 1-1/2"h x 14-1/2"w
P/N 09-43983 (Blk)
$14.25 ea.

SKYMASTER
CL-359 - 1-1/2"h x 11-1/2"w
P/N 09-43985 (Blk)
P/N 09-43986 (Wh)
$13.95 ea.

SKYMASTER 337
CL-179 - 1-1/2"h x 15-1/8"w
P/N 09-43987 (Blk)
$13.95 ea.

Golden Eagle
CL-126 - 2-1/2"h x 13-5/8"w
P/N 09-43989 (Blk),
$13.95 ea.

421 GOLDEN EAGLE
CL-299L&R - 1-5/8"h x 24"w
09-43992 (Blk)
09-43994 (Gd)
$13.95 ea.

CHRISTEN HUSKY
CH-060 - 3/4"h x 7-1/4"w
P/N 09-43997 (Blk)
P/N 09-43998 (Wh)
$12.95 ea.

Curtiss
CR-031 - 6-3/8"h x 12"w
P/N 09-43999 (Blk)
P/N 09-44001 (Wh)
(up to 15"w) **$19.95 ea.**

EXTRA 200
ET-001 - 1-3/4"h x 15-1/2"w
P/N 09-44002 (Blk)
P/N 09-44003 (Wh)
$14.95 ea.

EXTRA 300
ET-002 - 1-3/4"h x 15-1/2"w
P/N 09-44004 (Blk)
P/N 09-44006 (Wh)
$16.95 ea.

Funk
FU-002 - 4-3/4"h x 16-1/2"w
P/N 09-44007 (Blk)
P/N 09-44008 (Wh)
$17.95 ea.


GL-002L&R - 4-1/2"h x 15"w
(Full Color on Tail)
P/N 09-44009
$39.95 ea.

GULFSTREAM
GL-016 - 3/4"h x 5-1/2"w
P/N 09-44011 (Blk)
$11.95 ea.

Learjet
LE-001 - 3-1/8"h x 10-1/4"w
P/N 09-44013 (Blk)
P/N 09-44014 (Wh)
$13.95 ea.

Meyers 200
MR-001 - 1"h x 5-1/2"w
P/N 09-44016 (Blk)
P/N 09-44017 (Wh)
$15.60 ea.

MOONEY Ranger
ML-053L&R - 1-1/2"h x 9"w
P/N 09-44018 (Blk)
$25.90 ea.

ML-037 - 1-1/4"h x 8-3/4"w
Mooney 201
(Black, White or OPT. Wing Tip)
P/N 09-44021 (Blk)
P/N 09-44022 (Wh)
$16.70 ea.

Turbo Mooney 231
ML-017 - 1-3/4"h x 18"w
P/N 09-44023 (Blk)
$18.95 ea.

TLS
ML-012 - 1-1/2"h x 4-1/4"w
P/N 09-44026 (Blk)
P/N 09-44027 (Wh)
$14.95 ea.

Ryan Navion
RYAN AERONAUTICAL CO. SAN DIEGO
NL-004 - 3-1/4"h x 12"w
P/N 09-44028 (Blk)
P/N 09-44029 (Wh)
$19.95 ea.

Tri Pacer
PL-128 - 2-1/4"h x 18-1/2"w
P/N 09-44031 (Blk)
P/N 09-44032 (Wh)
$15.95 ea.

LANCE
PL-248 - 1-1/2"h x 10"w
P/N 09-44033 (Blk)
$12.95 ea.

LANCE II
PL-073 - 1-5/8"h x 14-1/4"w
P/N 09-44036 (Blk)
P/N 09-44037 (Wh)
$12.95 ea.

APACHE
PL-116 - 2-3/8"h x 10-7/8"w
P/N 09-44038 (Blk)
P/N 09-44039 (Wh)
$12.95 ea.

aztec
PL-058 - 1-3/4"h x 3-1/2"w
P/N 09-44041 (Blk)
P/N 09-44042(Wh)
$13.95 ea.

DAKOTA
PL-0191- 1/8"h x 9-1/2"w
P/N 09-44043 (Blk)
$11.95 ea.

SEMINOLE
PL-020 - 1-1/2"h x 15"w
P/N 09-44046 (Blk)
$15.95 ea.

NAVAJO
PL-091 - 3"h x 23-1/2"w
P/N 09-44048 (Blk)
$15.95 ea.

CHIEFTAIN
PL-083 - 2"h x 20-5/8"w
P/N 09-44051 (Blk)
$15.95 ea.


RL-018 - 6-1/2"h x 7"w
P/N 09-44053 (Blk)
$13.95 ea.

Commander 112
RL-027 - 3"h x 21-1/2"w
P/N 09-44056 (B/W)
$16.95 ea.

Commander 112B
RL-016 - 3"h x 16-1/2"w
P/N 09-44058 (B/G)
$15.95 ea.

Commander 112TC
RL-025 - 2-7/8"h x 22-1/2"w
P/N 09-44061 (B/W)
$16.95 ea.

VELOCITY
VL-005 - 3"h x 13"w
P/N 09-44063 (Blk)
P/N 09-44064 (Wh)
$14.95 ea.

THE WACO AIRCRAFT CO.
WL-004 - 3-1/4"h x 15-1/4"w
P/N 09-44066
(Black, Gold, & Red)
$29.95 ea.

Barracuda
HB-017 - 2"h x 2-1/2"w
P/N 09-44069 (Blk)
$12.95 ea.

Coyote
HB-038 - 2-1/4"h x 12"w
(Wing Tip) 09-44072 (Blk),
$11.95 ea.

Diamond AIRCRAFT
HB-139 - 3-3/4"h x 19"w
P/N 09-44076 (Wh)
$14.95 ea.

AllStar
HB-124 4- 1/2"h x 16-1/2"w
P/N 09-44077 (Blk)
P/N 09-44078 (Wh)
$19.95 ea.

Katana DA20
HB-126 - 8"h x 24-1/4"w
P/N 09-44079 (Blk)
P/N 09-44080 (Wh)
$25.95 ea.

KITFOX
HB-023 - 1"h x 4-1/4"w
P/N 09-44082 (Blk)
$8.95 ea.

LANCAIR IV
HB-027 - 2-1/2"h x 12"w
P/N 09-44084 (Blk)
$21.95 ea.

LANCAIR IV P
HB-102 - 2-1/2"h x 14-3/4"w
P/N 09-44087 (Blk)
P/N 09-44088 (Wh)
$12.95 ea.

LANCAIR ES
HB-046 - 3-1/8"h x 10-7/8"w
P/N 09-44089 (Blk)
$19.95 ea.

LANCAIR SUPER ES
HB-090 - 3-1/4"h x 12-1/2"w
P/N 09-44091 (Blk)
$12.95 ea.

quickie
HB-125 - 2-1/2"h x 8-1/2"w
P/N 09-44093 (Blk)
P/N 09-44094 (Wh)
$10.95 ea.

QUICKSILVER
HB-104 - 5-1/2"h x 28"w
P/N 09-44097 (Multi-color)
$29.95 ea.

RANS S7
HB-057 -3-1/4"h x 25-1/4"w
P/N 09-44101 (Blk)
$14.95 ea.

RANS S10
HB-057 - 3-1/4"h x 25-1/4"w
P/N 09-44103 (Blk)
$13.95 ea.

RV-4
HB-098L&R- 5-1/4"h x 13"w
P/N 09-44106 (Blk)
P/N 09-44107 (Wh)
$25.90 /pr

RV-6
HB-097L&R - 5-1/4"h x 13"w
P/N 09-44108 (Blk)
P/N 09-44109 (Wh)
$25.95 ea.

RV-8
HB-096L&R -5-1/4"h x 13"w
P/N 09-44111 (Blk)
P/N 09-44112 (Wh)
$12.95 ea.

Starlet
HB-015 - 3"h x 6-1/2"w
P/N 09-44113 (Blk)
$11.95 ea.

Wag-A-bond
HB-016 - 2"h x 12"w
P/N 09-44116 (Blk)
$11.95 ea.

Wheeler
HB-035 - 1-1/4"h x 6-7/8"w
P/N 09-44118 (Blk)
$9.95 ea.

ZENAIR
HB-065 - 1-1/4"h x 8-1/2"w
P/N 09-44121 (Blk)
P/N 09-44122 (Wh)
$9.95 ea.

ROBERTSON/STOL
MS-070 - 2-1/2"h x 20"w
P/N 09-44126 (Blk)
$12.95 ea.


MS-050 - 3-1/2"h x3-1/2"w
09-44128 (Blk)
$13.95 ea.


MS-061 - 3"h x 3-1/2"w
P/N 09-44131
White lettering on red.
$10.95 ea.

AAM
MS-061 - 3"h x 3-1/2"w
P/N 09-44133 (Rd)
P/N 09-44134 (Wh)
$10.00 ea.

Prices Subject to Change Without Notice

LOGO DECALS

AC-001 - 7"h x 8"w
P/N 09-01967
White, Blue, & Yellow
$9.90 ea

AC-002 - 7"h x 8"w
P/N 09-43221
White, Red, & Black
$9.95 ea

CHAMP

AL-007 - 1"h x 8-1/8"w
$10.95 ea
P/N 09-43922 (Blk), 09-43923 (Wh), 09-43926 (Silver)

Sundowner

BE-021- 1/2"h x 12"w
$11.95 ea
P/N 09-43927 (Blk), 09-43928 (Wh)

Sierra

BE-030- 4.75"h x14.5"w
$16.95 ea
P/N 09-43929 (Blk)

Decathlon

BL-065 - 2"hx10-7/8"w
$13.95 ea
P/N 09-43932 (Blk), 09-43933 (Wh)

BELLANCA SUPERVIKING

BE-005 - 1.5"h x 18"w
White Left & Right (pair)
P/N 09-43936 .....**$37.90**
(Gold Wing Black type) Right side
P/N 09-43934 ..... **$18.95 ea**

8"h x 7-3/4"w
P/N 09-43939
(Black, Red, Blue)
$17.85 ea.
P/N 09-43940 (Black)
$11.95 ea

CL-089
2"h x 3-3/4"w
P/N 09-43941
(Full Color)
$11.95 ea

CL-225 - L & R
P/N 09-43942 (Blk)
P/N 09-43943 (Wh)
6"h x 10-1/2"w
$19.95 /pr

CL-071 - L & R
P/N 09-43944 (Blk)
P/N 09-43945 (Wh)
6"h x 10-1/2"w
$21.90 /pr

CL-071 - L & R
P/N 09-43946 (Blk)
P/N 09-43947 (Wh)
6"h x 10-1/2"w
$21.90/pr

CL-257L & R
P/N 09-43948 (Blk)
P/N 09-43949 (Wh)
6"h x 10-1/2"w **$21.50 /pr**

CL-112L & R
P/N 09-43950 (Blk)
P/N 09-43951 (Wh)
6"h x 10-1/2"w **$19.90 /pr**

CL-340 - L & R
P/N 09-43952 (Blk)
P/N 09-43953 (Wh)
6"h x 10-1/2"w **$21.90 pr.**

CL-214 - L & R
P/N 09-43954 (Blk)
P/N 09-43955 (Wh)
6"h x 10-1/2"w **$19.95 pr.**

CL-487 - L & R
P/N 09-43956 (Blk)
6"h x 10-1/2"w **$19.90 pr.**

CL-032L & R
P/N 09-43958 (Blk)
P/N 09-43959 (Wh)
6"h x 10-1/2"w **$19.95 pr.**

CESSNA 150

CL-454 (Black, White or OPT.)
P/N 09-43960 (Blk)
P/N 09-43961 (Wh)
1"h x 27"w **$19.95ea.**

CESSNA 206

CL-164 (Black, White or OPT.)
P/N 09-43962 (Blk)
P/N 09-43963 (Wh)
1-1/2"h x 15-1/2"w **$12.95 ea.**

CESSNA 310

CL-297 (Black, White or OPT.)
P/N 09-43964 (Blk)
1-1/2"h x 10-1/4"w **$13.95 ea.**

CESSNA 340

CL-327 P/N 09-43966 (Blk/Wh)
P/N 09-43967 (Blk/Gd)
2"h x 3-3/4"w **$13.95 ea.**

SKYHAWK

CL-178 P/N 09-43968 (Black)
P/N 09-43969 (Silver)
1-1/8"h x 9"w **$13.95 ea.**

SKYHAWK II

CL-102 (Black, White or OPT.)
P/N 09-43972 (Blk), P/N 09-43973 (Wh)
1/3/4"h x 11-1/2"w **$12.95 ea.**
CL-485 (Black, White or OPT.)

Superhawk

P/N 09-43977 (Blk),
P/N 09-43978 (Wh)
4"h x 12.5"w **$12.95 ea**

AMERICAN FLAG DECALS

Sold In Pairs Only



STRAIGHT
P/N 09-429– –



SLANTED
P/N 09-430– –



WAVY
P/N 09-431– –

HGT.	STRAIGHT		SLANTED		WAVY	
	WIDTH	PRICE	WIDTH	PRICE	WIDTH	PRICE
4"	7.5"	**$5.50**	7-1/2"	**$7.50**	4"	**$8.50**
6"	10.5"	**$9.50**	10-3/4"	**$13.50**	6"	**$12.50**
8"	14"	**$15.50**	14-1/2"	**$17.50**	8"	**$16.95**
10"	17.5"	**$21.50**	18-1/4"	**$25.95**	10"	**$25.95**
12"	20.5"	**$29.90**	21-1/4"	**$34.95**	12"	**$31.50**

Please order by part number. Use basic part number at top of chart, and complete part number with height of decal. Example: Wavy flag, 8" high is P/N 09-43108. Prices per pair (left & Right).

STARS & BARS



1943
Between 29 June and 14 August, the official national insignia incorporated white sidebars and an overall red surrounding outline and blue surrounding the star.

P/N 09-432– –



1943-1947
The red surround of the official insignia was quickly changed to a *blue surround* During its 4 years use this insignia appeared on more aircraft than all its predecessors combined.

P/N 09-433– –



1947-Present
With the reorganization of the Defense Department and the creation of the USAF, red bars were added to the official national insignia. A variation of this insignia appears officially without the blue surround on F-15 aircraft.

P/N 09-434– –

STYLE 4A ***STYLE 6A***



1917, 1921-1941
Introduced prior to the American entry into World War I and officially adopted after the war.



1942-1943
Some aircraft in the European and Mediterranean theaters unofficially incorporated a yellow surround in British style.

P/N 09-436-- P/N 09-439--

PRICING

SIZE	Style 1	Style 2	Style 3	Style 4A	Style 6A
10"	$65.00	$45.50	$49.95	$36.50	$25.00
15"	$72.25	$52.50	$58.50	$42.50	$43.20
20"	$87.50	$62.50	$69.75	$52.50	$45.00
25"	$99.50	$74.50	$82.50	$64.50	$62.50
30"	$120.50	$93.50	$115.95	$83.50	$75.50
35"	$175.50	$149.50	$153.75	$129.50	$101.80

Please order by part no. Use basic part no. under each style number and complete part no. with size of decal. Example: Style 3 decal in 25" size is P/N 09-43425

CESSNA Piper

Size 2-1/2" x 15" ***Size 2-1/2" x 11"***

Distinctive aircraft identification names, either stencils for painting or black vinyl lettering for easy press-on application.

Aircraft	Vinyl		Stencils	
	Part No.	Price/Set	Part No.	Price/Set
Cessna	09-33800	**$8.50**	09-33900	**$10.95**
Piper	09-34000	**$8.50**	09-34100	**$8.50**

PROPELLER DECALS

Sold In Pairs Only



09-42830 ... **$5.95 pr.**



09-42832 ... **$5.95 pr.**



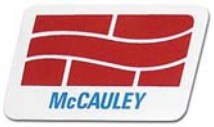
09-42834 ... **$5.95 pr.**



09-42836 .. **$5.95 pr.**



Black
09-42838 ... **$5.95 pr.**
White
09-02986 ... **$5.95 pr.**



09-42840 ... **$5.95 pr.**

CS

DECALS - PLACARDS



U.S. FLAG DECALS

Proudly display the Red, White, & Blue. Colorful vinyl pressure-sensitive U.S. Flag decals in right & left hand pattern.

2.5" x 4"..... P/N 13-01485 .....**$5.95**
4" x 6.5"..... P/N 09-35400 .....**$7.85**
6" x 10.5"..... P/N 09-35500 .....**$12.50**

AIRCRAFT SPRUCE LOGO DECALS

These royal blue on white self-adhesive oval shaped decals of the Aircraft Spruce & Specialty Company logo look great on your airplane, bumper, reference books, etc. Available in 3 sizes.

4" wide ..... P/N 09-40400 .....**FREE**
8" wide ..... P/N 09-40410 .....**FREE**
18" wide ..... P/N 09-40420 .....**FREE**

AIRCRAFT SPRUCE PATCH

This is an embroidered patch, oval in shape, and approximately 3-1/2", colors are Red/White/Blue. .....P/N 13-02703..... **$1.22**

CHECKLIST PLACARDS



Fixed gear, Fixed prop
P/N 09-42816.....**$3.75**



Fixed gear, Variable prop
P/N 09-42818 .....**$3.95**



Retractable gear, variable prop
P/N 09-42820 .....**$3.95**



Flight Plan Sequence
09-42822 .....**$3.35**



VFR minimums
09-42824 ..... **$3.75**



Emergency
09-42826 .....**$2.75**



Transponder Codes
09-42828 ..... **$2.75**



INSTRUCTIONAL USE ONLY PLACARD – Used on Part 103 exempted 2-seat ultralights. Available in pre-spaced vinyl lettering in your choice of colors. Size 3" x 10"
Vinyl Lettering..... P/N 09-43901.....**$2.50**



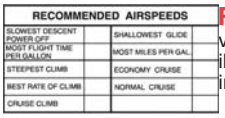
HOT EXHAUST – Black & red on white decal. Measures 1.5"x 4". A must where muffler can can be accidentally touched or brushed up against during aircraft servicing or entry.
P/N 09-43902 .....**$3.65**



OPEN ARROWS – Custom computer cut decals to indicate operation of door handles. Specify arrow CW or arrow CCW. Arrow and "OPEN" can be separated and individually positioned. Color: Red. Call for quote on custom size and colors. Standard size: 2"x 3-1/2".
Open Clockwise..... P/N 09-43903.....**$3.65**
Open Counter clockwise. P/N 09-43904.....**$3.65**
Custom Color..... **add $1.00**
Close Clockwise ..... P/N 09-03866.....**$3.65**



SOLO SEATING PLACARDS – Silkscreened in red ink on white all weather vinyl. Placards for solo from front or rear seat (specify). Size: 1"x 3".
Front Seat Solo..... P/N 09-43906.....**$2.35**
Rear Seat Solo ..... P/N 09-43907.....**$2.50**



RECOMMENDED AIRSPEEDS – Black on white vinyl. May be written on with a fine point indelible marker. Provides space for all your most important airspeeds. Size: 3.5" x 4.5
P/N 09-43908.....**$2.95**



WINDOW PLACARD – Black on white vinyl. Specify left arrow or right arrow. Size: 3/4" x 3".
Left ..... P/N 09-43909.....**$1.95**
Right..... P/N 09-43911.....**$1.95**



STATIC AIR – Black on white vinyl. U-V coated, fuel resistant. Used to mark location of static air vents. Size: 3/4" x 1".
P/N 09-43912 .....**$1.95**



CANOPY RELEASE – Black on white vinyl. Marks location of emergency release mechanisms for doors or canopies. Size: 7/8" x 3-1/8".
Canopy P/N 09-43913 . **$2.65**
Door..... P/N 09-43914.....**$2.65**



OIL INJECTION PLACARD – Black on white vinyl. Used on oil injected Two- Stroke engines. U-V and Fuel resistant. Size: 1" x 2-1/3".
P/N 09-43916.....**$1.95**



DRAIN SUMPS – Black on white vinyl. U-V and Fuel resistant. Size: 1" x 2".
P/N 09-00348.....**$4.50**



FUEL DRAIN LOCATOR – Black on white vinyl. Used to locate fuel drain petcocks on aircraft. U-V & Fuel resistant. Size: 1/2" x 2".
P/N 09-43917 .....**$1.95**



FIRE EXTINGUISHER – Black & Red on white vinyl. Used to locate extinguisher in emergency. Size: 2"x 3.5"
P/N 09-43918.....**$3.65**



BALLISTIC CHUTE – Black & red on white vinyl. Used to locate Ballistic Chute Handle in emergency. Size: 2" x 3.5".
P/N 09-43919.....**$3.65**



NO STEP DECAL - No Step, 1"x5" Decal-black letters
P/N 1040.....**$2.50**



NO LIFT DECAL - No Lift Decal. Color: Black on White. Size: 1/2" x 2-1/2"
P/N 104212.....**$1.65**

CS

Prices Subject to Change Without Notice

DECALS - PLACARDS

FUEL PLACARDS



09-42803
$4.95 ea.



09-42802
$4.50 ea.



80 Octane-half red/blue, round.
P/N 09-42804 ..... **$4.85 ea.**
100 Octane, Low Lead Only Blue
P/N 09-42806 ..... **$4.50 ea.**
100 Octane Only
P/N 09-42808 ..... **$4.75 ea.**



1234567890.
1234567890.
09-42801 ..... **$8.95 pr.**

USE 100/130 OCTANE FUEL ONLY

09-42810 ..... **$4.95 ea.**



Yellow on Black. Size: 1-1/4"x5"
P/N 09-01141 ..... **$3.65/pair**

FUEL
80/87 MIN. GRADE
AVIATION GASOLINE
or
UNLEADED AUTO GASOLINE
87 MIN. ANTIKNOCK INDEX
PER ASTM SPEC D-439

09-42814 ..... **$4.50 ea**

PLACARDS



1-1/4" x 5-1/4"
09-42812
$4.75 ea.



09-42809 **$0.65 ea.**
or 10 for **$4.88**



1-1/4" x 5-1/4"
09-42813
$4.95 ea.



1-1/2" x 2-1/4"
for Beechcraft
09-42811 **$4.85 ea.**



09-42604 **$4.50ea**



09-42817 **$4.50ea**



09-42608 **$4.75ea**



09-42821 **$4.50ea**



1-5/16" x 2-11/16"
09-42829 **$2.50 ea.**



09-42823 **$2.75ea**

FUEL OCTANE DECALS





Handsome vinyl placards have brilliant red lettering on a white background. Simply remove paper backing and apply. Size: 1" x 2-7/8".

80/87 red on white .....P/N 09-33610 ..... **$1.85 pr.**
100/130 green on white .....P/N 09-33615 ..... **$1.85 pr.**
100/130 red on white .....P/N 09-33700 ..... **$1.95 pr.**
100/130 red on white .....P/N 09-33710 ..... **$1.85 pr.**

GEAR DOWN BEFORE LANDING DECAL



Gear up landing incidents still occur everyday day in all categories of aviation. The most important item on a retractable airplane's before landing checklist may be the "GEAR DOWN BEFORE LANDING" item. By placing this simple, non adhesive transparent "GEAR DOWN" decal within view of the pilot, you can insure a higher level of awareness and safety during your approach and landing phase of flight. 4-3/4" x 1-3/4". Color: Red & Black print on clear. P/N 13-12967 ..... **$8.95**

AVGAS ONLY PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00037 ..... **$3.35**

CAUTION USE 80/87 AVGAS PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00034 ..... **$3.75**

CAUTION USE 100LL AVGAS PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00038 ..... **$3.75**

CAUTION USE 100/130 AVGAS PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00033 ..... **$3.75**

AIRCRAFT STC UNLEADED AUTO FUEL PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00032 ..... **$3.75**

JET FUEL ONLY PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00036 ..... **$3.75**

CAUTION DO NOT FILL AUX TANK PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00706 ..... **$3.65**

NO SMOKING PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00039 ..... **$3.65**

ZERO FUEL WEIGHT PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00704 ..... **$3.35**

WARNING ONLY THE PILOT PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00705 ..... **$3.75**

FASTEN SEATBELT PLACARD



Measures 1.25" x 3.75" ..... P/N 14-00040 ..... **$3.35**

SPINS PROHIBITED



Measures 1" x 3" ..... P/N 15-06666 ..... **$1.67**

CAUTION MAXIMUM BAGGAGE WEIGHT



Measures 1.25" x 3.75" ..... P/N 14-03291 ..... **$2.95**

CS

DECALS - PLACARDS



NAMEPLATE

All amateur-built aircraft must have a nameplate. Etch or stamp required data on this indestructible stainless steel nameplate. Conforms to FAA requirements. Size: 3"x 4-1/4". **Engraving is not included.**

P/N 09-01997 .....**$8.75ea**

Nameplate with custom engraving .....P/N 09-04684 .....**$44.95**

STAINLESS STEEL ID TAG



Suitable for all aircraft. Made of .015 acid-etched stainless steel. Size: 3"x 2".

P/N 09-00761..... **$3.35ea**

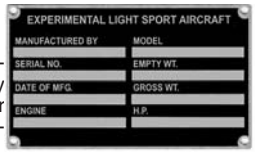


VAF SS DATA PLATE

Custom data plate engraving for your experimental aircraft. You will receive a fully engraved data plate ready to install on your aircraft for certification. It is highly recommended that you use Capital Letters.

P/N 09-04682..... **$54.95**

EXPERIMENTAL LSA SS DATA PLATE



Custom data plate engraving for your experimental aircraft. You will receive a fully engraved data plate ready to install on your aircraft for certification. It is highly recommended that you use Capital Letters.

P/N 09-04683.....**$44.95**

EXPERIMENTAL Single-piece decal with adhesive back. No need to line up 12 individual letters. One-step operation. Just remove protective backing and apply to any clean surface. 2" black letters on clear Mylar base. Decal Size: 2-1/4" x 19".

Set of 2..... P/N 09-33400 .....**$4.95**

LIGHT-SPORT DECALS - Similar to our EXPERIMENTAL Decals, complies with marking requirements for LSA. Available in: 2"x14-1/4"

Black on Clear .....P/N 09-00762.....**$2.25**
Black on White.....P/N 09-00782.....**$2.25**
White on Clear.....P/N 09-00783.....**$2.25**

NO STEP Bright red on white vinyl. Letters are 1" high. Decal size: 1-3/8" x 4-3/8".

P/N 09-33500..... **$1.25ea**

NO STEP 1"x5" Decal-black letters.

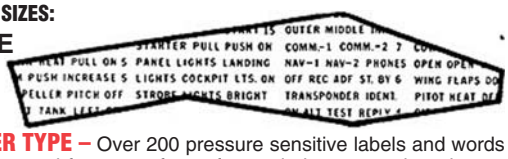
P/N 1040..... **$2.50**

PANEL MARKING SETS

ACTUAL TYPE SIZES:

THROTTLE

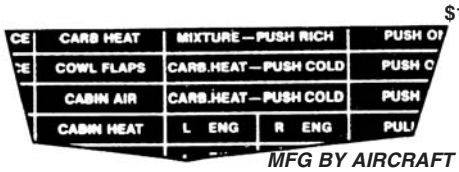
THROTTLE



DRY TRANSFER TYPE – Over 200 pressure sensitive labels and words conveniently grouped for ease of transfer to airplane controls or instrument panel. Available in two type sizes (see illustration) and in black or white lettering (specify).

Large Black ..... P/N 09-34600 Large White ..... P/N 09-34700
Small Black..... P/N 09-34800 Small White..... P/N 09-34900

$10.65 Set



MFG BY AIRCRAFT SPRUCE

SELF-ADHESIVE VINYL TYPE – White lettering on black background. Just cut, peel and press in place. Includes 349 of the most commonly used cockpit identifications and symbols (avionics, electrical, engine and aircraft controls) plus 248 numbers & letters. The most complete selection available. P/N 09-35000.....**$4.75 Set**



HOMEBUILDERS TYPE – Self-adhesive vinyl markings for the Long-EZ but applicable to many other aircraft. P/N 01-37800.....**$2.85 Set**

PASSENGER WARNING PLACARD - These Passenger Warnings must be displayed in the cockpit of all amateur-built aircraft. Verbiage complies with the latest FAA requirements. "Passenger Warning - This aircraft does not comply with federal safety regulations for standard aircraft".



This vinyl placard has brilliant red lettering on a white background. Simply remove the paper backing and apply.

P/N 09-05359.....**$2.25**



E-LSA- Red & White
P/N 09-01966 .....**$2.25**

S-SLA - Red & White
P/N 09-01968 .....**$1.95**



AIRCRAFT IDENTIFICATION DATA PLATES



FACTORY BUILT - Aircraft ID plate factory built made of aluminum. Not FAA Approved. Engraving included. When ordering please provide: Make, Model, S/N, N# for factory built aircraft only.

P/N 09-00447..... **$13.95**

EXPERIMENTAL ONLY - Aircraft ID plate factory built made of aluminum. Not FAA Approved. Engraving included. When ordering please provide: Make, Model, S/N, N# for factory built aircraft only.

P/N 09-40000..... **$13.95**



U.S. ARMY AIR CORP DATA PLATE

Experimental Data Plate replica - U.S. Army Air Corp. Used in many of the old liaison type airplanes from the L-3 to the L-21, as well as Boeing Stearman. P/N 05-12334.....**$22.85**

SOFT ALUMINUM DECALS



P/N 09-34200



P/N 09-34300



P/N 09-34400



P/N 09-34500

Soft Aluminum Decals Letters are 1-1/4"H X 3-3/4"L with black lettering. **$4.95 ea.**

CS

Prices Subject to Change Without Notice

PLACARDS

Made of aluminum foil with a pressure sensitive backing which adheres to most any surface that is clean and dry. The facing is made with a special anodize process which will resist sun fade-out and surface abrasion. These are the original placards that went into production in 1969. The placard material and anodize process meets Federal Specifications GG-455B and MIL-P-15024-B. The adhesive meets MIL-P-6906-A. Unless otherwise specified the placards are made of soft aluminum.



EMERGENCY EXIT PLACARD
P/N 05-11668 ..... **$5.75**



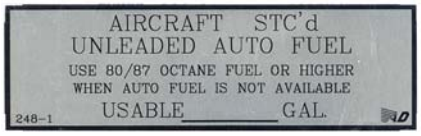
CAUTION 100LL AVIATION FUEL ONLY PLACARD
P/N 05-11590 ..... **$5.75**



LIFT HERE PLACARD
P/N 05-11640 ..... **$5.75**



FASTEN SEATBELT PLACARD
P/N 05-11642 ..... **$5.75**



UNLEADED AUTO FUEL PLACARD
P/N 05-11643 ..... **$5.75**



WARNING DOOR PLACARD
P/N 05-11644 ..... **$5.75**



NO PUSH PLACARD
P/N 05-11646 ..... **$5.75**



NO LIFT PLACARD
P/N 05-11648 ..... **$5.75**



CAUTION STATIC AIR PLACARD
P/N 05-11649 ..... **$5.75**



FUEL DRAIN PLACARD
P/N 05-11650 ..... **$5.75**



CAUTION USE 100/130 AVIATION GRADE FUEL
P/N 05-11657 ..... **$5.75**



BEST AIRSPEED FOR PLACARD
P/N 05-15359 ..... **$7.25**



INTENTIONAL SPINS PROHIBITED PLACARD
P/N 05-15362 ..... **$5.75**



MODEL S/N PLACARD
P/N 05-11645 ..... **$5.75**



NO SMOKING PLACARD
P/N 05-11663 ..... **$5.75**



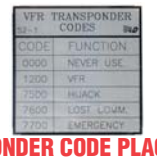
ICAO ALPHABET PLACARD
P/N 05-11611 ..... **$5.75**



STEP HERE PLACARD
P/N 05-11664 ..... **$5.75**



VFR PLACARD
P/N 05-15357 ..... **$5.75**



VFR TRANSPONDER CODE PLACARD
P/N 05-11669 ..... **$5.75**



CROSS WIND COMPONENT PLACARD
P/N 05-15364 ..... **$7.25**



COMPASS DEVIATION CARD PLACARD
P/N 05-15358 ..... **$5.75**



COMMON FREQUENCIES PLACARD
P/N 05-15363 ..... **$5.75**



TIRE PRESSURE PLACARD
P/N 05-11647 ..... **$5.75**



JACK POINT PLACARD
P/N 05-11652 ..... **$5.75**



TIE DOWN PLACARD
P/N 05-11656 ..... **$5.75**



GROUND HERE PLACARD
P/N 05-11672 ..... **$5.75**



LEVEL POINT PLACARD
P/N 05-11670 ..... **$5.75**

CS

PLACARDS

Color for placards below are white on black.



5/8"x 3-1/4" .P/N 09-42842
1"x 5" .. P/N 09-42844 .**$2.50 ea**



1"x 5" .....P/N 09-42850
5/8"x 3-1/4" ...P/N 09-42848 .. **$2.75ea**



1"x 3" 09-42858. **$1.95**



1"x 3" 09-42852. **$1.95**



1"x 3" 09-42854.**$2.25**



1"x 5" ..... 09-42856 ..... **$2.50ea**



1"x 3" .....09-42860 ..... **$1.95ea**



1"x 4" ..... 09-42846..... **$2.95ea**

All the placards & decals on this page are produced on long lasting UV coated pressure sensitive adhesive vinyl. They are computer cut using no clear background so they won't yellow. These are all top quality decals which will enhance your aircrafts looks for years to come. Do not settle for "cheap" imitations.

12-INCH STENCIL NUMBER STRIP

Highly recommended as the easiest and most effective way to apply painted 12" stenciled "N" numbers on any aircraft. These come pre-spaced and aligned horizontally or vertically and assure a professional looking job. Shipped factory-direct to you within 48 hours. Provide exact "N" number when ordering. Special order - Non-returnable. Please specify horizontal or vertical. 6 Characters on each strip or less. Made of Vinyl.

12" Strip (straight) (right/left).....P/N 09-00287 .... **$56.95 set**
12" Strip (slanted) (right/left).....P/N 09-00288 .... **$56.95 set**

Note: The Helvetica font is 2" width. Military and monument fonts are a condensed version for smaller spaces and are 1-1/2" wide. Certified aircraft require minimum 2" width so helvetica must be used.

3-INCH STENCIL STRIP

Vertical or horizontal lettering individually spaced and aligned. Advise number. Stencils will be made-to-order and shipped in about two weeks.

Straight Set of 2 (Right/Left).....P/N 09-00289 .... **$13.50 set**
Slanted Set of 2 (Right/Left).....P/N 09-00290 .... **$13.50 set**

INDIVIDUAL FIGURE STENCILS

N4804K N2510T N6979N
N425WT N100MD N51ER

Precut sticky paper masks for spraying registration numbers. Used by Piper and other aircraft manufacturers. Order two of each character for vertical stencils. Slanted stencils are furnished in pairs (R/L), so order one pair of each character. Order by part number. For last digit, put in number or letter needed.

3 Inch Vertical Figures.....P/N 09-3280x ..... **$1.25 Ea**
3 Inch Slanted Figures.....P/N 09-0672X..... **$1.25 Ea.**
12 Inch Vertical Figures.....P/N 09-3290x ..... **$6.25 Ea**
12 Inch Slanted Figures.....P/N 09-3300x .....**$13.50 Pr**

Note: Full N number strips are available. Individual Numbers and letters will not align isometrically. Vinyl strip or stencil strip is recommended.

Painting Options: These stencils offer you two methods of spraying lettering incorporated in a single stencil.

You can: (1) Letter after the body color has been applied or
(2) Letter before the body color has been painted. This second method provides recessed, protected lettering and eliminates masking.

LETTERING & NUMBERS

For any use. Available in over 40 type styles. Most colors available.

Cap Size(In.)	In Stock Colors	Slanted or Reversed	Reflective & Metallic
3/4	.40	.45	N/A
1	.75	.80	.80
1-1/2	.75	.80	80
2	1.00	1.05	1.05
2-1/2	1.00	1.05	1.05
3	1.35	1.40	1.40
4	1.35	1.40	1.40
4-1/2	1.50	1.55	1.55
5	1.50	1.55	1.55
6	1.80	1.85	1.85
7	2.25	2.30	2.30
8	2.50	3.00	3.00
9	4.00	4.50	4.50
10	5.00	5.50	5.50
12*	6.75	7.05	7.05

***Numbers excluded**

12-INCH VINYL N NUMBER STRIP

The fastest and easiest way to apply registration numbers. These numbers come pre-spaced and aligned and are ready to apply in one simple operation. These are top quality numbers which are shipped factory direct to you. Provide exact "N" number when ordering. 6 Characters max. on each) Color choices are black, white, red, blue, or gold. Standard type style is helvetica. Military block, drop shadow, or outline styles are also available. Please specify your N number, color, orientation, and print style in the special instructions of the online order form. Colors Available: * Black * White * Tomato Red (Light Red) * Cardinal Red (Dark Red) * Olympic Blue (Sky Blue) * Bright Blue * Sapphire Blue * Light Navy * Metallic Gold * Metallic Silver * Green * Brown

Note: Drop Shadow style is double the cost due to it being two colors.

Straight 12" Strip (6 Characters max. on each)
P/N 09-41910..... **$56.95 pair.**

Slanted 12" Strip (6 Characters max. on each)
P/N 09-41922 ..... **$56.95 pair.**

Slanted 12" Drop Shadow Strip (6 characters max. on each)
P/N 09-03434 ..... **$112.95 pair**

12-INCH INDIVIDUAL VINYL NUMBERS

We now offer new 12" vinyl "N" numbers as now required for return flight to the U.S. from foreign countries. Available in black, gold, red, white or blue. Numbers are slightly slanted. Basic part number is 09-387xx. Second to last digit is for color. 1 – Black, 6 – Gold, 7 – Red, 8 – White, 9 –Blue. For last digit, put in number or letter needed.

Note: Full N number strips are available. Individual numbers and letters will not align isometrically. Vinyl strip or stencil strip is recommended.

Please Note: N-Numbers ship via priority mail only to all U.S. domestic customers.

See our website for a complete listing of Part Numbers

Slanted 12" Individual #'s..... **$10.25 / pair**

3-INCH VINYL INDIVIDUAL NUMBERS & LETTERS

Individual vertical numbers and letters. Pressure sensitive vinyl for easy application. Black only. No slanted numbers available. Basic part no. is 09-3310x. For last digit, put in number or letter needed. ..... **$1.25 ea.**
Helvetica Straight ..... **$4.50/letter** Helvetica Slanted..... **$5.25/letter**
Monument Block..... **$9.00/ letter** Monument Block Slant.. **$9.00/ letter**

Note: Full N number strips are available. Individual numbers and letters will not align isometrically. Vinyl strip or stencil strip is recommended.



3" VINYL NUMBER STRIP

"N" Number Strips assure handsome registration numbering in minutes. Complete made-to-order 3" registration number on adhesive application strip individually spaced and aligned (NOT A FILM). Lay strip on aircraft and remove backing. Permanent number remains bonded to aircraft. A real time saver. Will outlast paint - look better. Available in black, white or gold. Vertical or horizontal lettering. Specify vertical or horizontal lettering and color. Colors Available: * Black * White * Tomato Red (Light Red) * Cardinal Red (Dark Red) * Olympic Blue (Sky Blue) * Bright Blue * Sapphire Blue * Light Navy * Metallic Gold * Metallic Silver * Green * Brown

******Delivery by UPS only*****

3"Straight..... Right & Left..... P/N 09-00294 ..... **$17.25 set**
3"Slanted..... Right & Left..... P/N 09-00302 ..... **$14.95 set**

Letter styles available for your aircraft. 3" and 12" vinyl strips.



CARDBOARD DIE-CUT ONE-PIECE STENCILS

	Size	Part No.	Price Each
EXPERIMENTAL	2"H x 18"L	09-32400	**$5.95**
NO STEP	2"H x 4-3/4"L	09-32500	**$4.85**
NO PUSH	1"H x 4-3/4"L	09-32600	**$2.45**
NO STEP	1"H x 4-3/4"L	09-32700	**$2.45**



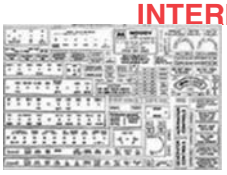
TRACE-IT STENCIL SETS

Allows for stenciling of every letter and number. NOTE: Illustration is portrayal of item you actually receive - each kit contains 3", 12" and 24" sizes.

P/N 09-42831 ..... **$46.90**

AIRCRAFT PLACARD KITS

INTERIOR PLACARD KITS



These quality decal sets are designed to provide all the necessary placards for the interior of various production and homebuilt aircraft. Just cut the decals you want to use from the card and apply to the aircraft interior.

NOTE: PART NUMBERS SHOWN ARE FOR WHITE ON BLACK INTERIOR PLACARD SETS. FOR WHITE ON CLEAR ADD -1 TO PART NUMBER. FOR BLACK ON WHITE ADD -2. FOR BLACK ON CLEAR ADD -3.

DESCRIPTION	P/N	PRICE
BEECHCRAFT		
MUSKATEER 19, 23	13-03954	**$56.25**
24, 24R, SIERRA	13-03950	**$56.25**
33, 35, 36 SERIES	13-03951	**$104.95**
TWIN BONANZA	13-03953	**$104.95**
BELLANCA		
CITABRIA/DECATHLON	13-03949	**$54.25**
CESSNA		
120/140/150/152	09-44055	**$48.99**
170/172/175	09-44060	**$48.65**
177/177RG	13-03955	**$54.75**
180/182/185	13-03956	**$49.95**
190/195	09-01158	**$50.00**
205/206/207	09-01963	**$80.75**
210/210T	09-01010	**$79.25**
310 H-M	09-01084	**$135.95**
310 P-Q	09-01160	**$113.95**
310 -D	09-01162	**$113.95**
336/337	09-01161	**$138.95**
ERCOUPE	09-01165	**$84.50**
GROB		
SEAPLANE	09-01021	**$41.70**
GRUMMAN		
AA1/AA1A	09-01168	**$41.75**
AA5/AA5A, AA5B	09-01170	**$58.75**
COUGAR	09-01171	**$133.95**
BARON	13-03952	**$125.00**
PIPER		
PA-18 SUPER CUB	09-01176	**$33.00**
PA-23 AZTEC SERIES	09-01184	**$82.25**
PA-24 COMANCHE	09-01181	**$54.25**
PA-28 140-181 CHEROKEE	09-01179	**$53.95**
PA-28 235-236	09-01180	**$53.95**
PA-28 R ARROW SERIES	09-00441	**$54.25**
PA-30 TWIN COMANCHE	09-01183	**$69.95**
PA-32 CHEROKEE-LANCE	09-01182	**$54.25**
PA-34	09-01185	**$79.25**
SARATOGA		
PA-38 112 TOMAHAWK	09-01178	**$53.80**
PA-44 SEMINOLE SERIES	09-01186	**$79.25**
TRI-PACER	09-01177	**$29.50**
WESTWIND	09-01046	**$208.95**
UNIVERSAL INTERIOR	09-01197	**$7.50**

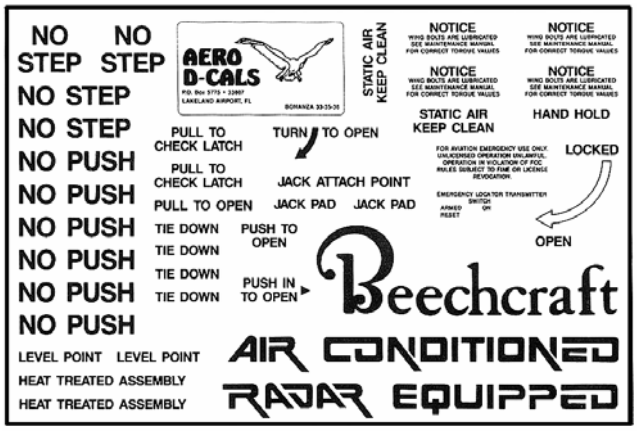


AERONCA 7AC STYLE COCKPIT INTERIOR PLACARDS

These experimental Aeronca 7AC like style parts will help you achieve the pre or post war appearance you are looking for without taking away from the performance.

Description	PN	Price
Fuel On/Off Placard	05-12328	**$17.95**
Throttle Open/Closed Placard	05-12329	**$12.65**
"Do Not Exceed 129 Miles Per Hour..." Placard	05-12330	**$17.95**
"Maximum Baggage 20 LBS	05-12331	**$11.95**
Middleton, OH Post WWII Data Plate	05-12332	**$23.95**
Nose Up/Down Trim Placard	05-12333	**$21.55**

EXTERIOR PLACARD KITS



NOTE: PART NUMBERS SHOWN ARE FOR BLACK ON CLEAR EXTERIOR PLACARD SETS. FOR WHITE ON CLEAR ADD -1 TO PART NUMBER. FOR BLACK ON WHITE ADD -2. FOR WHITE ON BLACK -3.

Aircraft Model	P/N	Price
Helicopter (Universal)	09-44201	**$37.50**
Single Engine (Universal)	09-44202	**$37.50**
Mooney M20/21	09-44203	**$49.95**
Piper PA28 Cher/Warrior/Archer II	09-44204	**$39.75**
Piper PA32 Cher/Lance/Saratoga	09-44206	**$48.75**
Piper PA32 Apache/Aztec	09-44207	**$69.95**
Piper PA34 Seneca I/II/III	09-44209	**$79.75**
Piper PA30/39 Twin Comanche	09-44211	**$66.75**
Piper PA31T/42T Cheyanne	09-44205	**$131.95**
Cessna 100/200	09-44213	**$35.95**
Cessna 300 Series	09-44210	**$133.95**
Cessna 400 Series	09-44220	**$83.50**
Cessna 425/441	09-44235	**$112.00**
Cessna Jet 500 Series	09-44245	**$207.95**
Beech Bonanza V35	09-44216	**$96.85**
Beech Baron 55/58	09-44251	**$123.95**
Beech Duke 60	09-44217	**$133.95**
Beech Queen Air 65/88	09-44218	**$157.00**
Beech King Air 200/300	09-44250	**$159.00**
Beech Jet 400 Series	09-44255	**$238.75**
Exterior Kit Beech King Air	09-01956	**$154.95**
Saber Jet 40/60	09-44219	**$193.00**
Hawker Jet 500	09-44280	**$164.00**
Westwind Jet 1100	09-01046	**$208.95**
Gulfstream 690-1000	09-44224	**$244.95**
Challenger Jet 600	09-44227	**$169.00**
Falcon Jet 10/20	09-44228	**$139.95**
Lear Jet 20 Series	09-44260	**$165.00**
Lear Jet 30 Series	09-44265	**$198.95**
Lear Jet 50 Series	09-44231	**$165.00**
Rockwell 112/114	09-44232	**$53.85**
Rockwell Gulf Stream 690	09-44233	**$131.00**

Die cut decal kits are available on request. Call for quotation.

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RCA 2610 SERIES DIGITAL ATTITUDE INDICATORS



The RCA2610 is the updated version of the popular RCA2600 Electric Digital Attitude Indicator. It is the perfect companion to the RCA1510 Digital Heading Indicator. This version has the same form, fit, and function as the original but has dual processors, improved screen resolution and updated software. The optional Pitch Sync feature allows pilots to instantly synchronize the airplane symbol to the horizon line when flying in a pitch up or pitch down attitude.

The RCA2610-G version comes without the Pitch Sync feature and functions like the original model with the brightness controls only.

The RCA2610 is designed to handle the high vibration environment found on helicopters and yet, their light weight makes them perfect for soaring. This makes the RCA2610 the most versatile and dependable Digital AI on the market today. With no moving parts to wear out, this instrument will provide years of reliable service - that's why it includes a full two-year warranty!

All RCA2610 models can be ordered with an optional slip indicator (inclinometer) which satisfies FAA AC 91-75 for even greater versatility. The panel tilt angle can be set from 0 to 90 degrees in one degree increments, but must be specified at time of order. Operating Voltage: 9 to 32VDDC.

Made in the USA. FAA/EASA Certified.

Description	Part No.	Price
2 Inch Pitch Sync 0 Degrees	10-06428	**$2,590.00**
2 Inch Pitch Sync 8 Degrees	10-06429	**$2,590.00**
2 Inch Pitch Sync Custom Tilt: 0-90 Degrees	10-06430	**$2,590.00**
2 Inch No Pitch Sync 0 Degrees	10-06434	**$2,590.00**
2 Inch No Pitch Sync 8 Degrees	10-06435	**$2,590.00**
2 Inch No Pitch Sync Custom Tilt: 0-90 Degrees	10-06436	**$2,590.00**
3 Inch Pitch Sync 0 Degrees	10-06431	**$2,645.00**
3 Inch Pitch Sync 8 Degrees	10-06432	**$2,645.00**
3 Inch Pitch Sync Custom Tilt: 0-90 Degrees	10-06433	**$2,645.00**
3 Inch No Pitch Sync 0 Degrees	10-06437	**$2,590.00**
3 Inch No Pitch Sync 8 Degrees	10-06438	**$2,595.00**
3 Inch No Pitch Sync Custom Tilt: 0-90 Degrees	10-06439	**$2,590.00**

RCA 1510 SERIES DIGITAL HEADING INDICATORS



The RCA1510 Series Digital Heading Indicator is the latest addition to the RC Allen Digital Instrument Lineup. It is the perfect companion to the RCA2610 Digital Attitude Indicator.

The RCA1510 is designed as a fully FAA Certified direct replacement for your mechanical Directional Gyro. It is totally self-contained and fits in a standard 3-inch panel cut-out. There are no special external connections other than power and an external GPS antenna. The Multi-Volt function (9-32V) allows installation in both 14 Volt and 28 Volt systems.

The RCA1510 combines data from its own internal magnetometer and GPS receiver for a more stable and accurate heading reading which also eliminates the need to "cage" or "zero" the instrument.

Because the RCA1510 has no mechanical gyroscope, it is much more accurate than traditional heading indicators. Unlike a mechanical gyroscopic unit, the RCA1510 is not affected by drifting or wandering. The unit is designed to work without GPS input if the GPS signal is lost.

The highly visible screen has adjustable brightness controls. It has a traditional rotating dial display with digital numeric headings. The pilot can adjust the Heading Bug just like a mechanical instrument or use the Quick-Set Heading Bug; a double-push of the HDG knob sets the Bug to the current heading.

The panel tilt angle can be set from 0 to 90 degrees in one degree increments, but must be specified at time of order.
Made in the USA
Features:
- Totally self-contained
- Quick-set Heading Bug
- Internal Magnetometer and GPS
- Sharp Dimmable Display
- Dual Processor Performance
- Multi-volt Operation (9 to 32 Volts)
- Fits standard panel cutout
- Vibration Resistant
- All digital - No moving parts
- Black anodized bezel
- Lightweight - 8oz. Max
- FAA Certified

Specifications:
- Operating Voltage: 9 to 32VDDC
- Running Current: (14VDC system) 0.20 AMPs MAX, (28VDC system) 0.18 AMPs MAX
- Circuit Breaker Size: 1AMP
- Accuracy: 2 Degrees
- Operating Temperature Range: -30º to +55º C
- Mating Connector: MS3116E8-4S or equivalent
- Dimensions: Please see specifications document.
- Weight: 8 oz. Max
- FAA Specification Conformance: TSO-C6e, TSO-C113a, DO-160G & DO-178B Level C

Description	Part No.	Price
0 Degrees	10-06580	**$2,645.00**
8 Degrees	10-06584	**$2,645.00**
Custom Tilt: 0-90 Degrees	10-06585	**$2,645.00**

RC ALLEN DIRECTIONAL GYROS (ELECTRIC)



Pictured is RCA15AK-1

The RCA15 Series electric directional gyro employs and electrically driven gyro motor and is a direct reading, azimuth indicator. Rotor run up time is 3 min. They have a built in inverter which converts aircraft DC power to the required AC voltage and frequency. May be used in both fixed wing and rotor wing aircraft and is easily installed in standard 3 1/8" panel cut out. Power failure flag drops into view when supply voltage is lost or has dropped below a level for proper operation of the gyro. Azimuth indication range 360°. Altitude operation 1,000 to 40,000 feet. Internal 3 phase inverter produces high starting torque and increases gyro roto speed. Internal lighting provides even light distribution at any intensity level. calibrated to an accuracy of 3° maximum drift error after 10 minutes of ±1.5° scorsby motion.

Meets or exceeds all requirements of FAA TSO C5c and Aeronautical Standard AS397.
Made in the USA

Electrical Requirements:
- Starting Current @ 14 VDC: 2.4A Max
- Running Current @ 14 VDC: 1.2A
- Starting Current @ 28 VDC:; 1.4A Max
- Running Current @28 VDC .6A
- Reccomended Circuit Breaker 3A

Model	Description	Part No.	Price
RCA15AK-1	14 VDC, Lighted	10-01681	**$2,279.00**
RCA15AK-2	14 VDC	10-01390	**$2,166.00**
RCA15BK-1	28 VDC, Lighted	10-01682	**$2,279.00**
RCA15BK-2	28 VDC	10-00501	**$2,166.00**
RCA15AK-16	14 Volt, 400HZ, 5K.	10-02530	**$2,889.00**
RCA15AK-17	14 Volt,Heading Bug only.	10-02529	**$2,669.00**
RCA15BK-16	28 Volt, 400HZ, 5K.	10-02533	**$2,889.00**
RCA15BK-17	28 Volt,Heading Bug only.	10-02532	**$2,669.00**
15BK-1	Factory Overhauled	10-05690	**$1,025.00**
Accessories			
MS3116E8-4S	4 Pin Connector	10-00791	**$30.95**
444-0011-0	Mini Slip Indicator - Add this to your new or current Electric Gyro Horizon. Replaces 444-0007-01.	10-04623	**$147.95**

RC ALLEN ATTITUDE GYROS (ELECTRIC)



The RCA26 Series is the top of the line and has been designed for precision and reliability. The RCS26EK Series is a 10-30VDC instrument. You have a choice of a fixed or moveable pointer, and a 14 or 28 volt lighting. Performance characteristics include roll indication of 360°. Pitch ± 30°. Pitch trim range ±7°. Slip Indicator can be added upon request. Mating connector (MS3116E8-4S) is also available. ***Pictured is the RCA26EK-11 *Additional core charge added to purchase at time of checkout. Exchange core must be a like core* and the core must be returned no later than 20 days from the invoice date to receive core credit.***

Model No.	Description	Part No.	Price
RCA26EK-11	Fixed Pointer, unlit. 0 Degree Tilt	10-02524	**$2,166.00**
RCA26EK-11 8 Degree Tilt	Fixed Pointer, unlit. 8 Degree Tilt	10-05004	**$2,166.00**
RCA26EK-11 Custom Tilt	Fixed Pointer, unlit. Specify Tilt	10-04984	**$2,166.00**
RCA26EK-12	Fixed Pointer, lighted. 0 Degree Tilt	10-02526	**$2,279.00**
RCA26EK-12 8 Degree Tilt	Fixed Pointer, lighted. 8 Degree Tilt	10-05005	**$2,279.00**
RCA26EK-12 Custom Tilt	Fixed Pointer, lighted. Specify Tilt	10-04985	**$2,279.00**
RCA26EK-13	Moveable pointer, unlit. 0 Degree Tilt	10-02527	**$2,166.00**
RCA26EK-13 8 Degree Tilt	Moveable pointer unlit. 8 Degree Tilt	10-05006	**$2,166.00**
RCA26EK-13 Custom Tilt	Moveable pointer unlit. Specify Tilt	10-04986	**$2,166.00**
RCA26EK-14	Moveable pointer, lighted. Voltage and tilt must be specified at time of order.	10-02528	**$2,279.00**
RCA26AK-1	Standard look, 14V, Lighted, Moveable pointer, Stationary roll dial. 0 degree tilt.	10-00608	**$2,279.00**
RCA26AK-1 8 Degree Tilt	Standard look, 14V, Lighted, Moveable pointer, Stationary roll dial. 8 degree tilt.	10-05002	**$2,279.00**
RCA26AK-1 Custom Tilt	Standard look, 14V, Lighted, Moveable pointer, Stationary roll dial. Specify tilt.	10-04989	**$2,279.00**
RCA26AK-2	Standard look, 14V, Lighted, fixed pointer, moveable roll dial. 0 Degree Tilt	10-01683	**$2,279.00**
RCA26AK-2 8 Degree Tilt	Standard look, 14V, Lighted, fixed pointer, moveable roll dial. 8 Degree Tilt	10-00392	**$2,279.00**
RCA26AK-2 Custom Tilt	Standard look, 14V, Lighted, fixed pointer, moveable roll dial. Specify Tilt	10-04990	**$2,279.00**
RCA26AK-3	Standard look, 14V, Moveable pointer, Stationary roll dial. 0 Degree Tilt.	10-01118	**$2,166.00**
RCA26AK-3 8 Degree Tilt	Standard look, 14V, Moveable pointer, Stationary roll dial. 8 Degree Tilt.	10-05003	**$2,166.00**
RCA26AK-3 Custom Tilt	Standard look, 14V, Moveable pointer, Stationary roll dial. Specify Tilt.	10-04991	**$2,166.00**
RCA26AK-4	Standard look, 14V, Fixed Pointer, Moveable roll dial.	10-01392	**$2,166.00**
RCA26AK-4-8	Standard look, 8° Tilt, 14V, Fixed Pointer, Moveable roll dial.	10-00391	**$2,166.00**
RCA26BK-2	Standard look, 28V, Lighted, Moveable pointer, Stationary Roll Dial.	10-01119	**$2,279.00**
RCA26BK-6	Standard look, 28V, Fixed Pointer, Moveable Roll Dial.	10-01393	**$2,166.00**
RCA26BK-8	Standard look, 28V, Moveable pointer, Stationary Roll Dial.	10-01120	**$2,166.00**
RCA26BK-9	Standard look, 28V, Lighted, Fixed pointer, Moveable Roll Dial.	10-00466	**$2,279.00**
RCA26BK-12	5° Tilt, 28V, Lighted, Moveable pointer, fixed roll dial	10-01122	**$2,279.00**
26BK-9	Factory Overhauled*	10-05685	**$1075.00**
26BK-2	Factory Overhauled*	10-05686	**$1075.00**
26AK-4	Factory Overhauled*	10-05687	**$1075.00**
MS3116E8-4S	4 Pin Connector MS3116E8-4S	10-00791	**$30.95**
444-0011-01	Slip indicator/inclinometer for RCA26 & RCA22 Series manufactured before 03/04/2011	10-04623	**$147.95**

CORE CHARGES APPLY TO OVERHAULED GYROS.

IN

RC ALLEN VACUUM HORIZON GYRO



The RCA22 Series of vacuum artificial horizon are controlled by air driven precision gyros to present the pilot with pitch and roll information. The attractive color scheme of blue sky and brown ground presents a realistic spherical display of flight. Unless otherwise indicated all instruments have a dark blue/brown display, fixed pointer and are unlighted. This is the "standard" display. Instruments equipped with a warning flag will let you know when vacuum has dropped below 3.8 inch Hg. Flag retracts from view at 4.3 inch. Hg. Instrument fits in a standard 3 1/8" panel cutout. ***Meets or exceeds all requirements of FAA TSO C4c and Aeronautical Standard AS396B. *Additional core charge added to purchase at time of checkout. Exchange core must be a like core* and the core must be returned no later than 20 days from the invoice date to receive core credit.***

Model No.	Description	Part No.	Price
RCA22-7	Standard display, 0 Degree Tilt	10-01371	**$919.00**
RCA22-7	Standard Display,8 Degree Tilt.	11-03607	**$915.00**
RCA22-7	Standard Display, Specify Tilt.	11-11150	**$859.00**
RCA22-7F	Standard Display with a warning flag. 0 Degree Tilt	10-00504	**$1,036.00**
RCA22-7F	Standard Display with a warning flag. 8 Degree Tilt	10-04998	**$978.00**
RCA22-7F	Standard Display with a warning flag. Specify Tilt	10-04996	**$978.00**
RCA22-11	Standard display, lighted 14V, 0 Degree Tilt.	10-00502	**$978.00**
RCA22-11	Standard display, lighted 14V, 8 Degree Tilt.	10-04994	**$978.00**
RCA22-11	Standard display, lighted 14V, Custom Tilt.	10-04995	**$978.00**
RCA22-11	Standard display, lighted 28V, 0 Degree Tilt	10-01391	**$978.00**
RCA22-11	Standard display, lighted 28V, 8 Degree tilt	10-03635	**$978.00**
RCA22-11	Standard display, lighted 28V, Custom Tilt	10-05011	**$978.00**
RCA22-11F	Standard display, lighted, with a warning flag. (14V) 0 Degree Tilt	10-00094	**$1,143.00**
RCA22-11F	Standard display, lighted, with a warning flag. (14V) 8 Degree Tilt	10-05010	**$1,075.00**
RCA22-11F	Standard display, lighted, with a warning flag. (14V) Custom Tilt	10-04993	**$1,075.00**
RCA22-11F	Standard display, lighted, with a warning flag. (28V). 0 Degree Tilt.	10-03574	**$1,075.00**
RCA22-11F	Standard display, lighted, with a warning flag. (28V). 8 Degree Tilt.	10-05008	**$1,075.00**
RCA22-11F	Standard display, lighted, with a warning flag. (28V). Custom Tilt.	10-05009	**$1,075.00**
RCA22-15	Display is blue over black 0 Degree Tilt.	10-01109	**$919.00**
RCA22-15	Display is blue over black 8 Degree Tilt.	10-05007	**$859.00**
RCA22-15	Display is blue over black Custom Tilt.	10-04997	**$859.00**
RCA22-7	Overhauled RCA22-7 Horizon Gyro*	10-05439	**$585.00**
RCA22-7F	Overhauled RCA22-7F	10-05869	**$595.00**
RCA22-11	Overhauled RCA22-11	10-05870	**$595.00**
RCA22-11F	Overhauled RCA22-11F	10-05871	**$595.00**
RCA22-15	Overhauled RCA22-15	10-05872	**$595.00**
RCA22-7F	Overhauled RCA22-7F	10-05869	**$595.00**
RCA22-11	Overhauled RCA22-11	10-05870	**$595.00**
RCA22-11F	Overhauled RCA22-11F	10-05871	**$595.00**
RCA55-15	Overhauled RCA22-15	10-05872	**$595.00**

RC ALLEN DIRECTIONAL GYROS VERTICAL CARD (VACUUM)



RCA11A-8



RCA11A-15

The RCA-11A series of vacuum directional gyros utilize and air driven precision gyro that controls a vertical rotating azimuth gimbal. The R.C. Allen Model RCA11A has been designed to provide a long life of accurate operation even when subjected to severe operating requirements. This instrument is engineered with a minimum of machined parts, providing lower initial cost and lower maintenance cost through its lifetime. The RCA11A is non-tumbling within ±85° limits in pitch and roll and can be easily installed in any 3 1/8" panel cut out. Meets or exceeds all requirements of FAA TSO C5c and Aeronautical Standard AS397. Dimensions: Length: 6.7" Height: 3.4" Width: 3.4" Weight: 2.3 Pounds

Model No.	Description	Part No.	Price
RCA11A-8	Standard Display	10-01370	**$919.00**
RCA11A-8F	Standard Display with Flag	10-01680	**$978.00**
RCA11A-15	Cardinal Heading markers N., S., E., & W. (Piper/Cessna display)	10-00390	**$919.00**
RCA11A-15F	Same as RCA11A-15 with flag	10-01116	**$1,039.00**
RCA11A-16B	Standard Display, Lighted, 14 Volt.	10-01369	**$978.00**
RCA11A-17B	Standard Display, Lighted, 28 Volt	10-01389	**$796.00**
RCA11D-4	Single Pointer, 400hz Autopilot with heading bug.	10-01117	**$1,569.00**
RCA11D-5	Dual Auto Pilot with Heading Bug	10-03430	**$1,559.95**
RCA11D-7	With Heading Bug Only	10-02931	**$1,295.00**
11A Series	Factory Overhauled 11A Series Gyro (Core Charges Apply)	10-05683	**$585.00**
RCA11A-15	Factory Overhauled (Piper/Cessna Display)(Core Charges Apply)	10-06263	**$595.00**



SIGMA-TEK 5000B SERIES STANDARD ATTITUDE GYROS

The 5000B is an air-driven gyro that has a pictorial horizon mask and fixed airplane. The mask moves to indicate climb, dive, and bank. Bank and pitch attitudes are displayed so that the pilot's sensing of the gyro indication is the same as the interpretation of the relation between the wings of the aircraft and the natural horizon during visual flight.

This instrument is FAA certified, and can be used to replace the aircraft's turn coordinator when equipped with an inclinometer.

The Standard configuration can replace most air driven gyros with the major difference being in the layout and colors of the display.

NOTE: Lighted instruments do not include lamp trays, please see accessories to purchase separately.

Sigma-Tek	Model	Display Colors	Inclino-meter	Lighted	Panel Tilt	Part Number	Price
1U149-010	5000E-13	Blue/Black	No	Yes	0	10-04790	**$1,695.00**
1U149-010-1	5000B-37	Blue/Brown	No	Yes	0	10-01071	**$1,695.00**
1U149-010-4	5000B-54	Blue/Brown	No	Yes	8	10-04655	**$1,695.00**
1U149-010-5	5000B-64	Blue/Black	No	Yes	8	10-04660	**$1,695.00**
1U149-013-1	5000B-45	Blue/Brown	Yes	Yes	0	5000B-45	**$2,035.00**
1U149-013-3	5000B-53	Blue/Brown	Yes	Yes	8	5000B-53	**$2,035.00**
23-501-06-9	5000B-20	Blue/Black	No	No	0	10-00389	**$1,405.00**
23-501-06-12	500B-24	Blue/Black	No	No	8	10-04652	**$1,405.00**
23-501-06-16	5000B-36	Blue/Brown	No	No	0	5000B	**$1,265.00**
23-501-06-17	5000B-42	Blue/Brown	No	No	8	5000B-42	**$1,405.00**
23-501-033-3	5000B-46	Blue/Brown	Yes	No	0	5000B-46	**$1,775.00**
23-501-034-4	500B-51	Blue/Brown	Yes	No	8	5000B-51	**$1,815.00**

Accessories

BA14-24-BW3G (14 Volt Lamp Tray).....P/N 10-02757 .....**$87.75**
BA28-24-BW3G (28 Volt Lamp Tray).....P/N 10-02758 .....**$87.75**



SIGMA-TEK 5000B SERIES ATTITUDE GYROS WITH WARNING FLAG

This gyro is a variation of the popular 5000B air-driven attitude gyro. It includes a warning flag that drops into view upon the loss of vacuum. This can be a life saving feature during an emergency in a busy cockpit. The horizon mask moves to indicate climb, dive, and bank attitudes, which are portrayed against a fixed airplane. The fluid movements and intuitive presentation provide the pilot with a realistic sense of the aircraft's attitude in relation to the natural horizon.

This instrument is FAA certified, and can be used to replace the aircraft's turn coordinator when equipped with an inclinometer.

This configuration includes a "Warning Flag" that is visible immediately upon Loss of vacuum or pressure. It is a very valuable upgrade as a safety feature.

NOTE: Lighted instruments do not include lamp trays, please see accessories to order separately.

Sigma-Tek	Model	Display Colors	Inclino-meter	Lighted	Panel Tilt	Part Number	Price
23-501-031-1	5000B-38	Blue/Brown	No	No	0	10-02078	**$1,545.00**
1U149-012	5000B-40	Blue/Brown	No	Yes	0	10-00132	**$1,738.00**
23-501-032-2	5000B-43	Blue/Brown	No	No	8	10-04653	**$1,749.00**
1U149-012-2	5000B-52	Blue/Brown	No	Yes	8	10-04654	**$2,010.00**
23-501-041-1	5000B-60	Blue/Brown	Yes	No	0	10-04656	**$2,006.00**
23-501-042-2	5000B-61	Blue/Brown	Yes	No	8	10-04657	**$2,006.00**
1U149-016-7	5000B-62	Blue/Brown	Yes	Yes	0	10-04658	**$2,035.00**
1U149-016-8	5000B-63	Blue/Brown	Yes	Yes	8	10-04659	**$2,035.00**

Accessories

BA14-24-BW3G (14 Volt Lamp Tray).....P/N 10-02757 .....**$87.75**
BA28-24-BW3G (28 Volt Lamp Tray).....P/N 10-02758 .....**$87.75**

SIGMA-TEK 5000E/L SERIES AUTOPILOT ATTITUDE GYROS



The 5000E air-driven attitude gyro is another variation of our standard 5000B model. It includes inductive pickoffs that generate the signals necessary to drive an autopilot. The intuitive display has a moving horizon mask that indicates the position of the aircraft's wings in relation to the natural horizon. This attitude information is passed along to the autopilot system.

This is one of our most popular primary instruments. It is FAA approved, and can replace the turn coordinator when equipped with an inclinometer. Many Sigma-Tek autopilot gyros are FAA PMA approved for use in ARC and Century CII, CIIB, CIII and CIV autopilot installations.

NOTE: Lighted instruments do not include lamp trays, please see accessories to purchase separately.

Sigma-Tek	Model	Display Colors	Autopilot Model	Auto-pilot Output	Light-ed	Panel Tilt	PMA	Part Number	Price
23-501-04-2	5000E-8	Blue/ Black	CFS 52D66	Roll	No	0	Yes	10-04892	**$2,370.00**
23-501-05-2	5000E-9	Blue/ Black	CFS 52D67	Pitch & Roll	No	0	Yes	10-04894	**$2,988.00**
1U149-006-1	5000E-10	Blue/ Black	CFS 52D66M	Roll	Yes	0	Yes	5000E-10	**$2,535.00**
1U149-007-1	5000E-11	Blue/ Black	CFS 52D67M	Pitch & Roll	Yes	0	Yes	5000E-11	**$2,975.00**
23-501-04-24	5000E-20	Blue/ Brown	CFS 52D66	Roll	No	0	Yes	10-04893	**$2,378.00**
23-501-05-25	5000E-21	Blue/ Brown	CDS 52D67	Pitch & Roll	No	0	Yes	10-04895	**$2,975.00**
1U149-006-8	5000E-22	Blue/ Brown	CFS 52D66M	Roll	Yes	0	Yes	10-04890	**$2,636.00**
1U149-007-9	5000E-23	Blue/ Brown	CFS 52D67M	Pitch & Roll	Yes	0	Yes	10-04891	**$3,085.00**

Accessories

BA14-24-BW3G (14 Volt Lamp Tray).....P/N 10-02757 .....**$87.75**
BA28-24-BW3G (28 Volt Lamp Tray).....P/N 10-02758 .....**$87.75**



SIGMA-TEK 5000M SERIES CAGEABLE ATTITUDE GYROS

The 5000M is an air-driven gyro that has a pictorial horizon mask and fixed airplane. The mask moves to indicate climb, dive, and bank. Bank and pitch attitudes are displayed so that the pilot's sensing of the gyro indication is the same as the interpretation of the relation between the wings of the aircraft and the natural horizon during visual flight. The instrument is provided with a caging system which is functional through 360° of roll and 90° of pitch. When caging is engaged, pitch and roll indices are aligned within two degrees. This instrument is FAA certified, and can be used to replace the aircraft's turn coordinator when equipped with an inclinometer. The caging feature is very useful for quick erection and display alignment; a high priority for occasional aerobatic maneuvers and operations with short stops.

NOTE: Lighted instruments do not include lamp trays, please see accessories to purchase separately.

Sigma-Tek	Model	Display Colors	Warning Flag	Caging	Inclino-meter	Light-ed	Panel Tilt	Part Number	Price
1U149-021-1	5000M	Blue/ Brown	No	Yes	No	Yes	0	10-02326	**$2,215.00**
23-501-035-5	5000M-1	Blue/ Brown	No	Yes	No	No	0	10-02327	**$2,241.00**
23-501-036-6	5000M-2	Blue/ Brown	No	Yes	No	No	8	10-02328	**$2,153.00**
23-501-037-7	5000M-3	Blue/ Brown	No	Yes	Yes	No	0	10-02329	**$2,943.00**
23-501-038-8	5000M-4	Blue/ Brown	No	Yes	Yes	No	8	10-02330	**$2,808.00**
1U149-022-2	5000M-5	Blue/ Brown	No	Yes	No	Yes	8	10-02331	**$2,215.00**
1U149-023-3	5000M-6	Blue/ Brown	No	Yes	Yes	Yes	0	10-02332	**$2,816.00**
1U149-024-4	5000M-7	Blue/ Brown	No	Yes	Yes	Yes	8	10-02333	**$2,871.00**
1U149-025-5	5000M-8	Blue/ Brown	Yes	Yes	Yes	Yes	0	10-04882	**$3,016.00**
1U149-026-6	5000M-9	Blue/ Brown	Yes	Yes	Yes	Yes	8	10-04883	**$3,016.00**
23-501-039-9	5000M-10	Blue/ Brown	Yes	Yes	Yes	No	0	10-04884	**$2,624.00**
23-501-040-10	5000M-11	Blue/ Brown	Yes	Yes	Yes	No	8	10-04885	**$2,624.00**
23-501-043-3	5000M-12	Blue/ Brown	Yes	Yes	No	No	0	10-04886	**$2,502.00**
23-501-044-4	5000M-13	Blue/ Brown	Yes	Yes	No	No	8	10-04887	**$2,502.00**
1U149-027-7	5000M-14	Blue/ Brown	Yes	Yes	No	Yes	0	10-04888	**$2,695.00**
1U149-028-8	5000M-15	Blue/ Brown	Yes	Yes	No	Yes	8	10-04889	**$2,749.00**

Accessories

BA14-24-BW3G (14 Volt Lamp Tray).....P/N 10-02757 .....**$87.75**
BA28-24-BW3G (28 Volt Lamp Tray).....P/N 10-02758 .....**$87.75**



SIGMA-TEK 5000EG ELECTRIC ATTITUDE GYROS

The 5000EG gyro is based on a air-driven 5000B model, whose proven reliability has made it the industry standard for many years. There are two models available: 14 and 28 VDC. The rotor is precisely machined from a heavy-metal tungsten alloy, which has a higher mass than brass, contributing to the instrument's demonstrated stability.

The electric motor is driven by a built-in power inverter, and has an integrated air-erection mechanism. A warning flag is deployed upon loss of primary power. During acrobatic flights or short stops, the gyro's mechanism can be caged whenever the knob is pulled.

This instrument is FAA certified, and can be used to replace the aircraft's turn coordinator when equipped with an inclinometer.

The electric gyro can replace most air driven gyros with the major difference being its electric power source and the layout and colors of the display.

NOTE: Lighted instruments do not include lamp trays or connector, please see accessories to purchase separately.

Model	Inclino-meter	Lighted	Panel Tilt	Volts	Part Number	Price
1U670-001-1	Yes	Yes	0	28	10-02748	**$2,535.00**
1U670-002-2	Yes	Yes	0	14	10-02749	**$2,535.00**
1U670-003-3	No	Yes	0	28	10-02750	**$2,435.00**
1U670-004-4	No	Yes	0	14	10-02751	**$2,435.00**
1U670-005-5	Yes	No	0	28	10-02752	**$2,435.00**
1U670-006-6	Yes	No	0	14	10-02754	**$2,435.00**
1U670-007-7	No	No	0	28	10-02753	**$2,395.00**
1U670-008-8	No	No	0	14	10-02755	**$2,395.00**
1U670-002-9	Yes	Yes	8	14	10-04903	**$2,535.00**
1U670-001-10	Yes	Yes	8	28	10-04896	**$2,535.00**
1U670-001-15	Yes	Yes	7-1/2	28	10-04897	**$2,535.00**
1U670-001-19	Yes	Yes	11	28	10-04898	**$2,535.00**
1U670-003-11	No	Yes	4	28	10-04899	**$2,435.00**
1U670-003-12	No	Yes	8	28	10-04901	**$2,435.00**
1U670-007-10	No	Yes	10	28	10-04902	**$2,395.00**

Accessories

BA14-24-BW3G (14 Volt Lamp Tray).....P/N 10-02757 .....**$87.75**
BA28-24-BW3G (28 Volt Lamp Tray).....P/N 10-02758 .....**$87.75**
Connector For Electric Attitude Gyro .....P/N 10-05121 .....**$92.75**



5000B-36



4000B-30

SIGMA-TEK FACTORY OVERHAULED GYROS

These units are factory-overhauled gyros that are like new and carry the same warranty as a new units. Provided installation is within 6 months of factory ship date, full replacement warranty is 12 months from date of installation.

Exchange core must be a like core* and the core must be returned no later than 20 days from the invoice date to receive core credit.

*Like cores include: any 4000B series Sigma Tek core as exchange for a 4000B-30 any 5000B series Sigma Tek core as exchange for a 5000B-36

*All lighted units must order light tray separately.

Description	Sigma-Tek Model No.	Our PN	Core	Price
Attitude Gyro	5000B-36	10-03360	$275.00	**$729.00**
Directional Gyro	4000B-30	10-03359	$275.00	**$729.00**

IN



SIGMA-TEK 4000B SERIES STANDARD DIRECTIONAL GYROS

The 4000B is a standard air-driven directional gyro. As the aircraft turns left or right, gears on the sensing unit and dial shaft translate this rotation into rotation of the instrument's vertical dial. Left turns produce clockwise dial rotation and right turns produce counter-clockwise rotation. The gyro is controlled by a heading selector knob located on the lower left of the instrument. Pressing and turning the knob first disengages the dial shaft and then resets the dial to a new heading, which results in a new course indication. Releasing the selector knob re-engages the dial shaft. The on-course position of the pointer is always at the top of the azimuth circle (0° on the dial with the aircraft headed north). The Standard configuration can replace most air driven gyros with the major difference being in the layout and colors of the display.

NOTE: Lighted instruments do not include lamp trays, please see accessories to purchase separately.

Sigma-Tek	Model	Airplane Color	Index Markers	Dial @ 30°	Letters @ 90°	Lighted	Part Number	Price
1U262-001-9	4000B-8	White	White	White	No	No	10-05123	**$1,429.00**
1U262-002-32	4000B-22	White	White	White	Yes	Yes	10-05124	**$1,695.00**
1U262-001-39	4000B-30	Orange	Orange	White	Yes	No	4000B	**$1,265.00**
1U262-002-42	4000B-31	Orange	Orange	White	Yes	Yes	10-00588	**$1,489.00**



SIGMA-TEK 4000C / D SERIES AUTOPILOT DIRECTIONAL GYROS

The 4000C/D is an air-driven directional gyro with A.C. autopilot pickoffs. Left turns produce clockwise dial rotation and right turns produce counter-clockwise rotation. Two knobs control the gyro. The left knob is used to cage the unit, and the right knob is used to select the instrument's heading. To change course, the right selector knob is pressed and turned to disengage the dial shaft and set the pointer to a new heading. Releasing the selector knob re-engages the pointer with the dial shaft. As the aircraft turns onto a new course, the pointer returns to its original position. The on-course position of the pointer is always at the top of the azimuth circle (0° on the dial with the aircraft headed north).

Some Auto-Pilot gyros are FAA PMA approved for use in several models of the Century and S-Tec Auto-Pilot systems.

Sigma-Tek	Model	Autopilot Model	Airplane Index	Dial @ 30°	Letters @ 90°	Lighted	PMA	Part Number	Price
1U262-003-14	4000C	52D54	White	White	No	No	Yes	11-05908	**$2,271.00**
1U262-004-15	4000C-1	52D54M	White	White	Yes	Yes	Yes	10-02929	**$2,464.00**
1U262-042-3	4000C-17	King	White	White	Yes	Yes	No	10-05137	**$2,749.00**
1U262-003-65	4000C-18	52D54	Orange	White	No	No	Yes	10-05138	**$2,370.00**
1U262-004-66	4000C-19	52D54M	Orange	White	Yes	Yes	Yes	10-05139	**$2,548.00**
1U262-005-20	4000D-1	ARC 40760-0114 (G502A)	Yellow	White	Yes	No	No	10-05141	**$2,961.00**
1U262-006-45	4000D-6	S-TEC (6404)	White	White	Yes	Yes	Yes	10-00049	**$2,803.00**



SIGMA-TEK 4000H SERIES XYZ BOOTSTRAP DIRECTIONAL GYROS

A cost effective link to "bootstrap" other instruments requiring heading information for: display orientation to aircraft heading, heading stabilization functions, and other navigational calculations and/or solutions. Specific applications include: Argus Moving Map Display®, L-3 Avionics Stormscope®, and Insight Strike Finder®. The heading output exactly tracks the aircraft heading as depicted under the index pointer on the Directional Gyro. The synchro index and rotation reference is set to ARINC characteristics. The 26 VAC, 400 HZ heading synchro requires a readily available external excitation, preferable from the instrument/system receiving the heading output or from an independent inverter. Sigma Tek's Directional "Bootstrap" gyro includes options for lighting and interfaces for ARC, Century Flight System, and S-Tec autopilots.

Sigma-Tek	Model	Autopilot Interface	Airplane Index	Dial @ 30°	Letters @ 90°	Lighted	Part Number	Price
1U262-031-1	4000H	None	Orange	White	Yes	Yes	10-05142	**$2,680.00**
1U262-033-3	4000H-2	ARC	Orange	White	Yes	Yes	10-05143	**$4,100.00**
1U262-034-4	4000H-3	ARC	Orange	White	Yes	No	10-05144	**$4,045.00**
1U262-033-5	4000H-4	S-TEC	Orange	White	Yes	Yes	10-05145	**$4,045.00**
1U262-034-6	4000H-5	S-TEC	Orange	White	Yes	No	10-02106	**$3,915.00**
1U262-035-7	4000H-6	CFS	Orange	White	Yes	Yes	10-05146	**$3,865.00**
1U262-036-8	4000H-7	CFS	Orange	White	Yes	No	10-05147	**$3,805.00**
1U262-039-11	4000H-10	KING (DC)	Orange	White	Yes	Yes	10-05149	**$3,865.00**
1U262-040-12	4000H-11	KING (DC)	Orange	White	Yes	No	10-05150	**$3,785.00**
1U262-237-9	4000H-8	CFS (DC)	Orange	White	Yes	Yes	10-05148	**$3,785.00**

Accessories for the above gyros

BA14-24-BW3G (14 Volt Lamp Tray).....P/N 10-02757 .....**$87.75**
BA28-24-BW3G (28 Volt Lamp Tray).....P/N 10-02758 .....**$87.75**

SIGMA-TEK 4000HR-SERIES HEADING REFERENCE DIRECTIONAL GYROS



The 4000HR air-driven directional gyro offers some of the best features of our other popular models. It inherited all of the functionality and reliability of the industry standard 4000B upon which it's based, and it picked up a heading reference bug from the 4000C autopilot model.

Many pilots find the heading reminder a valuable feature whenever the cockpit is busy, such as during an approach with heavy ATC traffic. Setting a new heading during a long, cross-country flight eliminates the tedious math associated with frequent navigational crosschecks. A quick glance at the instrument instantly reminds the pilot of his heading. The heading bug can be positioned anywhere around the heading card by turning the right knob.

Sigma-Tek	Model	Airplane Color	Index Markers	Dial @ 30°	Letters @ 90°	Lighted	Heading Reminder	Part Number	Price
1U262-007-33	4000HR-1	White	White	White	Yes	No	Yes	10-05151	**$1,749.00**
1U262-007-40	4000HR-2	Orange	Orange	White	Yes	No	Yes	10-00469	**$1,545.00**
1U262-010-41	4000HR-3	Orange	Orange	White	Yes	Yes	Yes	10-00095	**$2,035.00**

Note: Lighted instruments do not include lamp trays, please specify aircraft voltage:

BA14-24-BW3G (14 Volt Lamp Tray)..... P/N 10-02757 .....**$87.75**
BA28-24-BW3G (28 Volt Lamp Tray)..... P/N 10-02758 .....**$87.75**

SIGMA-TEK 4000B ARINC-STYLE DIRECTIONAL GYROSCOPES



This instrument was developed for those pilots that prefer the distinct, professional look of an ARINC-styled cockpit. It is identical to the standard 4000B model differing mainly in aesthetics. Besides its distinct bezel and airplane, the display graphics and colors differentiate it from the standard model. A heading reminder bug is available as an option.

The ARINC gyros have a 3" bezel that matches existing ARINC flight director systems.

Sigma-Tek	Model	Airplane Color	Index Markers	Dial @ 30°	Letters @ 90°	Lighted	Part Number	Price
1U262-011-1	4000B-23	Orange	White	White	Yes	14 or 28V	10-05128	**$3,289.00**
1U262-012-2	4000B-24	Orange	White	White	No	5V	10-05129	**$3,289.00**
1U262-013-3	4000B-25	Orange	White	White	Yes	No	10-05136	**$3,223.00**



SIGMA-TEK 1U367 ARINC-STYLE ATTITUDE GYRO

The 1U367 has a pictorial horizon mask and a fixed airplane. The mask moves to indicate climb, dive, and bank. Bank and pitch attitudes are displayed so that the pilot's sensing of the gyro's horizon indication is the same as the interpretation of the relationship between the wings of the aircraft and the natural horizon during visual flight. The instrument is operable following maneuvers of 360° in roll and 360° in pitch. Controlled precession is employed to achieve the 360° in pitch. Note: Arinc-bezel lighted gyros have integral lighting as noted.

Sigma-Tek PN	Model	Display Colors	Lighted	Panel Tilt	Our PN	Price
1U367-205-5	1U367	Blue/Brown	none	0	10-05117	**$2,535.00**
1U367-210-11	1U367	Blue/Brown	14 or 28V	8	10-05118	**$2,740.00**

SIGMA-TEK HIGH-FLOW FITTINGS



53B423-001 - A 3/8" fitting is used for the pump output (pressure) in a typical vacuum installation having 5/8" hoses.
P/N 10-01150 .....**$59.85**



53B423-002 - A 3/8" 45° fitting used for either inlet or outlet ports with installations having 5/8" hoses.
P/N 10-01151 .....**$59.85**



53B423-003 - A 3/8" 90° short high-flow fitting used for either inlet or outlets with installations having 5/8" hoses.
P/N 10-01152 .....**$59.85**



53B423-004 - A 3/8" 90° short high-flow fitting used for either inlet or outlets with installations having 5/8" hoses.
P/N 10-01153 .....**$59.85**

MID-CONTINENT INSTRUMENTS AND AVIONICS ELECTRIC ATTITUDE INDICATOR



Engineered as a primary or standby artificial horizon in fixed-wing aircraft and helicopters, this indicator's single connection makes installation a snap. This indicator is standard equipment on many OEM aircraft including the Beech Baron and Bonanza. Featuring 10-32 volt DC operation, antireflective glass, long-life lighting and 7,500 hours MTBF, this is a cost-effective and safe alternative to unreliable vacuum systems.

4300-311 - 10/32V, lighted, 0-20° .. P/N 10-00751 ..... **$3,420.00**
4300-313 - 10/32V, Lighted, 0-20°, Delta P/N 10-03899 ..... **$3,409.00**
Emergency power supply TS420 ... P/N 11-05540 ..... **$2,370.00**

MID-CONTINENT INSTRUMENTS AND AVIONICS 3300 ELECTRIC DIRECTIONAL GYRO



FEATURES: • Weighs just 1.9 lbs. – One pound less than most electric directional gyros • Multi-voltage 10–32 volt DC, remains valid until the aircraft main battery discharges to 10VDC • Direct replacement for many AIM205 and RC Allen RC15A units • Designed specifically for use in high vibration applications • Warning flag monitors rotor speed and power input • Anti-reflective glass enhances visibility and reduces fatigue • Approved to FAA TSO-C5e and RTCA DO-160E • Requires less than half the power of standard DG units • Long-life LED lighting, user selectable to 5, 14 or 28 volt input • One year limited warranty ***SPECIFICATIONS***; Power Input: 10–32 VDC, Current Rating: At 14 VDC Start: 1.4A Max., Run: 0.44A nominal, At 28 VDC Start: 0.6A Max., Run: 0.22A nominal, Lighting: Internal LED lighting switchable to 5, 14 or 28 VDC input; wired through main connector, Weight: 1.9 lbs., Length: 4.65 inches, MTBF: 2,500 hours, Mating Connector: MS3116F8-4S ,Mounting: Rear panel mount in standard 31/8" round panel cutout

3300-10 no lighting ..... P/N 10-02821 ..... **$2,983.00**
3300-11 14V LED Lighting ..... P/N 10-04773 ..... **$3,275.00**
3300-11 28V LED Lighting ..... P/N 10-04774 ..... **$3,275.00**
4 Pin Connector MS3116E8-4S ..... P/N 10-00791 ..... **$30.95**

MID-CONTINENT INSTRUMENTS AND AVIONICS "LIFESAVER" ELECTRIC ATTITUDE INDICATOR



Fly with confidence and peace of mind with the Lifesaver® gyro. Even if every other system in your aircraft's avionics panel goes dark, the Lifesaver powers on. The only attitude indicator with a self-contained battery backup, it delivers one full hour of emergency attitude reference. 1 hr of precious time to pull you through when trouble strikes and all other power fails. Optional slip indicator can be installed anytime. No removal of gyro necessary.

Benefits: Field replaceable lighting, Anti-reflective glass enhances visibility and reduces fatigue, Battery life 3 years in average aircraft environment, 10-32 VDC replacement for use in either 14 or 28V aircraft, May be installed in place of an existing turn coordinator or turn, and slip indicator per FAA advisory circular AC91-75.

14V Gyro With Battery ..... P/N 10-00750 ..... **$4,076.00**
Slip Indicator Kit ..... P/N 10-00764 ..... **$304.00**
Remote Battery Mounting Kit ..... P/N 10-00763 ..... **$84.75**
Replacement Battery Pack ..... P/N 10-01054 ..... **$269.95**
3/32" Front Mount Adapter ..... P/N 10-00765 ..... **$95.75**
1/2" Front Mount Adapter ..... P/N 10-00766 ..... **$178.99**

FALCON ATTITUDE GYRO (VACUUM)



This Gyro Horizon is controlled by an air driven precision gyroscope to present the pilot with pitch and roll information, through the full 360° "pictorial" presentation leads to faster interpretation of airplane attitude. A zero pitch adjustment knob is provided. Dims: 3-1/8 x 3-1/8 x 8 max. Non-TSO'd for Experimental Aircraft Only

Non-TSO'd ..... P/N 10-22955(New) **$625.00**
Overhauled Gyro ..... P/N 10-06426 ..... **$539.95**
Gyro with 8° tilt Falcon ..... P/N 10-02242 ..... **$735.00**

FALCON ATTITUDE GYRO (ELECTRIC)



This factory new electric attitude gyro fits the standard gyro instrument cut-out. Features push-to-cage knob, low power/power failure flag, longer life & reliability due to lower operating temp.; Black case, black adjustment knob, & bright yellow/green airplane marker with sky blue/brown ground dial. Roll & loop without worry. Size: 6.4", Wt: 2.4 lbs., Power: 14VDC req. MS3116E8 connector (included). Non-TSO'd for Experimental Aircraft Only.

Size	Model No.	Description	Part No.	Price
3-1/8"	GH02E-3	Non-TSO'd, 14V	10-04671	**$1,595.00**
4 Pin	MS3116E8-4S	4 Pin Connector MS3116E8-4S	10-00791	**$30.95**

FALCON DIRECTIONAL GYRO (VACUUM)



The vertical rotating azimuth card is controlled by a precision gyroscope air-driven. The directional gyro will give correct heading information through ±60° of aircraft attitude in roll and pitch, 360° in yaw. A caging knob is provided to reset the gyro to the magnetic compass. Similar to Air Italia Gyros. Non-TSO'd for Experimental Aircraft Only ..... P/N 10-22950(New) **$625.00**

Falcon gyros can tolerated some aerobatic flight, but aerobatics can reduce the life of the gyro. It is recommended that the gyros be rem oved when the aircraft will be performing extensive aerobatic maneuvers. The Falcon electric gyros have caging knobs, but the vacuum gyros do not. Made in china.

MPL 503 AIR PRESSURE SWITCHES



MPL 503 Series pressure switches sensitive inches/H 2 O or Knots. Accuracy and reliability offer the designer an excellent general purpose low pressure to electric interface for monitoring and control applications. The miniature size make the 503 Series ideal for OEM applications.

Description	PN	Price
MPL503E Air Pressure Switch Adjustable: 40-100" of H2O	11-02379	**$52.85**
MPL503DO Air Pressure Switch Normally Open Setting	11-13476	**$36.50**
MPL503DC Air Pressure Switch Normally Closed Setting	11-13477	**$49.95**

CASTLEBERRY ELECTRIC ATTITUDE INDICATOR



The high quality electric attitude indicator replaces the turn and bank and may be installed in the same panel location, freeing up crowded panel space. Installation of these units is straight-forward. It has an inclinometer for use in standard rate turns and a failure warning flag to indicate loss of gyro RPM. When used together with the Castleberry Emergency Power Unit, Model EPU 28-24RMT, this instrument provides the pilot with a welcome margin of insurance in case of aircraft electrical power failure. ***Features:*** • Inclinometer • Power failure flag • Pull to cage knob • Backlit • Standard 3 1/8 in. diameter

Model No.	Description	Part No.	Price
300-14EL	14V Gyro **	10-02823	**$2,965.00**
300-14EL	28V Gyro With 8° Tilt	10-02829	**$2,795.00**
300-14ELP	300-14EL With Auto Pilot outputs.*	10-02826	**$4,125.00**

Please Specify at time of order 10-32V or tilt if desired.
****Light Tray required.***

CASTLEBERRY EMERGENCY POWER BACK-UP EPU-2



TSO'd emergency power supply, Model EPU 28-24RMT that can replace some older non TSO'd units made by Terra and AIM that are no longer in production. This unit provides a 24 VDC output up to 5 Amps for 30 minutes for emergency buss power to operate the standby attitude gyro with extra capacity of up to 4 amps for other critical instrument or avionics. This is economical insurance in a 7.5 pound package for aircraft frequently involved in IFR operations.

Emergency Power Supply EPU-2 ..... P/N 11-05822 .... **$2,138.00**
EPU Connector ..... P/N 11-07713 ..... **$71.00**
Rack Mount and Connector for EPU-2 ..... P/N 11-05823 ..... **$286.00**
Component Maintenance Manual ..... P/N 11-00187 ..... **$895.00**



MID-CONTINENT INSTRUMENTS AND AVIONICS MINI 2-INCH ATTITUDE INDICATORS

The Mini Gyro offers big features in a compact package. At half the cost of the competition, the Mini Gyro not only saves panel space, but also time and money. An ideal standby instrument, this TSO-approved indicator has 10-32 volt DC operation and is an attractive alternative to vacuum systems. It features unique LED lighting selectable to 5, 14 or 28 volts. Remote emergency power supply available for this indicator (P/N 11-05540).

Standard airplane display ..... P/N 10-01721 ..... **$3,480.00**
Delta airplane display ..... P/N 10-01722 ..... **$3,467.00**
Slip indicator (inclinometer) ..... P/N 10-04775 ..... **$255.95**
Emergency Power Supply ..... P/N 11-05540 ..... **$2,370.00**



MID-CONTINENT INSTRUMENTS & AVIONICS STANDBY ATTITUDE MODULE MD302

SAM® is the industry's first digital standby instrument to provide attitude, altitude, airspeed and slip information to the pilot in an advanced, 2-inch format. SAM delivers an easy-to-fit, compact design with selectable orientation (horizontal and vertical) like no other, ensuring a perfect fit within any panel. The unique two-screen display features high-definition graphics and extra-wide viewing angles, and at 1.6 pounds, SAM weighs less than just one of the three instruments it's designed to replace.

See www.aircraftspruce.com for complete list of features and specifications.

Model No.	Configuration	Part No.	Price
MD302 - 6420302-1	Digital, 10–32 VDC, Attitude, Altitude, Airspeed, Slip, Internal battery, Black bezel	10-05081	$7,622.00
MD302 - 6420302-2	Digital, 10–32 VDC, Attitude, Altitude, Airspeed, Slip, No battery, Black bezel	10-06017	$7,665.00
MD302 - 6420302-3	Digital, 10–32 VDC, Attitude, Altitude, Airspeed, Slip, Internal battery, Gray bezel	10-06018	$7,589.00
MD302 - 6420302-4	Digital, 10–32 VDC, Attitude, Altitude, Airspeed, Slip, No battery, Gray bezel	10-06019	$7,616.00
MD302 - 6420302-5	No display, 10–32 VDC, Remote mounted, ARINC output, No battery	10-06020	$7,589.00



MID-CONTINENT INSTRUMENTS & AVIONICS MD32 MAGNETOMETER

The MD32 Magnetometer is designed specifically for the MD302 Standby Attitude Module — SAM®. The MD32 is FAA TSO-certified and delivers independent heading reference without orientation limitations or the need for special installation hardware. Its compact size, unique mounting flexibility, and convenient cockpit calibration ensure easy, economical installation.

P/N 10-06594 ..... **$1,195.00**



VACUUM FAILURE WARNING LIGHT KIT

The Precise Flight Vacuum Failure Warning kit will provide the pilot with immediate warning of failure of the vacuum system, providing valuable time prior to gyro failure. An inexpensive system that can alert the IFR pilot immediately in the event of vacuum failure. P/N 11-02205 ..... **$84.75**



VOLT & VAC ALERT

A gyro instrument can start giving false information in less than one minute, and it is important that the pilot become instantly aware of a vacuum loss. The Volt & Vac Alert monitors instrument vacuum and electrical voltage. Should either fall below set values, the system will provide an instantly recognizable voice warning directly in the pilots headset, and then flash a light positioned within the normal gyro scan area, providing him with instant recognition of a problem. The Volt & Vac Alert is STC - PMA approved P/N 10-00393 ..... **$495.00**

VENTURI



2" VENTURI - This small aluminum venturi provides 2" Hg vacuum for operating turn/bank indicator. Has 1/8" NPT port. Use 1/4" tubing for hookup. Wt. 3.5 oz. P/N 15045 ..... **$57.75**



4" VENTURI - This venturi develops 4" Hg suction from double-throat venturi and 10" long horn. Used to operate a directional gyro or gyro horizon. When operating a directional gyro there is sufficient capacity to also operate a turn/bank. All aluminum construction. May require a suction regulator.

Wt. 0.9 lb. ..... P/N 15050 ..... **$89.75**



9" VENTURI - This "super venturi" is similar in appearance to the 4" venturi but with redesigned air passages and a recontoured, long (11-1/4") horn. It pulls enough vacuum to operate a gyro horizon, directional gyro and a turn/bank. Must be used with a suction regulator.

P/N15052 ..... **$86.50**

SIGMA TEK CAGEABLE ATTITUDE GYROS



Short stops (engine off less than twelve minutes) and some aerobatic maneuvers may cause your attitude gyro to tumble or precess from its vertical reference. When the rotor is spinning, the gyros normal erection system is slow and can take several minutes to correct a large erection error. This non-locking caging feature allows the pilot to quickly align the gyro display and rotor to gyro case reference. The attitude gyro should only be caged for quick alignment during straight and level VFR flight using well defined earth horizon for reference or prior to take off. ***All lighted gyros must order tray separately.***

P/N	DESCRIPTION	PRICE
5000B	Standard Gyro, Unlighted (non-cageable)	$1,265.00
5000B-F	Standard Gyro w/Vacuum Failure Flag (non-cageable)	$1,545.00
5000M-1	With Caging Knob, 0° Panel Tilt	$2,241.00
5000M	With Caging Knob, 0° Panel Tilt, Lighted	$2,215.00
5000M-2	With Caging Knob, 8° Panel Tilt	$2,153.00
5000M-5	With Caging Knob, 8° Panel Tilt, Lighted	$2,215.00
5000B-46	With Inclinometer, 0° Panel Tilt	$1,775.00
5000B-45	With Inclinometer, 0° Panel Tilt, Lighted	$2,035.00
5000B-51	With Inclinometer, 8° Panel Tilt	$1,815.00
5000B-53	With Inclinometer, 8° Panel Tilt, Lighted	$2,035.00
5000M-3	With Caging & Inclinometer, 0° Panel Tilt	$2,943.00
5000M-6	With Caging & Inclinometer, 0° Panel Tilt, Lighted	$2,816.00
5000M-4	With Caging & Inclinometer, 8° Panel Tilt	$2,808.00
5000M-7	With Caging & Inclinometer, 8° Panel Tilt, Lighted	$2,871.00
10-00111	5000B Light Tray 14V	$97.75
10-00112	5000B Light Tray 24V	$97.75



B&C LYCOMING VACUUM PUMP PAD ADAPTER INVERTED OIL PICKUP

This provides a direct replacement for the Lycoming vacuum pump pad adapter. Its unique design offers both a standard vacuum pump pad adapter AND provision for inverted oil pickup. The vacuum pump pad is often used for a B&C spline-driven alternator, such as the SD8 or SD20. Aircraft with oil systems using the standard "T" fitting on the firewall will typically experience a 3 to 5 second drop into the "yellow" oil pressure range after rolling inverted. However with this installed, the oil pressure will have a momentary blip or "wiggle" on the oil pressure gauge as the ball valve switches ends. As a result, the engine receives better lubrication and prop surges are lessened. The comes with oil seal installed, gaskets, and an MS20822-10D 90 degree fitting. Just slip the existing vacuum pump gear and thrust washer in, and it is ready for installation on the engine. The standard Lycoming vacuum pump gear and washer will fit (gear and washer not included). Alternate PN: VAC-2/4

BC704-H For 4 Cylinder Engines ..... P/N 07-06790 ..... **$199.95**
BC706-H For 6 Cylinder Engines ..... P/N 07-06795 ..... **$192.75**

STANDBY VACUUM SYSTEM SVS V



Manufactured by Precise Flight, Inc., this Standby Vacuum System, SVS V, is a new solution to the old problem of in-flight vacuum pump failures. It operates on a differential between manifold pressure and ambient pressure which is directed through a shuttle valve system to drive the flight instruments. When the vacuum pump fails, the pilot simply turns on the SVS system and adjusts engine power settings while observing the instrument suction gauge to obtain adequate differential to operate the instruments. Kit includes low vacuum light and installs in 2-4 hours. STCd for most aircraft. This kit can provide peace of mind on all flights and, if that pump ever fails, can be a real life saver. P/N 10-00400 ..... **$575.00**

AERO SAFE GUARDIAN I STANDBY VACUUM/PRESSURE SYSTEMS



The Aero Safe Guardian I Standby/ Pressure system is designed to provide the pilot with the most reliable standby source of instrument air available for single engine aircraft. STC'd for most Bellanca, Beech, Cessna, and Piper single engine aircraft. Specify aircraft make, model, year, and serial number when ordering.

Vacuum system ..... P/N 10-00267 ..... **$2,045.00**
Pressure system ..... P/N 10-00268 ..... **$2,057.00**

IN

Prices Subject to Change Without Notice

RC ALLEN TURN COORDINATOR 3 INCH. INDICATORS



Used in many production aircraft. Incorporates an electrical Gyro Turn Indicator with an inclinometer. The inclinometer, by movement of a ball in relation to the lubber lines, indicates the slip angle of aircraft while in a turn. The airplane on the dial rotates with reference to the indices. A power failure flag drops into view whenever the supply voltage is lost or when voltage has dropped below a level acceptable for proper operation of the gyro. Operates on 14 to 28V DC. New manufacture. First installation requires electrical connector and clamp. ***DIMENSIONS:*** Length: 6 1/5 in. Max, Width: 3 3/8 in Max, Height:3 3/8 in Max, Weight: 1.9 lbs. Meets or exceeds requirements of FAA TSO C3b

Description	Model	Part No.	Price
Unlighted - Mating Connector: MS3106A-10SL-3S	RCA82A-11	10-01372	**$989.00**
Lighted (14V) - Mating Connector: MS3106A-10SL-3S	RCA83A-11-14	10-00485	**$919.95**
Lighted (28V) - Mating Connector: MS3106A-10SL-3S	RCA83A-11-28	10-01685	**$919.00**
Mating Connector	MS3106A-10SL-3S	10-00789	**$19.75**

MID-CONTINENT INSTRUMENTS TURN COORDINATOR (ELECTRIC)



Engineered for a long service life, the new "B" model turn coordinator features a proven AC rotor powered by a solid-state inverter. This creates less heat behind the panel. By utilizing a brushless rotor design, this instrument has one of the top ratings in the industry – 4800 hours MTBF. A direct replacement for most 3-pin turn coordinators, it is perfect for use in high-performance aircraft and cold-climate applications. The well-known "Z" models are an industry standard. Value priced and reliable they are in more aircraft than any other brand. All 3-inch turn coordinators operate from 10 to 32 volts DC for convenience and reliability.

1394T100-7Z 12-32v, UNLIT .....P/N 1394T100 .....**$769.00**
1394T100-10RB (Cessna, KAP 140, Autopilot).....P/N 10-02311 .....**$1,537.00**
MS3106A-10SL-3S Electrical Plug Connector.....P/N 10-00789 .....**$19.75**
Note: 3A & 8A models have brushless rotors to reduce air noise

MID-CONTINENT INSTRUMENTS TURN COORDINATORS (ELECTRIC)



Certified to FAA TSO C3b. OEM standard - proven reliability. Includes power warning indicator. Features: •4500 hours MTBF, more than double the original "Z" design• Brushless AC rotor operates on 14 or 28 VDC. •Proven reliability through HALT (Highly Accelerated Life Testing) requirements and OEM usage since 1999.• Improved "Off" warning flag pulls out of view when rotor is up to speed. • Is a direct replacement for the popular 1394T100-7Z and most standard 3-pin turn coordinators.

1394T100-7B Unlighted 12-32V.....P/N 10-02108 .....**$829.00**
28V unit- 12-32V Bezel Lighting.....P/N 10-01024 .....**$1,118.00**
Unlighted G300A Autopilot, ARC .....P/N 10-02653 .....**$1,738.00**
1394T100-14RB Low Wing Turn Coordinator Autopilot - For use on low wing aircraft. .....P/N 10-04022 .....**$1,856.00**

FALCON TURN COORDINATOR (ELECTRIC)



3-1/8" cut out, 3-3/4" long. Small and lightweight, excellent for homebuilt aircraft. For 14V or 28V systems. Features power out warning flag. Unlighted. Made in China.

Unlit 0° Panel Falcon.....P/N 10-22510 .....**$499.95**
Unlit 8° Panel Falcon.....P/N 10-02261 .....**$499.95**
Lit 0° Panel Falcon.....P/N 10-02262 .....**$632.00**
Lit 8° Panel Falcon .....P/N 10-02263 .....**$587.00**
Connector MS3106A-10SL-3S Air Electro ..P/N 10-00789 .....**$19.75**
Cable Clamp MS3057-4A.....P/N 11-04969 .....**$5.85**

WINTER SLIP INDICATORS



The basic flight instrument for co-ordinated turns. Available in two styles: Rectangular model fits easily in cramped panel space. Square model matches a 2-1/4" instrument hole, fits on either side of the panel. Both feature finely crafted metal cases and precision ball and tube assemblies.

Square ..... P/N 10-03812.....**$89.95**
Rectangle ..... P/N 10-03857.....**$89.95**

BANK INDICATORS (BALL TYPE)



In turning, instantly register slightest departure from the correct banking angle. Bank scale has white markings on black background. New manufacture. Available in 2 models:

10°-10° Scale, 2.25" between mounting holes.P/N 10-00600 ... **$114.85**
20° - 20° Scale, 5" between mounting holes... P/N 10-00700 ..... **$59.80**

MID-CONTINENT INSTRUMENTS TURN & SLIP (ELECTRIC)



Built-in voltage regulator allows it to be used in either 14V or 28V systems. Small, compact unit and weighs only 1.2 lbs. Incorporates a small "power out" warning window which is black when normal current is being supplied but turns red in the case of electrical power failure. This turn and bank is now being used in many production aircraft. New installation requires electrical connector and cable clamp. New manufacture by Electrical Gyro Corp. Size: 3-3/8" x 3-3/8" x 3-3/4" long.

Unlighted .....P/N 1234T100 .....**$1,203.00**
14V Bezel-Lit.....P/N 10-22614 .....**$1,428.00**
28V Bezel-Lit.....P/N 10-22628 .....**$1,337.00**
MS3106A-10SL-3S Electrical Plug Connector.....**$19.75**

FALCON TURN & BANK(ELECTRIC)



The unit is an electrically-driven gyroscope. The inclinometer, by movement of a ball in relation to the lubber lines, indicates the slip angle of the aircraft while in a turn. A power flag drops into view whenever the voltage drops below a level which is required for proper operation of the gyro. It incorporates a built-in voltage regulator so it can be used with either 14VDC or 28VDC power supply system. It has a DC-AC-DC converter. Power Supply: 10-30VDC, Electrical Consumption: Max. 1.0A at 11-26VDC Max. 0.35A at 26 to 30VDC, Operating Range: 2 min. Turn, Weight: 18 oz./0.5 kg, Length: approx. 5 inchesUnlit. Made in China.

P/N 10-22515 .....**$1,042.00**

RC ALLEN TURN & BANK (ELECTRIC)



instrument is powered by an electrically driven DC precision gyro with an inclinometer. It gives the pilot turn and bank information. The RCA56 series is an all volt instrument, with a power warning flag, a black or white ball inclinometer and either lighted or non-lighted. DIMENSIONS: Length: 6 1/4 in. Max Width: 3 3/8 in. Max Height: 3 3/8 in. Max Weight: 1.9 lbs.

Meets or exceeds requirements of FAA TSO C3bNew manufacture by A.I.D. RC Allen. New installation requires plug connector & cable clamp. RCA56-3B, UNLIT..... P/N 10-01684 .....**$947.00**
RCA56-3BL, LIT..... P/N 10-02138 .....**$1,077.00**
Plug Connector ..... P/N MS3106A-10SL-3S...**$19.75**

AN5820-1 TURN & BANK (VACUUM)



AN5820-1 Turn & Bank indicator completely overhauled and certified to FAA requirements. Fresh matte-white dial markings with "doghouses". Power: 1.8" to 2.2" Hg vacuum produced by a 2" venturi or vacuum pump. Size: 3.25"x 3.25"x 4.75" long. Weight: 1.5 lbs. 1 year warranty.P/N AN5820-1.....**$526.00**

TURN & BANK KIT



Consists of an overhauled and certified Turn & Bank indicator, 2" venturi, hoses, fittings and instrument screws. P/N 10-00300 .....**$595.00**

MID-CONTINENT INSTRUMENTS TURN & SLIP INDICATOR, 2-INCH



Widely used in the turbo-prop market as standard equipment, this dependable instrument fits into the tightest panel space. The AC brushless rotor offers great reliability. Internal lighting options of 5, 14 and 28 volt offer greater flexibility. These were factory installed on the DeHavilland Dash 8 and Boeing Chinook CH47

14V Turn & Slip ..... P/N 10-00305.....**$2,295.00**
28V Turn & Slip ..... P/N 10-00310.....**$1,846.00**
Plug Connector..... P/N MS3106A-10SL-3S **$19.75**

FALCON 2-1/4" INCLINOMETER



This in-dash mounted inclinometer is lightweight and fits a standard 2-1/4" instrument hole. Used on Kitfox aircraft & ideal for virtually any homebuilt.

P/N 10-00705.....**$53.85**

IN

TEMPEST DRY AIR PUMPS



TEMPEST TORNADO 3000 DRY AIR PUMPS

New revolutionary LRT oil drain, patent pending feature is designed to drain oil, caused by a leaking Garlock Seal, before it reaches the drive coupler. Provides a tell tale leak path. Closed front ends, designed to eliminate oil and oil residues from entering into the pump. Helps prevent pump failures caused by oil entering into the drive mechanism or rotor and vanes. 3 year 1300 hour warranty

Tempest Tornado 3000 Model AA3215CC ..... P/N 10-00609.. **$389.00**
Tempest Tornado 3000 Model AA3216CW ..... P/N 10-00610.. **$389.00**
Tempest Tornado 3000 Model AA3215CC-9 ... P/N 10-00611.. **$389.00**



TEMPEST VACUUM PUMP COOLING SHROUDS

Cooling shrouds have been proven to reduce pump operating temperature and therefore extend service life. Testing has proven reduction in operating temperature by as much as 15%. Saves money - extends service life of dry air pumps. AA20T fits all 200/240 series pumps. AA40T fits all 400 series pumps. Sigma - Tek® pumps are not eligible.

AA207 ..... P/N 10-02796 ..... **$66.80**
AA40T ..... P/N 10-02797 ..... **$74.95**

TEMPEST HOMEBUILT VACUUM SYSTEM KITS

Kit includes •Vacuum Pump •Vacuum Regulator •Vacuum Gauge •Gyro Filter Assembly •6-5/8 Hose & Clamps •6-3/8 Hose & Clamps •4-1/4 Hose & Clamps •Pump Inlet & Outlet Fittings •Gyro Inlet Fittings •Gyro Outlet Fittings •Gyro to Vacuum Gauge Fitting •Installation Instructions

Model 215CCHK..... P/N 10-02004..... **$884.00**

VACUUM PUMP APPLICATION

See www.aircraftspruce.com for complete listing of vacuum pump applications for most general aviation aircraft.



TEMPEST WEAR INDICATOR TOOL KIT

Tempest Wear Indicator Tool Kit. Kit includes: 3 Star Lockwashers (82-50122-2A2), 3 Hole Plugs (82-50122-2A1), 1 WIP Tool (82-501222A6T) P/N 10-04814 ..... **$56.75**



TEMPEST ELECTRIC AUXILIARY DRY AIR PUMPS

Electric auxiliary dry air pumps are recommended for single engine aircraft flown in IFR conditions as a back-up in the event the primary vacuum pump fails. These pumps are FAA-PMA approved as direct replacements for Airborne pumps previously installed under STC eligibility and STC approval for these pumps for many additional aircraft is pending.

28VEC..... Electric Auxiliary Dry Air Pump Model AA4A2-1 ..... P/N 10-00585..... **$1,878.00**
14VEC..... Electric Auxiliary Dry Air Pump Model AA4A3-1 ..... P/N 10-00584..... **$2,073.00**



TEMPEST DRY AIR PUMPS

Tempest dry air pumps, from Aero Accessories, are 100% new production and use all new components. They are FAA-PMA approved replacements for like and similar models on many installations. These pumps are available in the 200, 240, and 400 series.

The AA215CC series come with a 1-year, unlimited hour warranty and the AA241CC, AA242CW, and the AA441CC and AA442CW series come with a 1-year, 500 hour warranty. Warranties expire 2-years from date of manufacture. **$100.00 Core Charge applied to Overhauled Pumps**

Core Rebate available for new pumps.



TEMPEST DRY AIR PUMPS - OVERHAULED

MODEL	DESCRIPTION	PART NO.	PRICE
215CCWIP	Overhauled Dry Air Pump w/WIP	10-24000-1	**$269.00**
216CWWIP	Overhauled Dry Air Pump w/WIP	10-24600-1	**$267.00**
241CC	Overhauled Dry Air Pump	10-24700-1	**$466.00**
243CC-13	Overhauled Dry Air Pump	10-01969	**$470.00**
243CC-15	Overhauled Dry Air Pump	10-01968	**$470.00**
242CW	Overhauled Dry Air Pump	10-24800-1	**$466.00**
244CW-4	Overhauled Dry Air Pump	10-01971	**$470.00**
244CW-10	Overhauled Dry Air Pump	10-01972	**$468.00**
441CC-OH	Overhauled Dry Air Pump	10-23500-1	**$619.00**
441CC-3	Overhauled Dry Air Pump	10-01974	**$616.00**
441CC-7	Overhauled Dry Air Pump	10-01975	**$628.00**
441CC-9	Overhauled Dry Air Pump	10-01977	**$616.00**
441CC-11	Overhauled Dry Air Pump	10-01978	**$616.00**
441CC-17	Overhauled Dry Air Pump	10-01979	**$616.00**
441CC-23	Overhauled Dry Air Pump	10-01980	**$616.00**
442CW	Overhauled Dry Air Pump	10-23600-1	**$619.00**
442CW-4	Overhauled Dry Air Pump	10-01981	**$628.00**
442CW-6	Overhauled Dry Air Pump	10-01982	**$628.00**
442CW-8	Overhauled Dry Air Pump	10-01983	**$610.00**
442CW-10	Overhauled Dry Air Pump	10-01984	**$616.00**
442CW-12	Overhauled Dry Air Pump	10-01146	**$653.00**
442CW-14	Overhauled Dry Air Pump	10-01985	**$616.00**
442CW-20	Overhauled Dry Air Pump	10-01986	**$616.00**

TEMPEST DRY AIR PUMPS - NEW

MODEL	DESCRIPTION	PART NO.	PRICE
AA241CC	New Dry Air Pump	10-24700	**$690.00**
AA243CC-13	New Dry Air Pump	10-01987	**$719.00**
AA243CC-15	New Dry Air Pump	10-01988	**$719.00**
AA243CW	New Dry Air Pump	10-24800	**$690.00**
AA244CW-4	New Dry Air Pump	10-01989	**$719.00**
AA244CW-10	New Dry Air Pump	10-01990	**$719.00**
AA3215CC	New Dry Air Pump	10-00609	**$389.00**
AA3216CW	New Dry Air Pump	10-00610	**$389.00**
AA3215CC-9	New Dry Air Pump	10-00611	**$389.00**
AA441CC	New Dry Air Pump	10-23500	**$1,017.00**
AA441CC-3	New Dry Air Pump	10-01991	**$996.00**
AA441CC-7	New Dry Air Pump	10-01992	**$996.00**
AA441CC-9	New Dry Air Pump	10-01993	**$996.00**
AA441CC-11	New Dry Air Pump	10-01994	**$1,016.00**
AA441CC-17	New Dry Air Pump	10-01995	**$996.00**
AA442CW	New Dry Air Pump	10-23600	**$996.00**
AA442CW-4	New Dry Air Pump	10-01996	**$996.00**
AA442CW-6	New Dry Air Pump	10-01997	**$996.00**
AA442CW-8	New Dry Air Pump	10-01998	**$996.00**
AA442CW-10	New Dry Air Pump	10-01999	**$996.00**
AA442CW-12	New Dry Air Pump	10-02001	**$1,079.00**
AA442CW-14	New Dry Air Pump	10-02002	**$996.00**
AA442CW-20	New Dry Air Pump	10-02003	**$996.00**

TEMPEST PNEUMATIC COMPONENTS

PNEUMATIC FITTINGS

MODEL	DESCRIPTION	PART NO.	PRICE
AA1K1-4-6	Fitting -1/4 NPT x 3/8 Hose	10-00914	$50.99
AA1K1-4-8	Fitting -1/4 NPT x 1/2 Hose	10-01923	$84.75
AA1K1-6-6	Fitting -3/8 NPT x 3/8 Hose	10-01924	$328.40
AA1K1-6-8	Fitting -3/8 NPT x 1/2 Hose	10-00915	$65.75
AA1K1-6-10	Fitting -3/8 NPT x 5/8 Hose	10-00916	$41.50
AA1K1-8-10	Fitting -1/2 NPT x 5/8 Hose	10-00917	$62.75
AA1K1-8-12	Fitting -1/2 NPT x 3/4 Hose	10-01925	$84.75
AA1K8-6-8	Fitting -3/8 NPT x 1/2 Hose	10-01926	$118.75
AA1K8-6-10	Fitting -3/8 NPT x 5/8 Hose	10-01147	$81.75
AA1K9-4-6	Fitting -1/4 NPT x 3/8 Hose (A-45O)	10-01927	$44.85
AA1K9-6-10	Fitting -3/8 NPT x 5/8 Hose (A-45O)	10-01928	$54.75
AA1K10-2-4	Fitting -1/8 NPT x 1/4 Hose	10-01929	$59.75
AA1K10-4-6	Fitting -1/4 NPT x 3/8 Hose	10-00918	$37.70
AA1K10-4-8	Fitting -1/4 NPT x 1/2 Hose	10-01932	$63.75
AA1K10-6-10	Fitting -3/8 NPT x 5/8 Hose	10-01933	$59.75
AA1K10-6-12	Fitting -3/8 NPT x 3/4 Hose	10-01934	$147.75
AA1K10-8-12	Fitting -1/2 NPT x 3/4 Hose	10-01935	$126.75
AA1K14-6-6-6	Fitting -3/8 NPT x 3/8 x 3/8 Hose	10-01936	$85.75
AA1K14-10-10	Fitting -5/8 NPT x 5/8 x 5/8 Hose	10-01937	$139.75
AA1K17-4-8-6-4	Fitting -1/4 NPTx1/2x3/8x1/4Hose	10-01938	$217.95
AA1K22-10-10	Fitting -5/8 NPT x 5/8 Hose	10-01148	$125.75
AA1K24-2	Fitting -3/4 Hose Flange	10-01939	$259.95
AA1K30-6-6-4	Fitting -3/8 x 3/8 x 1/4 Hose	10-01940	$116.75
AA1K30-10-6-6	Fitting -5/8 x 3/8 x 3/8 Hose	10-01942	$95.75
AA1K31-4-6-4	Fitting -1/4 NPTx1/2x3/8x1/4 Hose	10-01943	$82.80
AA1K43-10-10	Fitting -5/8 x 5/8 Hose	10-01949	$60.75

PNEUMATIC FILTERS

MODEL	DESCRIPTION	PART NO.	PRICE
AAD9-14-3	Filter	10-00923	$22.75
AAD9-14-5	Filter	10-00924	$21.40
AAD9-18-1	Filter	10-01354	$22.75
AA2J4-4	Filter	10-01946	$37.95
AA2J4-6	Line Mounted Filter	10-01946	$37.95
AA2J4-7	Line Mounted Filter	10-01947	$37.95
AA1J7-1	Gyro Filter Assembly	10-01948	$47.95
AA1J7-2	Gyro Filter Assembly	10-01949	$60.75
ARB3-5-1	Garter Filter	10-01333	$2.90

MISCELLANEOUS PARTS

MODEL	DESCRIPTION	PART NO.	PRICE
82-06768	Coupling	10-01951	$77.75
82-50130B	Flange Gasket	10-01952	$2.53
82-50195	WIP Plug-New Pumps Only	10-01954	$6.70
82-50195P	WIP Plug-New Pumps Only-Pkg. of 10	10-01955	$57.75
82-50195A	WIP Plug-O/H Pumps Only	10-01958	$9.80
82-50195AP	WIP Plug-O/H Pumps Only-Pkg. of 10	10-01959	$80.75
82-50155DP	LRT Diverter Kit	10-01961	$13.55
AA9144	Prop Governor Gasket	10-01962	$15.95
AAD5-77-1	WIP Plug-O/H Pumps Only-Pkg. of 10	10-01963	$38.50
AAF7-236-1	Aux. Switch 14 Volt DC	10-01964	$343.00
AAF7-236-2	Aux. Switch 28 Volt DC	10-01965	$344.00

NEW VACUUM REGULATORS

MODEL	DESCRIPTION	PART NO.	PRICE
AA1H5-25A	Regulating Valve	10-03457	$637.00
AA2H3-2	Regulating Valve	10-03458	$292.95
AA2H3-5	Regulating Valve	10-03459	$283.95
AA2H3-6	Regulating Valve	10-03460	$517.00
AA2H3-12	Regulating Valve	10-03461	$269.95
AA2H3-23	Regulating Valve	10-03462	$274.95
AA2H3-48	Regulating Valve	10-03463	$317.00
AA2H3-27	Piper Aircraft (PA44-180 and PA44-180T) Vacuum Regulator	10-06257	$844.00

OVERHAULED AIRBORNE SOLENOIDS

MODEL	DESCRIPTION	PART NO.	PRICE
1H15-6	Solenoid	10-01860	$736.00

OVERHAULED AIRBORNE VACUUM MANIFOLDS

MODEL	DESCRIPTION	PART NO.	PRICE
1H5-1	Vacuum Manifold	10-01861	$493.00
1H5-2	Vacuum Manifold	10-01862	$616.00
1H5-3	Vacuum Manifold	10-01863	$677.00
1H5-4	Vacuum Manifold	10-01864	$699.00
1H5-6	Vacuum Manifold	10-01865	$774.00
1H5-8	Vacuum Manifold	10-01866	$770.00
1H5-9	Vacuum Manifold	10-01867	$580.00
1H5-10	Vacuum Manifold	10-01868	$699.00
1H5-13	Vacuum Manifold	10-01869	$960.00
1H5-14	Vacuum Manifold	10-01870	$729.00
1H5-18	Vacuum Manifold	10-01871	$541.00
1H5-19	Vacuum Manifold	10-01872	$885.00
1H5-20	Vacuum Manifold	10-01873	$756.00
1H5-21	Vacuum Manifold	10-01874	$1,063.00
1H5-22	Vacuum Manifold	10-01875	$872.00
1H5-23	Vacuum Manifold	10-01876	$552.00
1H5-24	Vacuum Manifold	10-01877	$700.00
1H5-25A	Vacuum Manifold	10-05732	$620.00

OVERHAULED AIRBORNE PRESSURE MANIFOLDS

MODEL	DESCRIPTION	PART NO.	PRICE
1H24-3	Pressure Manifold	10-01879	$821.00
1H24-6	Pressure Manifold	10-01880	$905.00
1H24-7	Pressure Manifold	10-01881	$1,042.00
1H24-8	Pressure Manifold	10-01882	$905.00
1H24-10	Pressure Manifold	10-01883	$857.00
1H24-11	Pressure Manifold	10-01884	$1,118.00
1H24-12	Pressure Manifold	10-01885	$1,469.00
1H24-18	Pressure Manifold	10-01886	$1,062.00
1H24-20	Pressure Manifold	10-01887	$1,337.00
$200 CORE CHARGE			

OVERHAULED AIRBORNE CHECK VALVES

MODEL	DESCRIPTION	PART NO.	PRICE
1H37-1	De-Ice Valve	10-01888	$427.00
1H37-3	De-Ice Valve	10-01889	$490.00
1H37-4	De-Ice Valve	10-01890	$440.00
1H43-11	De-Ice Valve	10-01891	$2,002.00
1H43-12	De-Ice Valve	10-01892	$2,033.00
1H43-13	De-Ice Valve	10-01893	$1,730.00
1H43-14	De-Ice Valve	10-01894	$1,928.00
1H43-15	De-Ice Valve	10-01895	$1,715.00
1H43-16	De-Ice Valve	10-01896	$1,654.00
1H43-20	De-Ice Valve	10-01897	$2,236.00
1H43-21	De-Ice Valve	10-01898	$2,109.00
1H44-12	De-Ice Valve	10-01899	$1,943.00
1H44-16	De-Ice Valve	10-01906	$1,836.00
1H44-17	De-Ice Valve	10-01907	$2,474.00
1H44-18	De-Ice Valve	10-01908	$2,474.00
2H22-11	De-Ice Valve	10-01909	$1,532.00
2H22-16	De-Ice Valve	10-01910	$2,325.00
2H48-14	De-Ice Valve	10-01911	$1,174.00
2H48-22	De-Ice Valve	10-01913	$1,306.00
2H48-23	De-Ice Valve	10-01914	$1,074.00
2H48-24	De-Ice Valve	10-01916	$1,564.00
2H59-3	De-Ice Valve	10-01917	$2,401.00
2H59-4	De-Ice Valve	10-01919	$2,974.00
2H59-8	De-Ice Valve	10-01920	$2,004.00
2H59-16	De-Ice Valve	10-01921	$3,431.00
$200 CORE CHARGE			

TEMPEST PNEUMATIC COMPONENTS

TEMPEST OVERHAULED AIRBORNE VACUUM REGULATORS

Model	Part No.	Price
2H3-1	10-02970	$1,204.00
2H3-2	10-05733	$250.95
2H3-12	10-05734	$250.95
2H3-4	10-02972	$833.00
2H3-7	10-02976	$648.00
2H3-25	10-03013	$698.00
2H3-11	10-02980	$391.00
2H3-16	10-03004	$580.00
2H3-13	10-02982	$901.00
2H3-14	10-02983	$722.00
2H3-6	10-03004	$580.00
2H3-22	10-03007	$698.00
2H3-8	10-02977	$648.00
2H3-9	10-02978	$630.00
2H3-5	10-02973	$252.95
2H3-10	10-02979	$698.00
1H5-25A	10-05732	$620.00
2H3-23	10-05737	$251.95
2H3-15	10-02984	$437.00
2H3-27	10-03015	$940.00
2H3-32	10-03017	$758.00
2H3-35	10-03018	$805.00
2H3-38	10-03019	$834.00
2H3-44	10-03022	$976.00
2H3-45	10-03023	$1,022.00
2H3-46	10-03024	$647.00
2H3-48	10-03025	$285.95
2H3-19	10-03006	$475.00
$500.00 CORE CHARGE		

TEMPEST OVERHAULED VACUUM MANIFOLD

Model	Description	Part No.	Price
2H3-1	Vacuum Manifold	10-02970	$1,204.00
2H3-4	Vacuum Manifold	10-02972	$833.00
2H3-5	Vacuum Manifold	10-02973	$252.95
$500.00 CORE CHARGE			

TEMPEST OVERHAULED PRESSURE MANIFOLD

Model	Description	Part No.	Price
2H3-7	Pressure Manifold	10-02976	$648.00
2H3-8	Pressure Manifold	10-02977	$648.00
2H3-10	Pressure Manifold	10-02979	$698.00
2H3-11	Pressure Manifold	10-02980	$391.00
2H3-13	Pressure Manifold	10-02982	$901.00
2H3-14	Pressure Manifold	10-02983	$722.00
2H3-15	Pressure Manifold	10-02984	$437.00
$500.00 CORE CHARGE			

TEMPEST OVERHAULED CHECK VALVE

Model	Description	Part No.	Price
2H3-16	Check Valve	10-03004	$580.00
2H3-19	Check Valve	10-03006	$475.00
2H3-22	Check Valve	10-03007	$698.00
$500.00 CORE CHARGE			

TEMPEST OVERHAULED DE-ICE VALVE

Model	Description	Part No.	Price
O/H 2H3-20	Overhauled Regulating Valve	10-03399	$734.00
2H3-25	De-Ice Valve	10-03013	$698.00
2H3-27	De-Ice Valve	10-03015	$940.00
2H3-32	De-Ice Valve	10-03017	$758.00
2H3-35	De-Ice Valve	10-03018	$805.00
2H3-38	De-Ice Valve	10-03019	$834.00
2H3-44	De-Ice Valve	10-03022	$976.00
2H3-45	De-Ice Valve	10-03023	$1,022.00
2H3-46	De-Ice Valve	10-03024	$647.00
2H3-48	De-Ice Valve	10-03025	$285.95
$500.00 CORE CHARGE			

Due to a shortage of cores Vacuum / Pressure regulators may not be in stock. Customer may need to ship their unit to Aircraft Spruce for overhaul.

TEMPEST OVERHAULED AIRBORNE PRESSURE REGULATORS CROSS-REFERENCE

Model	Description	Superseded by
1H30-1	Overhauled Airborne Pressure Regulators	2H30-1
1H30-2	Overhauled Airborne Pressure Regulators	2H30-2
1H30-3	Overhauled Airborne Pressure Regulators	2H30-3
1H30-6	Overhauled Airborne Pressure Regulators	2H30-6
1H30-8	Overhauled Airborne Pressure Regulators	2H30-8
1H30-9	Overhauled Airborne Pressure Regulators	2H30-9
1H30-11	Overhauled Airborne Pressure Regulators	2H30-11
1H30-13	Overhauled Airborne Pressure Regulators	2H30-13
1H30-14	Overhauled Airborne Pressure Regulators	2H30-14

TEMPEST OVERHAULED PRESSURE REGULATORS

Model	Description	Part No.	Price
2H30-1	Pressure Regulators	10-03029	$649.00
2H30-2	Pressure Regulators	10-03037	$766.00
2H30-3	Pressure Regulators	10-03039	$628.00
2H30-6	Pressure Regulators	10-03042	$796.00
2H30-8	Pressure Regulators	10-03043	$1,458.00
2H30-9	Pressure Regulators	10-03045	$647.00
2H30-11	Pressure Regulators	10-03047	$773.00
2H30-13	Pressure Regulators	10-03053	$725.00
2H30-14	Pressure Regulators	10-03054	$860.00
2H30-17	Pressure Regulators	10-03056	$1,044.00
2H30-27	Pressure Regulators	10-03057	$632.00
2H30-28	Pressure Regulators	10-03060	$634.00
2H30-32	Pressure Regulators	10-03066	$586.00
2H30-32	Pressure Regulators	10-03066	$586.00
2H30-35	Pressure Regulators	10-05944	$603.00
$500.00 CORE CHARGE			

Due to a shortage of cores Vacuum / Pressure regulators may not be in stock. Customer may need to ship their unit to Aircraft Spruce for overhaul.

RAPCO FAA APPROVED FITTINGS



RA1K1-6-10 - This 90° fitting with 5/8" hose and 3/8" NPT is used in most inlet threaded ports of 200 series vacuum pumps and is a FAA PMA direct replacement for the Airborne Model 1K1-6-10. This 90° fitting has superior flow and low pressure loss.
P/N 10-00395 ..... **$37.50**



RA1K8-6-10 - This 152° fitting with 5/8" hose and 3/8" NPT is used in most outlet threaded ports of 200 series vacuum pumps and is a FAA PMA direct replacement for the Airborne. P/N 10-00396 ..... **$58.85**



RA1K31-4-6-4 - This 3/8" and 1/4" hose, 1/4" NPT, "T" fitting is used in most threaded ports of the flight instruments and is a FAA PMA direct replacement for the Airborne Model 1K31-4-6-4. P/N 10-00397 ..... **$49.65**

RA1K10-4-6 - This 3/8" hose, and 1/4" NPT fitting is used in most inlet threaded ports of the flight instruments and is a direct replacement for the Airborne Model 1K10-4-6.
P/N 10-00398 ..... **$36.50**





RA1K10-6-10 - This fitting with 5/8" hose and 3/8" NPT is used in most inlet and outlet threaded ports of the 200 series vacuum pump. The fitting is 5/8" hose with 3/8" NPT threads. The Rapco, Inc. fitting is a FAA PMA direct replacement for the Airborne Model 1K10-6-10..
P/N 10-01849 ..... **$41.75**

RA1K1-4-6 - This 90° fitting with 3/8 hose, 1/4" NPT is used in most threaded ports of the flight instruments and is a FAA PMA direct replacement for the airborne. P/N 10-01130 ..... **$39.50**



RAPCO RA1H5-1 MANIFOLD CHECK VALVE



This valve is used in many Multi-Engine General Aviation applications. The Rapco, Inc. FAA PMA Multi-Engine manifold check valve is a direct replacement for the Airborne Model 1H5-1.
P/N 10-01131 ..... **$557.00**

AIRBORNE VACUUM PUMP REPAIR KITS



Basic Kits – These FAA/PMA kits include rotor, vanes,gasket, and drive coupling.
For Airborne 211/212 Pumps
P/N 10-00901 ..... **$112.75**
For Airborne 200 cc/cw Pumps
P/N 10-00902 ..... **$126.80**
For Airborne 241/242 Pumps ..... P/N 10-00903 ..... **$109.75**
For Airborne 441/442 Pumps ..... P/N 10-01001 ..... **$164.00**
Deluxe Kits – These FAA/PMA kits include rotor, coupler, external spline, bushing, blades, nut, cushion washer and band gaskets. Washer and gaskets not included on 200CC kits. Installation instructions included.For Airborne 211/212 pumps ..... P/N 10-01901 ..... **$166.75**
For Airborne 241/242 pumps ..... P/N 10-01903 ..... **$156.99**
For Airborne 441/442 pumps ..... P/N 10-01904 ..... **$219.95**





PUMP STATOR HOUSINGS

215/216 Pump Stator Housing
82-50122A
P/N 10-00919 ..... **$79.95**
$15.00 Core Charge
241/242 Pump Stator Housing
82-50122-1
P/N 10-00920 ..... **$90.85**
$35.00 Core Charge



RAPCO VACUUM SYSTEM KIT

This Vacuum System Kit is ideal for use on experimental aircraft, allowing the kit builder to obtain all of the necessary components of their vacuum system in one convenient kit. The price of this kit reflects a substantial discount over the individual prices of the components if purchased separately.

This Kit Includes:
- 1 RAP215CC Vacuum Pump w/Gasket
- 1 RA2H3-12 Vac. Regulator w/Garter Filter
- 1 RAIJ7-1 Filter Assembly
- 1 RA1K1-6-10 90° 5/8" Fitting
- 1 RA1K8-6-10 152° 5/8" Fitting
- 2 RA1K31-4-6-4 3/8" and 1/4" T-Fitting
- 2 RA1K10-4-6 3/8" Fitting
- 1 - 5/8" x 3' Hose
- 1 - 3/8" x 5' Hose
- 1 - 1/4" x 6' Hose
- 10 - #8 Hose Clamps
- 4 - #4 Hose Clamps
- 1 Installation Diagram
- 1 Suction Gauge

Kit with RAP215CC Pump - For engines with ***COUNTER CLOCKWISE*** turning accessory drives. ..... P/N 11-00099 ..... **$818.00**

Kit with RAP216CW Pump - For engines with ***CLOCKWISE*** turning accessory drives..... P/N 06-00635..... **$818.00**

Kit Without Pump..... P/N 10-02010..... **$664.00**



RAPCO SHEAR SHAFT / COUPLER

P/N 08-13898 ..... **$15.90**



RAPCO SHEAR COUPLER KIT

Includes: Coupler, Spline, Gasket Kit. Rapco PN RA-Shear Coupler Kit
P/N 08-13890 ..... **$31.60**



RAPCO VACUUM MEASURE KIT

Includes: Caliper, Screw, Washer Kit. Rapco PN RA-Vac Measure Kit.
P/N 08-13900 ..... **$16.55**



GARWIN / PESCO REMANUFACTURED WET PUMPS

Our supplier remanufactures run-out Pesco and Garwin wet pumps to factory specifications. FAA Approved.

Note: Pump Drive is included.

Pesco 194 pump ..... P/N 10-00028 ..... **$546.00**
Pesco 207 pump ..... P/N 10-00029 ..... **$589.00**
Garwin G455 pump ..... P/N 10-00027 ..... **$546.00**
Garwin G450 pump ..... P/N 10-00026 ..... **$546.00**

Add $150.00 core charge to purchase price. Like cores in repairable condition may be returned to Aircraft Spruce West for full core credit. Return cores via UPS and reference invoice number.

AIRWOLF WET VACUUM PUMP



Four thick, robust vanes are lubricated by a fine mist of engine oil for incredibly smooth, fracture-free operation. The pump is milled from a solid aluminum billet, and direction of rotation is unimportant, eliminating vane fractures. Combined with our top-selling oil filter system and genuine Walker AirSepyour vacuum system finally becomes dependable. **$100.00** Core charge applies.
P/N 10-00707 ..... **$1,599.00**

VACUUM RESTRICTOR VALVE



AN5829-2 manually adjustable needle valve complete with locking collar and mounting flange. For reducing vacuum to 2" Hg for operation of turn/bank. Manufactured by ACS Products Co. ..... P/N AN5829-2 ..... **$56.95**

VACUUM PUMPS

RAPCO DRY AIR PUMPS - VACUUM / PRESSURE



RAPCO FAA approved quality dry air pumps are available in brand new replacement models or overhauled. All are backed by warranty.

BRAND NEW RAPCO DRY AIR PUMPS are FAA-PMA approved and come with an inspection port to help determine replacement time. An exclusive internal shaft seal helps to keep out destructive oil and solvents. Mounting gasket included. Warranty period for 200 series is three year 1300 hours, 240 and 400 series is 1 year 500 hours, whichever comes first. No core charge on new pumps. Core rebate available.

Rapco New Dry Air Vacuum Pumps			
Description	**Rapco Part Number**	**Our Part Number**	**Price**
RAP215CC New Rapco Pump	RAP215CC	10-23925	**$339.00**
RAP215CC-9 New Rapco Pump	RAP215CC-9	10-03401	**$339.00**
RAP216CW New Rapco Pump	RAP216CW	10-23935	**$339.00**
RAP241CC New Rapco Pump	RAP241CC	10-23950-1	**$607.00**
RAP241CC-13 New Rapco Pump	RAP241CC-13	10-03447	**$607.00**
RAP241CC-15 New Rapco Pump	RAP241CC-15	10-03448	**$607.00**
RAP242CW New Rapco Pump	RAP242CW	10-23960-1	**$617.00**
RAP242CW-4 New Rapco Pump	RAP242CW-4	10-03449	**$607.00**
RAP242CW-10 New Rapco Pump	RAP242CW-10	10-03450	**$607.00**
RAP441CC New Rapco Pump	RAP441CC	10-01126	**$849.00**
RAP441CC-3 New Rapco Pump	RAP441CC-3	10-03074	**$844.00**
RAP441CC-7 New Rapco Pump	RAP441CC-7	10-03075	**$849.00**
RAP441CC-9 New Rapco Pump	RAP441CC-9	10-03076	**$829.00**
RAP441CC-17 New Rapco Pump	RAP441CC-17	10-03077	**$849.00**
RAP441CC-23 New Rapco Pump	RAP441CC-23	10-03078	**$829.00**
RAP442CW New Rapco Pump	RAP442CW	10-01127	**$849.00**
RAP442CW-4 New Rapco Pump	RAP442CW-4	10-03079	**$845.00**
RAP442CW-6 New Rapco Pump	RAP442CW-6	10-03080	**$849.00**
RAP442CW-8 New Rapco Pump	RAP442CW-8	10-03081	**$849.00**
RAP442CW-12 New Rapco Pump	RAP442CW-12	10-01128	**$879.00**
RAP442CW-14 New Rapco Pump	RAP442CW-14	10-03082	**$823.00**
RAP442CW-20 New Rapco Pump	RAP442CW-20	10-03083	**$829.00**



OVERHAULED DRY AIR PUMPS by RAPCO are FAA approved and shipped with FAA form 8130-3. Mounting gasket included. Warranty period for 200 series is two years 1000 hours, 240 and 400 series is one year 400 hours, whichever comes first.

Rapco Overhauled Dry Air Vacuum Pumps			
Description	**Rapco Part Number**	**Our Part Number**	**Price**
211CC Overhauled Pump	211CC	10-23930	**$235.00**
211CC-9 Overhauled Pump	211CC-9	10-23931	**$237.95**
212CW Overhauled Pump	212CW	10-23940	**$224.95**
215CC Overhauled Pump	215CC	10-03084	**$229.95**
216CW Overhauled Pump	216CW	10-03085	**$228.95**
241CC Overhauled Pump	241CC	10-23950	**$406.00**
241CC-13 Overhauled Pump	241CC-13	10-03086	**$417.00**
241CC-15 Overhauled Pump	241CC-15	10-03087	**$406.00**
242CW Overhauled Pump	242CW	10-23960	**$423.00**
242CW-4 Overhauled Pump	242CW-4	10-03088	**$406.00**
242CW-10 Overhauled Pump	242CW-10	10-03089	**$406.00**
441CC Overhauled Pump	441CC	10-02349	**$539.00**
441CC-3 Overhauled Pump	441CC-3	10-03090	**$532.00**
441CC-7 Overhauled Pump	441CC-7	10-03091	**$539.00**
441CC-9 Overhauled Pump	441CC-9	10-03092	**$532.00**
441CC-11 Overhauled Pump	441CC-11	10-03093	**$532.00**
441CC-17 Overhauled Pump	441CC-17	10-03095	**$539.00**
441CC-23 Overhauled Pump	441CC-23	10-03096	**$532.00**
442CW Overhauled Pump	442CW	10-02350	**$539.00**
442CW-4 Overhauled Pump	442CW-4	10-03097	**$539.00**
442CW-6 Overhauled Pump	442CW-6	10-03098	**$539.00**
442CW-8 Overhauled Pump	442CW-8	10-03099	**$539.00**
442CW-10 Overhauled Pump	442CW-10	10-03101	**$532.00**
442CW-12 Overhauled Pump	442CW-12	10-02351	**$579.00**
442CW-14 Overhauled Pump	442CW-14	10-03102	**$539.00**
442CW-20 Overhauled Pump	442CW-20	10-03105	**$532.00**

Add Core Charge to purchase price of Overhauled models. 200 Series **$100.00**, 400 Series **$100.00** To receive core credit return repairable Rapco or Airborne aluminum cores to Aircraft Spruce West via UPS and reference invoice number.

SIGMA-TEK DRY AIR PUMP



The Sigma-Tek 1U128-006 is a pump which carries a warranty for 2-years or 1000 hours. It uses an aluminum rotor and rotor housing, making the pump very resistant to damage from ingestion of foreign objects, excessive loads or engine oil. It provides clean, dry air for operation of air driven instruments in aircraft operating at medium altitudes. Pump rotates clockwise or counterclockwise in vacuum or pressure mode. May be mounted in either a vertical or horizontal position. FAA approved as a direct replacement for all instrument pumps but is not intended for supplying air to deicing boots. Mounting gasket furnished. Install suction regulator in line to instruments. Delivers 6 In. Hg vacuum (2.9-8.5 minimum CEM) or 6 In. Hg pressure (3.7-8.5 minimum CEM) from 1500 to 4000 RPM. No core charge. P/N 10-02778 ..... **$789.00**

AIR POWER REMANUFACTURED DRY AIR PUMP



Ais Power overhaul facility which remanufactures run-out Airborne vacuum pumps to factory specifications. Warranty on 211/212 series pumps is 1-year/1000 hours and on 240/440 series pumps warranty is 1-year/400 hours. Weight: 211/212/240 series= 3 lbs.; 441/442 series = 4 lbs.

Description	**Part No.**	**Price**
215cc pump	10-00068	**$235.00**
216cw pump	10-00069	**$235.00**
241cc pump	10-00070	**$335.00**
242cw pump	10-00071	**$325.00**
441cc pump	10-00072	**$392.00**
442cw pump	10-00073	**$399.00**
211CC	10-01136	**$229.95**
241CC-13	10-01139	**$337.00**
441CC-7	10-01141	**$399.00**
441CC-17	10-01142	**$399.00**
442CW-4	10-01143	**$466.00**
442CW-6	10-01144	**$399.00**
442CW-8	10-01145	**$466.00**

Call for RMA before sending pump to Aircraft Spruce West for overhaul.

VACUUM PUMP SHEAR COUPLINGS

These parts fit Airborne 200 & 400 series pumps.

Shear Coupling .....P/N 07-03568 ..... **$14.85 ea**
Standard Bushing.....P/N 82-20095 ..... **$20.95 ea**

TEMPEST VACUUM FILTERS

FAA-PMA Approved

ARB3-5-1..... P/N 10-00922..... **$2.90**
AAD9-14-3..... P/N 10-00923..... **$22.75**
AAD9-14-5..... P/N 10-00924..... **$21.40**
AAD9-18-1..... P/N 10-01354..... **$22.75**

TEMPEST VACUUM PUMP WRENCH



Case hardened steel, with nickel-chrome plating for corrosion resistance. Slip resistant vinyl grip. Rare earth magnet allows efficient and easy installation of hard-to-get-to install nuts. Eligibility: Fits all 200, 240, 400 and 3200 series vacuum pumps.

P/N 10-02654 ..... **$29.70**

RAPCO VACUUM PUMP REMOVAL & INSTALLATION TOOL



The RA716 Pump Wrench provides superior access to the vacuum pump flange nuts. This new tool is made from quality hardened steel with corrosion resistant nickel plating. The shank is shaped to provide easy access to tight areas between the pump and accessories. The open end head is laser cut providing a close tolerance fit on the nut. Plastic coating on the handle provides a firm grip.....P/N 10-13911 **$23.50**

IN

Prices Subject to Change Without Notice



PARKER SUCTION REGULATOR

Constructed of lightweight aluminum. Large air passages minimize the pressure drop through the valve. Valve chatter is virtually eliminated by pneumatically balancing the regulating diaphragm. The simple but effective polyurethane garter filter protects the air pump and may be easily replaced. Beaded hose fittings simplify installation and eliminate expensive AN fittings which unnecessarily restrict air flow.

Has 5/8" x 3/8" Ports (45° elbow)..... P/N 10-02102 ..... **$1,256.00**
Has 5/8" x 3/8" Ports (Straight) ..... P/N 10-03423 ..... **$795.00**
Replace. Filter (replace after 100 hrs operation)..... P/N B3-5-1..... **$2.90**

RAPCO VACUUM REGULATORS



RAPCO RA2H3-2 VACUUM REGULATOR - This FAA Approved Rapco vacuum regulator is designed to maintain a constant setting at various pressure altitudes. Adjustable setting. Vacuum regulators come with the RAB3-5-1 garter filter. 5/8" Hose Fitting (Pump), 1/2" Hose Fitting (instruments). Replaces - Airborne PN. 2H3-2, 133A3, Aero Accessories PN. 2H3-2

P/N 10-03895 .....**$283.95**



RAPCO RA2H3-5 VACUUM REGULATOR - This FAA Approved Rapco vacuum regulator is designed to maintain a constant setting at various pressure altitudes. Adjustable setting. Vacuum regulators come with the RAB3-5-1 garter filter. 5/8" Hose Fitting (Pump), 5/8" Hose Fitting (instruments). Replaces - Airborne PN. 2H3-5, 133C1, Aero Accessories PN. 2H3-5

P/N 10-03894 .....**$283.95**



RAPCO RA2H3-6 VACUUM REGULATOR - This FAA Approved Rapco vacuum regulator is designed to maintain a constant setting at various pressure altitudes. Adjustable setting. Vacuum regulators come with the RAB3-5-1 garter filter. 5/8" Hose Fitting (Pump), 5/8" Hose Fitting (instruments). Replaces - Airborne PN. 2H3-6, 133B3, Aero Accessories PN. 2H3-6, Piper PN. 584-324

P/N 10-03918 .....**$286.95**



RAPCO RA2H3-11 VACUUM REGULATOR - This FAA Approved Rapco vacuum regulator is designed to maintain a constant setting at various pressure altitudes. Adjustable setting. Vacuum regulators come with the RAB3-5-1 garter filter. AN-10A Flared Tube Fitting (Pump), AN-10A Flared Tube Fitting (instruments) Replaces - Airborne PN. 2H3-11, 133A13

P/N 10-03919 .....**$445.00**



RAPCO RA2H3-12 VACUUM REGULATOR - This FAA Approved Rapco vacuum regulator is designed to maintain a constant setting at various pressure altitudes. Adjustable setting. Vacuum regulators come with the RAB3-5-1 garter filter. 5/8" Hose Fitting (Pump), Two 3/8" Hose Fitting (instruments). Replaces - Airborne PN. 2H3-12, 2H3-16, 133A16, Cessna PN. C482001-0401 P/N 10-00289 ...**$273.95**



RAPCO RA2H3-15 VACUUM REGULATOR - This FAA Approved Rapco vacuum regulator is designed to maintain a constant setting at various pressure altitudes. Adjustable setting. Vacuum regulators come with the RAB3-5-1 garter filter. One AN-10A Pump fitting. . Replaces - Airborne PN. 2H3-15 P/N 10-04842 .....**$371.00**



RAPCO RA2H3-19 VACUUM REGULATOR - This FAA Approved Rapco vacuum regulator is designed to maintain a constant setting at various pressure altitudes. Adjustable setting. Vacuum regulators come with the RAB3-5-1 garter filter. 5/8" Hose Fitting (Pump),Two 3/8" Hose Fittings (Instrument)Replaces – Airborne PN.2H3-19, Piper PN. 492-240

P/N 10-04780 .....**$537.00**



RAPCO RA2H3-23 VACUUM REGULATOR - This FAA Approved Rapco vacuum regulator is designed to maintain a constant setting at various pressure altitudes. Adjustable setting. Vacuum regulators come with the RAB3-5-1 garter filter. 5/8" Hose Fitting (Pump), Two 3/8" Hose Fitting (instruments). Replaces - Airborne PN. 2H3-23, 133A4, Piper PN. 492-272

P/N 10-03009 .....**$283.95**



RAPCO RA2H3-48 VACUUM REGULATOR - This FAA Approved Rapco vacuum regulator is designed to maintain a constant setting at various pressure altitudes. Adjustable setting. Vacuum regulators come with the RAB3-5-1 garter filter. 5/8" Hose Fitting (pump), AN-10A Flared Tube (instrument). Replaces - Airborne PN. 2H3-48, Aero Accessories PN. AA2H3-48

P/N 10-03921 .....**$324.00**

TEMPEST VACUUM REGULATORS



FAA/PMA Approved

AA 2H3-2 ..... P/N 10-03458..... **$292.95**
AA 2H3-6 ..... P/N 10-03460..... **$517.00**
AA 2H3-12 ..... P/N 10-03461..... **$269.95**
AA 2H3-23 ..... P/N 10-03462..... **$274.95**

AIRBORNE CENTRAL AIR FILTERS



Increase gyro life with Airborne gyro air filter. Incorporates a 0.3 micron filter element that protects gyro instruments by filtering out tobacco smoke and cabin dust. Small, lightweight, easily installed. Fits most planes. Dual 3/8" beaded tubes simplify 2-gyro installations.

Part No.	Description	Price
1J7-1	Vacuum Instrument Central Gyro Air Filter: 0.3 micron pleated paper element with two 3/8" installation tubes.	$149.95
B3-5-1	Vacuum relief & pump inlet foam garter filter: Foam Inlet filter (except 1J2-2)	$2.90
D9-14-3	Replacement element used in Airborne 1J2-2.	$19.50
D9-18-1	Replacement Filter for Airborne1J7-1 Gyro filter Assy.	$19.50
1J10-1	Line mounted Filter 3/8"x3/8" non-beaded tube. 5-3/4"long.	$73.95

REPLACEMENT FILTERS

Part No.	Description	Price
10-05901	Replacement Filter 1J7-2	$116.75
10-05902	Replacement Filter 2J4-4	$84.50

RAPCO REPLACEMENT PNEUMATIC FILTERS

Description	Recommended Replacement	OEM Number	RAPCO Number	Part No.	Price
Line Mounted Filter, 1/2"x1/2" Tube	1 yr / 500 Hrs	2J4-4	RA2J4-4	10-23810	$31.75
Line Mounted Filter, 5/8"x5/8" Tube	1 yr / 500 Hrs	2J4-6	RA2J4-6	10-23820	$34.50
Line Mounted Filter, 5/8"x5/8" Tube Overall length 5-1/2"	1 yr / 500 Hrs	2J4-7	RA2J4-7	10-23830	$34.85
Vacuum Central Gyro Air Filter Assy	1 yr / 500 Hrs	1J7-1	RA1J7-1	10-23840	$35.65
Line Mounted Filter - 3/8" x 3/8"	1 yr / 500 Hrs	1J10-1	RA1J10-1	10-00287	$32.50
Steel canister filter with drain hole. Two 5/8" hose fittings, overall length 5-1/2" x 3-1/4" diam.	--	101-524009-0163, 101-524009-0161, 101-524009-91	RA101-524009-0163	05-15253	$158.75
Vacuum Pump Inlet Garter Filter	1 yr / 100 Hrs	B3-5-1	RAB-3-5-1	10-23850	$2.95
Replacement Element, 1J2-2 filter	1 yr / 100 Hrs	D9-14-3	RA-D9-14-3	10-23860	$19.50
Rep. Element for1J2 series (except 1J2-2)	1 yr / 100 Hrs	D9-14-5	RA-D9-14-5	10-23870	$19.50
Replacement Element, 1J7-1 Filter	1 yr / 500 Hrs	D9-18-1	RA-D9-18-1	10-23880	$19.50

UMA GAUGES



UMA 1" GYRO SUCTION GAUGES

Case: Molded ABS Plastic. Weight: 1.4 oz.

Part No.	Range	Dial Markings	Price
10-02361	3-7 IN.HG	B & W	**$162.75**
10-00311	3-7 IN.HG	GA 4.5-5.4	**$180.00**
10-02464	3-7 IN.HG	GA 3.5-5.0, RR 3.5 & 5.0	**$168.75**



UMA 1-1/4" GYRO SUCTION GAUGES

Case: Molded ABS Plastic. Weight: 1.4 oz.

Part No.	Range	Dial Markings	Price
10-01010	3-7 IN. HG.	GA 4.5-5.2, RR 4.5 & 5.2	**$183.75**
10-02465	3-7 IN. HG.	GA 4.75-5.25, RR 4.75 & 5.25	**$203.95**
10-02466	3-7 IN. HG.	GA 4.5-5.0	**$203.95**
10-02467	2-6 IN. HG.	GA 3.8-4.4, RR 3.8 & 4.4	**$203.95**
10-02358	3-7 IN. HG.	B & W	**$197.75**
10-02468	2-6 IN. HG.	GA 4.0-5.0	**$203.95**
10-02469	2-6 IN. HG.	GA 4.5-5.4, YA 2.0-4.5, RR 6.0	**$203.95**
10-02470	2-6 IN. HG.	GA 3.5-5.0, RR3.5	**$203.95**
10-02471	0-10 IN. HG.	B & W	**$203.95**



UMA 2-1/4" UMA GYRO SUCTION

Case: Cast Aluminum. Weight: 4.7 oz.

Part No.	Range	Dial Markings	Price
10-00090	2-8 IN. HG.	GA 4.6-5.4	**$206.95**
10-01000	0-10 IN. HG.	B & W	**$200.00**
10-02359	0-10 IN. HG.	GA 4-5, RR 5	**$206.95**
10-02360	0-10 IN. HG.	GA 4.2-4.4, RR 4.2 & 5.3	**$206.95**



UMA 1-1/4" PNEUMATIC PRESSURE

Case: Molded ABS Plastic. Weight: 1.4 oz.

Part No.	Range	Dial Markings	Price
10-02364	0-25 PSI	GA 5.0-10, YA 10-21	**$257.95**
10-02365	0-25 PSI	GA 15-21, YA 21-25, RR 14.9	**$257.95**
10-12305	0-25 PSI	GA 15-21, RR 24	**$257.95**
10-02366	0-25 PSI	GA 2.5-7.5, YA 7.5-21	**$257.95**



VARGA 1" INCH ROUND SUCTION GAUGE

Miniature 1" round case instrument. Used in many production aircraft. A real space saver.

P/N 10-01100 ..... **$139.50**

FOR EXPERIMENTAL AIRCRAFT ONLY.

NOT FAA APPROVED



1-1/4 INCH GYRO PRESSURE GAUGE

These units are designed to save space in cockpit panels. These gauges utilize an internal diaphragm for accuracy and reliability. Miniature 1-1/4" instrument. Case: Molded ABS Plastic. Weight: 1.4 oz.

Part No.	Range	Dial Markings	Price
10-01105	3-7 IN. HG.	GA 4.25-6.25	**$202.95**
10-02462	3-7 IN. HG.	GA 4.25-5.2, RR 4.25 & 5.2	**$202.95**
10-02463	3-7 IN. HG.	GA 4.5-5.2, YA 3.8-4.5, RR 3.8 & 5.2	**$202.95**



UMA 2-1/4" GYRO PRESSURE GAUGES

These units are designed to save space in cockpit panels. These gauges utilize an internal diaphragm for accuracy and reliability. Case: Cast Aluminum. Weight: 4.7 oz.

Part No.	Range	Dial Markings	Price
10-02362	2-8 IN. HG.	B & W	**$200.00**
10-02363	2-8 IN. HG.	GA 4.5-5.5	**$206.95**



UMA 2-1/4" CABIN ALTITUDE DIFFERENTIAL PRESSURE GAUGE

Case: Valox 420 Plastic Weight: 7.4 oz.

Part No.	Range	Daial Markings	Price
10-02370	0-25,000 Ft. 0-6 PSI	B & W	**$574.00**
10-02371	0-30,000 Ft. 0-6 PSI	GA 0-10, YA 10-28	**$574.00**
10-02460	0-30,000 Ft. 0-6 PSI	GA 0-10, YA 10-28	**$574.00**
10-02461	0-35,000 Ft. 0-8 PSI	B & W	**$574.00**

IN

AIRSPEED INDICATORS



UMA AIRSPEED INDICATORS (NON-TSO'D)

These quality UMA, non-TSO'd airspeed indicators are available in MPH, Knots or Dual Scales.
Note: An inverter is required for the Internal Lighting Option (P/N 10-02083 UMA 14V LIGHT INVERTER)

Description	Dial	Part No.	Price
3-1/8"	20-80 mph	10-04905	$212.95
3-1/8"	20-100 mph	10-04910	$212.95
3-1/8"	20-120 mph	10-04915	$212.95
3-1/8"	20-140 mph	10-04920	$212.95
3-1/8"	20-160 mph	10-04925	$212.95
3-1/8"	40-180 mph	10-04930	$212.95
3-1/8"	40-200 mph	10-01029	$212.95
3-1/8"	40-240 mph	10-00512	$212.95
3-1/8"	40-260 mph	10-01030	$212.95
3-1/8"	40-280 mph	10-01031	$212.95
3-1/8"	40-300 mph	10-01032	$223.95
3-1/8"	20-80 Knots	10-01033	$212.95
3-1/8"	20-100 Knots	10-01034	$212.95
3-1/8"	20-120 Knots	10-04950	$212.95
3-1/8"	20-140 Knots	10-04955	$212.95
3-1/8"	20-160 Knots	10-01035	$212.95
3-1/8"	40-180 Knots	10-04965	$212.95
3-1/8"	40-200 Knots	10-04970	$212.95
3-1/8"	40-240 Knots	10-00514	$212.95
3-1/8"	40-260 Knots	10-01036	$212.95
3-1/8"	40-280 Knots	10-01037	$212.95
3-1/8"	40-300 mph	10-01038	$223.95
3-1/8" Dual	20-140 mph/20-120 Knots	10-00511	$231.95
3-1/8" Dual	40-160 mph/20-135 Knots	10-02200	$231.95
3-1/8" Dual	40-180 mph/20-150 Knots	10-02300	$231.95
3-1/8" Dual	40-200 mph/40-170 Knots	10-02400	$231.95
3-1/8" Dual	40-240 mph/40-205 Knots	10-02600	$231.95
3-1/8" Dual	40-260 mph/40-225 Knots	10-01039	$231.95
3-1/8" Dual	40-300 mph/40-250 Knots	10-01040	$231.95
3-1/8" Dual	40-350 mph/40-300 Knots	10-01041	$231.95
3-1/8" Dual	40-260 Knots/50-300 mph	10-01042	$231.95
3-1/8" Dual	40-300 Knots/40-340 mph	10-01043	$231.95
Range Markings	UMA Range Markings on NON-TSO Units	10-02792	$125.00



UMA 3-1/8" AIRSPEED INDICATORS (TSO'd)

These quality UMA airspeed indicators are available in MPH, Knots or Dual Scales.

3-1/8" TSO'd Single Scale	Part No.	Price
40-160 MPH	10-03250	$546.00
40-180 MPH	10-03251	$546.00
40-200 MPH	10-03252	$546.00
40-240 MPH	10-03253	$546.00
40-260 MPH	10-03254	$546.00
40-280 MPH	10-03255	$546.00
40-300 MPH	10-03256	$546.00

3-1/8" TSO'd Dual Scale	Part No.	Price
40-160 MPH/ 40-135 Knots	10-03270	$546.00
40-180 MPH/ 40-150 Knots	10-03271	$546.00
40-200 MPH/ 40-170 Knots	10-03272	$546.00
40-240 MPH/ 40-205 Knots	10-03273	$546.00
40-260 MPH/ 40-225 Knots	10-03274	$546.00

3-1/8" NOT TSO'd Single Scale	Part No.	Price
40-160 Knots	10-03257	$546.00
40-180 Knots	10-03258	$546.00
40-200 Knots	10-03259	$546.00
40-240 Knots	10-03260	$546.00
40-260 Knots	10-03261	$546.00
40-280 Knots	10-03262	$546.00
40-300 Knots	10-03263	$546.00

3-1/8" NOT TSO'd Dual Scale	Part No.	Price
40-240 MPH/ 40-205 Knots	10-03276	$546.00
50-270 MPH/ 40-240 Knots	10-03277	$546.00
50-300 MPH/ 40-260 Knots	10-03278	$546.00
Outside/Inside Scale: 300 Knots	10-03279	$546.00
40-300 MPH/ 40-250 Knots	10-03275	$546.00



UMA 2-1/4" MINIATURE AIRSPEEDS

A fine quality instrument of new manufacture for the exceptional homebuilt aircraft. Matte-white dial markings. Fits standard 2-1/4" instrument panel opening. Space saving dims: 2-3/8"x2-3/8"x3.25"L. All ranges available in knots.

Range	P/N	Range	P/N	Range	P/N
20-100 MPH	10-03992	40-160 MPH	10-03996	40-240 MPH	10-04000
20-120 MPH	10-03993	40-180 MPH	10-03997	40-260 MPH	10-04001
20-140 MPH	10-03994	40-200 MPH	10-03998	40-300 MPH	10-04002
0-120 Knot	10-03995	40-140 Knot	10-00507	40-160 Knot	10-01787
40-180 Knot	10-00508	40-200 Knot	10-00509	40-240 Knot	10-00510
ALL MODELS.....$231.95					



UNITED AIRSPEED INDICATORS (TSO'D)

These 8000 series United airspeeds are TSO'd for installation on certificated aircraft. Factory new. Available in dual scale MPH/knots, or in MPH or knots only. Fits standard 3-1/8" panel hole. Wt: 0.7 lb.

Part No.	Range	Lighted	Price
10-00190	40-200 mph/40-170 knots	No	$796.00
10-00190-1	40-200 mph/40-170 knots	Yes	$940.00
10-00191	40-250 mph/40-200 knots	No	$796.00
10-00191-1	40-250 mph/40-200 knots	Yes	$940.00
10-00192	40-300 mph/40-260 knots	No	$796.00
10-00192-1	40-300 mph/40-260 knots	Yes	$940.00
10-00198	0-170 knots	No	$796.00
10-00198-1	0-170 knots	Yes	$940.00
10-00201	0-260 knots	No	$796.00
10-00201-1	40-260 knots	Yes	$933.00

Available with custom range marks .....P/N 10-02614 .....**$215.95**



UNITED TRUE AIRSPEED INDICATORS

The true airspeed indicator corrects the indicated airspeed for changes in temperature and pressure encountered as aircraft changes altitude. By aligning outside temperature and pressure altitude with setting knob, movable airspeed scale is rotated proper amount so pointer registers true airspeed. Factory new 8100 series by United. TSO'D for certificated aircraft. Dual scale. Not Lighted.

Add $215.95 for custom range marks & specify exact range marks needed.

Series	Range	Part No.	Price
8100	40-200 mph/35-170 knots	10-00203	$842.00
8125	40-250 mph/40-215 knots	10-00204	$842.00
8100	40-170 knots	10-00216	$842.00
8125	40-210 knots	10-00217	$842.00
8130	40-260 knots	10-00218	$842.00
8140	0-350 Knots	10-00219	$850.00

LIGHTED UNITED AIRSPEEDS

Add -1 to P/N's above for internally lighted airspeed indicators.



Dual Scale (MPH/Knots) with multicolor markings

UMA 2-1/4 TSO'D AIRSPEED INDICATORS

UMA indicators are FAA TSO'd to C2d specifications. Installable in a fixed wing aircraft with a reciprocating or Turboprop Engine. Must be installed in a temperature controlled environment from -55 to +85 °C, to a max altitude of 25,000 ft. UMA offers indicators with full scale ranges available, from 160 to 300 in MPH or Knots.

UMA Part NO.	Range	Part No.	Price
T16-210-121	20-120 MPH	10-03577	$565.00
T16-211-121	20-120 Knots	10-03578	$565.00
T16-210-141	20-140 MPH	10-03579	$565.00
T16-211-141	20-140 Knots	10-03580	$565.00
T16-210-142	30-140 MPH	10-03582	$565.00
T16-211-142	30-140 Knots	10-03583	$565.00
T16-210-160	40-160 MPH	10-03584	$565.00
T16-211-160	40-160 Knots	10-03585	$565.00
T16-210-161	20-160 MPH	10-03586	$565.00
T16-211-161	20-160 Knots	10-03587	$565.00
T16-210-180	40-180 MPH	10-03588	$565.00
T16-211-180	40-180 Knots	10-03589	$565.00
T16-210-200	40-200 MPH	10-03590	$565.00
T16-211-200	40-200 Knots	10-03591	$565.00
T16-210-240	40-240 MPH	10-03592	$565.00
T16-211-240	40-240 Knots	10-03593	$565.00
T16-210-260	40-260 MPH	10-03594	$565.00
T16-211-260	40-260 Knots	10-03595	$565.00
T16-210-300	40-300 MPH	10-03596	$565.00
T16-211-300	40-300 Knots	10-03597	$565.00
T16-210-400	40-400 MPH	10-03598	$635.00
T16-211-400	40-400 Knots	10-03599	$635.00
T16-212-240	40-240 KmH	10-03602	$565.00
T16-212-260	40-260 KmH	10-03603	$565.00
T16-212-280	40-280 KmH	10-03604	$565.00
T16-212-300	40-300 KmH	10-03605	$565.00
T16-212-320	40-320 KmH	10-03606	$565.00
T16-212-380	40-380 KmH	10-03607	$565.00
T16-212-400	40-400 KmH	10-03608	$635.00
T16-212-440	40-440 KmH	10-03609	$635.00

AIRSPEEDS

FALCON 3 1/8" SINGLE RANGE AIRSPEEDS



These Airspeed Indicators have been one of the most chose flight instruments by kit plane builders and pilots. There are many great advantages to using these gauges: excellent slow speed characteristics; very progressive increments; a variety of ranges, light weight; short length, and affordable price. All Airspeed Indicators are housed in an aluminum case and consist of all metal parts. Available ranges: mph, knots, km/hr; single range reading or dual range readings. Non-Tso'd.

Model No.	Length	Range	Part No.	Price
ASI200M-3	3.5"/97.3mm	30-200 MPH	10-02918	**$199.95**
ASI180M-3	3.5"/97.3mm	30-180 MPH	10-03000	**$199.95**
ASI080M-3	2.2"/56.5mm	0-80 MPH	10-02905	**$189.95**
ASI100M-3	2.2"/56.5mm	0-100 MPH	10-02910	**$189.95**
ASI120M-3	2.2"/56.5mm	0-120 MPH	10-02915	**$189.95**
ASI140M-3	3.5"/97.3mm	0-140 MPH	10-02916	**$189.95**
ASI150M-3	2.2"/56.5mm	0-150 MPH	10-02225	**$189.95**
ASI160M-3	3.5"/97.3mm	0-160 MPH	10-02917	**$199.95**
ASI080N-3	3.5"/97.3mm	0-80 Knots	10-02896	**$189.95**
ASI100N-3	2.2"/56.5mm	0-100 Knots	10-02897	**$189.95**
ASI120N-3	2.2"/56.5mm	0-120 Knots	10-02898	**$189.95**
ASI140N-3	3.5"/97.3mm	0-140 Knots	10-02899	**$199.95**
ASI160N-3	3.5"/97.3mm	0-160 Knots	10-02900	**$199.95**
ASI180N-3	3.5"/97.3mm	0-180 Knots	10-02217	**$199.95**
ASI200N-3	3.5"/97.3mm	0-200 Knots	10-02218	**$199.95**
ASI220N-3	3.5"/97.3mm	0-220 Knots	10-02219	**$199.95**
ASI120K-3	2.2"/56.5mm	0-120 KPH	10-02625	**$189.95**
ASI150K-3	2.2"/56.5mm	0-150 KPH	10-02221	**$189.95**
ASI200K-3	2.2"/56.5mm	0-200 KPH	10-02222	**$189.95**
ASI300K-3	2.2"/56.5mm	0-300 KPH	10-02223	**$199.95**

FALCON 3 1/8" DUAL RANGE AIRSPEEDS



These Airspeed Indicators have been one of the most chose flight instruments by kit plane builders and pilots. There are many great advantages to using these gauges: excellent slow speed characteristics; very progressive increments; a variety of ranges, light weight; short length, and affordable price. All Indicators are housed in an aluminum case and consist of all metal parts.

Falcon Gauge Dual Dial Airspeed Indicators provide dual readings and are suitable for higher performance type aircraft flying at moderate to high speeds. Matte-white dial markings, housed in a sturdy protective aluminum case. Weight: approx. 10.5 oz./301g. Length: 3.5" or 97.3mm Size: 3-1/8"

Model No.	Range	Part No.	Price
ASI164MN-3	20-160 MPH/140 Knots	10-02227	**$199.95**
ASI186MN-3	30-180 MPH/160 Knots	10-02228	**$199.95**
ASI208MN-3	30-200 MPH/180 Knots	10-02901	**$199.95**
ASI252MN-3	30-250 MPH/220 Knots	10-02229	**$199.95**
ASI306MN-3	40-300 MPH/260 Knots	10-02230	**$199.95**
ASI316KN-3	30-300 KPH/160 Knots	10-02231	**$199.95**

FALCON TRUE AIRSPEEDS



Falcon Gauge True Airspeed Indicators have sub-dial and windows. Pilot can set to coincide the outside temperature with the flight altitude for immediate reference. It is a high precision airspeed indicator which makes nice feature and impression for an experimental aircraft cockpit. It also features all parts made with metal, aluminum case housing, short length, light weight. Size: 3 1/8". Length: 2.2" or 56.5mm. Weight: 10.5oz or 310g

Model	Range	Part No.	Price
ASIT240MKL	40-240 MPH / 210 Knots, with color markings for Vans Aircraft RV 3, 4, 6 -Lighted	10-05803	**$375.00**
ASIT24KM9	260 MPH / 220 Knots, with color markings for Vans Aircraft RV 10 -Lighted	10-05814	**$274.95**

SIGMA-TEK RESTRAINED AIRSPEEDS



These airspeed indicators have restrained movements. These instruments are actuated by ram air and ambient atmospheric pressure obtained from the aircraft pitot and static pressure systems. A moveable pointer and a fixed dial indicate airspeed with the zero index at the 12 o'clock position. Temperature compensation is internal and there is no external zero adjustment. Pointer damping is internally adjustable. ***Note: Lighted Instruments do not include lamp trays, see website for accessories.***

Model No.	Lighted	MPH	Knots	Part No.	Price
EA5174-( )L	X	40-200	40-170	10-05158	**$958.00**
EA5175-( )		40-250	40-200	10-05159	**$785.00**
EA5175-( )L	X	40-250	40-200	10-05160	**$958.00**
EA5176-( )		40-300	40-260	10-05162	**$928.00**
EA5176-( )L	X	40-300	40-260	10-05163	**$979.00**

FALCON 3 1/8' TRUE AIRSPEEDS



Falcon Gauge True Airspeed Indicators have a sub-dial and window. The pilot can set the dial to coincide the outside temperature with the flight altitude for immediate and accurate true airspeed reference. It is a high precision airspeed indicator which makes for a nice feature and impression in an experimental aircraft cockpit. It also features all parts made with metal, aluminum case housing, short length and light weight. Non-Tso'd

Dual Range: mph inside/knots outside or knots inside/mph outside

Single Range: mph or knots Size: 3-1/8"

Length: 2.2" or 56.5mm Weight: 10.5 oz. or 301g

Model No.	Range	Part No.	Price
ASIT260M-3	40-260 MPH	10-02235	**$274.95**
ASIT260M-3L	40-260 MPH, Lighted	10-02236	**$375.00**
ASIT210N-3	40-210 Knots	10-02237	**$375.00**
ASIT210N-3L	40-210 Knots, Lighted	10-02238	**$375.00**
ASIT240M-3	40-240 MPH	10-02248	**$274.95**
ASIT240M-3L	40-240 MPH, Lighted	10-02249	**$375.00**
ASIT241MN-3	40-240 MPH/210 Knots	10-00001	**$274.95**
ASIT241MN-3L	40-240 MPH/210 Knots, Lighted	10-02214	**$375.00**
ASIT262MN-3	40-260 MPH /220Knots	10-00004	**$274.95**
ASI262MN-3L	40-260 MPH/220 Knots, Lighted	10-02234	**$375.00**
ASIT214NM-3	40-210 Knots/240 MPH	10-00002	**$274.95**
ASIT226NM-3	40-200 Knots/260 MPH	10-00003	**$274.95**
ASIT226NM-3L	40-200 Knots/260 MPH, Lighted	10-02216	**$375.00**

FALCON GAUGES ARE MADE IN CHINA

FALCON 2 1/4" MINIATURE AIRSPEEDS



These Miniature Airspeed Indicators are designed for ultralights. They offer ultralight pilots an affordable alternative to other higher priced indicators found in the market today without compromising the pilot's needs for a quality gauge that provides accuracy, light weight, compactness and safety. Their excellent slow speed performance provides an extra measure of safety by assuring accurate speed readings when flying low or critical stall speeds. Weight: approx. 2.8 oz. or 80g Length: 2-9/16" or 41mm

Model No.	Range	Part No.	Price
ASI080M-2	0-80 MPH	10-02605	**$179.95**
ASI100M-2	0-100 MPH	10-02610	**$179.95**
ASI120M-2	0-120 MPH	10-02615	**$179.95**
ASI140M-2	0-140 MPH	10-02620	**$179.95**
ASI120K-2	0-120 KPH	10-04198	**$179.95**
ASI140K-2	0-140 KPH	10-02226	**$179.95**
ASI120N-2	0-120 KNOTS	10-04069	**$179.95**

SIGMA-TEK AIRSPEEDS (TSO'D)



Sigma-Teks precision airspeeds are original equipment on a variety of aircraft and over 144,000 have been delivered worldwide. Select from a single MPH scale or dual scale showing MPH / Knots. New manufacture. TSOD for certificated aircraft unlit. Add $95 for custom range markings. (Specify exactly)

Model	Lighted	MPH	Part No.	Price
Dual Scale Airspeed	No	40-250	10-03210	**$758.00**
Dual Scale Airspeed	No	40-300	10-03215	**$743.00**
Standard Airspeed	No	40-200	10-05152	**$726.00**
Standard, Lit Airspeed	Yes	40-200	10-05153	**$679.00**
Standard, Lit Airspeed	Yes	40-250	10-05154	**$909.00**
Standard Airspeed with decal and calibration card	No	40-250	10-05155	**$992.00**
Standard, Lit Airspeed	Yes	40-300	10-05156	**$935.00**

SIGMATEK 3-1/8" TRUE AIRSPEEDS



These true speed indicators are differential pressure indicators that measure the difference between static and total pressure produced by ram air from the pitot. The indicated airspeed can be corrected for changes in altitude by turning the knob to align the outside air temperature with the altitude. The moveable airspeed scale will then show the actual, or true, airspeed. Model No.: EA5175-( )PTL. Lighted. MPH: 40-250. Knots: 40-200. Note: Lighted Instruments do not include lamp trays, see accessories. P/N 10-05161....**$1,070.00**

Sigmatek Accessories

14V Lamp Tray.....P/N 10-02757 .....**$87.75**
28V Lamp Tray.....P/N 10-02758 .....**$87.75**
Sigmatek Airspeed Range Markings.....P/N 10-04961 .....**$181.75**

IN

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

AIRSPEED INDICATORS - ALTIMETERS

WINTER 2-1/4 INCH AIRSPEED INDICATORS



This precision instrument is enclosed in a compact housing and operates by means of a measuring tube. This ensures high accuracy even at very low speeds. EBF-series airspeed indicators are available with a pitot tube and static pressure connection.

Description	Part No.	Price
Winter 2-1/4 ASI 8020 EBF Various Range 360 Degree Dial	10-05625	**$374.00**
Winter 2-1/4 ASI 8022 EBF Various Range 360 Degree Dial	10-05627	**$374.00**
Winter 2-1/4 ASI 8026 EBF Various Range 510 Degree Dial	10-05629	**$455.00**
Winter 2-1/4" ASI 7 FMS 213 Range 0 To 100 Knot 360 Dial	10-05908	**$603.00**

WINTER 3 INCH AIRSPEED INDICATORS



This precision instrument is enclosed in a compact housing and operates by means of a measuring tube. This ensures high accuracy even at very low speeds. EBF-series airspeed indicators are available with a pitot tube and static pressure connection. Diameter: 3". Depth: 3"

Description	Part No.	Price
Winter 3" ASI 8021 EBF Various Range 360 Degree Dial	10-05626	**$375.00**
Winter 3" ASI 8023 EBF Various Range 360 Degree Dial	10-05628	**$374.00**
Winter 3" ASI 6 FMS 403 Range 0 to 100 Knots 510 Dial	10-05906	**$600.00**
Winter 3" ASI 6 FMS 213 Range 0 to 100 Knots 360 Dial	10-05907	**$603.00**

MID-CONTINENT INSTRUMENTS AND AVIONICS AIRSPEED INDICATORS



Customizable range markings can be added to match aircraft operating handbook. Affordable, certified 2-inch instrument which can be used as standby or primary indicator. Combine with a Mid-Continent MD15 Altimeter and 4200 Attitude Indicator for a complete standby package designed for tight panel applications. Approved to FAA TSO-C2d. Integral long life 5, 14 or 28 volt LED lighting. Anti-reflective glass enhances visibility and reduces pilot fatigue. Rear-mounted in standard 2 1/4" cutouts horizontally, vertically or individually. Designed and built in the USA. One year limited warranty.

Model	Description	Part No.	Price
MD25-160	2-Inch 20-160 knots, Lighted	10-04761	**$1,649.00**
MD25-200	2-Inch 40-200 knots, Lighted	10-04763	**$1,649.00**
MD25-260	2-Inch 40-260 knots, Lighted	10-04764	**$1,649.00**
MD25-300	2-Inch 40-300 knots, Lighted	10-04765	**$1,649.00**
MD25-350	2-Inch 40-350 knots, Lighted	10-04766	**$1,649.00**
MD25-400	2-Inch 40-400 knots, Lighted	10-04767	**$1,649.00**

FALCON MINIATURE AIRSPEED INDICATORS WITH PITOT KIT



This package includes a ASI080M-2 airspeed indicator, as well as a pitot kit consisting of 1/4" aluminum tubing, vinyl tube, Polyethylene Hose Adapter, and Breeze Clamp.

Falcon Miniature airspeed indicators are designed for ultralights. They offer ultralight pilots an affordable alternative to other higher priced airspeed indicators. They have excellent slow speed features which make them perfect for ultralight flying.

Size	Range	Part No.	Price
2-1/4"	0-80 MPH	AS010	**$185.95**
2-1/4"	0-100 MPH	AS011	**$185.95**
2-1/4"	0-120 KPH	AS012	**$184.95**
3-1/8"	0-80 MPH	AS020	**$195.95**
3-1/8"	0-100 MPH	AS021	**$194.95**
3-1/8"	0-120 MPH	AS022	**$195.95**

WINTER 3-INCH ALTIMETERS



Standard Precision Altimeters 4 FGH 10. Airtight, black plastic housing. Connection via hose from static pressure sensor to hose connector on rear. Kollsman window with millibar scale, reading from 940 to 1050 millibars. See scale drawing for installation dimensions. Weight 0.330 kg. Linear scale. The 4 FGH 10 altimeter can be fitted with a scale ring.

Description	Part No.	Price
Winter 3 Altimeter 4 FGH 10 1000-20000 FT MB	10-05621	**$1,202.00**
Winter 3 Altimeter 4 FGH 10 1000-20000 FT INHG	10-05622	**$1,198.00**

WINTER 2-1/4 INCH ALTIMETERS



The pressure-sensitive measuring element is a diaphragm capsule (aneroid capsule) which reacts to the effect of changing air pressure as the aircraft changes altitude. Tempered, aged copper-beryllium diaphragms ensure highly accurate readings. Diaphragm movement is transmitted to the instrument pointers by a linkage and gearwheels - the whole is insensitive to shock and vibration. A bimetal link compensates the effect of temperature change.

Description	Part No.	Price
Winter 2-1/4 Altimeter EBH 8032 0-5000 FT MB	10-24105	**$587.00**
Winter 2-1/4 Altimeter EBH 8034 0-5000 FT INHG	10-05632	**$429.00**
Winter 2-1/4 Altimeter EBH 8035 0-10000 FT INHG	10-05634	**$573.00**

TASKEM 2000 DIGITAL ALTIMETER



The Series 2000 Digital Altimeter is a precision instrument providing altitude readings from -100 to +30700 feet in 10' steps. A standard 3-1/8 instrument powered from 11–35V DC & uses a highly visible backlighted liquid crystal display. Displayed data includes Altitude, Baro Ref & Vertical Speed. A programmable altitude alert function combines both audio and visual (LED) outputs. An oxygen alert cautions when over 12500 feet. All data is output in computer compatible RS-232 format. Model 2000 devices display pressure in Hg while Model 2001 units are in mBar. 2 options can be added to the basic (-1) model; OAT (-2) includes temperature sender and also computes and displays Density Altitude, Mode C (-4) is a standard TSO-C88a compatible encoder. Both options are included in the (-3) versions. Wt., 8 oz. Depth behind back of instrument panel, 3-7/8". 2-yr factory warranty.

Model	P/N	Price	Model	P/N	Price
2000-1	10-24040	**$399.50**	2001-1	10-24041	**$405.95**
2000-2	10-24050	**$498.95**	2001-2	10-24051	**$498.95**
2000-3	10-24060	**$498.95**	2001-3	10-24061	**$498.95**
2000-4	10-24070	**$597.00**	2001-4	10-24071	**$597.00**

TASKEM 5000 DIGITAL ALTIMETER



Unlike mechanical altimeters, the Taskem 5000 is insensitive to the high vibration of 2-stroke engines frequently used on ultralight aircraft. This has literally shaken many mechanical altimeters. The 5000 is all solid state and can withstand severe shock and vibration without damage. It has a full 4.5 digit liquid crystal (LCD) display with large, 1/2" high characters. Because the LCD uses direct drive, it is easily readable from most viewing angles and does not disappear when viewed from an angle or does not washout in bright sunlight. Includes a backlight for night or dusk viewing. The altitude range extends from below sea level to well above the need for supplementary oxygen. The limits are -1000 to 19,990 ft. (-305 to 6,093 meters). Increments are in 10 ft./1m steps. The instrument is powered from DC in the range of 7–30V and is protected for accidental polarity reversal. A 9V battery is a common power source and a battery holder for this is provided on the back, external to the case. An alkaline battery will provide over 40 hours of operation, without the backlight illuminated. The backlight is not powered in the ON power switch position to conserve battery life.

Feet.....P/N 10-24010 ..... **$309.00**
Meters....P/N 10-24020 ..... **$287.95**

HALL WINDMETER

Designed for hang gliders but can be mounted on low speed aircraft as an airspeed indicator. Easy to read. Mounting bracket clamps to 7/8 or 1 1/8" dia. tube. Short bracket is 3' long, Long bracket 15" long.

Wind Meter (0-55 mph).....P/N 10-04100 ..... **$18.85**
Wind Meter (0-80 mph).....P/N 10-04105 ..... **$18.85**
Wind Meter (0-130 kph).....P/N 15-04602 ..... **$18.50**
Short Bracket .....P/N 10-04200 ..... **$5.95**
Long Bracket.....P/N 10-04300 ..... **$6.75**

IN

ALTIMETERS



UNITED SENSITIVE ALTIMETERS

Designed to help the pilot determine altitude by measuring existing atmospheric pressure, this altimeter translates this measurement into "height-above-sea-level." This is indicated on the dial of the instrument in feet, which requires setting the barometric pressure in the Kollsman window. Standard 3-1/8" size.

Range	Scale	Manufacturer	P/N	Price Ea.
0-20000 ft.	Inches	United (TSO)	10-04550	**$1,196.00**
0-35000 ft.	Inches	United (TSO)	10-04570	**$1,379.00**
0-20000 ft.	Millibar	United (TSO)	10-04560	**$1,199.00**
0-20000 ft.	Inches	United (Lighted)	10-00929	**$1,439.00**
0-35000 ft.	Inches	United (Lighted)	10-00930	**$1,553.00**
0-20000 ft.	Millibar	United (Lighted)	10-00931	**$1,413.00**
0-20000 ft.	In/Mil	United (Lighted)	10-00932	**$1,440.00**
0-20000 ft.	In/Mil	United (Unlighted)	10-00933	**$1,225.00**
0-35000 ft.	In/Mil	United (Unlighted)	10-02696	**$1,392.00**
0-35000 ft.	In/Mil	United (Lighted)	10-02697	**$1,585.00**
0-35000 ft.	Millibar	United (Lighted)	10-02698	**$1,499.00**
0-35000 ft.	Millibar	United (Unlighted)	10-02699	**$1,379.00**
0-35000 ft.	In/Mil	United (Unlighted)	10-04514	**$5,392.00**



UNITED ALTIMETER WITH CORRECTED BAROMETRIC OUTPUT

True airspeed all the time! No need to correct the barometer, the altimeter does it automatically for the pilot. • Compatible with most Air Data Systems • 35,000 ft., dual barometric scale • Internally lighted – light tray included • TSO C10d certified • Standard D.C. voltage barometric output • Mounts in standard 3 1/8" panel cutout • Requires just 5" depth behind the panel • 1/8" NPT static port • Connector included • Manufactured by United Instruments. P/N 10-02718..... **$3,025.00**



MID-CONTINENT INSTRUMENTS AND AVIONICS ALTIMETER, 2-INCH

Reliable for primary or standby use, these altimeters provide flight critical data with a three-pointer or counter drum pointer display. The compact, 2-inch size is ideal for complex panel installations. Lighting is included. These altimeters are used in many popular OEM and STC packages. Call for application assistance.

Model	Description	Part No.	Price
MD15-211	2-Inch 20K, 3-ptr., Right-hand knob, Mil., lighted	10-04753	**$5,423.00**
MD15-212	2-Inch 20K, 3-ptr., Left-hand knob, Mil., lighted	10-04754	**$5,423.00**
MD15-221	2-Inch 20K, 3-ptr., Right-hand knob, In., lighted	10-04755	**$5,423.00**
MD15-222	2-Inch 20K, 3-ptr., Left-hand knob, inches, lighted	10-04756	**$5,423.00**
MD15-311	2-Inch 35K, 3-ptr., Right-hand knob, Mil., lighted	10-04757	**$5,494.00**
MD15-312	2-Inch 35K, 3-ptr., Left-hand knob, Mil., lighted	10-04758	**$5,494.00**
MD15-321	2-Inch 35K, 3-ptr., Right-hand knob, In., lighted	10-04759	**$5,494.00**
MD15-322	2-Inch 35K, 3-ptr., Left-hand knob, In., lighted	10-04760	**$5,494.00**



FALCON 3 1/8" SENSITIVE ALTIMETERS

1. Three Pointer Altimeter with Barometric Window and Low Altitude Warning Stripes is a modern type. The easy to read striped sector will show while flying below 16,000 ft. 2. Three Pointer Altimeter with a Barometric Window enables the pilot to adjust the altimeter to the barometric conditions existing at the point of landing. 3. Two Pointer Altimeter without Barometric Window. This type of altimeter is designed to meet the demands of some pilots who either live or fly the area's barometric pressure beyond 28.1 to 31 inches of mercury, or 950 to 1050 millibars, or some pilots prefer to set the altimeter to"0" altitude before taking off without regard to the barometric pressure. By installing this altimeter, the pilot can fly anywhere in the world without having to care about the barometric pressure changes. Non-TSO'd.

Model No.	Part No.	Range	Barometric Window	Warning Stripes	Pointers	Price
ALT100F	10-02259	10,000 ft	No	No	2	**$475.00**
ALT20INF-3	10-05327	20,000 feet, inches	Yes	Yes	3	**$495.00**
ALT20MBF-3	10-04500	20,000 ft, Millibars	Yes	Yes	3	**$495.00**
ALT20IMF-3	10-02260	20,000 ft, Inches & Millibars	Yes	Yes	3	**$525.00**
ALT6MEMB-3	10-02257	6,000 meter, Millibars	Yes	No	3	**$495.00**
ALT20INF-3N	10-02204	20,000 ft, Inches	Yes	No	3	**$475.00**
ALT20MBF-3N	10-02256	20,000 ft, Millibars	Yes	No	3	**$475.00**

Falcon Gauges are made in China.



UMA 3-1/8" ALTIMETERS

This UMA standard altimeter utilizes a single pointer and is designed to meet the needs of the low-cost Non-IFR user. This altimeter utilizes a single pointer and adjustable barometric scale, viewed through a Kollsman Window. Can be ordered in inches of mercury or millibar. Available in feet or meters. Aluminum case. **$201.95 ea**

Part No.	Range	Dial Markings	Scale
10-22965	0-20,000 Ft.	B &W	w/ IN HG
10-02436	0-10,000 Ft.	B &W	w/ IN HG
10-02369	0-5,500 Ft.	B &W	w/ IN HG
10-05120	0-5,500 Ft.	B &W	w/ Millibar
10-05125	0-10,000 Ft.	B &W	w/ Millibar
10-05126	0-20,000 Ft.	B &W	w/ Millibar
10-05127	0-3,000 M	B &W	w/ Millibar



UMA 2-1/4" ALTIMETERS

This UMA standard altimeter utilizes a single pointer and is designed to meet the needs of the low-cost Non-IFR user. This altimeter utilizes a single pointer and adjustable barometric scale, viewed through a Kollsman Window. Can be ordered in inches of mercury or Millibar. Scale is available in feet or meters. **$369.00 ea**

Part No.	Range	Dial Markings	Scale
10-05131	0-10,000 Ft.	B & W	w/ IN HG
10-05132	0-20,000 Ft.	B & W	w/ IN HG
10-05133	0-10,000 Ft.	B & W	w/ Millibar
10-05134	0-20,000 Ft.	B & W	w/ Millibar
10-05883	0-3000 Mtrs.	B & W	w/ Millibar

FALCON 3 1/8" NON-SENSITIVE ALTIMETERS



These light weight altimeters feature a non-sensitive altimeter on a 3-1/8", single pointer, and a barometric window. A setting knob allows the pilot to set the barometric reading to the correct field elevation or barometric pressure setting. They are weight conservative, economical, yet very precision and accurate instruments that provide excellent altitude measuring capabilities; designed for ultra-light airplanes. 3-1/8" is non-sensitive. Standard Types are either feet reading with barometric window inches of mercury or millibars reading; or meters reading with barometric window millibars reading. Length: 2 3/8" Weight: 10.7 oz.

Part No.	Range	Price
10-05100	6,000 ft./12,000 ft Inches	**$215.00**
10-03422	10,000 ft./20,000 ft. Inches	**$215.00**
10-02251	6,000 ft., Millibars	**$215.00**
10-02252	10,000 ft., Millibars	**$215.00**

FALCON 2 1/4" SENSITIVE ALTIMETERS



2-1/4" is sensitive. Single Pointer, and a barometric window. A setting knob allows the pilot to set the barometric reading to the correct field elevation or barometric pressure setting. They are weight conservative, economical, yet very precision and accurate instruments. It is suitable where space and weight is a consideration. This type is available in Feet or Meter reading, the baro-metric window can be either in inches of mercury or in millibars reading. Length: 2 3/8" Weight: 3.6 oz.

Model No.	Part No.	Range	Price
ALTN6INF-2	10-02205	5,500 ft. Inches	**$225.00**
ALTN10INF-2	10-04510	10,000 ft. Inches	**$225.00**
ALTN6MBF-2	10-04070	6,000 ft., Millibars	**$225.00**
ALTN10MBF-2	10-04071	10,000 ft., Millibars	**$225.00**
ALTN3ME-2	10-02207	3,000 Meters, Millibars	**$225.00**
ALTN6ME-2	10-02254	6,000 Meters, Millibars	**$225.00**

IN

Prices Subject to Change Without Notice

MICROTIM™ BAROMETRIC ALTIMETER



Features: * Registers changes in altitude of 2 feet or less. * Calibrated from -2000 feet MSL (2000 feet BELOW sealevel) to +20000 feet MSL (20000 feet ABOVE sealevel). * Low Power. * One foot resolution, barometric-pressure and field-elevation adjustable. * AGL(relative), MSL(sealevel) or BOTH alternately every 2 seconds. * Selectable units: feet/inHg or meter/kPa or feet/mbar(hPa). * Excellent ultralight altimeter or backup unit. * Small (3"x1.5"x3/4") * Very durable * EASY TO USE right out of the box.

P/N 10-01726 ..... **$213.95**

WINTER ALTIMETERS



Casing made of black plastic-airtight. Connection via hose line from static pressure pick-up point to connection coupling at the rear. Scale window with millibar or inch-HG scale.

Description	Part No.	Price
Winter 2-1/4 Altimeter 4 FGH 40 1000-20000 Ft Mb	10-05623	**$1,198.00**
Winter 2-1/4 Altimeter 4 FGH 40 1000-20000 Ft INGH	10-05624	**$1,243.00**
Winter 3 Altimeter EBH 8034 0-5000 FT INHG	10-05633	**$404.00**
Winter 3 Altimeter EBH 8035 0-10000 FT INHG	10-05635	**$534.00**
Winter 3 Altimeter EBH 8038 0-5000 FT MB	10-05636	**$404.00**
Winter 3 Altimeter EBH 8039 0-10000 FT MB	10-05637	**$429.00**
Winter 3 Altimeter 4 FGH 10 1000-20000 FT MB	10-05621	**$1,202.00**
Winter 3 Altimeter 4 FGH 10 1000-20000 FT INHG	10-05622	**$1,198.00**

INSTRUMENT BUGS



"Bugs" are perfect for pilots who rent aircraft, and for owners. The transparent suction cup works on all instruments. A thumb screw friction lock lets the yellow pointer tip rotate 360°. Fly with it day & night. Includes: 2 "Bugs" in a plastic reusable storage box with instructions and 4 disposable alcohol swabs, which are used to clean the instrument face and bugs so that they stick well. P/N 10-00114 ..... **$9.85**

OPERATING RANGE DECALS



Yellow, red, green and white, pressure sensitive. Just pull off backing and place on instrument lens.

P/N 10-03905 ..... **$2.95/set**

AIRCRAFT INSTRUMENT COVER





The instrument cover is a plastic disk approximately 2 3/4" in diameter and 1/16" thick. By use of the attached suction cup, the cover will mask the face of most general aviation flight instruments. It is useful in many training situations one of which is partial panel work. As a safety aid, the cover can be used to mask an instrument when it is non-functional, as is required by Regulations. Each package has two covers.

P/N 13-04968.....**$6.95**

INSTRUMENT COVERS



The suction cup on the back of this soft rubber disc enables the pilot or instructor to cover up one or more flight instruments for partial panel instruction or to cover a failed instrument during flight. Measures 3-1/8" in diameter. Flight instructors and IFR pilots should have several of these handy covers in their flight bags. P/N 13-00088.....**$2.75 ea**

INOPERATIVE INSTRUMENT AID



Designed with static cling polyester, the IIA will stick to your glass instrument face without licking and will stay there until you want to remove it. Practicing instrument failures during flight is a requirement by the Federal Aviation Administration for your practical test. One package includes four Inoperative Instrument Aids. Developed by a Certified Instrument Flight Instructor with the intent to improve instrument instruction. measures 3" in diameter.

P/N 13-04173 ..... **$5.75**

REDUCING MASKS



Precision die-cut black anodized aluminum masks simplify installation of small instruments in large instrument panel cut-outs. 3 types available.

#1: Large AN-type artificial horizon cut-out to 3-1/8" size
P/N 10-05900..... **$10.95**

#2: Large AN-type directional gyro cut-out to 3-1/8" size.
P/N 10-06000..... **$13.75**

#3: 3-1/8" size cut-out to 2-1/4" size ..... P/N 10-06100..... **$10.95**

DRILL JIG AND FILING TEMPLATE FOR THE 3 ATI INSTRUMENT CUT



A handy much needed tool to have for those difficult to make 3 ATI cut outs that everyone complains about. A rugged tool made of alloy steel with a 58–60 RC hardness for long life. Simply drill mounting holes and cut opening file to template. P/N 10-00153 ..... **$32.50**

MOUNTING PLATE FOR THE 3 ATI INSTRUMENT



Quick fix for a hard to cut out opening. Plate is .500 wider than instrument. For easy mounting, material is .080 aluminum P/N 10-00154 ..... **$10.95**

REDUCING PLATE FROM 2-1/4" DIA.

Reduce from 2.25" to 2" diameter instrument. For oil pressure, ammeter gauge etc. P/N 10-00155 ..... **$8.95**

INSTRUMENT COVERS FOR PARTIAL PANEL PRACTICE



Sold in 4 packs of 25 (for a total of 100 sticky notes). These round pads are white with a light blue ASA logo, and fit any aviation instrument. Perfect for partial panel practice or jotting down quick notes. P/N 13-21776..... **$6.50**

INSTRUMENT PANEL COVER-UPS



These white stick on instrument size covers are ideal for partial panel practice or to cover an actual failed instrument. These covers are reusable and are furnished in a package of 5 covers P/N 10-00066 ..... **$3.40**

3ATI REDUCER PLATES


Reducer Plates 3-1/8"

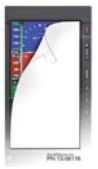
3ATI Reducers to 3 1/8" **-** Use a 3ATI hole cut out to mount 3 1/8" diameter instrument. Plate can be shimmed to instrument panel thickness . Simple installation. Heat-treated aluminum .080 thick with black anodize finish.

P/N 07-01331 ..... **$18.50**


Reducer Plates 2-1/4"

3ATI Reducers to 2 1/4" **-** Use a 3ATI hole cut out to mount 2 1/4' diameter instruments. Plate can be shimmed to instrument panel thickness, comes with 4 rivets. Simple installation. Heat-treated aluminum .080 thick with black anodize finish. BACK PLATE 3.8 X 3.8 P/N 07-01330 ..... **$18.50**

INSTRUMENT PANEL COVER-UPS FOR PFD / MFD



Cover ups for PFD and MFD screens for glass cockpit training. For partial panel practice & actual instrument failures. * Reusable, 3 per pack * "Cling" type plastic covers, with lift tab * Zip lock plastic bag for convenient storage.

P/N 13-06116..... **$7.55**

INSTRUMENT HOLE COVER PLATES



Use these plates to attractively cover unused panel cut-outs. Aluminum and plastic plates have raised center, which brings the plug face about even with the front surface of the panel.

Plastic plate for 2-1/4" Cut-Out No Holes..... P/N 10-06900.... **$4.85**
Plastic plate for 3-1/8" Cut-Out No Holes..... P/N 10-07000.... **$5.95**

Predrilled

Plastic plate for standard altimeter hole..... P/N 10-07100.... **$8.95**
Aluminum plate for 2-1/4"hole, black wrinkle ..... P/N 10-00427.. **$10.85**
Aluminum plate for 2-1/4"hole, no paint..... P/N 10-00428.. **$10.85**
Aluminum plate for 3-1/8"hole, black wrinkle ..... P/N 10-00429.. **$11.50**
Aluminum plate for 3-1/8"hole, no paint..... P/N 10-00430.. **$10.95**
Plastic plate for 3ATI hole, black fire retardant... P/N 10-00433.... **$8.85**
Aluminum plate for 3ATI hole, black wrinkle..... P/N 10-00434.. **$11.50**
Aluminum plate for 3ATI hole, no paint..... P/N 10-00436.. **$10.50**
Plastic plate for half ATI hole, black fire resist.... P/N 10-00437.... **$8.50**

INSTRUMENT PANEL LAYOUT TEMPLATE



Use this template for precise positioning of instrument holes and mounting screw holes in panel. For both 2-1/4" & 3-1/8" dia. instruments. With transfer punch for marking screw hole centers and instructions.

P/N 12-14600 ..... **$19.95**

IN

VSI - ACCELEROMETERS



FALCON ACCELEROMETER (G-METER)

Accelerometers register to "g" forces acting on the airframe during turbulence or aerobatic maneuvers. One pointer gives a continuous reading, the other two indicate maximum positive and negative loads. Easy to reset by pushing the "push to reset" knob. All models are mechanical and offer precision, accuracy, reliability and durability. They are very easy to operate with no wiring necessary. Whether flying acrobatic or not, this G-Meter provides the pilot valuable information for a winged airplane and helicopter without having to spend astonishing figures. Made in China.

Size	Part No.	Range	Price
3-1/8"	10-00936	-5g to +10g	**$465.00**
3-1/8"	10-00935	-2g to +5g	**$465.00**
2-1/4"	10-09800	-5g to +10g - white pointers	**$459.00**
2-1/4"	10-02049	-5g to +10g, Lighting 12V	**$629.00**
2-1/4"	10-04074	-5g to +10g, Lighting 5V	**$629.00**
2-1/4"	10-00840	-2g to +5g	**$459.00**



FALCON ACCELEROMETER SMALL G METER

This instrument, mounted in the aircraft panel with its face in the vertical plane, register to "g" forces acting on the airframe during turbulence, or aerobatic maneuvers. One pointer gives a continuous reading, the other two indicate maximum positive and negative loads. A reset knob is provided. The mechanism is locked for shipping. Interchangeable with MS282025-1. Specifications: Dim: 2-1/4" X 2-1/4" X 4" Weight: Approx. 7lbs Range: -5g to +10g. Made in China.

P/N 10-09800 ..... **$459.00**



CENTURY INSTRUMENTS RECONDITIONED ACCELEROMETER (G-METER)

This reconditioned instrument, mounted in the aircraft panel with its face in the vertical plane, register to "g" forces acting on the airframe during turbulence, or aerobatic maneuvers. One pointer gives a continuous reading, the other two indicate maximum positive and negative loads. A reset knob is provided. The mechanism is locked for shipping. Interchangeable with AN5745. Specifications: Dim: 3-1/8" X 3-1/8" X 3" Weight: Approx. 8lbs Range: -5g to +12g.

P/N 10-09710 ..... **$443.00**

FLIGHT DATA G-METER GT50 12/28



Note: Now FAA Approved as a replacement clock in non-transport category aircraft.

The GT-50 is a Six Function: Accelerometer - Clock - Voltmeter - Temperature for Experimental Aircraft.

G-Meter:
* Continuous Instantaneous Display to +12/-10 G's
* Records and Saves Max and Min G's
* 30 Degree (Sonex) Tilted Panel Compatible

Flight Timer: Automatically Records Flight Time

Clock: 12 or 24 Hour Format

Timer/Stopwatch Voltmeter

Features: * Best G-Meter Value Available. * Extreme Operating Temperature Display. * Soft Orange Backlight. * 2-1/4" Panel Mounted. * Weighs 2.5oz * Includes Pre-Wired Connector * 12-28 Volt Compatible

P/N 10-03691..... **$169.00**

Flight Data OAT Probe GT50..... P/N 10-03694..... **$29.00**



WINTER VARIOMETERS

The tiny housings mean that these instruments can be installed even where space is restricted. Available in 2-1/4" and 3" sizes.

Description	Part No.	Price
Winter 2-1/4 Variometer 1000 FT Min	10-05638	**$760.00**
Winter 2-1/4 Variometer 10 Knots	10-05639	**$760.00**
Winter 2-1/4 Variometer 2000 FT Min	10-05642	**$765.00**
Winter 2-1/4 Variometer 1000 FT Min Log	10-05644	**$680.00**
Winter 3 Variometer 1000 Ft Min	10-05640	**$760.00**
Winter 3 Variometer 10 Knots	10-05641	**$760.00**
Winter 3 Variometer 2000 Ft Min	10-05643	**$760.00**
Winter 3 Variometer 1000 Ft Min Log	10-05646	**$680.00**
Flask for Winter Variometer	10-03856	**$33.00**



UNITED VERTICAL SPEED INDICATORS

The vertical speed indicator is a precision instrument which provides an accurate indication of rate of change of altitude. This instrument is temperature compensated and is provided with a zero adjustment screw on the face of the case in the seven o'clock position. Power: Static system.

Manufactured by United Instruments. Used in most production aircraft. Size: 3-1/8" x 3-1/8" x 4", Wt. 0.7 lb. TSO-C8b.

Unlighted VSI's

0-2000 FPM ..... P/N 10-05200 ..... **$639.00**
0-3000 FPM ..... P/N 10-20400 ..... **$653.00**
0-4000 FPM ..... P/N 10-20500 ..... **$665.00**
0-6000 FPM ..... P/N 10-05250 ..... **$1,207.00**

Lighted VSI's

0-2000 FPM ..... P/N 10-00925 ..... **$878.00**
0-3000 FPM ..... P/N 10-00926 ..... **$878.00**
0-4000 FPM ..... P/N 10-00927 ..... **$869.00**
0-6000 FPM ..... P/N 10-00928 ..... **$1,304.00**

3-1/8" UMA VERTICAL SPEED INDICATORS



Part No.	Name	Range	Price
10-20505	Vertical Speed	0-2,000 Ft.	**$231.95**
10-02368	Vertical Speed	0-3,000 Ft.	**$231.95**
10-20506	Vertical Speed	0-4,000 Ft.	**$283.95**
10-20508	Vertical Speed	0-6,000 Ft.	**$283.95**
11-07239	Optional internal lighting		**$56.75**



UMA MINIATURE 2 1/4" VERTICAL SPEED INDICATORS

This instrument mounts in a standard 2-1/4" instrument panel cutout. New manufacture with brilliant easy-to-read matte-white numerals on black background. Size: 23/8"x 23/8"x 31/4" long.

Part No.	Name	Range	Price
10-05500	Vertical Speed	0-2,000 Ft.	**$315.00**
10-00079	Vertical Speed	0-3,000 Ft.	**$315.00**
10-05550	Vertical Speed	0-4,000 Ft.	**$347.00**
10-05560	Climb	0-4,000 Ft.	**$363.00**
10-05570	Rate of Change	0-4,000 Ft.	**$363.00**
10-05580	Cabin Climb	0-4,000 Ft.	**$363.00**
10-05600	Vertical Speed	0-6,000 Ft.	**$347.00**
10-05610	Climb	0-6,000 Ft.	**$363.00**
10-06910	Rate of Change	0-6,000 Ft.	**$363.00**
11-07239	Optional internal lighting		**$56.75**

FALCON VERTICAL SPEED INDICATORS



These Vertical Speed Indicators (Rate of Climb), have been installed in thousands of planes. Available in climb ranges from 2,000 feet per minute to 3,000 feet per minute, and 10 meters per second. This precision aircraft instrument provides immediate climb and descent information with an easy to read dial and is extremely reliable and durable. Over several decades, they have been servicing and satisfying pilots and kit plane builders worldwide.

The 2-1/4" altimeter is perfect for the ultra-light models and where space and weight are a factor of consideration. Made in China.

Part No.	Size	Range	Length	Weight	Price
10-05352	3 1/8"	2,000 ft/min	4.25"/105mm	12.7 oz	**$219.95**
10-05210	3 1/8"	3,000 ft. / Min.	4.25"/105mm	12.7 oz	**$239.95**
10-02246	3 1/8"	10 meter/second	4.25"/105mm	12.7 oz	**$219.95**
10-01643	2 1/4"	2,000 ft. / Min.	4.8"/112mm	9.2 oz	**$257.95**
10-00983	2 1/4"	10 Meters / Sec.	4.8"/112mm	9.2 oz	**$257.95**

IN

SKYSPORTS NON-TSO'D INSTRUMENTS



SKYSPORTS VACUUM ATTITUDE GYRO

The Skysports Vacuum Attitude Gyro is a standard artificial horizon gyro powered by the vacuum system in the aircraft. It is ideal for use in a wide variety of experimental aircraft. Non-TSO'd. Size: 3-3/8"x6.46/164m. Weight: 2.4lb/984g.

P/N 10-05423..... **$519.00**



SKYSPORTS VACUUM DIRECTIONAL GYRO

The Skysports Vacuum Directional Gyro is a standard gyro powered by the vacuum system in the aircraft. It is ideal for use in a wide variety of experimental aircraft. Non-TSO'd. Dimensions: 3-3/8" x 5-5/16"/134.95mm. Weight: 2.25lb/984g.

P/N 10-05421..... **$519.00**



SKYSPORTS ELECTRIC ATTITUDE GYRO

The Skysports Electric Attitude Gyro is a high quality gyro which is excellent for a wide variety of experimental aircraft. It features a power failure flag which drops into view if voltage is below operational requirements. It also includes a "Pull to Cage" knob. Non-TSO'd. Power Supply: 14V. Dimension: 3-3/8" x 6.46/164mm Weight: 2.4lb/ 984g.

P/N 10-05422..... **$1,236.00**



SKYSPORTS ELECTRIC DIRECTIONAL GYRO

The Skysports electric directional gyro is a high quality gyro providing smooth operation, long life, and reliability. It features a warning flag which is displayed when voltage drops below operation requirements, and the instrument is LED lighted with automatic dimming. A good choice for a wide variety of experimental aircraft. Non-TSO'd. Dimensions: 3-3/8"

P/N 10-05077..... **$1,147.00**



SKYSPORTS ELECTRIC TURN COORDINATOR

The Skysports Electric Turn Coordinator is lightweight and compact, and ideal for a wide variety of experimental aircraft. It includes an inclinometer for slip indication during turns, and features a power failure flag to indicate that voltage has dropped below operational requirements. Operates on 14-28VDC. Non-TSO'd. P/N 10-05410..... **$484.00**



SKYSPORTS 3 1/8" SINGLE RANGE AIRSPEEDS

Skysports airspeed indicators are lightweight, reliable, and are housed in short length aluminum cases. They give accurate indications at slow speeds and are available in a variety of ranges. These airspeed indicators are excellent for a wide range of experimental and ultralight aircraft. Non-TSO'd. Size: 3 1/8" Length: 3.5in/97.3mm Weight: 10.2oz/290g

Model No.	Length	Range	Part No.	Price
BK-33	97.3mm	20-180 MPH	10-05394	**$213.95**
BK-9C	58mm	20-180 MPH	10-05409	**$210.95**
BK-7B	58mm	20-120 MPH	10-05406	**$210.95**
BK-31	97.3mm	20-140 MPH	10-05392	**$246.95**
BK-6C	58mm	20-150 MPH	10-05405	**$237.95**
BK-12	58mm	20-80 KNT	10-05381	**$237.95**
BK-13A	58mm	20-100 KNT	10-05384	**$237.95**
BK-14A	58mm	0-120 KNT	10-05386	**$213.95**
BK-3A	97.3mm	20-140 KNT	10-05399	**$212.95**
BK-15	97.3mm	0-160 KNY	10-05387	**$215.95**
BK-34	97.3mm	30-180 KNT	10-05395	**$215.95**
BK-5A	97.3mm	30-220 KNT	10-05404	**$246.95**
BK120-1B	58mm	30-150 KPH	10-05383	**$250.95**
BK150-1A	58mm	30-150 KPH	10-05388	**$213.95**
BK200-1A	58mm	0-200 KPH	10-05389	**$213.95**
BK300	58mm	40-300 KPH	10-05391	**$246.95**

SKYSPORTS 3-1/8" DUAL AIRSPEEDS



Skysports dual dial airspeeds provide the pilot with airspeed indications in MPH and Knots, and are housed in a lightweight, durable aluminum case. These airspeed indicators are ideal for a wide variety of experimental aircraft flying at higher cruise speeds. Non-TSO'd.
Weight: 10.5 oz / 301g. Length: 2.2" or 56.5mm
Size: 3 1/8" Length: 3.5" or 97.3mm Weight: 10.5 oz / 301g

Model No.	Range	Part No.	Price
BK-3	120-160 MPH/20-140 KNT	10-05390	**$245.95**
BK-4	30-180 MPH/30-160 KNT	10-05400	**$250.95**
BK-10	30-200 MPH/30-180 KNT	10-05380	**$250.95**
BK-5	30-250 MPH/30-220 KNT	10-05402	**$249.95**
BK-47	0-300 KPH/0-160 KNT	10-05401	**$285.95**

SKYSPORTS 2 1/4" MINIATURE AIRSPEEDS



Skysports miniature airspeed indicators provide the pilot with accurate slow speed indications making them a good choice for use in ultralight aircraft. These airspeed indicators are lightweight and fit in a standard 2-l/4" instrument hole.
Non-TSO'd.
Range: 0-140 mph
Size: 2 1/4"
Length: 2-9/16" or 41mm
Weight: 2.8oz or 80g

Model No.	Range	Part No.	Price
BK-42	20-140 MPH	10-05936	**$211.95**
BK-140	20-140 KPH	10-05385	**$211.95**
BK-57	0-120 KNT	10-05403	**$237.95**

Skysports Instruments are made in China.

SKYSPORTS NON-TSO'D INSTRUMENTS

SKYSPORTS 3-1/8" SENSITIVE ALTIMETERS



Skysports sensitive altimeters feature three pointers and knob to set correct barometric pressure enroute and destination. High quality sensitive altimeters which are in use in thousands of experimental aircraft worldwide.
Non-TSO'd
Size: 3 1/8"
Weight: 1.4 lbs. or 592g

Barometric Window	Range	Warning Stripes	Pointers	Part No.	Price
Yes	20,000 ft, Inches	Yes	3	10-04400	**$299.95**
Yes	20,000 ft, Millibars	Yes	3	10-05371	**$338.00**
Yes	20,000 ft, Inches & Millibars	Yes	3	10-05374	**$339.00**
Yes	6,000 meter, Millibars	No	3	10-05376	**$316.00**
Yes	20,000 ft, Inches	No	3	10-05372	**$307.00**
Yes	20,000 ft, Millibars	No	3	10-05373	**$294.00**



SKYSPORTS 3-1/8" NON-SENSITIVE ALTIMETERS

Skysports non-sensitive altimeters feature a single pointer and barometric window. These altimeters are lightweight, and very accurate, making them ideal for a wide variety of experimental and ultralight aircraft. The setting knob allows the pilot to set the barometric pressure or field elevation.
Non-TSO'd
Length: 2-3/8". Weight: 10.7 oz

Gauge Size	Range	Part No.	Price
3-1/8"	10,000 ft/ 20,000 ft, Inches	10-05367	**$219.95**
3-1/8"	6,000 ft, Millibars	10-05366	**$219.95**
3-1/8"	10,000 ft, Millibars	10-05365	**$219.95**



SKYSPORTS 2-1/4" SENSITIVE ALTIMETERS

Skysports sensitive altimeters feature three pointers and knob to set correct barometric pressure enroute and destination. High quality sensitive altimeters which are in use in thousands of experimental aircraft worldwide.
Non-TSO'd
Length: 2-3/8"
Weight: 3.6 oz. oz

Size	Range	Part No.	Price
2-1/4"	10,000 ft, Inches	10-05368	**$285.95**
2-1/4"	6,000 ft, Millibars	10-05369	**$254.95**
2-1/4"	6,000 meters, Millibars	10-05375	**$278.95**



SKYSPORTS NON TSO 2-1/4" ALTIMETER

Skysports NON TSO 2-1/4". Barometric Altitude Indicator - 3000 meters. Millibar Scale. P/N 10-05441 ..... **$246.95**



NON-TSO'D VERTICAL SPEED INDICATORS

Skysports vertical speed indicators are easy to read, lightweight, and durable. These rate of climb indicators are available in several different ranges and are in use in a wide variety of experimental aircraft worldwide.
Non-TSO'd
Size: 3-1/8"
Length: 4.25"/105mm
Weight: 12.7 oz

Part No.	Size	Range	Length	Weight	Price
10-05361	3 1/8"	2,000 ft/min	4.25"/105mm	12.7 oz	**$279.95**
10-05362	3 1/8"	3,000 ft. / Min.	4.25"/105mm	12.7 oz	**$261.95**
10-05360	3 1/8"	10 meter/second	4.25"/105mm	12.7 oz	**$242.95**
10-05363	2 1/4"	2,000 ft. / Min.	4.8"/112mm	9.2 oz	**$370.00**
10-05364	2 1/4"	10 Meters / Sec.	4.8"/112mm	9.2 oz	**$321.00**

SKYSPORTS PANEL MOUNT COMPASSES



Skysports aircraft compasses are similar in design and function to the industry standard C2300 and C2400 series compasses. High quality and economically priced. Error of the compass is no more than 2.5 degree; Friction error is no more than 1 degree; When an aircraft tilts for 10,the error is no more than 4 degree; Ambient temperature is-55TO +60 degree centigrade.
Non-TSO'd.
Size: 2-1/4"
Mount: Panel Mount (Lighted or unlighted)
Weight: 6.9oz/198g

Description	Part No.	Price
Northern Hemisphere, Not Lighted	10-05412	**$79.75**
Northern Hemisphere, 12V-24V Lighted	10-05413	**$88.75**
Southern Hemisphere, Not Lighted	10-05415	**$85.75**
Southern Hemisphere, 12V-24V Lighted	10-05414	**$86.75**



SKYSPORTS VERTICAL CARD COMPASSES

The Skysports Vertical Card compass features a 2 inch vertical card dial which presents the entire 360 degree heading range at all times for easy interpretation. It is a dry compass which eliminates the leaking and much of the precessing common in wet compasses.
Lighted 12VDC.
Non-TSO'd.

Description	Part No.	Price
Northern Hemisphere, Compass Only	10-04173	**$263.95**
Northern Hemisphere, Compass & Mounting Bracket	10-05425	**$265.00**
Southern Hemisphere, Compass Only	10-05426	**$259.95**
Southern Hemisphere, Compass & Mounting Bracket	10-05427	**$253.95**



SKYSPORTS MANIFOLD PRESSURE GAUGE

Skysports manifold pressure indicator displays engine intake in inches of mercury. High quality instrument which is in use in experimental aircraft worldwide.
Non-TSO'd
Range: 10-50 inch hg
Size: 3-1/8"
Weight: 13.5oz or 386g
Length: 75"
P/N 10-05379 ..... **$203.95**

Skysports Instruments are made in China.

SKYSPORTS INSTRUMENTS

Skysports Instruments are made in China.



SKYSPORTS ROTAX 912 TACHOMETER 2-1/4 0-7000 RPM

Tachometer 2-1/4", 0-7000 RPM, 9-30 VDC
P/N 10-05945 ..... **$88.95**



SKYSPORTS ROTAX 582 TACHOMETER 2-1/4 0-8000 RPM

Tachometer 2-1/4", 0-8000 RPM, 9-30 VDC
P/N 10-05946 ..... **$96.80**



SKYSPORTS 2-1/4 ROTOR TACHOMETER & SENDER 0-700 RPM

2-1/4", 0-700 RPM.
P/N 10-05947 ..... **$104.75**



SKYSPORTS 2-1/4 CHT 50-150C 120-300F

2-1/4" CHT Gauge, 50-150C / 120-300F
P/N 10-05948 ..... **$57.85**



SKYSPORTS 2-1/4 OIL TEMP 50-150C 120-300F

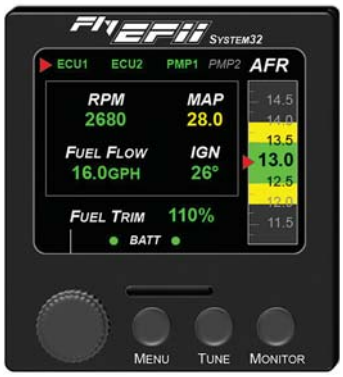
2-1/4" Oil Temp Gauge, 50-150C / 120-300F
P/N 10-05950 ..... **$59.95**



SKYSPORTS 2-1/4OIL PRESSURE GAUGE 0-10 BAR 0-145 PSI

2-1/4" Oil Pressure Gauge, 0-10 BAR 0-145 PSI.
P/N 10-05951 ..... **$67.75**

FLYEFII DUAL SYSTEM32 ENGINE MANAGEMENT SYSTEM



The FlyEFii System32 Engine Management System Hardware is the first electronic engine management system ever designed specifically for the needs of experimental aviation.
System32 is a state of the art, high speed, fully redundant system that represents the fulfillment of a ten year wish list of functionality.
Dual 32 bit high speed ECUs and a sunlight readable graphical LCD Cockpit Controller combine for seamless power and efficiency in managing your engine's electronic fuel injection and electronic ignition functions.
System32 will be offered in ignition only and full ignition + injection versions.

Description	Part No.	Price
EFII System 32 4 Cyl Lyc.	07-19980	**$6,195.00**
EFII Dual Ignition Dual ECU 4 Cyl Lyc Ignition and Injection	07-19978	**$2,750.00**
EFII System 32 6 Cyl Lyc.	07-19981	**$7,695.00**
EFII Dual Ignition Dual ECU 6 Cyl Lyc Ignition and Injection	07-19979	**$3,395.00**

INDU DIGITAL I ANALOG SENSITIVE ALTIMETER



The Indu Altimeter is an electronic device which mimics the classic altimeter display but uses state of the art electronics. It presents both analog and digital readings using the high precision of modern electronics.

- Displays Altitude in both analog format and digital display
- Rotating knob for adjusting barometric pressure (Hg or hPa)
- Standard 3.125" diameter. (Depth required is only 2 ¼ inches)
- Connects to static system and 10 – 30 VDC power
- Low current consumption (120mA @ 12VDC)
- Weighs only 240 grams (8.5 ounces)
- Broad Altitude range (-500 to 50,000 feet)
- Supplied with power cable and static line T-connector
- Very high quality. Manufactured in the European Union (EU)
- Non-TSO'd
- Two year manufacturer warranty

P/N 11-16225 ..... **$479.95**

SWIFT INSTRUMENTS

SWIFT AIRSPEED INDICATORS



2-1/4"



3-1/8"

2-1/4 INCH

Model No.	Description	Part No.	Price
ASI2-120M	0-120 MPH	10-06290	**$134.50**
ASI2-120N	0-120 Knots	10-06291	**$134.50**
ASI2-160K	0-160 KPH	10-06292	**$134.50**
ASI2-160M	0-160 MPH	10-06293	**$134.50**
ASI2-160N	0-160 Knots	10-06294	**$134.50**
ASI2-200K	0-200 KPH	10-06295	**$134.50**
ASI2-200M	0-200 MPH	10-06296	**$134.50**
ASI2-200N	0-200 Knots	10-06297	**$134.50**

3-1/8 INCH

Model No.	Description	Part No.	Price
ASI3S-80M	0-80 MPH	10-06331	**$134.50**
ASI3S-100M	0-100 MPH	10-06311	**$134.50**
ASI3S-120M	0-120 MPH	10-06314	**$134.50**
ASI3S-140M	0-140 MPH	10-06316	**$134.50**
ASI3S-160M	0-160 MPH	10-06319	**$134.50**
ASI3S-180M	0-180 MPH	10-06321	**$134.50**
ASI3S-200M	0-200 MPH	10-06324	**$134.50**
ASI3S-120K	0-120 KPH	10-06313	**$134.50**
ASI3S-160K	0-160 KPH	10-06318	**$134.50**
ASI3S-200K	0-200 KPH	10-06323	**$134.50**
ASI3S-220K	0-220 KPH	10-06326	**$134.50**
ASI3S-250K	0-250 KPH	10-06327	**$134.50**
ASI3S-300K	0-300 KPH	10-06328	**$134.50**
ASI3S-350K	0-350 KPH	10-06329	**$134.50**
ASI3S-400K	0-400 KPH	10-06330	**$134.50**
ASI3S-80N	0-80 Knots	10-06332	**$134.50**
ASI3S-100N	0-100 Knots	10-06312	**$134.50**
ASI3S-120N	0-120 Knots	10-06315	**$134.50**
ASI3S-140N	0-140 Knots	10-06317	**$134.50**
ASI3S-160N	0-160 Knots	10-06320	**$134.50**
ASI3S-180N	0-180 Knots	10-06322	**$134.50**
ASI3S-200N	0-200 Knots	10-06325	**$134.50**

SWIFT SWITCHABLE AIRSPEED INDICATORS



These 3-1/8" Airspeed Indicators can be switched between MPH, KPH, and Knots scales.

Model No.	Description	Remarks	Part No.	Price
ASI3-80	0-80 MPH/KPH/Knots	Unit Switchable	10-06310	**$216.75**
ASI3-100	0-100 MPH/KPH/Knots	Unit Switchable	10-06298	**$216.75**
ASI3-120	0-120 MPH/KPH/Knots	Unit Switchable	10-06299	**$216.75**
ASI3-140	0-140 MPH/KPH/Knots	Unit Switchable	10-06300	**$216.75**
ASI3-150	0-150 MPH/KPH/Knots	Unit Switchable	10-06301	**$216.75**
ASI3-160	0-160 MPH/KPH/Knots	Unit Switchable	10-06302	**$216.75**
ASI3-180	0-180 MPH/KPH/Knots	Unit Switchable	10-06303	**$216.75**
ASI3-200	0-200 MPH/KPH/Knots	Unit Switchable	10-06304	**$216.75**
ASI3-220	0-220 MPH/KPH/Knots	Unit Switchable	10-06305	**$216.75**
ASI3-240	0-240 MPH/KPH/Knots	Unit Switchable	10-06306	**$216.75**
ASI3-260	0-260 MPH/KPH/Knots	Unit Switchable	10-06307	**$216.75**
ASI3-300	0-300 MPH/KPH/Knots	Unit Switchable	10-06308	**$216.75**
ASI3-400	0-400 MPH/KPH/Knots	Unit Switchable	10-06309	**$216.75**

SWIFT ALTIMETER AND BAROMETERS



2-1/4"



3-1/8"

2-1/4 INCH

Model No.	Description	Remarks	Part No.	Price
ALT2-10F1	5,000 FT 1 Pointer	Barometric unit switchable: mb/inHg	10-06284	**$161.85**
ALT2-1.5M1	10,000 FT 1 Pointer	Barometric unit switchable: mb/inHg	10-06283	**$161.85**
ALT2-3M1	3,000 M 1 Pointer	Barometric unit switchable: mb/inHg	10-06285	**$161.85**
ALT2-5F1	1,500 M 1 Pointer	Barometric unit switchable: mb/inHg	10-06286	**$161.85**

3-1/8 INCH

Model No.	Description	Remarks	Part No.	Price
ALT3-40f3	40,000 FT 3 Pointer	Barometric unit switchable: mmHg/inHg/mb	10-06256	**$299.95**
ALT3-10F2	10,000 FT 2 Pointer	Barometric unit switchable: mmHg/inHg/mb	10-06287	**$305.75**
ALT3-10M2	10,000 M 2 Pointer	Barometric unit switchable: mmHg/inHg/mb	10-06288	**$305.75**
ALT3-10M3	10,000 M 3 Pointer	Barometric unit switchable: mmHg/inHg/mb, 100m/circle	10-06289	**$335.95**

SWIFT VERTICAL SPEED INDICATORS



2-1/4"



3-1/8"

2-1/4 INCH

Model No.	Description	Part No.	Price
VSI2-10MS	2000 ft/min	10-06348	**$148.00**
VSI2-20FM	10 m/sec	10-06349	**$148.00**

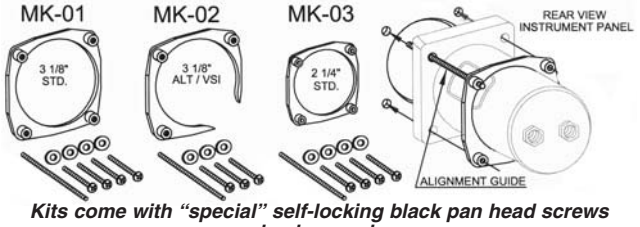
3-1/8 INCH

Model No.	Description	Remarks/Depth	Part No.	Price
VSI3-10MS	10 m/sec	56mm	10-06350	**$185.25**
VSI3-20MS	20 m/sec	Large Range/96mm	10-06352	**$185.25**
VSI3-30MS	30 m/sec	Large Range/96mm	10-06354	**$185.25**
VSI3-20FM	2000 ft/min	56mm	10-06351	**$185.25**
VSI3-30FM	3000 ft/min	96mm	10-06353	**$185.25**
VSI3-60FM	6000 ft/min	Large Range/96mm	10-06355	**$185.25**
VSI3S-10MS	10 m/sec	56mm	10-06461	**$148.00**
VSI3S-20FM	2000 ft/min	56mm	10-06462	**$148.00**
VSI3S-30FM	3000 ft/min	56mm	10-06463	**$148.00**

Prices Subject to Change Without Notice

INSTRUMENT MOUNTING & ADAPTER KITS

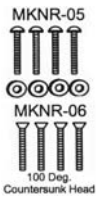
INSTRUMENT MOUNTING KITS



Kits come with "special" self-locking black pan head screws and nylon washers

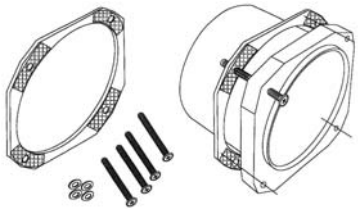
Precision machined "Nut Ring" instrument mounting kit. Designed to slide on from the back side of the instrument using the alignment guide pin inserted through a screw hole. Pulling on the alignment pin from the front side of the panel allows you to hold the instrument in correct alignment in the panel. Specially designed self-locking pan head black brass mounting screws and nylon washers are then easily installed from the front. Countersunk self-locking black brass screws are also available. Extra screws & washers are sold in packs of 12. The nylon washer keeps from chipping the instrument panel. All self-locking screws are extra long to accommodate the extra thickness of light wedges and internally lighted instruments. Nut Rings can be installed without removing hoses, tubing, or electrical connections. Designed to replace "grasshopper nuts". PMA'd.

Alignment guide pin sold separately.(P/N 10-03696)



Model	Description	Part No.	Price
MK-01	3-1/8" Std.	10-00335	**$10.85**
MK-02	3-1/8" ALT/VSI	10-00336	**$10.85**
MK-03	2-1/4" Std.	10-00337	**$10.85**
MKNR-05	Pan Head Screws	10-00338	**$10.95**
MKNR-06	Countersunk Screws	10-00339	**$12.75**
Accessories			
AP-01	Alignment Mounting Kit	10-03696	**$1.95**

"EZ NUTS" INSTRUMENT MOUNTING SYSTEM BY SPT



Take the frustration out of mounting instruments with the use of Superior Panel Technology's EZ Nuts. Adhesive tape securely holds nut ring in place. No realignment if instrument is later removed. Aluminum bezel is treated to prevent corrosion. The pressed in stainless steel inserts eliminate the problem of striped threads. Simply cut off one corner if only three screws are needed. Save labor time when compared to "grasshopper nuts".

Includes four 1-1/2" non-magnetic black oxide stainless steel, pan-head screws. Stronger than brass. Includes four black nylon washers to prevent marring of the panel.

*100 degree countersunk screws available and are sold in packs of eight.

3-1/8" Bezel.....P/N 11-01830 ..... **$8.95**
2-1/4" Bezel.....P/N 11-01831 ..... **$8.95**
Black-Oxide Stainless Steel Countersunk screw package (set of 8).....P/N 11-06546 ..... **$4.50**

Black-Oxide Stainless Steel Pan head screw package - Note: Includes eight black nylon washers that will enhance the appearance of the panel and will prevent the marring and scratching of the panel during instrument installation and removal.

(set of 8).....P/N 11-09911 ..... **$2.95**

PITOT TUBE PROTECTORS



These hinged pitot tube protectors open automatically in take off at speed of about 40 mph and close automatically at end of landing roll.

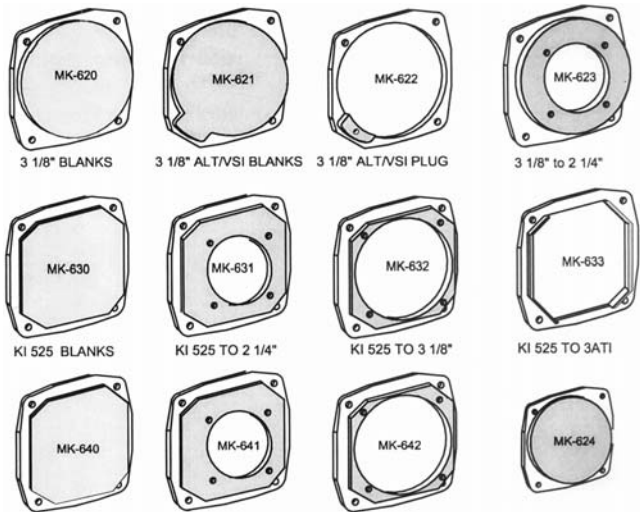
Model No.	Part No.	Fits Pitot Tube Sizes	Price
1	10-02000	1/4" O.D.	**$14.60**
2	10-02100	1/2" O.D.	**$14.60**
3	10-04968	3/16" O.D.	**$14.85**

REMOVE BEFORE FLIGHT RIBBON



This 3" x 24" orange vinyl streamer with black letters, features a grommet for a clip ring to attach anywhere on the aircraft. High visibility, fire resistant material. P/N 15200 ..... **$11.95**

INSTRUMENT ADAPTER KITS



CNC Machined from aircraft grade aluminum. The adapter face is raised .075" to give the flush panel look. Easy to install and easily painted.

See www.aircraftspruce.com for specifications.

Model	Description	Part No.	Price
MK-620	3-1/8" Blank	10-00340	**$13.85**
MK-621	3-1/8" ALT/VSI Blank	10-00341	**$13.85**
MK-622	3-1/8" ALT/VSI Plug	10-00342	**$19.75**
MK-623	3-1/8" to 2-1/4"	10-00343	**$19.75**
MK-624	2-1/4" Blank	10-00344	**$13.85**
MK-630	KI525 Blank	10-00345	**$13.85**
MK-631	KI525 to 2-1/4"	10-00346	**$19.75**
MK-632	KI525 to 3-1/8"	10-00347	**$19.75**
MK-633	KI525 to 3 ATI	10-00348	**$17.75**
MK-640	3 ATI Blank	10-00349	**$13.85**
MK-641	3 ATI to 2-1/4"	10-00350	**$19.75**
MK-630	3 ATI to 3-1/8"	10-00351	**$19.75**

PITOT TUBE COVERS



PITOT TUBE BOOTY – Durable leather-like cover provides optimum protection. Velcro strap attaches booty to 5/8" or 11/16" dia. L-shaped pitot tube. Bright red "Remove Before Flight" streamer. Made of flame-proof & weather-resistant National Aerospace material.

P/N 15210 ..... **$5.95**

SLIP-ON PITOT TUBE COVER – Not shown. Same as above except is slip fit over 1/4" or 1/2" dia. pitot tube. Red "Remove Before Flight" streamer is attached to cover. Made of flame-proof and weather-resistant National Aerospace material. P/N 15220 ..... **$6.95**

DEGROFF'S PITOT SHIELDS



PITOT SHIELDS are a "fail-safe" pitot tube cover that will protect the pitot tube from contamination by insects, debris and ice while the airplane is on the ground. It is friction-fit to the pitot tube and has a calibrated "flat-plate-forward" design that, upon reaching a specific velocity, will release from the pitot tube and fall harmlessly away, allowing for normal airspeed indications. The cover utilizes EVA foam that is UV resistant and stable at temperatures reached by heated pitot tubes. It is a highly visible color with the words "REMOVE BEFORE FLIGHT" printed and visible from all directions. This pitot tube cover is soft, but tough. It will not damage aircraft surfaces when it comes off during ground roll, nor will it be a potentially hazardous foreign-object on the runway.

For 5/8" pitot tube.....P/N 10-00491 ..... **$21.50**
For 3/4" pitot tube.....P/N 10-00492 ..... **$21.99**
For Piper pitot tube .....P/N 10-00493 ..... **$19.95**

ALUMINUM PITOT MAST



Custom manufactured aluminum pitot mast designed for the popular Van's Aircraft RV kit aircraft. Aluminum streamline tubing is correct size for all popular pitot tubes. Aluminum mounting plate is .070" thick aluminum, precision welded to the tubing. Mounting plate measures 3" wide X 4" long. Streamlined mast is 5" long. The mounting plate has a jog on the forward side to overlap the spar flange inside the wing. This mast can be used on other popular aircraft that require a mast for the pitot tube. Blue anodized finish. Mounting instructions and template included. Made in the USA. P/N 12-04764 ..... **$68.95**

IN

PITOT TUBES

UNHEATED PITOT TUBES



STRAIGHT TYPE – Flange-mounted through leading edge of spar. Aluminum tube 24" long, 1/4" dia. May be cut to shorten.
P/N 15133 .....**$22.50**



L-SHAPED TYPE – Flange mounted L-shaped model for under-the-wing mounting. 1/4" dia. aluminum tube.
P/N 15135 .....**$31.75**



L-SHAPED PITOT-STATIC TUBE – Same design with static tube added. For pitot tube cover order #15220 or 10-02100 (flip up). P/N 15144 .....**$37.80**

STRAIGHT TYPE PITOT-STATIC TUBE – Clamp-mounted for leading edge of wing. 14-1/2" long. May be shortened, formed or shaped to best angle of attack. 1/4' dia. aluminum tubes. All installation hardware furnished.
P/N 10-01800 .....**$29.70**



STRUT TYPE PITOT-STATIC TUBE – Simple L-shaped design for clamping to strut. 1/4" dia. aluminum tubes.
P/N 10-01900 .....**$32.75**

MAST-MOUNT PITOT TUBE - Designed for mounting in 3/4" O.D. x .049" wall aluminum tubing (not furnished). Machined from solid aluminum. Includes Polyethylene hose fitting for 1/4" I.D. P/N 15170 .....**$39.25**

RAVEN PITOT STATIC TUBE



Pitot system combines pitot and static functions in one tube. Used for years on many different aircraft. Comes complete with mounting block to install it. P/N 10-00476 .....**$323.00**

PITOT STATIC SUMP BOTTLE



This pitot-static sump bottle collects moisture in the aircraft's static system which prevents water damage to panel mounted instruments. Used in many Cessna aircraft. Measures 1.625" dia. x 4.75" long. Thread size: 7/16-20 for a nylon fitting & 1/8" NPT to the static port. ...P/N 10-00630 .....**$17.50**

STATIC PORTS



Aluminum static port for mounting through 9/16" dia. hole in side of fuselage. Base has 1/8" NPT female port for connecting to static line (polyethylene fitting included). Install with 3/32" dia. flush rivets. P/N 15160 .....**$18.95**



Aluminum static port mounts from outside of fuselage through 9/16" dia. hole. Secure to skin with 9/16" Pal nut & lock washer on inside. Includes (1) 0700-153 polyethylene fitting. Kit..... P/N 15165.....**$21.85**
Static port only..... P/N 10-00658.....**$21.50**



Aluminum static port mounts from outside of fuselage through .560 dia hole. Secure with four countersunk 100o 3/32" rivets. Includes one 0700-153 polyethylene fitting.
P/N 15175..... **$21.75**



Aluminum single engine Cessna type static port. External mounted through a 19/64" hole. Can be used on fabric, composite or aluminum. No need for rivets. 1-3/8" dia.x1" depth. Ideal for homebuilts of all types. P/N 10-00250..... **$17.75**



Aluminum static ports mount 1-1/4" base OD from outside of fuselage through 5/16" ID hole. Secure with 4 countersunk 3/32" rivets to skin with pal nut & lock washer on inside.
P/N 10-00659 ..... **$18.55**

Aluminum static ports mount 1-1/4" base OD from outside of fuselage through 5/16" ID hole. Secure with 4 countersunk 3/32" rivets to skin with pal nut & lock washer on inside.
P/N 10-00660 ..... **$20.50**



BOND-IN STATIC PORT SET



This aluminum static port is designed for high performance composite aircraft. Simply bond through the fuselage from the outside. Base has a 1/8" NPT for connecting to the static line. Furnished with installation instructions. Sold in set of 2. P/N 10-00229 ..... **$45.50**

AEROGIZMOS PITOT TUBE



Incorporates the mount and the tube in one convenient unit, making it no longer necessary to have a separate mount. This unit further enhances the building experience as there is no protruding mast from the wing if it is to be stored during the building process. Made from a single piece of 6061 aluminum making it strong and long lasting. The unit has been lightened in the interest of weight savings. Not for IFR use. P/N 10-03633.....**$169.95**

WINTER PITOT TUBE



The pitot tube is the sensor for aircraft instruments. It consists of a cylindrical tube open at the front to sense total pressure (measuring pressure for airspeed indicators) and slotted along the sides to sense static pressure. These pressures must then be carried to the instruments by hoses.
Pitot Tube .....P/N 10-03854 ..... **$65.75**
Venturi Tube .....P/N 10-03855 ..... **$57.75**

HEATED PITOT TUBES



AN5812 PITOT TUBE - This heated pitot tube mounts under the wing. Used on Mooney, Beech, Piper, Maule, American Aviation aircraft, Glasair & Glastar. Threaded outlet fits 1/4" size AN tube fittings. Use 2.023x.857x.049 4130 Streamline Tubing to fabricate mount.....
AN5812-12 (12V) (10 amp.).....**$3,195.00**
AN5812-1 (24V) (15 amp.) **$1,889.00**
Phenolic connector receptacle P/N 10-00032..... **$224.95**

AN5813-1 PITOT TUBE - The AN5813-1(PH500) is the standard replacement heated pitot tube for twin Cessnas with 24V systems. Draws 3-4 amps and measures 93/4" long. Mounts in 1.18 diameter tube. Dull finish.



P/N 10-00064 ..... **$4,200.00**

FALCON HEATED PITOT TUBES



The AN5812 heated pitot tube has been used on a wide variety of aircraft over the years and is now available for experimental aircraft. Made from brass and weighing 1.5 lbs, these imported pitot tubes meet the AN specifications. Made in China.

Model No.	Description	Part No.	Price
12-AN5812	12V, standard	10-00984	$569.00
12-AN5812-1	12V, Long Pipe for RV's	10-04199	$569.00
24-AN5812-1	24V Long Pipe for RV	10-05820	$739.00
12-AN5812-2	12V, left and right drain holes	10-04201	$739.00
24-AN5812	24V, standard	10-00985	$619.00
24-AN5812-2	24V, left and right drain holes	10-04202	$569.00
PT-001	non-heated, 1 drain hole	10-04224	$348.00
PT-002	non-heated, left and right drain hole	10-04225	$348.00

FALCON GAUGE PITOT TUBE MOUNTING BRACKET



Works with heated and non-heated tubes. Aluminum Alloy
Standard Mounting Bracket .....P/N 10-01063 ... **$69.95**
Mounting Bracket for RV's .....P/N 10-02276 ... **$98.75**

GRETZ GA-1000 HEATED PITOT TUBE



Molded from a very high-tech polymer material. Electronics embedded in the Pitot tube. Comes with a small electronic control module to control the heat of the Pitot and information to the pilot regarding performance. A LED board that will mount conveniently on the panel. Will fit the Gretz mounting bracket kits. Come with the electronic control module, the LED board and cable, Pitot mounting screws, electronic control module mounting hardware, and complete instructions for installation and use.
P/N 10-01715 .....**$425.00**

GRETZ GA-500 UNHEATED PITOT TUBE

Same shape and color as the heated GA-1000 Pitot tube, but does not include the heater, electronic instructions, etc. It will mount into the same Gretz mounting bracket kits. P/N 10-01716 .....**$125.00**

GRETZ AERO PITOT TUBE BRACKET KITS



To be installed on all of the very popular Van's RV aircraft series, but it can also be installed easily on other metal wing aircraft,. as well as composite, and tube and fabric aircraft with very minor modifications to the kit parts. Very easy to remove and to re-install. The mount brackets comes with in a paintable finish. These Pitot Tube Mounting Bracket.
Paintable Finish Pitot Tube Mounting Bracket Kit for GA-1000, & GA-500, also, AN5812, PH502-12CR, Dynon, and Fly More
P/N 10-01820 .....**$109.75**
Paintable Finish Non-Drilled Pitot Tube Mounting Bracket Kit for Falcon.
P/N 10-01188 .....**$109.75**

Please Note: Pitot tubes are Not included in Kits or Kit prices!

WELDED PITOT TUBE ASSEMBLY



This non-heated non-IFR welded pitot tube assembly. It is intended for the experimental VFR aircraft market. The tube and mast are from 4130 tube welded in a fixture to assure alignment. The orifice is produced from aircraft grade aluminum. The pressure tube is polyethylene for easy connection to the aircraft pitot system. Dimension: 6" x 5" x 2-1/2"
P/N 10-03637 .....**$155.75**

PITOT TUBE KIT



1/4" Aluminum Tubing (03-39300). Vinyl Tube for ASU (AS010.2). 1/4T x 1/8P Polyethylene Hose Adapter (0700-153). 3/8" ID Snapper Clamp (05-00940).
P/N AS010.4.....**$10.50**

PNEUMATIC TOGGLE SWITCHES



2-Way Toggle Switch, (1/8" NPT Male Inlet) for alternate static air source.
Steel.....P/N 11-12169 ... **$16.85**
Plastic .....P/N 11-12168 ... **$16.95**

IN

Prices Subject to Change Without Notice

ANGLE OF ATTACK INDICATORS

BENDIX KING KLR 10 LIFT RESERVE INDICATOR



The easiest stall to recover is the one that never happens. The KLR 10 Lift Reserve Indicator provides at-a-glance awareness and audible cues of remaining lift, in an easy-to-install, easy-to-read device that's ready for your experimental aircraft. Mounted on the glare shield, it's at eye-level, exactly where you need it. Helping you takeoff with confidence, grease more landings and fly with better Angle of Attack. The KLR 10 Advantage: Lightweight, Low-cost, easy installation with low power consumption. Accurate and instantaneous displays of lift reserve, which is the safety margin above a stall. Visual and audible cues alert you of decaying lift much earlier than traditional warning systems. Allows for quick and timely reactions. Independent of pilot-static systems, so it can be used even if the existing air-data system is compromised by ice, water or other contaminants . Optional heated probe.

Standard Probe, Standard Mount	11-12022	**$1,600.00**
12V Standard Probe, Swivel Mount	11-12949	**$1,495.00**
12V Heated Probe, Swivel Mount	11-12945	**$1,595.00**
24V Heated Probe, Swivel Mount	11-12946	**$1,595.00**
12V Heated Probe, Standard Mount	11-12947	**$1,595.00**
24V Heated Probe, Standard Mount	11-12948	**$1,595.00**
Accessories		
Heated Probe Option, +12vDC	11-12024	**$269.95**
Angle of Attack Probe Cover with flag	11-12027	**$15.95**
Swivel Mount	11-12028	**$89.95**
Flush Mount Panel (Instrument Panel Mount)	11-12029	**$89.95**

THE REDDISH STALL WARNER



Developed in the UK by Nigel Reddish, these stall warners have been installed in many RV series aircraft. the vane is ground adjustable and installation is simple. Includes a micro switch and vane. For experimental aircraft only.***Note:*** The Mark 2 Version is practically the same as the Mark 1, the only difference is the vane on the Mark 2 is longer. The installation is the same as the Mark 1.only.

Mark I ..... P/N 10-00189..... **$89.95**
Mark II ..... P/N 10-02686..... **$89.95**

ANGLE OF ATTACK CYA 100



The CYA-100 Angle of Attack system is the only affordable FAA APPROVED TRUE Angle of Attack system on the market today! Extremely light, and extremely small, the CYA-100 is easy to install, with no extra computer boxes or hoses. The vane driven sensor is magnetically coupled. There are no small pressure ports to plug and no ball bearings to seize. ..... P/N 10-05682..... **$625.00**

RITEANGLE™ BASIC SYSTEM AOA



The RiteAngle Basic, is a high quality AOA system for aircraft without flaps. This is the most accurate low cost AOA system available to customers today. **Note: The Basic system is for aircraft without flaps only.** The RiteAngle™ Basic uses electronics not available during earlier designs of RiteAngle™ systems. Although operationally similar to prior RiteAngle products, the RiteAngle Basic is a totally new, more efficient, economical design. It is a modern up to date system, that accurately determines your aircraft's angle of attack. This series uses our proven, easy-to-understand, five LED display. Green indicates Safe, Amber indicates Caution, and Red indicates Danger. The "On Speed" AOA, 1.3 Vso will be correct, regardless of bank angle, density altitude, or any of the other variables where the airspeed might be inaccurate. P/N 11-10388 ..... **$395.00**

RITEANGLE™ BUDDY AOA



The RiteAngle™ Buddy also uses electronics not available during design of the initial RiteAngle™ systems. Although it is similar to the prior RiteAngle systems, for aircraft with no flaps, The RiteAngle Buddy operationally, is a totally new design using an enhanced display. **Note: The Buddy is for aircraft without flaps only.** The RiteAngle™ Buddy is a modern, up to date system that accurately determines your aircraft's angle of attack. This series uses an improved easy-to-understand LED display. This instrument is designed to FAA standards. Green indicates safe, amber indicates caution, and red indicates danger. P/N 11-06626 ..... **$549.00**
Ema AOA Basic And Buddy Sensor..... P/N 11-10392..... **$50.00**

RITEANGLE™ ELITE SYSTEM AOA



With the RiteAngle Elite system you have the advantage of having a system which was designed to the FAA guidelines for use on certified aircraft, without all the expense of tracking of parts and having it assembled by a PMA facility, and of course not having to pay for the time, effort, and work involved in getting the STC!

The RiteAngle™ Elite is a modern, up dated system that accurately determines your aircraft's angle of attack. Easy to understand - Green Safe, Amber Caution, Red Danger. There are no computed values, the vane actually measures the relative wind.

Elite+ AOA System..... P/N 11-10389..... **$995.00**
Ema AOA Small Vane Option..... P/N 11-10390..... **$85.95**
Ema Elite Enhanced Display Opt ..... P/N 11-10391..... **$200.00**

LIFT MONITOR SYSTEM

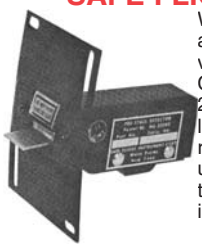


Lift Monitor is FAA approved for installation on all GA aircraft, not just experimentals. The low cost of the Lift Monitor and simplicity of installation leave little excuse for not availing yourself of the safety and performance afforded by an AOA system. Working completely independently of all other aircraft systems, installation requires only a log book entry on the part of your mechanic.

Lift Monitor models are available as either a panel mount or glare shield installation. Adapters are provided for existing 2/14" and 3-18" instrument holes. A "Remove Before Flight" protective cover for the probe is included with each system.

Description	Part No.	Price
Monitor System With Panel Mount Kit	05-14964	**$389.00**
Monitor System With Glare Shield Mount Kit	05-14966	**$389.00**

SAFE FLIGHT PRE-STALL WARNER



Warns by light and horn of any danger of an approaching stall regardless of the flight maneuver. Never signals unless a stall is imminent. Consists of an instrument panel unit (fits standard 2.25" hole) containing a warning horn & signal light, and a small vane wing unit which operates a relay. Operation of the instrument doesn't depend upon air speed but rather on the air flow conditions of the wing. Complete with installation kit & instructions. Installation time: 2-6 hours.

Description	Model	Part No.	Price
Lift Detector	164	164	**$2,249.00**
Horn & Light	R (12V)	10-22712	**$2,236.00**
	S (24V)	10-22724	**$1,949.00**

SAFE FLIGHT SCC LEADING EDGE AOA SYSTEM



The SCc system is tailored specifically for certified aircraft in the general aviation market. In designing the SCc, Safe Flight built on its nearly 70 years of experience in providing aircraft manufacturers primary stall warning and AoA utilizing our patented wing lift sensor technology. The SCc system is comprised of a Lift Transducer mounted on the leading edge of the wing and an Indexer Computer that provides a heads-up display of AoA. The SCc system delivers precise AoA information to help achieve consistent takeoff, climb, cruise, and landing approach performance through an innovative visual display and audio output. Simply stated, the SCc was designed by pilots, for pilots. The system is the most accurate and comprehensive Angle of Attack system available for your aircraft.

Note: The SCc was recently approved for use in certified aircraft. There are no STC's available. Approval is limited to single engine aircraft. Check "Application Guide" located on our website to verify eligibility.

P/N 11-13582 ..... **$2,101.00**

STALL HORN TESTER



Quickly and easily test your stall warning horn without inhaling bugs or putting your mouth on a freezing wing. With the stall warning horn tester you no longer need a ladder to test stall horn on high wing aircraft. It is an FAA requirement that you test the stall warning device before flight. This effective device eliminates the old way of testing the stall horn - by simply depressing the bellow and releasing the bellow "quickly". Instantly, you can tell if the stall warning horn is functioning. Thousands of this product have been sold throughout the world. The compact size allows you to store it in your flight bag or aircraft compartment. P/N 14-01021..... **$9.95**

ACI STALL WARNER



Few pilots need reminding of the catastrophic consequences of an unintentional stall at low level. A frequent sequence of events is distraction of pilot attention, leading to lack of speed control, with the stall rapidly followed by rotational entry into a spin. Steep ground impact follows all too quickly.We all know about this, but why do stall accidents continue to kill pilots and their passengers year after year? Factors include the rapidity with which our low inertia aircraft lose airspeed, their sensitivity to gusts, the higher frequency of engine failure - and so on. However, very few Experimental and PFA aircraft are fitted with audible stall warners, and yet we are flying aircraft that need them. Virtually every certified production light aircraft has a stall warning system as standard. The ACI Stall Warner is for experimental aircraft only.

P/N 10-00235 ..... **$316.00**

IN

ANGLE OF ATTACK INDICATORS

ALPHA SYSTEMS AOA FALCON KIT



(H: 2.5" D: 1.25" W: 0.865" Weight: Less than 3.00 lbs) Kit Features The Falcon display is a Light Bar Style display with a remote switch panel. With the Falcon display, when you come in for a landing you want to fly to the blue LED (on speed for landing). Should you come in with too low of an angle of attack, the display will illuminate into the yellow, telling you to put your nose up. Should you come in with too high of an angle of attack, the display with illuminate red, telling you to put your nose down.

Standard.....P/N 11-12667.....**$1,995.00**
Pressurized.....P/N 11-13468.....**$2,315.00**

ALPHA SYSTEMS AOA CONDOR KIT



(H: 2.38" D: 1.25" W: 2.38" Weight: Less than 3.00 lbs)
Kit Features: This is simply the Falcon System in a round 2-1/4" flush panel mount version. With the display, you will aim for the blue LED when landing and the more LED's that are on, the more lift you have available.

Standard.....P/N 11-12668.....**$1,995.00**
Pressurized.....P/N 11-13469.....**$2,315.00**

ALPHA SYSTEMS AOA GRIFFIN KIT



(H: 2.5" D: 1.25" W: 0.865" Weight: Less than 3.00 lbs) Kit Features- The Griffin display is a Chevron Style display. With the Griffin display, when you come in for a landing you want to fly to the blue donut (on speed for landing). Should you come in with too low of an angle of attack, the yellow chevron will light up and tell you to put your nose up. Should you come in with too high of an angle of attack, the red chevron will light up and tell you nose down.

Pressurized.....P/N 11-13467.....**$2,315.00**

CALL OR VISIT WWW.AIRCRAFTSPRUCE.COM FOR ADDITIONAL ALPHA SYSTEMS PARTS AND KITS.

GARMIN AOA SYSTEMS



Provides AOA with a single glance during critical flight phases. Intuitive display provides both visual and audible indications of AOA. Normalized AOA provides superior performance in all flight phases. Works with G3X™ systems with GSU 25 and GAP 26 – just add the indicator. Available for installation as a standalone system for GA aircraft.
The GI 260 receives AOA input from a GSU 25 air data computer connected to a GAP 26 probe. Since these are key components of the G3X™ flight display system, pilots of experimental/amateur built aircraft can add the dedicated AOA indicator to their aircraft by connecting as few as 4 wires. For pilots of general aviation aircraft, the GI 260, GAP 26 and GSU 25 can be added as a complete package. A universal inspection plate mount is included to aid in installation.

Description	PN	Price
AOA System 14/28 Volt Unheated GAP 26, GI 260, GSU 25	10-05793	**$1,450.00**
AOA System 14 Volt Heated GAP 26, GI 260, GSU 25	11-13453	**$1,649.00**

RITEANGLE™ INTEGRITY AOA SYSTEM FAA



Does the AOA system you are considering automatically correct for 5 positions of flaps? When you lower flaps you lower stalling AOA! Uses a vane like military and airliners. Automatically corrects for up to 5 flap positions. Designed to install easily. Many parts prefabricated. Nothing required to set up you didn't practice prior to solo! Accurate within 1 degree. Enhanced display. Modify your aerodynamics - Simply plug in set-box and reset i.e.: s.t.o.l. modification with stc. A "stand alone system". Does not tie into pitot or static lines P/N 11-14300 ..... **$1,675.00**

ALPHA SYSTEMS AOA EAGLE KIT



(H: 2.5" D: 1.25" W: 0.865" Weight: Less than 3.00 lbs)
Kit Features - The Eagle Display is a Chevron plus Diamond Style display with a remove switch panel. With the Eagle Display, when you come in for a landing you want to fly to the blue donut (on speed for landing). Should you come in with too low of an angle of attack, the yellow chevron will light up and tell you to put your nose up. Should you come in with too high of an angle of attack, the red chevron will light up and tell you nose down.

Standard.....P/N 11-12666.....**$1,995.00**
Pressurized.....P/N 11-13466.....**$2,315.00**

ALPHA SYSTEMS HAWK ANGLE OF ATTACK KIT



The Hawk is a servo needle display. Fits a standard 2-1/4" round flush panel mount. 3-1/8" adapter plate is available for additional purchase. Instantaneous Angle of Attack Indication. Three point calibration process, programmed at display, to aircraft's specific lift curve. 16 different LED brightness levels from ultra dim to very bright. Display has an imbedded photocell for daytime/nighttime brightness settings, choice of which is programmed at display by you. Audio Output, tied to existing audio input on audio panel by others. 4 Different Audio options to choose from, choice of which is programmed at display by you. Audio Mute switch with amber LED indicator located on display. 12-28 VDC input, draws less than 0.250 Amps at full brightness. 3 Different LED output options, choice of which is programmed at the display by you.

Standard.....P/N 11-12669.....**$1,995.00**
Pressurized.....P/N 11-13470.....**$2,315.00**

ALPHA SYSTEMS MERLIN AOA KIT



The Merlin Display is a Light Bar Style display. With the Merlin display, when you come in for a landing you want to fly to the blue LED (on speed for landing). Should you come in with too low an angle of attack, the display will lit into the yellow, telling you to put your nose up. Should you come in with too high an angle of attack, the display will be lit into the red, telling you to put your nose down.

Standard.....P/N 11-13472.....**$1,746.00**
Pressurized.....P/N 11-13473.....**$2,315.00**
Merlin Glareshield Mount Kit(Fixed).....P/N 11-13579.....**$42.95**
Merlin Glareshield Mount Kit(Swivel).....P/N 11-13578.....**$85.95**



ALPHA SYSTEMS VALKYRIE HUD ADAPTER

Features: Display sold separately. This mounting kit allows either the Eagle, Griffin or Falcon displays to be mounted vertically above the glare shield to make it a "heads up" display. P/N 11-12671 ..... **$500.00**

AOA HEATED PROBES



Heated Probe has a built in heater of 12V DC that minimizes the potential for ice build up on the leading edge of the probe. Probe comes complete with high temperature fittings and tubing. It is a drop in replacement and can be used or upgraded in the existing Alpha Systems AOA mounting plate.

12V Heated Probe.....P/N 11-14694 .....**$200.00**
24V Heated Probe.....P/N 11-14693 .....**$200.00**

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COMPASSES



AIRPATH COMPASSES

Factory-new Airpath compasses as used in almost all production aircraft. 2.25" size.

Model	Mounting	Lighting	P/N	Price
C2300	Panel	None	10-01340	$158.85
C2300- S. Hemisphere	Panel	12V Red	10-01342	$158.85
C2300-L4	Panel	12V Red	10-01341	$181.75
C2300-L4- S. Hemisphere	Panel	12V Red	10-01387	$181.75
C2400-L4P	Pedestal	12V Red	10-01343	$207.95
C2400-L4P - S. Hemisphere	Pedestal	12V Red	10-01344	$208.95
C2400-L4VT	Overhead	12V Red	10-01345	$268.95
C2400-L4VT - S. Hemisphere	Overhead	12V Red	10-01346	$264.95
C2200-L4 N. Hemisphere	Cessna "Bonded Bracket"	12V Red	10-00592	$195.75
C2200-L4 S. Hemisphere	Cessna "Bonded Bracket"	12V Red	10-05355	$194.75

BULBS FOR AIRPATH COMPASSES

14V ..... P/N 11-04016 **$1.25 ea** 28V..... P/N 11-04015.....**$0.95 ea**

AIRPATH COMPASS REPAIR KITS

Kit consists of diaphragm, 1/2pt of compass fluid & face glass gasket.

Repair Kit (with fluid) ..... P/N 10-08000 ..... **$11.25**
Repair Kit (without fluid) ..... P/N 10-08020 ..... **$9.75**
Compass Fluid: 1/2 Pint ..... P/N 10-08100 ..... **$1.92**
Quart..... P/N 10-08200 ..... **$6.75**
Airpath Compass Deviation Card Holder ..... P/N 10-01658 ..... **$1.90**
Deviation Card..... P/N 10-01659 ..... **$0.79**
CB21-914H - Inner gasket ..... P/N 10-00505 ..... **$9.50**
C21-915G Spacer gasket..... P/N 10-00368 ..... **$2.15**
Diaphragm Only ..... P/N 10-01386 ..... **$5.35**
Glass Compass Lens for C2300/C2400 series compasses.
P/N 10-08010 ..... **$21.50**



ECONOMY COMPASS SEAL KITS

Kit without fluid - includes: (2) Gaskets, (1) Deviation Card, (1) Diaphragm P/N 10-04943.....**$9.75**
Kit with Fluid - includes: (2) Gaskets, (1) Deviation Card, (1) Diaphragm, (1) 1/2pint Compass Fluid P/N 10-04944...**$11.25**



C2400 SERIES COMPASS HOUSINGS

C24-730A Housing for C2400L4P Top Panel Mount
P/N 10-04696 ..... **$27.75**
C24-727A Housing for C2400L4VT Windshield Mount.
P/N 10-04697 ..... **$29.80**



C2400 W/R INNER CASE - This is inner case compass only. Designed to fit Airpath 2-1/4" as replacement only (for models 2400-L4VT, C2400-L4P). P/N 10-04718 ..... **$108.95**



TRIMCRAFT COMPASS REPAIR KIT WITHOUT FLUID

Compass Repair Kit p/n C-21K contains one diaphragm & compass card and two gaskets. Complete and easy to understand instructions. (Fluid not included).
P/N 04-03464 .....**$11.85**



FALCON AIRCRAFT COMPASSES

These compasses are very similar to the Airpath C2300 & C2400 style compasses above but are priced more economically. New manufacture. Not certified. Made in China.

Size	Model No.	Description	Part No.	Price
		Northern Hemisphere		
2-1/4"	MCPN-2L	Panel Mount, Lighted	10-02069	$99.95
2"	MCDN-2	Pedestal Mount	10-02071	$104.00
2"	MCDN-2L	Pedestal Mount, Lighted	10-02070	$108.00
		Southern Hemisphere		
2-1/4"	MCPS-2	Panel Mount	10-02068	$97.75
2-1/4"	MCPS-2L	Panel Mount, Lighted	10-02243	$102.75
2"	MCDS-2	Pedestal Mount	10-01704	$104.00
2"	MCDS-2L	Pedestal Mount, Lighted	10-05220-SO	$109.95



FALCON VERTICAL CARD COMPASSES

It is easy to read presentation and see the complete 360 degree dial in proper relation to your aircraft heading. 14V, lighting. 2-1/4". Made in China.

Model	Description	Part No.	Price
MCVC-2L-A	N. Hemisphere Compass Only	10-05276	$234.95
MCVC-2L-A-M	N. Hemisphere Compass & Bracket	10-04174	$249.95
MCVC-2SL-A	S. Hemisphere Compass Only	10-04489	$234.95
MCVC-2SL-AM	S. Hemisphere Compass & Bracket	10-04490	$249.95
30-V-0001	Vertical Card Compass Universal Mounting Bracket	10-04175	$26.50



PRECISION AVIATION COMPASS KEY

Precision Aviation PD-1 Compass Key.
P/N 10-06424 ..... **$1.32**

PRECISION VERTICAL CARD COMPASS



The Precision Vertical Card Compass is a totally new concept for today's aircraft. It is a dry compass, designed to replace the float/liquid type compass; no more leaking fluid or backward azimuth readings. It uses eddy current damping and as such has no overshoot. It consists of a 2"vertical rotating dial which is compared with a fixed miniature airplane (lubber line) to present the magnetic heading of the aircraft at all times. Heading information is more natural because the heading is read at the 12 o'clock position and off the nose of the miniature aircraft. The compass card rotates and presents all quadrants in their true relation to line of flight. Requires no power (except for lighting) to operate. Fully TSO'd. Installed in many current production aircraft and helicopters. Size: 2-7/8"H x 2-3/8"W x 2-1/8"D. Wt. 0.6 lb. After installation, compass must be compensated using standard compensation procedures. Also used in sailplanes. ***Bracket / mount is required for installation and is not included with unit.***

Northern Hemisphere 14V ..... P/N 10-00421..... **$335.00**
Northern Hemisphere 28V ..... P/N 10-00423..... **$335.00**
Southern Hemisphere 14V..... P/N 10-00422..... **$349.00**
Southern Hemisphere 28V..... P/N 10-00424..... **$346.00**

REPLACEMENT LIGHT BARS FOR PAI-700

14V ..... P/N 10-00092.....**$34.50**
28V ..... P/N 10-00093.....**$34.50**
5V Light Assy. ..... P/N 10-02956.....**$33.50**

PRECISION COMPASS MOUNTS

PACMG-2 – Universal mount for many aircraft using a glare shield or deck mount. Models include Beech Baron and Bonanza, Cessna Skyhawk, Skylane and Cardinal. .....P/N 10-07500 ..... **$29.50**
PACMO-U – Universal overhead bracket kit for customer adaptation.
P/N 10-07600 ..... **$29.50**
PACMO-CESNO – Custom mount for several Cessna models using one-piece windshield & compass mounting block. Models include Cessna 150,152,170,180,182,185 & 210. .....P/N 10-07700 ..... **$59.75**
PACMO-PIPER – Custom mount for several Piper models with 5/8" hat-section center windshield post. Models include Piper Cherokee, Warrior, Arrow, Archer, Lance, Comanche, Navajo & Cherokee Six.
P/N 10-07800 ..... **$50.50**
PACMO-APZ21 – Custom mount for use in Piper Apache, Aztec, & Cessna 421. .....P/N 10-07910 ..... **$49.50**
PACMO-SRN – Custom mount for use in Beech Sierra using windshield mount. P/N 10-07920 ..... **$49.99**
PACMO-KA – Beech King Air.....P/N 10-07921 ..... **$49.99**
PACMO-EB – Early Bellanca. Compass mounted overhead.
P/N 10-07922 ..... **$59.75**
PACMO-LB – Late Bellanca. Compass mounted on windshield.
P/N 10-07923 ..... **$49.50**
PACMO-2CN – Cessna early 172, 182 with compass mounted on windshield with 1" center with 1" divider strip. .....P/N 10-07924 ..... **$49.50**
PACMO-340R – Cessna 340 Twin. .....P/N 10-07925 ..... **$71.90**
PACMO-310RN – Cessna 310. .....P/N 10-07926 ..... **$61.75**
PACMO-GTR – Grumman Tiger, Cheetah. .....P/N 10-07936 ..... **$50.50**
PACMO-MHN – Mooney compass mounted on housing covering center post. P/N 10-07927 ..... **$50.99**
PACMO-HMN – Mooney compass mounted on center post with horizontal screws. P/N 10-07928 ..... **$62.75**
PACMO-VMN – Mooney compass mounted on center post with vertical screws. P/N 10-07929 ..... **$48.50**
PACMO-PCN – Comanche with no center post use PACMG-2, twin, SE.
P/N 10-07931 ..... **$49.99**
PACMO-R22 – Robinson R22. .....P/N 10-07932 ..... **$59.75**
PACMO-R44 – Robinson R44. .....P/N 10-07933 ..... **$59.75**
PACMO-RV6C – RV6 kit. (Sliding Canopy only, not tip-up)
P/N 10-07934 ..... **$56.75**
PACMO-HSN3A – 32.50 40.63 Schweizer 300 & 300 CB.
P/N 10-07935 ..... **$67.75**
PACMO-3/4P – w/ a 3/4" post .....P/N 10-00426 ..... **$56.75**
PACMO-5/8P – w/ a 5/8" post .....P/N 10-00431 ..... **$56.75**
PACMO-7/8P – w/ a 7/8" post .....P/N 10-00432 ..... **$57.75**
PACMO-ARCP – Ercoupe .....P/N 10-00435 ..... **$56.75**



COMPASS COMPENSATOR

Very sensitive to stray magnetic fields within the aircraft. If the compensators of the compass will not bring the compass within tolerances, it will be necessary to install the PBB475 compensator ("balanced balls"). These balls contain magnets which permit the compass to be properly compensated. Instructions furnished. P/N 10-07900 ..... **$49.50**



MAGNETIC COMPASS SHIELD

Use this .005" x 5" x 12" metal strip to shield the precision PAI-700 compass from magnetic interference in the instrument panel. P/N 11-00973 ..... **$20.75**



NON-MAGNETIC SCREWDRIVER FOR COMPASSES

This small non-magnetic screwdriver blade is ideal for adjusting magnetic compasses. This blade is durable, corrosion resistant, & can be put on a key chain until needed. .....P/N 10-07930 ..... **$7.50**

IN

SIRS "PEGASUS" (TSO'D)



Utilizes high quality components throughout, including Silicone rubber seals, metal expansion bellows, and Tungsten Carbide pivots. Has a high-visibility spherical display, and can be viewed over a 140° arc instead of the standard 90°. Fits standard 2-1/4" panel hole (by 2-1/4" deep) and weighs only 30% of a typical liquid compass. Blue/white lighted or unlighted versions, and has a 3-yr. warranty.

NORTHERN HEMISPHERE					
P/N	**LIGHT**	**PRICE**	**P/N**	**LIGHT**	**PRICE**
PG-2A	NONE	**$246.95**	PG2C-28	28V BLUE	**$273.95**
PG2C-12	12V BLUE	**$273.95**			
SOUTHERN HEMISPHERE					
P/N	**LIGHT**	**PRICE**	**P/N**	**LIGHT**	**PRICE**
PG-2ASH	NONE	**$256.95**	PG2C-12SH	12V LIT	**$289.95**
PG2C-28SH	28V LIT	**$285.95**			

SIRS "NAVIGATOR" (TSO'D)



Delivers extremely accurate readings due to its fully integrated, 4 magnet correction facility. Same features as "Pegasus", but is mounted with a fully adjustable bracket. This allows the compass to be mounted in a variety of positions located away from magnetic influences. Size: 20-3/8"h x 2-1/4"w. "Navigator" comes in lighted or unlighted versions; 3yr. warranty.

NORTHERN HEMISPHERE					
P/N	**LIGHT**	**PRICE**	**P/N**	**LIGHT**	**PRICE**
NV-2A	NONE	**$246.95**	NV2C-28	28V BLUE	**$273.95**
NV2C-12	12V BLUE	**$273.95**			
SOUTHERN HEMISPHERE					
P/N	**LIGHT**	**PRICE**	**P/N**	**LIGHT**	**PRICE**
NV2C-12SH	NONE	**$289.00**	NV2C-28	28V LIT	**$338.00**
NV2C-12V-SH	12V LIT	**$289.00**			

NAVIGATOR MOUNTING BRACKETS & ACCESSORIES

Description	**Part No.**	**Price**
Install Kit for Pegasus Compass	10-02124	**$46.50**
MF1 Short foot (self adhesive)	10-00277	**$29.60**
Glareshield Mount for SIRS Nav Compasses	10-00276	**$43.50**

SIRS NAVIGATOR NV2-2400X



Designed to be installed on the glareshield using the same location holes required for other compass installations. Features silicone seals. The display shows 140° of heading, as opposed to the 90° view offered by standard compasses. TSO'd Navigator comes in 6, 12, & 28V configurations, with a 3 year warranty.

Northern Hemisphere		
Description	**Part No.**	**Price**
NV2A-2400 UNLIT COMPASS	10-00401	**$268.95**
NV2C-2400 LIT COMPASS 12V	10-00467	**$273.95**
NV2C-2400 LIT COMPASS 28V	10-00468	**$273.95**
Southern Hemisphere		
Description	**Part No.**	**Price**
NAV TSOD COMPASS 28VLIT SH	10-02131	**$338.00**
NAV NV2A-2400 UNLIT COMPASS SH	10-02132	**$289.95**
NV2C-2400 LIT COMPASS 28V SH	10-02134	**$290.95**
NV2C-2400 LIT COMPASS 12V SH	10-02133	**$289.95**
NAV TSOD COMPASS UNLIT SH	10-02129	**$267.95**
Accessories	**Part No.**	**Price**
INSTALL KIT NAV.SERIES COMPASS	10-02123	**$42.80**

SIRS MASTER COMPASS



Graduated in 1/2 degree intervals and the compass is supplied with a calibration chart indicating any deviations in minutes of arc. Ideal for use with larger aircraft. A special reverse-read version (954-2399REV) is available to indicate the same headings as those read from the aircraft instruments during the compass swing operation, when viewing from the front of the aircraft. Magnetic headings are viewed through a magnified prism and a special mounting Tripod is available (non-magnetic tripod) to ensure steady readings PN 10-04231 Warranty: 3 years Accuracy: Better than 30 Minutes Tilt: 7 Degrees

Standard Compass..... P/N 10-04230 ... **$2,595.00**
Reverse Read Compass .. P/N 10-04817 ... **$2,595.00**
Tripod ..... P/N 10-04231 ... **$1,076.00**

SIRS HAND HELD PRISMATIC MASTER COMPASS



Designed to meet demanding requirements of the Aviation and Military environments where accurate bearings are required. Supplied with a calibration certificate and can be configured with reversed readings to assist with aircraft wings. Ideal for use with small to medium aircraft. The liquid damped card is divided in 2 degree increments.Warranty: 3 years. Dial Markings: DegreesTilt: 15 Degrees.

Standard Compass..... P/N 10-04232 ... **$1,427.00**
Reverse Read Compass .. P/N 10-04816 ... **$1,425.00**

BARFIELD SIGHT CALIBRATION COMPASS



The SC063 is used to check the mounted aircraft compass. Our sight compass, is a portable, self contained calibration device consisting of a modified aircraft compass which has been re-screened to indicate 180º from normal. Since the sight compass is 180º away from normal, it permits the operator to stand facing the aircraft, making it considerably easier to transmit signals to and from the aircraft cockpit. The SC063 is unique in that the compensating magnets have been removed and a combination magnifying lens and collimating sight added. The compensator has been removed so the compass indicates magnetic direction at all times and is not subject to calibration offsets. The magnifying lens increases the readability of the dial and the collimating lens insures precise sighting alignment. Attached to the rear of the compass is an adjustable sight lens..... P/N 10-05357 ..... **$1,231.00**

ARP CARBURETOR ICE DETECTION SYSTEM



Made in USA. Available in three (3) different mounting configurations (Panel Mount, Remote Mount and Universal Mount) thus providing flexibility for any aircraft installation. GIVES UP TO 5 MINUTES WARNING TIME by illuminating a RED visual ice warning light. LIGHT WEIGHT less than 13 ounces. SIMPLIFIED INSTALLATION keeps installation cost down – approx. 1 to 3 man-hours. WARRANTY 3-Years on Electronics Box and 1-Year on Probe. FAA-STC SA489EA APPROVED for normal, utility and acrobatic airplanes and helicopters equipped with Continental, Franklin and Lycoming type engines and Precision Air-Motive (Facet or Marvel-Schebler) MA-2, MA-3, MA-3A, MA-3SPA, MA-4, MA-4-5, MA-4SPA, MA-5, MA-6, MA-6AA and HA-6 series carburetors. Installation on other aircraft not specified on the STC may be performed via FAA Form 337. FAA-PMA APPROVED for installation on Type Certificated aircraft.

Panel Mount, 12V (107AP-12)..... P/N 10-09900 ..... **$454.00**
Remote Mount, 12V (107AP-R-12) ..... P/N 10-03708 ..... **$504.00**
Remote Mount, 24V (107AP-R-24) ..... P/N 10-03709 ..... **$527.00**
Universal Mount, 12 (107AP-U-12) ..... P/N 10-03697 ..... **$474.00**
Universal Mount, 24 (107AP-U-24) ..... P/N 10-03698 ..... **$519.00**
Spare Probe (107AP-P)..... P/N 10-03710 ..... **$206.95**



ICEMAN SYSTEM PROBE

Spare Probe for use with "Carburetor Ice Detection System". AA-STC SA00081NY is approved for aircraft equipped with MA-3A, MA-3PA, MA-3SPA, MA-4SPA, MA-4-5, MA-4-5-AA, MA-5, MA-6-AA Marvel-Schebler type carburetors.

P/N 10-00059 ..... **$65.75**

FLIGHT DATA SYSTEMS FC-10 WITH FT-60 TRANSDUCER



Flow: Instantaneous Display of Fuel Flow , Used: Fuel Used , Remaining: Fuel Remaining , Endurance: Time or Distance Remaining , Required: Fuel Required to Active GPS Waypoint , Reserve: Fuel or Time Remaining at Active GPS Waypoint , Efficiency: Miles Per Gallon (or Liter) Displays Fuel Flow and Fuel Used for Each Engine (Two Engine Systems) ***Features:*** Communicates with Handheld or Panel Mount GPS , User Selectable Units (Gallons, Liters, Nautical Miles, Statute Miles) , Low Fuel Warning , Best Fuel Computer Value Available , Large Extreme Operating Temperature Display , Soft Orange Backlight with Automatic Brightness , 2-1/4" Panel Mount, Weighs 2.6oz, 12-28 Volt Compatible , Includes EI FT 60 (less than 350 HP - Fuel Pump) , Includes Pre-Wired Harness , Connector is pin to pin compatible with many JPI, Hoskins, and Shadin Systems .

FC-10 Single Engine (additional sender req.) .. P/N 10-03150 ... **$369.95**
FC-10 Twin Engine..... P/N 10-03151 ... **$535.00**
FC-10 Without Sender..... P/N 10-03152 ... **$238.00**



FLIGHT DATA SYSTEMS AFP-30 FUEL COMPUTER

Designed for the experimental aircraft owner who wants instantaneous flight information previously reserved only for transports and private jets. Features complete Winds Aloft information, Airspeed information including: True Airspeed and Mach number, Altitude information such as Density Altitude and Vertical speed, and both Total and Saturated Air Temperature. Complete with GPS communication enabling it to display fuel computer data. The Performance Computer function calculates, instantaneously, Percent Horsepower based on the engine manufacturer's power chart. Backup Tachometer and Manifold Pressure indications. Compatible with most handheld and panel mount GPS units..... P/N 10-03154 ..... **$699.00**

IN

Prices Subject to Change Without Notice

ENGINE GAUGES



MID-CONTINENT INSTRUMENTS AND AVIONICS CARBURETOR TEMPERATURE INDICATORS

The MD-11 carburetor temperature gauge & B-5 temp. probe are designed to help eliminate carburetor icing by early detection, reduce spark plug fouling, extend engine life, increase range & power, and maximize fuel economy. Designed for use with most Marvel-Schebler & Bendix float type carburetors. FAA approved. Mounts in 2-1/4" instrument hole.

14V carb air temp indicator only .....P/N MD-11-3 ..... **$595.00**
28V carb air temp indicator only .....P/N MD-11-4 ..... **$595.00**
B-5 probe only.....P/N B-5..... **$396.00**
Mating Connector.....P/N 10-01563 ..... **$13.50**
14V Carburetor Air Temperature Kit .....P/N 10-02759 ..... **$938.00**
28V Carburetor Air Temperature Kit .....P/N 10-02760 ..... **$937.00**

2-1/4" UMA MANIFOLD PRESSURE GAUGES



Manifold pressure is one factor used to obtain correct power setting of the engine. The indicators are temperature and altitude compensated. Matte-white dials. Units are new. Manufactured by UMA.

2-1/4" Gauge, 0-50 Hg. ..... P/N 10-11200 . **$168.75**
2-1/4" Gauge, 10-35 Hg. ..... P/N 10-11250 . **$168.75**
UMA optional internal lighting .. P/N 11-07239 ... **$56.75**

FALCON 3 1/8" MANIFOLD GAUGE



Falcon Gauge Manifold Pressure Gauge is designed and manufactured for use on aircrafts and is a standard diaphragm pressure instrument. This indicator is temperature and altitude compensated. Manifold pressure is one of the factors required to obtain the correct power setting of the aircraft engine. Made in China.

10-50 IN HG..... P/N 10-02269 ..... **$179.95**
10-35 IN HG..... P/N 10-02270 ..... **$179.95**

3-1/8" UMA MANIFOLD PRESSURE GAUGES



3-1/8" Gauge, 10-35Hg. ..... P/N 10-00080.... **$280.95**
3-1/8" Gauge, 10-50Hg. ..... P/N 10-11300.... **$280.95**
P/N 10-00080 UMA optional internal lighting... P/N 11-07239..... **$56.75**

UNITED TSO'D MANIFOLD PRESSURE GAUGES



Range	Part Number	Price
10 TO 35	10-05452	**$950.00**
10 TO 35	10-05453	**$1,477.00**
10 TO 50	10-05454	**$948.00**
10 TO 50	10-05455	**$1,477.00**
10 TO 75	10-05456	**$950.00**
10 TO 75	10-05457	**$1,479.00**

UMA FUEL/AIRBOX DIFFERENTIAL PRESSURE GAUGE



Displays the differential pressure between the fuel system and air box on turbo charge engines where it is necessary to maintain constant fuel pressure that is above the airbox pressure. Sender sold separate. (Requires the use of a 1EU007D UMA different pressure sneder.)

1 1/4" ..... P/N 10-00979..... **$200.00**
Sender 0-7 PSI..... P/N 10-00980..... **$145.00**

ROCHESTER OIL PRESSURE GAUGE



Rochester oil pressure gauges have matte-white dial with black bezel. Mount in 2-1/16" dia. hole. 1/8" NPT port fits AN910-1D coupling. New mfg.

0-80 PSI*..... P/N 10-00015..... **$39.75**
****Chrome Bezel***

MINI WATER PRESSURE GAUGE



Range	P/N	Price
(-5)-25 PSI	10-22241	**$225.95**
(-15)-15 PSI	10-22248	**$225.95**

ROCHESTER OIL TEMPERATURE GAUGES



Rochester oil temperature gauges have matte-white dial with black bezel. Mount in 2-1/16" dia. hole. New manufacture. Furnished with one 5/8-18UNF X 5/8-18UNF adapter nut. Available in the following temperature ranges and capillary lengths.

P/N 10-11600 ..... 100-250°F .... 60" Cap **$86.50**
P/N 10-11700 ..... 100-250°F .... 72" Cap **$108.75**
P/N 10-11800 ..... 00-250°F ..... 144" Cap **$107.95**
10-11900 ..... 100-250°F .... 48" Cap **$109.85**
Adapter Nuts Only: 44-0024 5/8-18UNF x 5/8-18UNF.....**$11.95**



MECHANICAL OIL TEMPERATURE GAUGE

A quality gauge which is complete with all installation fittings. Range is 100-250° F. 5/8"-18 female capillary adapter fitting. 60" lead length Not FAA approved.

P/N 10-00954..... **$114.75**



OIL TEMPERATURE BULB ADAPTER

Brass fitting used to shorten long capillary bulbs for use in light aircraft engines. Internal 5/8-18 threads mate with fitting on bulb. External 5/8-18 threads fit into engine.

P/N 95527 ..... **$19.50**



MILITARY OIL PRESSURE GAUGE

AN5771-2 Military style gauge with sq. case. Mounts in 2-1/4" dia. hole. New surplus. Matte-White Dial (0-150 PSI) P/N 10-00955..... **$259.95**



MECHANICAL OIL PRESSURE GAUGE

Scott's quality Oil Pressure Gauge features 0-120 PSI range and 1/8 NPT thread on flared tube fitting. Not FAA Approved P/N 10-00956..... **$259.95**



OIL PRESSURE INSTALLATION KIT

This kit contains 4 Weatherhead brass fittings with 1/8" pipe thread & 6 ft. of 1/8" Nylo-Seal tubing. Compatible with most mechanical oil pressure gauge installations.

P/N 10-12000..... **$8.75**



RV-12 REMOTE OIL PRESSURE SENSOR MOUNTING KIT

A new remote oil sensor kit for the Rotax 912 engine. While the lengths of this package are designed specifically to fit an RV-12, the hose length should work in virtually any 912 installation. P/N 05-11919 ..... **$154.95**

MS28034-3 ENGINE TEMPERATURE SENSOR



Presently in use in government and general aviation industry under liquid and gaseous conditions, this sensing device exceeds stringent U.S. Military Specifications for response time, burst pressure, and AC high potential tests.

P/N 10-01668 ..... **$467.00**



3-IN-1 GAUGES (ELECTRIC OIL TEMP)

Oil temperature range is -50° to 150°C, oil pressure 200 psi, fuel pressure 0-25 psi. The pressure gauges operate by direct connection to the appropriate system and the oil temperature by an electrical resistance bulb probe. New installation requires Cannon plugs & cable clamps for instrument and resistance bulb.

Certified Overhauled Unit - Gauge..... P/N 10-12800..... **$745.00**
3-IN-1 White Electric Gauge Farenheight .... P/N 10-03144..... **$749.00**
MS3106A-14S-2S Cannon Plug P/N 10-00790..... **$14.50**
MS3057-6A Cable Clamp for Instrument ..... P/N 10-00957..... **$3.70**
MS28034-1 Res. Bulb,1-7/8" (#563BH) ..... P/N 10-00953..... **$293.95**
MS3106A-12S-3S Cannon Plug (Res.Bulb) P/N 10-00958..... **$15.85**



KELLY MANUFACTURING TORQUE INDICATORS

Our Torque Indicators are a wet line, direct reading bourdon tube type instru-ment, housed in a 2" diameter case. Unit can be calibrated over a wide rage of PSI input to direct read torque. Units can be furnished to your specifications. Indicate needed pressure input and pressure-to-torque conversion. This unit cannot be damaged by oil back up in vent line. DIMENSIONS: 2" diameter x 2.125" length, Weight: 0.4 lbs, Power: Wet line direct reading pressure gage

Model No. / Part No.	Description	Price
27-3007-1 P/N 10-03441	0 to 1800 FT/LB, Green Arc 0 - 1628, Red Line at 1628	$471.00
27-3007-4 P/N 10-03442	0 to 75 P.S.I, Green Arc 0 - 64.4, Red Line 64.4	$595.00
27-3007-7 P/N 10-03443	0 to 75 P.S.I 0 to 53	$469.00



KELLY MANUFACTURING OIL TEMPERATURE INDICATOR

Housed in a 2" diameter case, this instrument can be calibrated in C° or F°. Oil Temperature is sensed by a MS28034-1 resistance bulb. DIMENSIONS: 2" Dia. x 3.12" L Weight: 0.4 lbs Power: 28VDC Connector: MS3112E8-4P

29-1004-10 - Green Arc 0° C -110° C, Yellow Arc -40° C - 0° C Red Line -40° & 110° C ..... P/N 10-03445 ..... **$502.00**

IN

UMA ENGINE GAUGES

UMA 2-1/4" SINGLE EGT GAUGES

These highly reliable and lightweight gauges are self-contained, requiring no external power source. Specify probe size and type. Standard markings are black and white.



2-1/4" EGT Gauge

700-1700°F- 90° Sweep ..... P/N 10-22275 .... **$166.75**
700-1700°F- 270° Sweep ... P/N 10-02427 .... **$166.75**

Type K EGT Probes

1-5/8" - 2-1/2" Clamp ..... P/N 10-04791 ..... **$93.75**
1-2" Clamp ..... P/N 10-00966 ..... **$93.75**
8mm, Bayonet-Rotax ..... P/N 10-00967 ..... **$93.75**
Optional internal lighting for all UMA 2-1/4", 3-1/8" instruments (except altimeter). ..... P/N 11-07239 ..... **$56.75**

UMA 2-1/4" CHT GAUGES



NON-TSO GAUGES

Probe/Range	Part No..	Price
UMA ProbeRange: 100-300°F	10-05709	$190.00
UMA Probe Range: 40-150°C	10-05710	$190.00
VDO Probe Range: 40-150°C	10-05712	$190.00
Thermocouple Type J Range: 100-600°F	10-05713	$190.00
Thermocouple Type J Range: 50-300°C	10-05714	$190.00

TSO GAUGES

Probe/Range	Part NO.	Price
MA 1BX Thermistor Probe Range: 40-150°F	10-05716	$236.95
MA 1BX Thermistor Probe Range: 100-300°F	10-05717	$236.95
VDO Probe Range: 100-300°F	10-05718	$236.95
Type J Thermocouple Probe Range: 50-300°C	10-05719	$236.95
Type J Thermocouple Probe Range: 100-600°F	10-05720	$236.95

Senders not included witht the above 2-1/4" CHT Gauges.

UMA 2-1/4" EGT GAUGES



NON-TSO GAUGES

Probe/Range	Part No..	Price
Uma 2-1/4 Egt 700-1700 F Type K Sender Req.	10-05699	$190.00
Uma 2-1/4 Egt 1000-2000 F Type K Sender Req.	10-05701	$190.00
Uma 2-1/4 Egt 100-900 C Type K Sender Req.	10-05698	$190.00

TSO GAUGES

Probe/Range	Part NO.	Price
Uma 2-1/4 Tso Egt 100-900 C Type K Sender Required	10-05706	$236.95
Uma 2-1/4 Tso Egt 400-1700 F Type K Sender Required	10-05707	$236.95

UMA 2-1/4 INCH EGT GAUGE WITH OPTI ALERT



The 2 1/4", 270°, Opti-Alert warning instruments. signal the pilot when there is a problem by illuminating a Light Emitting Diode (LED). This warning indicates that an improper range condition has arisen. Operate with a 14V or 28V system. Pressure and temperature gauges use remote mounted sensors which are sold separate.

Description	Part No.	Price
Uma 2-1/4 Egt 100-900 C W/ Opti Alert Type K Sender Req.	10-05702	$212.95
Uma 2-1/4 Egt 700-1700 F W/ Opti Alert Type K Sender Req	10-05704	$212.95
Uma 2-1/4 Egt 1000-2000 F W/ Opti Alert Type K Sender Req	10-05705	$212.95

ELECTRONIC UMA 2-1/4" OIL PRESSURE GAUGE



Uses a moving coil type movement for aircraft use. Made in USA. Order transducer separately.0-80 PSI
P/N 10-22245 ..... **$166.75**

UMA 2-1/4" WATER TEMPERATURE GAUGE



This instrument is designed to be durable yet lightweight. Excellent for a wide variety of homebuilt aircraft applications. Made in USA. Order probe separately.
0-300°F ..... P/N 10-02058 ..... **$166.75**

Probes

1/8" NPT (Rotax) ..... P/N 10-00968 ..... **$81.75**
3/8-24 (automotive)..... P/N 10-00969 ..... **$81.75**

UMA 2-1/4" OIL TEMPERATURE GAUGE



This instrument is designed to be durable yet lightweight. Excellent for a wide variety of homebuilt aircraft applications. Made in USA. Order probe separately.
100-300°F..... P/N 10-22285 ..... **$166.75**

UMA OPTIONAL INTERNAL LIGHTING - Optional internal lighting for all UMA 2-1/4", 3-1/8" instruments (except altimeter). ... This is just a lighted option. Order the instrument in addition to the internal lighting. P/N 11-07239 ..... **$56.75**

UMA 2-1/4 INCH ELECTRICAL OIL PRESSURE TACH

0-130 PSI ROTAX 912/914



UMA 2-1/4 Inch Electrical Oil Press Tach 0-130 PSI Rotax 912/914. 2 1/4" Air Core (270° Sweep)
P/N 10-05510 ..... **$190.00**

MECHANICAL UMA 2-1/4" FUEL PRESSURE GAUGE



These factory new fuel pressure gauges from UMA fit standard 2-1/4" panel hole. They are mechanical, wetline gauges and require no sending unit.

0-25 PSI ..... P/N 10-02356 ..... **$218.95**
0-50 PSI ..... P/N 10-00316 ..... **$218.95**
0-10 PSI ..... P/N 10-22201 ..... **$218.95**
0-30 PSI ..... P/N 10-22203 ..... **$218.95**
0-100 PSI ..... P/N 10-22205 ..... **$218.95**

MECHANICAL UMA 2-1/4" OIL PRESSURE GAUGE



These factory new oil pressure gauges from UMA fit standard 2-1/4" panel hole. They are mechanical, wetline gauges and require no sending unit.

0-50 PSI ..... P/N 10-22240 ..... **$218.95**
0-130 PSI ..... P/N 10-22242 ..... **$218.95**
10-100 PSI ..... P/N 10-02357 ..... **$218.95**

UMA 1" PRESSURE GAUGES



This mechanical, direct hook-up pressure indicator is ideal for monitoring the engine pump cooling system. Suitable to a wide variety of homebuilt aircraft applications. Made in USA. 0-10 PSI (water)
P/N 10-22247 ..... **$202.95**

UMA 1" OIL PRESSURE GAUGE



Case is molded ABS plastic. Wt:1.4oz. Black and white dial markings. 25-125 PSI.
P/N 10-22251 ..... **$202.95**

UMA 1" FUEL PRESSURE GAUGE



Case is molded ABS plastic. Wt:1.4oz. Black and white dial markings. 0-10 PSI.
P/N 10-22252 ..... **$202.95**

MECHANICAL UMA 2 1/4" WATER PRESSURE GAUGE



This mechanical, direct hook-up pressure indicator is ideal for monitoring the engine pump cooling system. Suitable to a wide variety of homebuilt aircraft applications. Made in USA. -15 to +15 PSI P/N 10-22249 ..... **$218.95**

2-1/4 INCH UMA WATER TEMPERATURE 100-300F



2-1/4 inch UMA Electronic (UMA P/N 12-360-300F°) Water Temperature Gauge, Range: 100-300 deg. F°
P/N 10-02058..... **$166.75**

UMA 2 1/4" FLAP POSITION INDICATOR



This 2-14" flap indicator uses a resistance potentiometer as a flap position sensor. Transmitter required. Wt: 9.8 oz.

Indicator (0-40°) .....P/N 10-22250 ..... **$207.95**
Indicator (0-60°) .....P/N 10-02442 ..... **$207.95**
Transmitter.....P/N AN5785 ..... **$231.95**

UMA OPTIONAL INTERNAL LIGHTING

Optional internal lighting for all UMA 2-1/4", 3-1/8" instruments (except altimeter). This is just a lighted option. Order the instrument in addition to the internal lighting. .....P/N 11-07239..... **$56.75**

MINI OIL PRESSURE GAUGE



Miniature mechanical instrument, only 1-1/4" dia., as used in many production aircraft. New manufacture.
0-125 PSI Oil Press. .....P/N 10-12400 ..... **$218.95**

MINI FUEL PRESSURE GAUGES



1-1/4" Dia. New manufacture by UMA.

0-10 PSI Fuel Press.....P/N 10-12100 .....**$218.95**
0-35 PSI Fuel Press.....P/N 10-12200 .....**$218.95**
0-50 PSI Fuel Press.....P/N 10-12300 .....**$218.95**

UMA 3 IN 1 ELECTRONIC INSTRUMENT



Combine any three electronic instruments into a 3-1/8" case. Standard product is with black and white dials, but custom range markings are available to meet customer demand for specific design. ***Note - Senders are required and sold separately.*** P/N 10-03452 ..... **$453.00**

UMA Range Markings .....P/N 10-02792 ..... **$125.00**

IN

UMA ENGINE GAUGES



UMA 2-1/4" ELECTRONIC OIL PRESSURE 270°GAUGE

Electronic Oil Pressure Gauges connect to a pressure transducer and connects to the gauge with wires. Standard dial markings are black and white.

2-1/4", 0-60 PSI, TSO'd....P/N 10-02415 ...**$236.95**
2-1/4", 0-80 PSI, TSO'd....P/N 10-02416 ...**$229.95**
2-1/4", 0-100 PSI, TSO'd..P/N 10-02417 ...**$236.95**
2-1/4", 0-100 PSI .....P/N 10-02424 ...**$166.75**
2-1/4", 150 PSI .....P/N 10-02761 ...**$166.75**

SENDER NOT INCLUDED
SEE NEXT PAGE FOR SENDERS

2-1/4 inch UMA Electronic Oil Pressure Gauge Case: Valox 420 Plastic Weight: 4.7 oz.



DATCON OIL PRESSURE SENDER

Thread sizes: 1/8"-27 NPTF, #10-32 terminals, Common ground through mounting thread, 0-80 psi/0-5 bar range and 240-33.5 Ohms. P/N 10-05329..... **$41.90**



UMA ELECTRONIC FUEL PRESSURE 270°GAUGE

Electronic Fuel Pressure Gauges connect to a pressure transducer and connects to the gauge with wires. Standard dial markings are black and white.

2-1/4", 0-7 PSI, TSO'd..... P/N 10-02412...**$236.95**
2-1/4", 0-15 PSI, TSO'd..... P/N 10-02413...**$236.95**
2-1/4", 0-60 PSI, TSO'd..... P/N 10-02414...**$236.95**
2-1/4", 0-30 PSI ..... P/N 10-02422...**$166.75**

SENDER NOT INCLUDED
SEE NEXT PAGE FOR SENDERS

2-1/4 inch UMA Electronic Fuel Pressure Gauge Case: Valox 420 Plastic Weight: 4.7 oz.



UMA ELECTRONIC 2-1/4" HYDRAULIC PRESSURE 270° GAUGE

Electronic Hydraulic Pressure gauge connects to a precision, high pressure transducer which mounts directly to the aircraft's hydraulic system. Standard markings are black and white.

2-1/4", 0-2000 PSI, TSO'd
P/N 10-02459 .....**$229.95**

SENDER NOT INCLUDED
SEE NEXT PAGE FOR SENDERS

2-1/4 inch UMA Electronic Hydraulic Pressure Gauge Case: Valox 420 Plastic Weight: 4.7 oz.



UMA 2-1/4" ELECTRONIC OIL TEMPERATURE 270° GAUGE TSO'D

These rugged aircore gauges work with either thermocouple or thermister probes. Standard markings are black and white.

100-300° F, TSO'd ..... P/N 10-02443 .....**$236.95**

SENDER NOT INCLUDED
SEE NEXT PAGE FOR SENDERS

2-1/4 inch UMA Electronic Oil Temperature Gauge Case: Valox 420 Plastic Weight: 4.8 oz.



UMA ELECTRONIC 2-1/4" CHT 270° GAUGE

These gauges are available for either thermocouple or thermistor probes. Standard markings are black and white.

P/N 10-02057

2-1/4", 100-300 °F - compatable with VDO.....P/N 10-02426.... **$166.75**
2-1/4", 100-600 °F - 90° sweep for use with thermocouple powered aircraft.....P/N 10-02429.... **$166.75**
2-1/4", 100-600 °F - 270° sweep for use with internal powered aircrat
P/N 10-02057.... **$166.75**

TYPE J CHT PROBES

10mm Spark Plug Ring .....P/N 10-00960..... **$81.75**
12mm Spark Plug Ring .....P/N 10-00961..... **$81.75**
14mm Spark Plug Ring .....P/N 10-00962..... **$81.75**
18mm Spark Plug Ring .....P/N 10-00963..... **$81.75**
3/8"-24 Bayonet w/snap .....P/N 10-00795.... **$108.75**

UMA TSO'D TEMPERATURE PROBES

T3B1 1/8 NPT TSP Type K with 6' Lead .....P/N 10-05164.... **$106.75**
T3B2 3/8-24 TSO Type K with 6' Lead.....P/N 10-05165.... **$106.75**
T3B3 5/8-18 TSO Type Kwith 6' Lead.....P/N 10-05166.... **$106.75**
T3B3A 5/8-18 TSO Type Kwith 6' Lead.....P/N 10-05167.... **$106.75**
T3B11 1/4-18 TSO Type Kwith 6' Lead.....P/N 10-05168.... **$106.75**



UMA ELECTRONIC 2-1/4" WATER TEMPERATURE 270° GAUGE

2-1/4 inch UMA Electronic (UMA P/N T12212U300F000) Water Temperature Gauge Range: 100-300 deg. F TSO2-1/4", 100-300 °F TSO'd
P/N 10-02428.....**$236.95**



UMA ELECTRONIC 2-1/4" CARBURETOR AIR TEMPERATURE 270° GAUGE

These gauges use either thermistor or electronic sensors. Standard markings are black and white.

2-1/4", -60-120 °F TSO'd.....P/N 10-04670 .....**$236.95**
2-1/4", -20-120 °F.....P/N 10-02391 .....**$166.75**



UMA TSO'D 2-1/4 CARBURATOR AIR TEMPERATURE GAUGE

TSO'd Carburetor Temperature 2 1/4" gauge. Range from -60 - 120°F.

NOTE: This is the standard black and white gauge. For color range markings as shown you must add the color range markings part no. to your order.

P/N 10-03465 .....**$236.95**
UMA Color Range Markings.....P/N 10-02792 .....**$125.00**



UMA 2-1/4" ELECTRONIC MANIFOLD PRESSURE 270° GAUGE

Electronic Manifold Pressure gauges connect to a pressure transducer which connects to the aircraft's engine and indicates the absolute pressure in the intake manifold of the aircraft. These units are very precise and avoid plumbing issues. Standard markings are black and white.

2-1/4", 5-35 IN. HG.....P/N 10-02389 .. **$166.75**
2-1/4", 5-50 IN/ HG.....P/N 10-02390 .. **$166.75**

SENDER NOT INCLUDED
SEE NEXT PAGE FOR SENDERS



UMA 2-1/4" ELECTRONIC OUTSIDE AIR TEMPERATURE

The digital Outside Air Temperature (O.A.T.) is available in either Fahrenheit or Celsius. Standard models use a Red LED display.

2-1/4", -40-60 °C, 270°.....P/N 10-02387 ...**$225.95**
2-1/4", -40-140 °F, 270° .....P/N 10-02388 ...**$225.95**

SENDER NOT INCLUDED
SEE NEXT PAGE FOR SENDERS



UMA DUAL AMP/VOLTMETERS

These 2-1/4" dual amp voltmeters are ideal for any aircraft where panel space is limited. Amperage is displayed at all times, and simply push a button to display voltage. Complete with gauge and shunt. Voltage range 0-30 volts.

Range: 30 amp.....P/N 10-14680 .....**$318.00**
60 amp.....P/N 10-14685 .....**$318.00**
80 amp.....P/N 10-14690 .....**$318.00**
100 amp.....P/N 10-14695 .....**$318.00**
0-150 amp .....P/N 10-00082 .....**$318.00**
UMA Optional internal lighting.....P/N 11-07239 .....**$56.75**

AMMETERS

These new manufactured ammeters offer accuracy, rugged construction, and contemporary styling. Made in U. S. A. Furnished with shunt. Size: 2-1/4".



Range: 0-30 (0 center).....P/N 10-14650 .....**$210.95**
0-60 (0 center) .....P/N 10-14655 .....**$210.95**
0-80 (0 center) .....P/N 10-14660 .....**$210.95**
0-100 (0 center) .....P/N 10-02788 .....**$210.95**



REPLACEMENT UMA AMMETER SHUNTS 30/60/80/100AMP

UMA Ammeter shunt 30AMP, 60AMP, 80AMP, and 100AMP.

Shunt 30AMP 1C1 .....P/N 10-02072 .....**$46.50**
Shunt 60AMP 1C2 .....P/N 10-02073 .....**$46.50**
Shunt 80 AMP 1C3 .....P/N 10-02352 .....**$46.50**
Shunt 100AMP 1C4 .....P/N 10-02074 .....**$46.50**

UMA OPTIONAL INTERNAL LIGHTING

Optional internal lighting for all UMA 2-1/4", 3-1/8" instruments (except altimeter). This is just a lighted option. Order the instrument in addition to the internal lighting. .....P/N 11-07239..... **$56.75**

UMA ENGINE GAUGES



2-1/4 inch Fuel Flow Gauge

UMA 2-1/4" FUEL FLOW 270° GAUGE

These affordable indicators display gallons/hour fuel flow in a conventional analog instrument package. Standard markings are black and white.

2-1/4" 08- GPH ..... P/N 10-02407 .. **$195.00**
2-1/4" 0-20 GPH ..... P/N 10-02408 .. **$195.00**
2-1/4" 0-30 GPH ..... P/N 10-02409 .. **$195.00**
2-1/4" 0-20 GPH ..... P/N 10-03706 .. **$195.00**

UMA 2-1/4" FUEL AIR BOX 270° PRESSURE

Electronic, Fuel/Air-box Differential Pressure gauges and senders are designed for the Rotax 914 engine but have other applications where differential pressures need to be measured. It eliminates having to calculate the fuel/air-box differential pressure by looking at two separate gauges and having two separate senders.

2-1/4" 0-7 diff. PSI (U)
P/N 10-00979 ..... **$200.00**
SENDER NOT INCLUDED



2-1/4 inch UMA Fuel Airbox Pressure Case: Valox 420 Plastic Weight: 4.8 oz.

UMA OPTIONAL INTERNAL LIGHTING

Optional internal lighting for all UMA 2-1/4", 3-1/8" instruments (except altimeter). This is just a lighted option. Order the instrument in addition to the internal lighting. ..... P/N 11-07239 ..... **$56.75**



UMA 2-1/4" ELECTRONIC FUEL QUANTITY GAUGE

SENDER NOT INCLUDED

Description	Part No.	Price
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/270° Sender: (C) 0-5V	10-02392	**$236.95**
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/180°I Sender: (C) 0-5V	10-02393	**$236.95**
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/270° Sender: (F) 240/30 ohms	10-02394	**$236.95**
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/180° Sender: (F) 240/30 ohms	10-02395	**$236.95**
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/180° Sender: (F) 0-30 ohms	10-02396	**$236.95**
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/270° Sender: (F) 0-90 ohms	10-02397	**$236.95**
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/180° Sender: (F) 0-90 ohms	10-02398	**$236.95**
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/270° Sender: (F) 78-6 ohms	10-02399	**$236.95**
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/180° Sender: (F) 78-6 ohms	10-02401	**$236.95**
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/ Sender: (C) 0-5V	10-02410	**$166.75**
2-1/4 inch UMA Electronic Fuel Quantity Indicator Range/Sweep: E-F/ Sender: (F) 240/30 ohms	10-02411	**$166.75**

UMA PRESSURE SENDERS

UMA's pressure senders offer high reliability and accuracy at an affordable cost. They use precision solid state sensors and are designed for rugged use in just about any environment.



UMA Pressure Sender (U)(G)(D) 1/8"-27 NPTF Connection(s) 1' Cable 5/8-18 Mounting Thread

Description	PSI	Part No.	Price
UMA Pressure Sender (U)	0-7 PSI Differential	10-00980	**$145.00**
UMA Pressure Sender (U)	0-7 PSI	10-01057	**$140.00**
UMA Pressure Sender (U)	0-35 PSI	10-01058	**$140.00**
UMA Pressure Sender (U)	0-70 PSI	10-01059	**$140.00**
UMA Pressure Sender (U)	0-100 PSI	10-01060	**$140.00**
UMA Pressure Sender (U)	0-150 PSI	10-01061	**$140.00**
UMA Pressure Sender (U)	0-60 InHg Absolute	10-01062	**$145.00**
UMA Pressure Sender T1EU35(G)(D)	0-35 PSI	10-02646	**$180.00**
UMA Pressure Sender T1EU100(G)(D)	0-100 PSI	10-02647	**$180.00**
UMA Ashcroft Precision Sender	0-2000 PSI	10-02420	**$216.95**
UMA Differential Pressure Sender	0-70 PSI	10-06223	**$145.00**



UMA Precision Sender (A)

TSO'D PRESSURE SENDERS

These units are the most economical TSO'd units on the market. They feature precision, solid state sensors and circuitry to give unequalled performance for the money. Available in gauge, differential and absolute types, they are compatible with avgas, jet fuel, engine oil and many other fluids. Compatible with indicating instruments that do not have precision output voltages. Units for fuel and oil pressure are certified under TSO C47. Units for manifold pressure are under TSO C45a.

Manufacturer Number	Range	Max Pressure	Part Number	Price
T1EU35(G)(D)	0-35 PSI	145 PSI	10-02646	**$169.95**
T1EU100(G)(D)	0-100 PSI	406 PSI	10-02647	**$170.75**
T1EU150(G)(D)	0-150 PSI	580 PSI	10-04312	**$170.75**

UMA TEMPERATURE PROBES NON-TSO'D



(U) All 1BX Temperature Probes contain a thermistor for temperatur sensing. 6" Lead Wires.



(J) All 2B1X & 2B0X Temperature Probes use Type J Thermocouple. 6' Lead Wires.



(K) All 2B2X & 2B3X Temperature Probes use Type K Thermocouple. 6' Lead wires

UMA P/N	Sizes	Our P/N	Price
1B1	Thread:1/8 NPT, 1/2 Hex Head	10-00968	**$81.75**
1B2	Thread: 3/8-24, 5/8 Hex Head (Auto)	10-00969	**$81.75**
1B3	Thread: 5/8-18, 7/8 Hex Head (Lyc.)	10-00418	**$81.75**
1B4	Thread: 10mm x 1.5 Pitch (Rotax 912 & 914)	10-00973	**$81.75**
1B5F	Thread: 3/8-24, 2-1/4" OAT F°	10-02374	**$93.75**
1B6	Thread: 16mm x 1.5 Pitch	10-02375	**$81.75**
1B7	Thread: 12mm x 1.5 Pitch	10-02376	**$81.75**
1B8	Thread: 1/4-20 (Carb. Temp.)	10-01156	**$81.75**
1B10	Thread: 1/4-28	10-02377	**$81.75**
---	Uma 1/4-28 Carb Temp Probe 100 Ohm Rtd Sensor	10-06269	**$86.75**
1B11	Thread: 1/4-18 NPT	10-02378	**$81.75**
2B10	10mm Spark Plug Ring	10-00960	**$81.75**
2B12	12mm Spark Plug Ring	10-00961	**$81.75**
2B14	14mm Spark Plug Ring	10-00962	**$81.75**
2B18	18mm Spark Plug Ring	10-00963	**$81.75**
2B01	Bayonet Type: 1/8 NPT	10-02448	**$108.75**
2B02	Bayonet Type: 3/8"-24, w/snap	10-00795	**$108.75**
2B20	Clamp Size: 1-5/8 - 2-1/2" Length: 1" Tip	10-04791	**$93.75**
2B21	Clamp Size: 1 - 2" Length: 1" Tip	10-00966	**$93.75**
2B30	Clamp Size: 8mm, Bayonet Length: (Rotax)	10-00967	**$93.75**

IN

Prices Subject to Change Without Notice

UMA 1-1/4” ENGINE INSTRUMENTS



Monitor your engine’s vitals with a full line of space saving 1-1/4” engine instruments with 240 degree analog sweep. These instruments allow you the opportunity to utilize panel space without compromising readability. No longer do you have to decipher cluster gauges or push buttons for readings or try to concentrate on flashing numbers. These premiere UMA instrument are electronic and can be powered from 14 or 28 volts. Signals are acquired from remote mounted sensors, processed and displayed on analog dials with easy to read markings. Each gauge uses rugged aircore meter movement for vibration resistance and repeatability. Each gauge can be placed in a 1-1/4” diameter hole and mounted behind the panel with (4) 6-32 screws. They can be cluster mounted as close as 11/2” centers. ***Senders are sold separately.***

UMA Technical Support: 800-842-5578.

STREAMLINE • STACKABLE • EASY TO READ • RUGGED DESIGN

CYLINDER HEAD TEMP. (CHT)

Description	Part No.	Price
CHT Gauge 100-300°F	10-00035	$190.00
CHT Gauge 100-600°F	10-00036	$190.00
CHT Thermocouple 14mm Plug (Rotax)	10-00962	$81.75
CHT Thermocouple 18mm Plug (Lyc.)	10-00963	$81.75
CHT Thermocouple 3/8-24 Bayonet (Lyc.)	10-00795	$108.75

OIL PRESSURE

Description	Part No.	Price
Oil Pressure Gauge 0-80psi	10-00037	$190.00
Oil Pressure Gauge 0-130psi	10-00038	$190.00
Oil Pressure Gauge 0-130psi Rotax 912/914	10-05509	$190.00

FUEL QUANTITY

Description	Part No.	Price
Fuel Qty. Ind. (Float 240-30)	10-00039	$190.00
Fuel Qty. Ind. (Cap. 5v)	10-00040	$190.00
Sender (Float type 240-30 ohms)	10-00056	$39.95
Sender (Capacitance 0-5V)	10-00797	$139.75

AMMETER

Description	Part No.	Price
Ammeter ±30 Shunt incl.	10-00041	$231.95
Ammeter ±100 Shunt incl.	10-00043	$231.95
Ammeter +60	10-00581	$231.95
Ammeter +80	10-00582	$231.95

WATER PRESSURE

Description	Part No.	Price
Water Press. Gauge 0-15psi	10-00044	$190.00
Water Press. Gauge 0-30psi	10-00045	$190.00

WATER TEMPERATURE

Description	Part No.	Price
Water Temp. Gauge 100-300°F	10-02457	$190.00

CARB. TEMPERATURE

Description	Part No.	Price
Carb. Temp -60-120°F	10-05769	$190.00

OUTSIDE AIR TEMPERATURE

Description	Part No.	Price
OAT (-25) -40°C	10-02385	$253.95
OAT (-10) -110°F	10-02386	$253.95

TACHOMETERS

Description	Part No.	Price
0-7000 RPM for Rotax 447/503/582	10-05507	$223.95
0-7000 RPM for Rotax 912/914	10-05506	$223.95

EXHAUST GAS TEMPERATURE (EGT)

Description	Part No.	Price
EGT Gauge 700-1700°F	10-00046	$190.00
EGT Gauge 100-900°C	10-05696	$190.00
EGT Gauge 1000-2000°F	10-05697	$190.00
EGT Thermocouple Clamp style (Lyc.)	10-04791	$93.75
EGT Thermocouple 8mm, Bayonet (Rotax)	10-00967	$93.75

FUEL AIRBOX PRESSURE

Fuel Airbox Pressure Range: 0-7 Diff.	10-02401	$236.95

FUEL FLOW

Description	Part No.	Price
Fuel Flow 0-8 6PH	10-02403	$195.00
Fuel Flow 0-20 6PH	10-02404	$195.00
Fuel Flow 0-30 6PH	10-02405	$195.00

OIL TEMPERATURE

Description	Part No.	Price
Oil Temp. Gauge 100-300°F	10-00047	$190.00
1-1/4 inch VDO - TSO’d Electronic Temperature Gauges 100-300 deg F	10-02779	$190.00
Oil Temp. Probe 3/8-24 (Automotive)	10-00969	$81.75
Oil Temp. Probe 5/8-18 (Lyc./Cont.)	10-00418	$81.75
Oil Temp. Probe 10mm (Rotax 912/914)	10-00973	$81.75

FUEL PRESSURE

Description	Part No.	Price
Fuel Pressure Gauge 15psi	10-00048	$190.00
Fuel Pressure Gauge 30psi	10-00049	$190.00
Fuel Pressure Gauge 0-80 psi	10-00050	$190.00

VOLTMETER

Description	Part No.	Price
Voltmeter 18-36V	10-00052	$190.00
Voltmeter 9-17V	10-00578	$190.00

FLAP INDICATOR

Description	Part No.	Price
Flap Position Indicator 0-30°	10-00053	$207.95
Flap Position Indicator 0-40°	10-00054	$207.95
Flap Position Indicator up-full	10-00055	$207.95
Flap Indicator Transducer	AN5785	$231.95

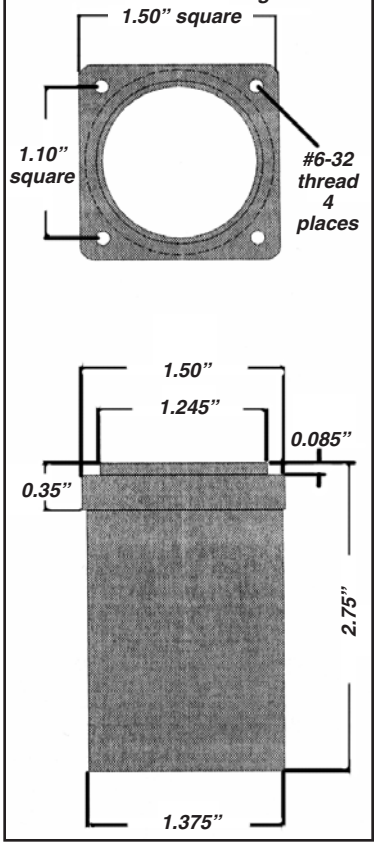
MANIFOLD PRESSURE

Description	Part No.	Price
5-35”	10-02438	$190.00
5-50”	10-02439	$190.00

For Experimental aircraft only. See next page for TSO’d Gauges. Mount individually or as a cluster.

MOUNTING INFORMATION

weight: 4.2 oz.



IN

UMA 1-1/4” TSO’d ENGINE INSTRUMENTS

These 1 1/4” instruments are identical to the 1 1/4” UMA Gauges on previous page, except these are TSO’d for certified aircraft. (Except Ammeters)



UMA No.	Size & Type	Range / Sender Sender Range	Markings & Sweep	Part No.	Price
TO4 113V 080P 000	1 1/4” OIL PRESS	0-80 PSI (VDO)	B & W	10-00037	**$190.00**
TO4 113V 130P 000	1 1/4” OIL PRESS	0-130 PSI (VDO)	B & W	10-00533	**$236.95**
TO4 1135 060P 000	1 1/4” OIL PRESS	0-60 PSI (ASHCROFT)	B & W	10-00534	**$236.95**
TO4 112V 015P 000	1 1/4” FUEL PRESS	0-15 PSI (VDO)	B & W	10-00538	**$236.95**
TO4 112V 030P 000	1 1/4” FUEL PRESS	0-30 PSI (VDO)	B & W	10-00539	**$236.95**
TO4 112V 080P 000	1 1/4” FUEL PRESS	0-80 PSI (VDO)	B & W	10-00540	**$229.95**
TO4 1125 150B 000	1 1/4” FUEL PRESS	0-150 PSI (ASHCROFT)	GA 59-115, RR@ 59-115	10-00545	**$284.95**
TO4 115V 015P 000	1 1/4” WATER PRESS	0-15 PSI (VDO)	B & W	10-00546	**$236.95**
TO4 1145 2K0P 000	1 1/4” HYDRAULIC PRESS	0-2000 PSI (ASHCROFT)	B & W	10-00550	**$236.95**
T12 113U 150C 000	1 1/4” OIL TEMP	40-150 °C	B & W	10-00555	**$236.95**
T12 113U 300F 000	1 1/4” OIL TEMP	100-300 °F	B & W	10-00556	**$236.95**
T12 115U 150C 000	1 1/4” WATER TEMP	40-150 °C	B & W	10-00557	**$236.95**
T12 115U 300F 000	1 1/4” WATER TEMP	100-300 °F	B & W	10-00558	**$236.95**
T12 116J 530C 000	1 1/4” CHT	50-300 °C	B & W (Thermocouple)	10-00561	**$236.95**
T12 117K 1K7F 000	1-1/4” EGT	400-1700 °F	B & W (Thermocouple)	10-04945	**$236.95**
T12 117K 1K7F 000	1 1/4” EGT	100-900 °C	B & W (Thermocouple)	10-00562	**$236.95**
T12 11T5 1K0C 000	1 1/4” TURBINE TEMP	0-1000 °C	B & W, 5V INPUT	10-00565	**$236.95**
T07 11MU A35H 000	1-1/4” MANIFOLD PRESSURE	5-35 in.	B & W	10-05523	**$236.95**
T18 1125 1C10 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (cap 5V)	B & W (2700)	10-00566	**$236.95**
T18 1125 2C10 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (cap 5V)	B & W (1800)	10-00567	**$236.95**
T18 112F 1F10 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (float 240-30 ohms)	B & W (2700)	10-00568	**$236.95**
T18 112F 1F20 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (float 0-30 ohms)	B & W (2700)	10-00569	**$236.95**
T18 112F 1F30 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (float 0-90 ohms)	B & W (2700)	10-00570	**$236.95**
T18 112F 1F40 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (float 78-6 ohms)	B & W (2700)	10-00571	**$236.95**
T18 112F 1F50 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (float 10-180 ohms)	B & W (2700)	10-00572	**$236.95**
T18 112F 2F10 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (float 240-30 ohms)	B & W (1800)	10-00573	**$236.95**
T18 112F 2F20 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (float 0-30 ohms)	B & W (1800)	10-00574	**$236.95**
T18 112F 2F30 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (float 0-90 ohms)	B & W (1800)	10-00575	**$236.95**
T18 112F 2F40 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (float 78-6 ohms)	B & W (1800)	10-00576	**$236.95**
T18 112F 2F50 000	1 1/4” FUEL QTY IND.	EMPTY TO FULL (float 10-180 ohms)	B & W (1800)	10-00577	**$236.95**
Ammeters are not TSO’d					
15 11S0 P30A 000	1 1/4” AMMETER (2700) (w/shunt)	-30 to 30 A	B & W	10-00041	**$231.95**
15 11S0 P60A 000	1 1/4” AMMETER (2700) (w/shunt)	-60 to 60 A	B & W	10-00581	**$231.95**
15 11S0 P80A 000	1 1/4” AMMETER (2700) (w/shunt)	-80 to 80 A	B & W	10-00582	**$231.95**
15 11S0 P1CA 000	1 1/4” AMMETER (2700) (w/shunt)	-100 to 100A	B & W	10-00043	**$231.95**

NOTE: ***These Ammeters are NOT TSO’d***

Senders sold separately, optional internal lighting available, Range Markings available at additional cost.

IN

HOUR METERS – ENGINE GAUGES

HONEYWELL HOBBS HOUR METERS



P/N 15000 P/N 15001 P/N 15006 P/N 15007

The Quartz + series of hour meters provide performance and reliability. Features include a highly reliable drive mechanism and odometer gear train combined with the accuracy of quartz crystal timing. Accurate to +/- 0.02% from -40° to 185°F. Total digital quartz readout is 9999.9 hours. Easy-to-read white numerals on black face dials. Sealed against dirt and moisture. Meets requirements of spec. MIL-L-3971B. Power: 12 – 32 V DC. Models 85094, 85001 and 85011 read "Total Hours". Model 85012 reads "Flight Hours".

Honeywell Hobbs Hour Meter 85094 + ... P/N 15000 ..... **$26.95**
Honeywell Hobbs Hour Meter 85001 + ... P/N 15001 ..... **$68.75**
Honeywell Hobbs Hour Meter 85011 + ... P/N 15006 ..... **$76.85**
Honeywell Hobbs Hour Meter 85012 + ... P/N 15007 ..... **$67.85**

PRESSURE SWITCH FOR HONEYWELLHOBBS HOUR METERS



View #1 View #2

Normally open. Closes at 4 PSI. Single circuit with 2 insulated terminals. Switch has silver contacts enclosed in weather-proof case. 1/8" male pipe thread connection.
P/N 10-00813 ..... **$31.85**



Water Compatible Pressure Switch for Rotax engines.
P/N 10-00326 ..... **$31.50**
For pressure switches with 1/8" male pipe threads. For 1/4" O.D oil pressure lines. ..... P/N 10-04846 ..... **$10.55**

DATCON HOUR METERS



871 ***3-Hole Flange Mounting 2.54" Bolt Circle 1.45" Dia. Holes***

873 ***Mounts in Standard 2-1/4" Instr. Hole***

876 ***Bracket Mount in 2-1/32" - 2-1/8" Panel Hole***

Standard equipment in most production aircraft. Operate on any DC voltage from 4-40V. Recommended for use on aircraft because they start or stop instantly when power is applied or removed. Furnished with mounting hardware. If meter is connected improperly it will not operate but meter will not be damaged. The running indicator indexes every 6 seconds.

Model 871 ..... 12/24V ..... P/N 56456-3 ..... **$72.75**
Model 873 ..... 12/24V ..... P/N 56457-3 ..... **$72.75**
Model 876 ..... 12/24V ..... P/N 56458-4 ..... **$74.65**

TINY TACH TACHOMETER/HOUR METERS



RPM reading adjustable from 1 spark per 2 revolutions to 8 sparks per revolution. One TINY-TACH™ now works for most gas engines. RPM display from 1 to 19,000. RPM update time 1/2 second. Hour meter records total actual running time on your engine. Job timer can be reset to record run time for record keeping. Coax cable transmits signal without EMF interference. 1 Antenna cable winds around your spark plug wire to give you the RPM reading – clean and simple to attach. Signal strength can be controlled by the antenna wire. Standard cable length is 6 feet. This unit is potted to prevent damage from moisture and vibration. Lithium battery life 5+ years, not replaceable. One year warranty.

TT2A Standard Model ..... P/N 10-04182 ..... **$49.85**
For Diesel Engines - 6mm transducer ..... P/N 10-04016 ..... **$99.00**
For Diesel Engines - 1/4 inch transducer .. P/N 10-04017 ..... **$99.00**

SWIFT VOLTMETERS AND AMMETERS



Swift Gauge Voltmetersand ammeters are 6-16V and are availble in 2-1/4" and 2" Round.
MADE IN CHINA.

Size	Model No.	Description	Part No.	Price
2 1/4"	VM16-ZQ	Voltmeter, 6-16V	10-02271	**$34.50**
2 1/4" round	VM16-ZQ	Voltmeter, 6-16V	10-02272	**$28.75**
2-1/4"	VM30-2Q	Voltmeter, 0-30V	10-04040	**$69.95**
2 1/4" round	A30-001R	Ammeter, +/-30A	10-03411	**$39.95**
2 1/4"	AV60-001	Ammeter, +/-60A	10-04041	**$34.50**
2 1/4" round	AV60-001R	Ammeter, +/-60A	10-03415	**$54.95**
2 1/4"	AV3016-002	Amp/Voltmeter +/-30A, 6-16V	10-03412	**$59.95**
2 1/4" round	AV3016-001R	Amp/Voltmeter +/-30A, 6-16V	10-03413	**$54.95**
2-1/4"	AV3030-002	Amp/Voltmeter +/-30A, 30V	10-04043	**$79.95**
2-1/4:	AV2-6616	Amp/Voltmeter 30-0-60, 6-10V	10-03414	**$149.00**
30A	SHT-030	Shunt for Amp/Voltmeter, 50mV/30A	10-03416	**$21.50**
60A	SHT-060	Shunt for Amp/Voltmeter, 50mV/60A	10-03417	**$21.50**

ENM HOUR METERS



Features 6-digits with an hour glass as a running indicator - operates only when engine is vibrating. Install anywhere with no wired connection or power source to operate. Internal battery supplies all the necessary power for the gauge to operate for years of service. Total operating hours are always shown on the LCD display. Compact tamper-proof meter is sealed against the environment to provide years of service.

- Voltage: 10-80 V DC
- Total dimensions: 1.43"W x 0.92"H x 2.13"D
- Face dimensions: 2.12"W x 1.25"H
- Weight: 2oz
- Power: 0.03W
- 6 Digit display
- Analog
- No reset
- Back of panel mounting

ENM Hourmeter DC Power Analog ..... P/N 10-05278 ..... **$50.65**
ENM Hourmeter AC Power Analog ..... P/N 10-05279 ..... **$47.80**
ENM Hourmeter Digital Vibration Activated.... P/N 10-05277 ..... **$54.75**

UNIVERSAL DIGITAL TACH/HOURMETER



Now both a digital tachometer and an hourmeter in the same low cost and small size package! No power required yet there is a large 7 segment LCD display. Solid state electronics with quartz crystal technology make this instrument highly reliable. Easy to install - just wrap the attached wire around your spark plug cable. The case is completely sealed, it operates in a wide temperature range and the service interval is programmable.
P/N TLPT14 ..... **$49.99**



BISHOP AIR SWITCH FOR HOURMETERS

Externally mounted air switch.
P/N 11-02378 ..... **$47.50**



TASKEM DIGITAL TACH / HOURMETER 4000

The Model 4000 Tachometer/Timer displays RPM in both digital and analog formats. The digital format uses a liquid crystal display (LCD)showing up to 19,990 RPM in 10 RPM steps. The LCD is backlighted for night viewing and since it uses "direct drive" it does not washout in sunlight or when viewed from an angle. The analog format is presented as a ring of light emitting diodes (LEDs) around the perimeter of the front panel. The user can easily set the range of RPM that the LEDs represent.
P/N 15-05211 ..... **$285.95**



VOLTMETERS

These new manufacture voltmeters offer accuracy, rugged construction, and contemporary styling. Made in USA. 2 1/4" Range:

9-16V ..... P/N 10-14620 ..... **$166.75**
20-32V ..... P/N 10-02064 ..... **$166.75**



DIGITAL FLAP INDICATOR

The Visual Instruments Flap Indicator system provides a means for owners of older aircraft to upgrade their troublesome indicators to a modern, more reliable design. The system includes a new transmitter, a modern digital display, and all parts necessary to perform the upgrade. The new display incorporates a color LED bar graph. The appearance is similar to flap indications shown on modern glass cockpits. Positions of more than 10° flap are indicated in a different color. This allows for easy identification during an emergency procedure such as a balked landing (go-around). The LEDs are very viewable from a wide angle. This is particularly useful since the indicator on many Cessna models is located on the right side of the panel. The display automatically adjusts to the ambient light for IFR or night operation. The Flap Indicator system includes all necessary parts and typically takes a mechanic approximately 2 hours to install. 2 year factory warranty. STCd for installation on early model Cessna 172s, 182s, 205s, 206s, & 210s. P/N 10-00240 ..... **$859.00**

IN

INSTRUMENT MOUNTING PODS



An economical, high-quality, easy-to-install solution to your instrument mounting problems. Made of vacuum-molded white and black ABS plastic with attractive black matte ABS faces. The white pod may be easily spray-painted with acrylic enamel to match your aircraft. Two-piece mounting brackets fit snugly around 1" tubing, secured with screws provided. Available for 2, 3, 4 or 5 instruments with the face precut and mounting holes drilled for either 2-1/4" or 2" instruments. Blank face plates also available. May be used horizontal or vertically. When you order, specify either 2-1/4"or 2" instruments holes or blank face plate. Instruments not included.

2 Instrument Pods: 7-1/2" Wide x 3-3/4" Tall x 3-3/4" Deep
3 Instrument Pods: 10-3/8" Wide x 3-3/4" Tall x 3-3/4" Deep
4 Instrument Pods: 13-1/8" Wide x 3-3/4" Tall x 3-3/4" Deep
5 Instrument Pods: 16" Wide x 3-3/4" Tall x 3-3/4" Deep

P/N	Instr 2-1/4" Hole	Color	Price	P/N	Instr. 2" Hole	Color	Price
10-01513	2	White	**$63.00**	10-01538	2	Black	**$67.75**
10-01517	3	White	**$75.50**	10-01539	3	Black	**$73.00**
10-01521	4	White	**$78.50**	10-01540	4	Black	**$79.50**
10-01525	5	White	**$75.75**	10-01541	5	Black	**$82.00**
10-01529	2	Black	**$68.00**		Blank		
10-01530	3	Black	**$72.75**	10-01542	2	White	**$63.00**
10-01531	4	Black	**$79.50**	10-01543	3	White	**$78.75**
10-01533	5	Black	**$82.00**	10-01544	4	White	**$79.50**
	2" Hole			10-01545	5	White	**$75.75**
10-01534	2	White	**$63.00**	10-01546	2	Black	**$68.00**
10-01535	3	White	**$78.75**	10-01547	3	Black	**$73.00**
10-01536	4	White	**$79.50**	10-01548	4	Black	**$79.50**
10-01537	5	White	**$69.25**	10-01549	5	Black	**$82.00**

SHOCK MOUNTS

For vibration and shock proofing on instruments and radios.



10-02183 - 1" Square Plate Type Lord Mounts, 6 lb. rating. Monel mounting plate. Base holes .141" dia. for 6-32 screws. Center hole .166" dia. for 8-32 screw. New surplus item - like new mfg. P/N 10-02183 ..... **$10.50**



ROUND MOUNT – As used in Cessna aircraft. Overall length 1.25". Rubber molded on 8-32 threaded projections. New manufacture. Similar to Cessna P/N J6984-8. P/N 10-14700 ..... **$9.50**



ROUND INSTRUMENT PANEL SHOCK MOUNT - Replacement Instrument Panel Shock Mount. Replaces Lord J6984-1, -8 and Cessna 0411059-1 Shockmount. P/N 10-06506 ..... **$2.60**

LORD J-14290-4 INSTRUMENT SHOCK MOUNT - 5 lb rating • Metal mounting plate • .144 dia. base hole (screw size: #6) • .195 dia. center hole (screw size #10) • Aircraft: Cessna 182, 182A-182N P/N 08-00381 .....**$38.50**





RTC-2 AVIATION REAL TIME CLOCK & OAT DISPLAY

The RTC-2 is a 2.25" aviation Real Time Clock featuring a two time zone system, stopwatch, countdown timer, alarm and OAT (Outside Air Temperature) display. It is primarily intended to show UTC time (also known as Greenwich Mean Time, GMT or Zulu time) together with a local time to facilitate ordinary ATC time reporting. P/N 11-06443 ..... **$250.00**

SCOTT TYPE AIR THERMOMETER NON-TSO



Not FAA PMA Approved. A direct reading gauge with both Fahrenheit and Centigrade graduations on the dial. It can be installed through plexiglas windshields, sheet metal cowling, or through the center strip of the windshield. Mounting Hole - Drill a .375" (3/8") + .010"/-.000" hole through the part of the window or wall section desired. For use with a 7/16" torque wrench. Do not exceed 20 inch-pounds torque. P/N 10-15500 .....**$84.75**



RC ALLEN 3 INCH ENGINE GAUGES 18-1000 & 18-1002 SERIES

Consists of three independent gages contained within a standard 3" diameter case. Oil temperature and cylinder head temperature gages are moving coil meter move-ment operated by MS28034-1 and AN5546-1 resistance bulbs respectively. Connection for the temperature gage is by cannon type connector: P/N MS3106A-14S-2S. FAA TSO Approved C47.

Model No. / Part No.	Description	Price
18-1000-1 P/N 10-03435	28 VDC Oil Temp. 50°-250°F, Oil Press. 0-200 PSI, Cylinder head temperature 100 to 500°F	**$1,064.00**
18-1000-2 P/N 10-03436	28 VDC Oil Temp. 20° to 120°F, Oil Press. 0 to 200 PSI, Cylinder head temp. 50 to 250°F	**$1,064.00**
18-1000-3 P/N 10-03437	14 VDC Oil Temp 50°-250°F, Oil Press. 0-200 PSI, Cylinder head temp. 100-500°F.	**$1,064.00**
18-1000-4 P/N 10-03438	14VDC Oil Temp 20° to 120°F, Oil Press 0 - 200 PSI, Cylinder head temp. 50 to 250°F	**$1,064.00**



18-1002 SERIES - This gage consists of three moving coil meter movements within a 3" diame-ter case. Oil temperature is sensed by an MS28034-1 resistance bulb and cyl-inder head temperature is sensed by an AN5546-1 resistance bulb. Oil pres-sure is sensed by a VDO Transducer. Connection is made by a single cannon type connector: Part Number MS3106A-14S-6S.

Model No. / Part No.	Description	Price
18-1002-1 P/N 10-03439	Oil Temp 50° - 250°F, Oil Press. 0 - 120psi, Cylinder temp. 0 - 500°F	**$1,064.00**
18-1002-5 P/N 10-03440	Oil Temp 50° - 250°F, Green Arc 100° - 200°F, Red line at 249°F, Oil Press. 0 - 120psi, Red line 10psi & 100psi, Yellow Arc 10psi - 30psi, Green Arc 30psi - 60psi, Yellow arc 60psi - 100psi, Cylinder Temp 0°- 500°F, Green Arc 220° - 420°F, Red Line 460°F	**$625.00**

ACCESSORIES FOR 18-1000 & 18-1002 SERIES

Part No.	Description	Price
10-00958	Resistance Bulb MS3106A-12S-3S	**$15.85**
10-00953	Resistance Bulb MS28034-1	**$293.95**
AN5546-1	86146 CHT Probe Thermistor	**$425.00**
10-00790	MS3106A-14S-2S Cannon Plug	**$14.50**

Note: Use MS3106A-14S-2S Cannon Plug for instruments and MS3106A-12S-3S for Resistance Bulb MS28034-1.

FUEL FIREWALL SENSOR MANIFOLD HOLDER



Fuel Firewall Sensor Manifold Holder: Designed for remote mounting of Fuel Pressure Sensors. CNC'ed form 6061-T6 Bar stock Aluminum. Tapped 1/8th NPT in each end. Anodized to prevent corro-sion. Laser etched for easy identification. Designed to be mounted with 8-32 or 6-32 fasteners. Dimensions 1.45 inches tall x 1.050 x 1.050 wide at the mounting base. Weight 18 grams each or .6 oz. Mounting holes on ½ inch centers.

Fuel Pressure Sensor Holder.....P/N 05-12431 .....**$19.95**
Oil Pressure Sensor Holder .....P/N 05-12432 .....**$19.95**



HYDRAULIC PRESSURE GAUGE

AN5771-4A Military style gauge with steel case. Mounts in 2-1/4" dia. panel open-ing. Range: 0-2000 PSI. Overhauled and Certified. With fresh Matte-white dial... P/N AN5771-4A **$244.95**

Prices Subject to Change Without Notice

ASTROTECH QUARTZ CHRONOMETERS



A fine quality 2-1/4" instrument to satisfy all cockpit clock/timer needs. 12 or 24 hour clock, 24 hour elapsed timer with time-out or hold feature, month and date. Will operate on internal battery for 2 years or can be connected to electrical system. 12 or 28V DC operation. **Does not include internal battery.**

Part no.	Model	Description	Price
10-05855	LC-2	Panel Mount 12-28V w/ Backup Battery	**$582.00**

NOTE: For Aircraft Application Information on Astrotech Chronometers visit www.aircraftspruce.com

FLIGHT DATA SYSTEM ELECTRIC TACHOMETER



Tachometer: Monitors both left and right ignition systems. Works with magnetos and electronic ignition. Warns when an ignition system has failed. Engine Hour Meter: Saves engine hours in "tach time" or actual time. Flight Timer: Automatically records flight Time. Features: Large and easy to read digits. Extreme operating temperature display. Soft orange backlight with automatic brightness. 2-1/4" panel mounted. Weighs 2.6oz. Includes pre-wired connector. 12-28 volt compatible

P/N 10-03898 ..... **$169.00**

AEROSPACE LOGIC 200 - CLOCK, OUTSIDE TEMPERATURE KIT



The CA200 is an advanced, next generation airborne timepiece plus a seven input annuciator. It can scan seven 200 Series instruments and report any out-of-limit conditions the moment they occur; all on one instrument. Once identified, simply glance over the panel to view the exact cause for concern.

With the CA200 mounted either in or close to your primary panel scan you will reduce the need for consistent full panel scans and be automatically made aware of any condition requiring attention.

The CO200 is identical to the CA200 with the exception of the annunciator function. Using one of the world's most accurate digital timebases they will provide precise time for years to come.

Outside air temperature functionality is TSO'd and meets the temperature accuracy requirements of SAE AS8005 for a Class IIa (+/- 1%) instrument. Functional displays include:

• UTC Time • Local Time • Chronograph • Flight Time and Interval Timer
• Seven annunciator sense inputs (CA200 only)

P/N 10-04348 ..... **$550.00**

WESTBEND DIGITAL QUARTZ TIMER



This timer from Westbend is the perfect size for cockpit use. It times up and down, and has a large, easily readable display. With a clip on the back for mounting on a kneeboard, and includes battery. The hang card makes it easy to display, too. Counts up to and from 100 hours Includes clip, stand, magnet and hanging hole for ease in use. LCD readout. Electronic alarm. AAA battery included. 2.5" x 2.5" x .5"

P/N 13-31380 ..... **$19.95**

TRIPLE RANGE STOPWATCH WITH NIST TRACEABLE® CALIBRATION



This stopwatch is a cost effective NIST traceable calibrated stopwatch. Despite the low price the it has a quality feel, durable construction, and solid feature set. Ability to deploy reliable NIST traceable stopwatches in your organization without breaking the budget! Timing range - 23 hours, 59 minutes, 59 seconds. NIST traceable accuracy is .01%. Single-action, time-out, cumulative-split, and continuous timing. Resolution is 1/100 second for first 30 minutes, then 1 second to 24 hours. Time of day display with day of week and alarm. Tactile click buttons for positive feel. Features large 1/4" digits. Size: 2 1/8" x 2 3/8" x 1/2" - Weight: 1 ounce. NIST calibration certificate included

P/N 13-02954 ..... **$18.95**

SUPERCLOCK FROM ELECTRONICS INTERNATIONAL



Displays local and Zulu time. May be set to display in a 12 or 24-hr format. A 10-year lithium battery keeps the clock running even if the aircraft battery is removed. Displays an Up Timer, that will start running when the engine is started. Acts as an automatic Flight Timer. The Up Timer may be started, stopped or reset. A Recurring Alarm may be set to alert you at appropriate time intervals. Displays a Down Timer. Displays an Engine Timer. Acts as a Hobbs Meter. When the engine starts, the Engine Timer will run. Specifications: 2-1/4" mount. 3.65" Depth. 10 Oz. Unit. Viewable in direct sunlight. Backlit for night operation. Operates from 7.5 to 35 volts at .3 amps.

P/N 10-01612 ..... **$285.00**

SUPERCLOCK/ALTITUDE ALERT FROM ELECTRONICS INT'L.



Reads your Altitude Encoder and displays your current altitude as seen by ATC. Display indicates when your current altitude is above or below your Programmed Target Altitude. A "Level off Alarm" occurs as you approach your Programmed Target Altitude. Displays Density Altitude based on your current OAT reading. Degrees F and degrees C. A Timer may be set as an "UP" or "Down" counting Timer. A Recurring Alarm may be set to alert you at appropriate time intervals. Displays Local and Zulu Time. The Local Clock may be set to display in a 12 or 24-hr format. Meets FAA requirements for a clock. Specifications: 2-1/4" mount. 3.65" Depth. 10 Oz. Unit. Viewable in direct sunlight. Backlit for night operation. Operates from 7.5 to 35 volts at .3 amps.

P/N ASC-5 ..... **$479.95**

PRECISION QUARTZ AIRCRAFT CLOCKS



Designed for accuracy, this precision clock is manufactured to meet rugged aircraft environmental standards. High-quality, solid state quartz movement. Comes with a factory one year limited warranty.

Features: FAA/PMA approved. Precision quartz movement. Transient and reverse polarity protected. One year limited warranty. Continuously powered by aircraft battery. Low power consumption (3mA). Fits standard 2-1/4" panel hole

Specifications: Dimensions: 2.5 x 2.5 x 3.2 inches max. Weight: 0.5 lbs.. Altitude: -1,000 to +55,000 feet. Mounting: Front or rear panel.

\Lighted Quartz Electric Clock (14V) ..... P/N 10-00460 ..... **$329.00**
Lighted Quartz Electric Clock (24V) ..... P/N 10-04615 ..... **$329.00**

QUARTZ ELECTRIC AIRCRAFT CLOCKS



These clocks are constructed for easy installation in a wide variety of aircraft. The rugged quartz movement is accurate within 2 seconds in 24 hours under normal operations and runs accurately in temperatures from -30°–180°F. The clock kit includes a power harness, mounting screws and installation instructions. The clock features adjustable red elapsed time hands.

P/N 10-22812 (12V) **$122.75**
P/N 10-22824 (24V) **$122.75**

MID-CONTINENT INSTRUMENTS AND AVIONICS QUARTZ ANALOG ELECTRIC CLOCK



FAA PMA approved. Precision quartz movement. Compact 2 1/4-inch size – fits standard panel cutout. Transient and reverse polarity protected. Original equipment for many major aircraft manufacturers Low power consumption (3 mA). Continuously powered by aircraft battery One year limited warranty.

MD-90L 14V Lighted ..... P/N 10-00460 .... **$329.00**
MD-90L 28V Lighted ..... P/N 10-04615 .... **$329.00**
MD-90L 14V Lighted ..... P/N 10-00460 .... **$329.00**
MD-90L 28V Lighted ..... P/N 10-04615 .... **$329.00**

IN

FLIGHT TIME CONTROL

P Model: Controlled by programmable Airspeed with solid state pressure sensor
G Model: Gets TAS from GPS source
Solid state speed sensor for internal take off and landing speed
Speed level is adjustable for different aircraft from the protected set up menu Stores up to 4,000 flights with date, departing and landing time
Daily totals with number of landings like a trip meter in cars; this is very helpful if you have a lot of short flights a day. (Example: Glider Towing or Parachuting) Adjustable plain total as reference for maintenance and log book MFG in Switzerland to precise standard.



FLISYS 80

Features:
• Easy Flight Time Controlling for Basic Training, Glider Training and Parachuting
• Internal Real Time Clock • Records Departing - Landing time with date and Pilot Number
• Records Aircrafts Total Flight Time
• Communication via SD - Card • SD Card for read outs of flight with defined Pilot Number
• Pilot Number stored for every recorded flight
• Programmable “On Air” output for Transponders
• Bigger size display for easier read out
• Power Supply 12 to 24 V DC.

3-1/8” TAS From Pilot FLISYS80P..... P/N 10-05104..... **$775.00**



FLISYS 57

FEATURES:
• Internal Real Time Clock
• Records Departing - Landing time and date
• Records Aircrafts Total Flight Time
• Programmable “On Air” output for Transponders
• Controlled by programmable Airspeed with solid state pressure sensor
• Power Supply 12 to 24 V DC

2-1/4” TAS From Pilot FLISYS57P..... P/N 10-05102..... **$562.00**
2-1/4” TAS From GPS FLISYS57G..... P/N 10-05103..... **$509.00**



FTC 57

Easy Flight Time Controlling for Basic Training, Glider Towing, Parachuting. Counts Time Hours and Minutes. 57mm (2-1/4”) round. FTC with same front size as Hobbs time counter. Easy initial time set with 2 push buttons on back side Input for On/Air from external switch or GPS system with output. Power supply is 12 V to 24 V DC.
2-1/4 FTC 57
P/N 10-05106..... **$250.00**



37x24 mm Rectangular
P/N 10-05107..... **$250.00**



ASA FLIGHT TIMER

Ergonomically designed and engineered for reliability, ease and convenience, the ASA Flight Timer should be considered essential equipment for all aviatiors. Features: Large LCD backlit display, multi-function clock and three simultaneous timer options. Exclusive digital notepad for squawk codes or frequencies, stores up to 12 approach times, audible and visual alarms.
P/N 13-02357 ..... **$39.95**



NELSON FLIGHT CLOCK

• Stopwatch / Alarm • Quartz clock • Digital • Replaceable battery • Yoke clip holds Sectionals, Approach plates, etc. • 2 yoke sizes, Piper & Cessna • 12 or 24 hour time
Cessna ..... P/N 13-31210 ..... **$28.50**
Piper ..... P/N 13-31200 ..... **$28.50**



WESTBEND ELECTRONIC TIMER

The jumbo LCD display on this electronic timer displays time in hours, minutes and seconds. Includes clock feature, electronic alarm, clip, stand, magnet and hanging hole for versatile use. AAA Battery included.
P/N 17-00240 ..... **$15.80**

WESTBEND ELECTRONIC TRIPLE TIMER/ CLOCK



Features of this electronic timer include a continuous running clock that displays hours, minutes, seconds, and AM/PM mode, three timing channels that count to and from 100 hours, and three distinctive alarms.
Additional Features: Memory recalls previous time setting. Times three activities at once. Alarm beeps for one minute and counts up to show elapsed time. Easy-to-read large LCD display. Clip, stand, magnet and hanging hole for versatile use.
Specifications: One AAA battery included. 2.5” x 3” x 1”.
P/N 17-00239 ..... **$19.95**

MCI MD93 DIGITAL CLOCK



Accurate time-keeping is essential for any pilot and in-flight USB charging power is a necessity. The MD93 Series 2 inch Digital Clock/USB Charger features intuitive operation with four modes: local time, universal time, flight timer and stopwatch. The Dual USB Charging Port supplies the electric current needed to charge any standard or high-power device with a USB interface, while protecting itself and the charging device from short circuit, power surges and over-current potential. Power 10-32 VDC.
P/N 10-05774 ..... **$499.00**

DAVTRON INSTRUMENTS

DIGITAL CHRONOMETERS AND CLOCKS

MODEL 803



- UT, LT, FT, & ET
- FT & ET Visual Alarm
- External Output for Optional Audio Alarm(FT/ET)
- Aircraft Voltage
- OAT F & C (12Ft. Temperature Probe)
- Internal Lighting
- AA Memory Battery
- Input Voltage 11 to 28 Volts
- NVIS (NVG) Option Green A

Description	Part No.	Price
UT, LT, FT, & ET Digital Clock 5V Lighting, Voltmeter, OAT (F & C)	10-03304	**$445.00**
UT, LT, FT, & ET Digital Clock 14V Lighting, Voltmeter, OAT (F & C)	10-25520-14	**$446.00**
UT, LT, FT, & ET Digital Clock 28V Lighting, Voltmeter, OAT (F & C)	10-25520-28	**$455.00**
803-5V With Night Vision Lighting Green A	10-03342	**$605.00**
803-14V With Night Vision Lighting Green A	10-03343	**$605.00**
803-28V With Night Vision Lighting Green A	10-03344	**$677.00**
C307PS Temperature Probe 12Ft. Coax (Analog)	11-04603	**$88.75**
Audio Alarm Son-Alert	11-04610	**$46.65**

MODEL 800



MODEL 800 Illuminated Buttons



- GMT, LT & ET
- ET Counter (UP/DOWN), Visual Alarm
- Model 800 AA Memory Battery (Optional)
- Input Voltage 11 to 28 Volts
- External Output for Optional Audio Alarm (ET)
- NVIS (NVG) Option Green A
- Available for Beechcraft yoke
- Internal Lighting

• 5 volt and 28 volt lighting units need at least 20 volts on main power input for clock to operate. For 14 volt systems, order a clock with 14 volt lighting.

Description	Part No.	Price
GMT, LT, & ET Digital Clock 5 Volt Lighting (800)	10-03323	**$199.75**
800-5V With Battery Holder (AA)	10-03305	**$215.95**
800-5V With Night Vision Lighting Green A	10-03324	**$291.95**
800-5V NVG With Memory Battery Holder (AA)	10-03325	**$315.00**
GMT, LT, & ET Digital Clock 14V Lighting (800)	10-04508	**$198.90**
800-14V With Memory Battery Holder (AA)	10-02050	**$213.95**
800-14V With Night Vision Lighting Green A	10-03330	**$339.00**
800-14V NVG With Memory Battery Holder (AA)	10-03331	**$365.00**
GMT, LT, & ET Digital Clock 28V Lighting(800)	10-24535-28	**$203.95**
800-28V With Memory Battery Holder (AA)	10-02051	**$222.95**
800-28V With Night Vision Lighting Green A	10-03335	**$376.00**
800-28V NVG With Memory Battery Holder (AA)	10-03336	**$398.00**
800-5V, Illuminated Buttons, Battery Holder	10-04730	**$309.00**
800-14V, Illuminated Buttons, Battery Holder	10-04574	**$312.00**
800-28V, Illuminated Buttons, Battery Holder	10-04575	**$309.00**
800-5V NVG, Illuminated Buttons, Battery Holder	10-04576	**$400.00**
800-14V NVG, Illuminated Buttons, Battery Holder	10-04577	**$495.00**
800-28V NVG, Illuminated Buttons, Battery Holder	10-04578	**$564.00**

MODEL 811



- Six-digit Display on all 3 Functions.
- Time Function (12 OR 24HR Selectable)
- FT & ET
- Bright Sunlight Readable Displays
- Memory Battery Included
- Input Voltage11 to 28 Volts
- NVIS (NVG) Option Green A

Description	Part No.	Price
LT, FT, & ET Clock	10-24550-14	**$509.00**
811B With Gray Faceplate	11-09414	**$511.00**
Model 811 With Night Vision	10-03346	**$715.00**

Accessories / Replacement Parts	Part No.	Price
811 Dropping Resistor	11-04607	**$8.55**
811 Memory Battery Pack	10-24560	**$32.50**
811 Inverting Cable	11-04608	**$41.80**
811B Female Connector (Standard Cable)	11-04609	**$38.50**
KW-505FDigital Display for Model 811B	11-04613	**$47.99**

DIGITAL CHRONOMETERS AND CLOCKS

MB800 (BEECHCRAFT YOKE)



MB800 Illuminated Buttons



- GMT, LT & ET
- ET Counter (UP/DOWN), Visual Alarm
- Input Voltage 11 to 28 Volts
- External Output for Optional Audio Alarm (ET)
- NVIS (NVG) Option Green A
- Available for Beechcraft yoke
- Internal Lighting

Description	Part No.	Price
MB800-5V (Black)	10-03341	**$162.75**
MB800-14V (Black)	10-02649	**$188.75**
MB800-28V (Black)	10-02651	**$189.95**
MB800-5V (Cream)	10-04581	**$196.75**
MB800-14V (Cream)	10-02906	**$199.75**
MB800-28V (Cream)	10-03340	**$205.95**
MB800-5V (Black) NVG Green A	10-04582	**$300.95**
MB800-14V (Black) NVG Green A	10-04583	**$334.00**
MB800-28V (Black) NVG Green A	10-04584	**$404.00**
MB800-5V (Cream) NVG Green A	10-04585	**$326.00**
MB800-14V (Cream) NVG Green A	10-04586	**$346.00**
MB800-28V (Cream) NVG Green A	10-04587	**$381.00**
MB800-5V (Black) Illuminated Buttons	10-04588	**$292.95**
MB800-14V (Black) Illuminated Buttons	10-04589	**$292.95**
MB800-28V (Black) Illuminated Buttons	10-04590	**$289.95**
MB800-5V (Black) NVG Green A, Illuminated Buttons	10-04591	**$315.00**
MB800-14V (Black) NVG Green A, Illuminated Buttons	10-04592	**$484.00**
MB800-28V (Black) NVG Green A, Illuminated Buttons	10-04593	**$550.00**

MODEL 877 REAR MOUNT



MODEL 850 NVG FRONT MOUNT



MODEL 850 FRONT MOUNT



- GMT, LT, FT, & ET
- FT & ET Visual Alarm
- External Output for Optional Audio Alarm(FT/ET)
- Bright Sunlight Readable displays
- Illuminated Displays
- Model 850 N Size Memory Battery
- Model 877 AA Memory Battery
- Input Voltage 11 TO 28 Volts
- NVIS (NVG) Optional Green A (850 & 850-2)

Description	Part No.	Price
GMT, LT, FT, & ET Clock 5V Lighting (850)	10-03310	**$484.00**
850A-5V-With Gray Faceplate	10-03311	**$490.00**
850-5V With Night Vision Compatibility (Green A)	10-03306	**$650.00**
850A-5V-NVG With Gray Faceplate	10-03347	**$658.00**
850-2-5V Rear Mount Night Vision (Green A)	10-04725	**$658.00**
GMT, LT, FT, & ET Clock 14V Lighting (850)	10-03312	**$485.00**
850A-14V With Gray Faceplate	10-03348	**$489.00**
850-14V With Night Vision Compatibility (Green A)	10-03349	**$696.00**
850-2-14V Rear Mount Night Vision(Green A)	10-04726	**$615.00**
850A-14V-NVG With Gray Faceplate	10-03350	**$696.00**
GMT, LT, FT, & ET Clock 28V Lighting (850)	10-03313	**$491.00**
850A-28V With Gray Faceplate	10-03314	**$494.00**
850-28V With Night Vision Compatibility (Green A)	10-03351	**$699.00**
850-2-28V Rear Mount Night Vision(Green A)	10-04727	**$636.00**
850A-28V-NVG With Gray Faceplate	10-03352	**$708.00**
GMT, LT, FT, & ET Clock 5V Lighting (877)	10-03308	**$478.00**
877A-5V With Gray Faceplate	10-03309	**$475.00**
GMT, LT, FT, & ET Clock 14V Lighting (877)	10-24545-14	**$471.00**
877A-14V With Gray Faceplate	11-05879	**$477.00**
GMT, LT, FT, & ET Clock 28V Lighting (877)	10-24545-28	**$472.00**
877A-28V With Gray Faceplate	11-05880	**$488.00**
Audio Alarm Son-Alert	11-04610	**$46.65**

IN

DAVTRON INSTRUMENTS

MILITARY CHRONOMETER

MODEL M880



- Military clock
- Two button control system
- Control switch has remote capability
- Sunlight readable displays
- N.V.G. Filter, Green A or BG7B
- Manual dimming of the display
- Full 6 digit display selectable, GMT, LT, ET
- Elasped time is count up or down
- Keep alive battery (2 year life)
- GMT full 6 digit hours/minutes/seconds
- Local Time, 24 hour, 4 digit

Description	Part No.	Price
GMT, LT & ET Clock with night vision compatibility for military (BG7B)	11-08021	**$1,695.00**
GMT, LT & ET Clock with night vision compatibility for military (Green A)	11-08022	**$1,365.00**

DENSITY & PRESSURE ALTITUDE MODEL 655



FRONT MOUNT



REAR MOUNT

- OAT (F) & OAT (C)
- Pressure & Density Altitude With Pressure ALT. Alarm
- Aircraft Voltage with Flashing Alarm
- Bright Sunlight Readable Displays
- Input Voltage 11 TO 28 Volts.
- Complete with 12 FT. Digital Probe.

Description	Part No.	Price
O.A.T. F&C/Vol/ Pres & Den ALT (Front Mount)	10-24515-1	**$280.95**
O.A.T. F&C/Vol/ Pres & Den ALT (Rear Mount)	10-24515-2	**$297.95**

DIGITAL VOLTMETER OUTSIDE AIR TEMPERATURE MODEL 303



FRONT MOUNT



REAR MOUNT

- OAT (F) & OAT (C)
- Aircraft Voltage with Flashing Alarm
- Bright Sunlight Readable Displays
- Input Voltage 11 TO 28 Volts.
- Complete with 12 FT. Digital Probe.

Description	Part No.	Price
O.A.T. F & C / Voltage (Front Mount)	10-24565-14-1	**$239.95**
O.A.T. F & C / Voltage (Rear Mount)	10-24565-14-2	**$239.95**

DIGITAL VOLTMETER AMMETER MODEL 475VA/475VAA



M475VA



M475VAA

- Low current drain .001 amp
- Plus 100.0 volt D.C. range
- 1.3" case depth
- Sunlight readable
- One tenth volt resolution
- Plus or minus 100.0 amp range
- 2¼ Standard mount
- 5, 14, or 28 volt back lighting
- One tenth amp resolution

The M475VAA has dual shunts and can read voltage and two current flows (M475VA has a single shunt). The 475VA and the 475VAA were designed for low current drain and are also used in standby and emergency battery packs. One example of safety is if the alternator fails, you can monitor the load current out of the battery.

Description	Part No.	Price
Volt/Amm Meter 14V Lighting (Single Shunt)	10-03319	**$277.95**
Volt/Amm Meter 28V Lighting (Single Shunt)	10-03320	**$278.95**
Volt/Amm Meter 14V Lighting (Double Shunt)	10-03321	**$310.00**
Volt/Amm Meter 28V Lighting (Double Shunt)	10-03322	**$299.95**
Volt/Amm Meter 14V Lighting (Single Shunt) With Night Vision Compatibility Green A	10-04562	**$394.00**
Volt/Amm Meter 28V Lighting (Single Shunt) With Night Vision Compatibility Green A	10-04564	**$394.00**
Volt/Amm Meter 14V Lighting (Double Shunt) With Night Vision Compatibility Green A	10-04566	**$394.00**
Volt/Amm Meter 28V Lighting (Double Shunt) With Night Vision Compatibility Green A	10-04567	**$395.00**

DIGITAL OUTSIDE AIR TEMPERATURE

MODEL 301



- OAT (F)
- OAT (C)
- Bright Sunlight Readable Displays
- Input Voltage 11 TO 28 Volts.
- Complete with 12 FT. Digital Probe.

Description	Part No.	Price
O.A.T. Celsius (301 C), Amber LED	10-08312	**$182.75**
301C 3 Pin Connector for Probe, Amber LED	10-03316	**$187.75**
O.A.T. Fahrenheit (301 F), Amber LED	10-08512	**$185.75**
301F 3 Pin Connector for Probe, Amber LED	10-03317	**$189.75**
O.A.T. Celsius, Green LED	10-04543	**$190.75**
O.A.T. Celsius, White LED	10-04544	**$191.75**
301C 3 Pin Connector For Probe, Green LED	10-04545	**$194.75**
301C 3 Pin Connector For Probe, White LED	10-04546	**$191.75**
O.A.T. Fahrenheit, Green LED	10-04547	**$190.75**
O.A.T. Fahrenheit, White LED	10-04548	**$190.95**
301F 3 Pin Connector For Probe, Green LED	10-04549	**$196.75**
301F 3 Pin Connector For Probe, White LED	10-04551	**$194.75**



M307FC



M307FCI



M307FCE

- OAT (F) & OAT (C) Voltage
- Bright Sunlight Readable Displays
- Input Voltage 11 TO 28 Volts.
- Complete with 12 FT. Digital Probe.

Description	Part No.	Price
O.A.T. F & C (307FC)	10-08513	**$211.95**
O.A.T. F & C Cabin Air (307FCI)	11-05881	**$212.95**
O.A.T. F & C & Voltmeter (307FCE)	10-04552	**$238.95**

M307CD



M307FD



Description	Part No.	Price
Celsius Differential Intercooler (307 CD)	10-03318	**$278.95**
Fahrenheit Differential Intercooler (307 FD)	11-05882	**$282.95**



MODEL 450

- Aircraft Voltage with Flashing Alarm
- Bright Sunlight Readable Display
- Input Voltage 11 TO 28 Volts.



MODEL 451

- Aircraft Voltage (451)
- Bright Sunlight Readable Display
- Minimum panel Space
- Input Voltage 11 TO 28 Volts.

Description	Part No.	Price
Voltmeter (450), Amber LED	10-24505	**$148.85**
Voltmeter (450), Amber LED, Remote Sensing	10-04555	**$173.75**
Voltmeter (450), Green LED	10-04553	**$154.80**
Voltmeter (450), Green LED, Remote Sensing	10-04556	**$183.75**
Voltmeter (450), White LED	10-04554	**$153.75**
Voltmeter (450), White LED, Remote Sensing	10-04557	**$179.75**
Voltmeter (451), Red LED	10-02819	**$143.99**
Voltmeter (451), Red LED, Remote Sensing	10-04558	**$145.90**

ACCESSORIES / REPLACEMENT PARTS

Description	Part No.	Price
KW-105G Display for Model 303, 307, 655, 880, & 903	11-04611	**$46.99**
KW-115G Display for Model 303, 655, 850, 877, & 880	11-04612	**$54.75**
KW-505F Digital Display for model 811B	11-04613	**$47.99**
800 Series Alarm Son-Alert	11-04610	**$46.65**
Temp Probe - 7Ft Red/Black Twisted (Analog)	10-00653	**$86.75**
Temp Probe - 12Ft COAX C307PS (Analog)	11-04603	**$88.75**
Temp Probe for 307CD/307FD (Analog)	11-04602	**$93.75**
Temp Probe 12Ft COAX D307PS (Digital)	11-10717	**$86.85**

See our website for additional sizes.

IN

Prices Subject to Change Without Notice

MITCHELL MECHANICAL TACHOMETERS



3-1/8" Tach

In 1985 AC discontinued production of the popular "RT" series of mechanical tachometers. Mitchell immediately entered the market to fill the void. These tachs feature exceptional accuracy and reliability. Mitchell tachs come with a factory-direct 2 year warranty. The range on all models is 500 to 3500 RPM. Accuracy is +/- 25 RPM from 1000 to 3000 RPM. Determine the correct part number from the chart below. All Mitchell tachs are FAA approved to TSO-C49b for certified aircraft. 2-1/4" tachs are direct replacements for the 3-1/8" tachs to save panel space. $30.00 for custom range marks (specify ranges). $12.50 to set hours (specify hours).

Mitchell P/N	Our P/N	Price
D1-112-5023	10-24623	**$224.00**
D1-112-5122	10-24622	**$224.00**
D1-112-5030	10-24630	**$249.95**
D1-112-5124	10-24624	**$249.95**

Mitchell P/N	Our P/N	Price
D1-112-5025	10-24625	**$224.00**
D1-112-5032	10-24632	**$249.95**
D1-112-5028	10-24628	**$229.95**

Mitchell P/N	Our P/N	Price
D1-112-5034	10-24634	**$224.00**
D1-112-5029	10-24629	**$249.95**
D1-112-5024	10-24644	**$229.95**

2566 Cruise RPM Clockwise..... P/N 98480-2 ..... 2-1/4" TACH (98480-2) **$253.95**
2300 Cruise RPM Clockwise..... P/N 10-02046 ..... 2 1/4" TACH..... **$256.95**



2-1/4" Tach

IFR P/N	Mitchell P/N	Stewart Warner No.	AC Type	Direction of Rotation	Average Cruise RPM	APPLICATION (REPLACEMENT FOR ORIGINAL EQUIPMENT INSTALLATIONS)
55-35-7	D1-112-5023	P-551-AZ	RT-7	Clockwise	2300	***Aero Commander:*** A9, A9A, A9B ***Aeronca:*** 15AC Sedan ***Alon:*** F1, F1A, A-2, A-4 & 415C. D, E, F, G (Including Ercoupe and Forney) ***Grumman/American:*** AA-1, AA1A, AA-5 ***Beech:*** C35, D35, E35, F35 ***Bellanca/Champion:*** 7EC, 7FC, 7GC, 7HC,7GCB, 7K, 7ECA, 7GCAA, 7GCBC, KCAB, 8KCAB, 260, 14-19, Viking 300, TurboViking ***Call:*** A2, A3, A4, A5, A9 ***Cessna:*** 120, 140, 170, 180, 182, 185 (with IO-470 eng.) 188, 336, 337 ***Culver:*** Cadet ***Lake Aircraft:*** C-1, C-2, L-4, LA-4SC, LA5 ***Mooney:*** Mark 20, 20A, 20D, 21, 200, 201, 202, 220 ***Piper:*** PA12, PA16, PA18, PA20, PA22, PA23, PA24, PA25PA28,PA30,PA32,PA39 ***Rockwell:*** 112, 114 ***Taylorcraft:*** 19,15A, 20, 20AG, Zephyr ***Temco:*** (Swift: GC-1, GA-1B)
55-35-8	D1-112-5122	P-551-AYZ	RT-8	Clockwise	2050	***Beech:*** 35, A3S, B35, 35R
55-35-9	D1-112-5030	P-551-AZH	RT-9	Counter-clockwise	2300	***Aeronca***: Champion, Chief (early models) ***Piper***: PA15, PA18, (W/TCM eng)
55-35-10	D1-112-5124	P-551-AZJ	RT-10	Counter-clockwise	2050	***Aeronca***: Champion, Chief (late models) ***Champion***: 7AC, 11AC, 7CCM Beech
55-35-11	D1-112-5025	P-551-TA	RT-11	Clockwise	2566	***Bonanza Models***: G35 thru V35, V35TC, 36, A36, 95, B95, B95A, D95A- All Musketeer Models. All Debonair Models ***Cessna***:150,152, 172, 177, 185 & 188 (with IO-520 eng), 206, 207, 210, 310, 320 ***Helio***: H250, H391, H392, H395 ***Navion***: E, F, G ***Stits***: SA9A, SA9B ***Bellanca/Champion:*** 7AC
55-35-12	D1-112-5032	P-551-AZK	RT-12	Counter-clockwise	2566	***Stinson***: 105,108
55-35-14	D1-112-5028	P-551-AZA	RT-14	Clockwise	1800	***Aero Commander*** (Ayres Corp.) B1A, S2B, S2C, S2D, S2R ***Stearman***: A75 (P & W eng.)
55-35-15	D1-112-5034	P-551-AZB	RT-15	Clockwise	3000	***Cessna***: 175
55-35-16	D1-112-5029	P-551-AZL	RT-16	Counter-clockwise	1800	***Grumman***; G164
55-35-17	D1-112-5024	N/A	RT-17	Clockwise	2400	***Maule***: M5/6/MX7-180, M5/6/7/MX7-235

Cub Face Dial 3" CW.....P/N 10-05450.....**$40.00** Cub Face Dial 3" CCW.....P/N 10-05451.....**$53.75**

****The specific tachometer listed is best suited if the installation has this approximate cruise rpm.***

Direction of rotation must be compatible with the previous tachometer that was used. Direction of rotation is defined as when viewing the front of the tachometer.

SLI AIRCRAFT TACHOMETERS



For three decades, Superior Labs, Inc. (SLI) has supplied the aircraft OEM's with the finest quality and most reliable mechanical tachometers in the industry for new production aircraft and can be customized for a variety of aircraft applications. These are now available to the public as aftermarket tachometers. ***Specifications***: • Accuracy to within ± 25 RPM • Range 0-3500 RPM • Diameter 3-1/8" • Length 3-1/2" • Weight: 13 Oz. • Two Years Warranty Most Models **$424.00**

Accessories	Part No.	Price
SLI Custom Range Markings	10-03685	**$95.00**
Sli Tach Lighting	10-03672	**$174.00**
SLI Tach Hours Set	10-03673	**$124.99**

SEE WWW.AIRCRAFTSPRUCE.COM FOR APPLICATION CHART, PART NUMBERS, AND PRICES.



RIGHT ANGLE TACH DRIVE

Right angle tach drive. All connections and case are Aluminum. Reversible: Can be configured clockwise & counter clockwise rotations

P/N 10-05504..... **$69.85**



DUAL TACHOMETER DRIVE

Adapter screws to the male thread on the back of the tachometer. The two tachometer cables screw onto the opposite sides of the dual adapter. 1:1 Ratio.

P/N 10-01445..... **$108.80**



ENGINE RIGHT ANGLE DRIVE

Female end attaches to engine tach drive outlet. Male output end accepts standard tach cable female nut (7/8-18 thread). Eliminates bending of tach cable at the engine in cramped installations. Designed for heavy-duty service. Gears and shafts are of heat-treated alloy steel. Oil impregnated sintered bronze shaft bearings. Cast iron case and fittings. With lubricator fitting for greasing. 1:1 ratio. P/N 10-00814 ..... **$69.75**



TACHOMETER CAP

This Tach Cap can be used to close off the tachometer drive of a Lycoming engine when an electronic tach drive is being used off the magneto or electronic ignition. 7/8" thread and Viton (R) O-ring to seal. P/N 10-06754..... **$19.95ea**



FALCON 2-1/4" MECHANICAL TACH

Falcon T2-001U Tachometer - For both point and Ducati Ignitions. Standard pointer type. Universal, 0-8000rpm, Point and CDI. Compatible with rotax point and CDI ignition, not compatible with 912, 914.

P/N 10-00816..... **$61.95**



TACHOMETER CABLES

Select the proper length from the listing, but measure old tach cable to verify length in chart is correct for your aircraft, as tach cables can vary from aircraft to aircraft. Over-length cables can cause problems - order one that fits the installation. Select the proper length from the listing, but measure old tach cable to verify length in chart is correct for your aircraft, as tach cables can vary from aircraft to aircraft. Measure original cable from end of Ferrule to end of Ferrule when fully extended. Inner tach cables are measured end to end. Inner assemblies have male ends only. One end is squared and the other is keyed. Tach cable assemblies have 7/8-18 on one end and 5/8-18 on the other, female nuts only.

Custom length tach and inner cables are available. Please contact sales for price and lead time of custom cable. You will be required to provide length and rotation. Additional information of aircraft, engine, make, model & dash number may be required.

Note: General rule for installation: Tach cable should be installed as straight as possible - the inner cable length will decrease 11/16" per 360 degrees of bends.

Available in left and right lay rotation. Add -R to the part number for Right Lay.

Tach Cable Ass'y – Lengths to 4ft (Add $2.50/Ft. for Longer Lengths)
4 foot length **$62.95**

Inner Cable Only – Length is 4ft (Add $0.90/Ft. for Longer Lengths)
P/N 10-22400 ..... **$30.50**

See our website for additional lengths.

Part No.	Length	Price
10-02675	22"	**$55.85**
10-15700	29-1/2"	**$60.75**
10-15800	26"	**$60.75**
10-15900	29"	**$60.75**
10-16000	25"	**$59.95**
10-16100	37"	**$62.95**
10-16200	36"	**$60.75**

Part No.	Length	Price
10-00012	46"	**$62.95**
10-16400	42"	**$62.95**
10-16500	34"	**$59.95**
10-16600	32"	**$60.75**
10-16700	35"	**$60.75**
10-16900	48"	**$62.95**
10-16910	52"	**$67.75**

IN

TACHOMETERS

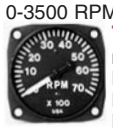
UMA 2-1/4" ELECTRONIC TACHOMETERS

These tachs have high resolution and easy to read displays. The analog model has a 250° sweep which provides great resolution in both the 3500 & 7000 ranges. The digital model has a bright LED display. Separate power source required. All tachs require power from a 14 or 28V system. Installations are simple with instructions included.



3500 ANALOG TACH - Lyc./Continental (to replace mechanical tachs) Current: 37 milliamps Size: 2.25"rnd. X 2.75"deep. Magnetic pickup (6 ft. cable length) included with P/N's 10-02141 and 10-02140 (T1A9). 6 ft. harness, sending unit, and .156 diameter tang adapter included with P/N 10-00083 (1A3-4).

0-3500 RPM, 4 cyl., Pulses:1 ..... P/N 10-02140 .**$290.95**
0-3500 RPM, 4 cyl., Pulses:2..... P/N 10-00083 .**$305.00**
0-3500 RPM, 6 cyl..... P/N 10-02141 .**$290.95**



7000 ANALOG TACH - Current: 37 milliamps; Size: 2.25" round X 2.75" deep

Rotax 19-519-206.....P/N 10-01854 .....**$172.75**
Rotax 912 .....P/N 10-01853 .....**$172.75**
Rotax 912/914 Lit .....P/N 10-02053 .....**$139.95**

UMA ELECTRONIC TACHOMETERS



These electronic tachometers use a 250° sweep meter movement to withstand high levels of vibration and register flight time accurately. The hour meter counts flight hours at RPM settings of 1800 & higher. Power: 12-28VDC. 2-year warranty.

Range	Description	Part no.	Price
0-7000 RPM	3-1/8" For Rotax 912 Engine B & W Markings, built-in hourmeter	10-00119	$280.95
	3-1/8" For Rotax 912 Engine Color Markings	10-04223	$310.00
	2-1/4" For Rotax 912 Engine Color Markings	10-01852	$197.75
0-3500 RPM	3-1/8" *To replace Mechanical Tachometer (readsCW or CCW; B&W Dial Only) Furnished w/mechanical sender	10-00120	$387.00
0-3500 RPM	3-1/8" *To replace Mechanical Tachometer (Green Arc 500-2700 - Red 2700) Furnished w/ mechanical sender	10-00121	$407.00

**** P/N 10-00120, 10-00121, 10-24870, & 10-24885 tachs eliminate the problems associated with mechanical tach cables, and the sending unit is a direct replacement for the tach cable. All models are analog style tachs with hour meters and can read RPM for either clockwise or counter-clockwise revolutions. Sender included. **Slick Mags Only***

UMA SENDING UNITS FOR TACHOMETERS



Unit 1A3-4 - Sending Unit 1A3-4 only
P/N 10-01706 ..... **$141.75**



T1A9 Magnetic pickup for Slick or Bendix Magnetos (6 ft. cable lengths)
Slick .....P/N 10-02432 ...**$117.75**
Bendix.....P/N 10-02433 ...**$117.75**

T1A9

WESTACH TACHOMETERS



CLamps to ultralite tubing or motorcycle handle bar. Swivels 360° at any angle. Furnished with chrome plated installation hardware. SINGLE TACH (Tachometer requires no sender.)

PWR By	Application	RPM	Head Type	MFR PN	Part No.	Price
CDI		0-8000	Round	2CT8A-2/6	10-01302	$147.75
Mag	2/4 cyl. dist/mag & 1/2 VW	0-3500	Square	2AT3-2	10-01275	$164.75
Mag		0-5000	Square	2AT5-2	10-01294	$164.75
CDI	2 or 6 imp alt (Rotax, 2Si, Hirth, Arcticat)	0-8000	Square	2AT8A-2/6	2AT8A-2/6	$164.75
CDI	Jabiru 5 imp alt.	0-3500	Square	2AT3A-5	10-00478	$164.75
CDI	Jabiru 6 imp alt.	0-3500	Square	2AT3A-6	10-00479	$164.75
Mag	3/6 cyl. dist/mag except GEO	3500	Round	2CT33-2	10-03902	$121.75
Mag	3/6 cyl. dist/mag except GEO	5000	Round	2CT53-2	10-03903	$121.75
Mag	3/6 cyl. dist/mag except GEO	8000	Round	2CT83-2	10-03904	$121.75
CDI	Rotax 912 & 914	8000	Round	2CT8A-1A	10-03924	$145.85



SQUARE



ROUND

WESTACH 2-1/4" TACH/HOUR METERS

PWR By	Application	RPM	MFR PN	Part No.	Head Type	Price
Mag	2/4 cyl. dist/mag &	3500	Y2AT3-2	10-01305	Square	$289.95
Mag	1/2 VW	8000	Y2AT8-2	10-01690	Square	$289.95
CDI	2 or 6 imp alt (Rotax, 2Si, Hirth, Arcticat)	8000	Y2CT8A-2/6	10-01694	Round	$318.00

Made in the U.S.A

EM8000 TACH GENERATOR



EM8000 Quality Tach Generator (4-pole). Aircraft tach generators measure an airplane's engine speed electrically. By using the rotation of a magnet to emit voltage, the frequency of the voltage is measured into revolutions per minute. This rpm is then reported to the tachometer for a visual readout to the pilot.
P/N 08-15987 .....**$619.00**

ELECTRONIC TACHOMETER 0-3500 RPM FOR 6 CYLINDER



UMA has one of the most extensive line of tachometers available on today's market. They manufacture tachometers for a wide variety of engines and ignition systems used in ultralights, kit planes, and most general aviation aircraft.3-1/8" ..... P/N 10-02116 .....**$349.95**

FOR 4 CYLINDER -
3-1/8" 0-3500 RPM (2 Pulse) ..... P/N 10-00120 .....**$387.00**

UMA ELECTRONIC TSO'D TACHS



Owners of Lycoming &d Continental powered airplanes now have an electronic, analog alternative to the old cable driven tachometer. The new UMA tach is certified to FAA TSO C49b standards for fixed wing aircraft. The system uses a tach sender mounted on the engine in place of the mechanical cable and is connected to the indicator with a single, 3-conductor cable. The 3 1/8" indicator utilizes a high torque pivot and jewel movement. The hour meter can be factory set to start at any desired RPM point. This unit gives the pilot the analog display that is easiest to scan and provides electronic accuracy and ease of installation. Custom dial markings in color & internal Electro-Luminescent lighting are available at extra cost. UMA manufactures a complete line of TSO'd & non-TSO'd gauges & instruments in the USA.

UMA Model#	Range	Dial Marking	Part No.	Price
T19-801-10	0-3500 RPM	Black & White	10-01221	$507.00
T19-801-11	0-3500 RPM	Green Arc 500-2700 & Red Line 2700RPM(Lyc.)	10-01222	$529.00

UMA ELECTRONIC TACHOMETER WITH HOURMETER



3 1/8" Analog Tachometer with hourmeter. 4 Cylinder. 0-3500 RPM. Records engine time above a set RPM point. Standard set point is 1800 RPM. Engine Type: Continental/Lycoming. TSO'd Magnetic pickup for Slick or Bendix Magnetos (6 ft. cable length), alternative to p-lead connections.
For Bendix Mags ..... P/N 10-04867..... **$349.95**
For Slick Mags..... P/N 10-04868..... **$349.95**

P-1000 DIGITAL TACH BY HORIZON INSTRUMENTS



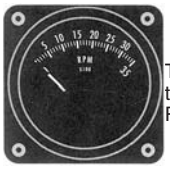
Provides diagnostic and performance information about the aircraft engine and ignition system not normally available with current mechanical or electrical/electronic tachometers. Eliminates problems resulting from inaccurate tachometers. STC approved for primary installation, not just secondary. Also incorporated into the P-1000 is a highly accurate engine hours clock, and an RPM Trap memory that recalls the highest RPM achieved by the engine. Both features are enabled with a touch of a button. The P-1000 is housed in a rugged, light-weight aluminum standard 3-1/8 inch "MS" style case. Installation is simple. Only four wires are connected, all of which are located under the panel! The P-1000 is the ideal aircraft tachometer, for upgrades or new designs, providing the conscientious pilot with high reliability, accurate RPM reading, and valuable diagnostic information..... P/N 10-01592..... **$609.00**

TRU-TACH II DIGITAL TACHOMETER



Mechanical tachometers are notoriously inaccurate. The TruTach II Optical Digital Tachometer measures the true speed of your propeller from inside or outside the aircraft. Just point it at the propeller or rotor blades and TruTach II will directly display the rotational speed with a resolution of 1 RPM. No connection to aircraft systems is required and measurements may be made at any speed setting from 240 to 70000 RPM. Direct display is available for 2, 3, 4, and 5 blade propellers. Digital Signall Processing assures rock-solid display in single and multi-engine aircraft as well as helicopters. The compact 4-inch instrument weighs just 4 ounces and may be used with fast turning ultra-lights and kit plane propellers. Automatic shut-off turns the unit off if you forget. Includes 9 volt battery providing 150 hours of operation. P/N 10-01021..... **$194.00**

2-1/4" REMOTE HEAD TACHOMETER



This tachometer is driven with power supplied by a transducer on the engine tach drive. Range 0-3500 RPM. Wt. 6 oz. Includes Gauge, sender, and tang.
Sender only .....P/N 10-02084 ..... **$218.95**
Tang only .....P/N 444-2 ..... **$8.50**

WESTACH TACHOMETERS



KY3GA3-1/2A - 500-3,500 RPM with hourmeter kit, 3-1/8" sq., 1/2 to 1 ratio. adjustable, with 303 DGT sender, 444-2 tang, 208-SS-SS cable. PN 10-02644.....**$303.00**

K3GA3-1/2A - Tachomter 500-3,500 RPM kit, 3-1/8" square, 1/2 to 1 ratio. adjustable with 303DGT sender, 444-2 tang, 208-SS-SS cable. Does not come with a sender. PN 10-02643 .....**$204.95**

1A3-4

Made in the U.S.A

IN

Prices Subject to Change Without Notice

ALCOR EGT & CHT SYSTEMS

BASIC EGT & CHT SYSTEMS

FAA and PMA approved for all reciprocating-powered aircraft!

2-1/4" GAUGES



A46125



A46150



A46126



A46151



A46127



A46164

3-1/8" GAUGES



A46124



A46155



A46156



A46157

Instruments: Provide a quick and easy way to troubleshoot and determine an engine's efficiency. Alcor's instruments are known for their quick response time, easy-to-read design and long life. All Alcor instruments are FAA/PMA approved for anything piston-powered that flies! Available in 2 ¼" and 3 1/8" diameters, these instruments can be purchased in single or dual configurations with or without internal lighting. Special order options are also available. All Alcor instruments carry a 3 Year Warranty!

Sensors: Recommended by the most popular manufacturers of digital engine monitoring systems because Alcor sensors are: • Made from the highest-quality materials • FAA approved • Provide fast response time • Built to last • Covered by a 5 Year warranty for grounded probes • Manufactured in the USA!

Basic Systems: Kit includes the 2 ¼" or 3 1/8" instrument, one lead and one sensor for single cylinder EGT or CHT monitoring.

Multi-Cylinder Systems: Kit Includes 2 ¼" or 3 1/8" instrument, all leads, switches and sensors for EGT and CHT monitoring of every cylinder. Alcor's 2 ¼" instrument uses Alcor's Universal Cylinder Selector (UCS) (p/n 80825 or 80827) switch to convert the basic system into an affordable Alcor analyzer!

BASIC SYSTEMS		
System	Part No.	**Price**
EGT	10-08700	**$319.95**
CHT	10-08800	**$364.95**
EGT/CHT 2-1/4"	10-08900	**$769.00**
EGT/CHT 3-1/8"	10-20700	**$683.00**

ANALYZER SYSTEMS		
System	Part No.	**Price**
EGT (4Cyl.)	10-09000	**$877.00**
CHT (4 Cyl.)	10-09100	**$964.00**
EGT/CHT (4 Cyl.)	10-09200	**$1,798.00**
EGT (6 Cyl.)	10-09300	**$1,160.00**

ALCOR PROBES

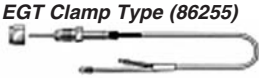
Alcor's probe (thermocouples) reliability is legendary in the aviation community, designed to give years of dependable and accurate service.

GROUNDED THERMOCOUPLES

ALCOR	DESCRIPTION
86255	EGT Clamp Type Probe min/ max dia.-1.5"to 3.25") (Yellow/Red, Chrome/ Alumel)
86240	EGT Screw-In Probe, fitting dims: 7/16" x 20 threads (Yellow/Red) less boss
86245	EGT Screw-In Probe, fitting dims- 7/16" x 20 threads (Yellow/Red, reverse stagger leads) less boss
28113	Weld Boss
86251	CHT Bayonet Probe (Black/ Yellow,
28202	Iron/Constantan) AN5541-1 CHT Bayonet Probe Adapter
86202	CHT Gasket Style Thermocouple. Type: J - Black and Yellow. Grounded Style: Gasket. Size: 18 mm. Resistance: .13 + .16 Ω - .05 Ω. Weight: 0.12 lbs.



EGT Clamp Type (86255)



EGT Screw-In Type (86240) with Weld Boss (28113)



EGT Screw-In Type (86245) (Reverse Stagger Leads) with Weld Boss (28113)



CHT Bayonet Type (86251) and Adapter (28202)



CHT Gasket Type (86202)



EGT/CHT Leads

IMPORTANT! EGT systems & components with red/brown color codes are not compatible with systems & components using red/yellow codes.

Alcor Systems are FAA Approved and the grounded probes have a 5Yr factory warranty, the ungrounded probes have a 1yr factory warranty, and the instruments have a 3yr factory warranty.

ALCOR ALCAL 2000+ SYSTEM TESTER



ALCAL 2000+ EGT/CHT TESTER: The Alcal 2000+ provides everything needed for accurate calibration and troubleshooting of EGT/CHT/TIT, Type K, J, and E systems. The tester will simulate thermocouple output millivolts so that instruments can be calibrated on the ramp or in the shop. The Alcal 2000+ will also receive a millivolt input while testing Alcor and other thermocouples installed in its special heater for accurate analysis at operating temperatures.

The Alcal 2000+ is also designed to check the accuracy of an entire system or the individual components. While the thermocouple is in the heater, the instrument can be read in the panel and recalibrated as necessary while simulating temperatures up to 1750 F. An easy-to-read LCD display makes accurate settings a snap. With its rugged Pelican case, the Alcal 2000+ is ready to use anywhere! Certification of the Alcal 2000+ is traceable to National Institute of Standards and Technology (NIST).

Features:

• Redesigned Pelican case with removable lid for stress-free use in any environment

• Internal carrying handle for tranquil transport and handling with or without the lid

• Additional EGT/TIT Heater that accepts competitors' larger probes and tests both digital and analog systems

• Easy access to the fuse and 9V Lithium battery for quick replacement if necessary

• Plus, all the great features of the Alcal 2000 (FAA/PMA not required)

Specifications:

• 9V Lithium Battery-powered

• 12lbs

• Alcor P/N: 85337

2000+ System Tester .....P/N 10-04981 .....**$3,679.00**

Accessories

28187 Gasket Thermocouple Adapter.....P/N 10-04959 .....**$66.75**
35291 EGT Heater 1.28 Hole.....P/N 10-04956 .....**$307.00**
35309 EGT Heater .....P/N 10-04953 .....**$306.00**
35311 CHT Heater .....P/N 10-04957 .....**$297.95**
86188 EGT Reference Thermocouple.....P/N 10-04954 .....**$85.75**
86261 CHT Reference Thermocouple.....P/N 10-04958 .....**$107.90**

ALCOR EGT & CHT COMPONENTS

ALCOR COMPONENT PRICE LIST

Alcor	Our P/N	Description	Price
EGT Leads, Type K			
42525	42525	EGT Leads, Type K (90")	**$36.40**
42526	42526	EGT Leads, Type K (144")	**$49.85**
42527	10-00131	EGT Leads, Type K (240")	**$71.85**
42528	42528	EGT Leads, Type K (216")	**$72.75**
CHT Leads, Type J			
42535	42535	CHT Leads, Type J (90" 8 ohm)	**$41.65**
42536	42536	CHT Leads, Type J (144" 8 ohm)	**$55.75**
42537	42537	CHT Leads, Type J (240" 8 ohm)	**$72.75**
42543	42543	CHT Leads, Type J (216" 8 ohm)	**$69.80**
Meters, Single 2-1/4"			
46149	10-03859	EGT Internal light 24V Type K	**$266.95**
46150	46150	EGT Type K Fahrenheit red and yellow	**$208.95**
46151	46151	CHT Type J, Fahrenheit black & yellow	**$208.95**
46162	10-00992	EGT Type K, Fahrenheit (Green Arc)	**$262.95**
46164	10-00993	EGT Type K,Fahrenheit (No Green Arc)	**$246.95**
46171	10-00996	CHT Type J, Celsius Black & Yellow	**$246.95**
46244	10-00997	EGT 240" Lead Type K, Fahrenheit (Green Arc)	**$292.95**
Meters, Dual 2-1/4"			
46124	10-00994	TIT/TIT Type K, Fahrenheit Red & Yellow	**$525.00**
46125	10-00126	EGT/EGT Type K Red & Yellow Unlit	**$509.00**
46188	10-06035	EGT/EGT Type K Lit	**$568.00**
46126	46126	EGT/CHT Type K & J, Fahrenheit	**$529.00**
46127	10-00127	CHT/CHT Type J, Fahrenheit	**$506.00**
Meters, Dual 3-1/8"			
45993	10-00998	EGT Type E Fahrenheit Red and Brown. Designed for twin engine aircraft.	**$847.00**
46115	10-03861	EGT/EGT 24V Type K. Designed for twin engine aircraft.	**$517.00**
46155	10-00128	EGT/EGT Type K	**$424.00**
46156	46156	CHT/EGT Type J & K, Fahrenheit	**$399.00**
46157	10-03860	CHT/CHT Type J Farenheit	**$423.00**
46224	10-00999	TIT/TIT Type K, Fahrenheit	**$485.00**
EGT Probes, Type K			
86143	10-01005	Model N, Screw-In (1/4" NPT)	**$147.75**
86159	10-01006	Model H, Screw-In (1/4" NPT)	**$150.75**
86160	10-01007	Model J1, Screw-In (7/16"-20)	**$145.95**
86161	10-01008	Model K, Screw-In (1/4" NPT)	**$149.75**
86226	10-01009	Model A, Clamp, 11.56" length (Reverse Stagger)	**$117.75**
86230	10-01011	Model N2, Screw-In (1/4" NPT)	**$145.75**
86240	10-00129	Model B, Screw-In (7/16-20)	**$99.50**
86245	86245	Model B,Screw-In(7/16"-20) (Reverse Stagger)	**$99.95**
86255	86255	Model A, Clamp (Normal Stagger)	**$91.95**
86275	10-01012	Model A, Clamp, 13.6" (Rev. Stagger)	**$99.95**
86281	10-01013	Model A, Clamp C/A Extended Lead	**$184.75**
CHT Probes			
86146	AN5546-1	Bayonet (AN5546-1) Thermistor	**$425.00**
86202	86202	Gasket Style Type J 18mm	**$117.75**
86251	86251	Bayonet Style Type J	**$89.50**
86252	10-04949	Bayonet Style, Type K, Red/Yellow, reverse stagger	**$89.50**
86253	10-04951	Screw In Style, Type K, normal stagger, Red/Yellow	**$109.95**
Parts and Accessories			
35309	10-04953	EGT Heater (1004-6)	**$306.00**
86188	10-04954	EGT Reference Thermocouple (1004-7)	**$85.75**
35291	10-04956	EGT Heater .128 Hole	**$307.00**
35311	10-04957	CHT Heater (1004-26)	**$297.95**
86261	10-04958	CHT Reference Thermocouple	**$107.90**
28187	10-04959	Gasket Thermocouple Adapter (1004-72)	**$66.75**
Ungrounded EGT Probes			
86307	10-86307	Screw-In (1/4 NPT)	**$474.00**
86341	10-04952	Red/Yellow, Screw-in (1/8 NPT)	**$475.00**
86308	10-86308	Screw-In (7/16-20)	**$474.00**
86309	10-86309	Screw-In (7/16-20), Extended Lead	**$473.00**
86310	10-86310	Clamp - 2.35" max	**$473.00**
86343	10-86339	Clamp (with Plug, Short) 3.25"max	**$369.00**
Accessories			
28113	10-01017	Weld Boss 7/16 UNF (for B Probe)	**$27.50**
28202	28202	CHT Adapter for Bayonet Probe (AN4076-1)	**$25.15**
28204	10-01018	Plug for 28113 Weld Boss.	**$27.50**
42523	10-01019	EGT Lead Stagger Adapter. Type K	**$9.90**
80825	80825	Universal Selector Switch - 7 inputs	**$174.75**
80827	80827	Universal Selector Switch - 4 section	**$212.95**
Vernier			
93882	10-01020	Vernier Control Assembly 112"	**$153.75**
Alcor, CHT Parts			
28202	28202	Bayonet Thermocouple Adapter (1004-4)	**$25.15**

IN

Prices Subject to Change Without Notice

WESTACH INSTRUMENTS

2-1/4" ENGINE INSTRUMENTS

MADE IN THE U.S.A

Guaranteed accurate within 2% with a 1-yr. warranty. Weight - an unbelievable 4oz. These instruments are self powered by the thermocouple, except for the lighting.



CYLINDER HEAD TEMPERATURE

100-700°F ..... P/N 2A1 ..... **$96.75**
25°–375°C ..... P/N 2A1-2 ..... **$96.75**
SENDERS: CHT Senders have 4 ft. leads.
14mm gasket type (VW, Rotax) ..... P/N 712-4W **$39.95**
18mm gasket type (Cont,Lyc.) ..... P/N 712-5W **$39.95**
Bayonet type 3/8" x 24 thread ..... P/N 712-7D **$81.99**
Bayonet type 1/8" NPT thread ..... P/N 712-7DJ **$78.95**
(All Rotax) ..... P/N 712-912K **$78.95**



EXHAUST GAS TEMPERATURE

700-1700°F/350-950°C ..... P/N 2A2 ..... **$92.75**
100-1900°F/100-1000C ..... P/N 2A2-1 ..... **$92.75**
400-900°C ..... P/N 2A2-2 ..... **$92.75**
4000-1600°F/200-850°C ..... P/N 2A2-7 ..... **$92.75**
SENDERS - Clamp type senders with 3/16" diameter probe. EGT Senders have 4 ft leads.
1" long tip ..... P/N 712-2DWK **$59.95**
1/2" long tip ..... P/N 712-20DWK **$59.95**
Long tip 1/4" threads ..... P/N 712-4D **$73.75**
3/8-24 for Lycomings ..... P/N 712-4D1 ..... **$73.75**
Long tip for VW (1/12" OD tailpipe) ..... P/N 712-24DWK **$59.95**
(All Rotax) ..... P/N 712-32DWK **$59.95**
Bayonet K type, EGT probe for Rotax ..... P/N 712-4D6K **$83.75**
Exposed Tip, model 712-20DWKE - Hose clamp style 1/2" probe.
P/N 10-01300 ..... **$56.85**

Note: Westberg 712 Series Thermocouples are for Non-TSO'd CHT & EGT Gauges only. They have two small pins which are the same size.





OIL TEMPERATURE

100° - 260°F. ..... P/N 2A9-2* **$89.75**
Sending Unit ..... P/N 399S7 ..... **$45.65**
*Use Sender #399S9-7/8 for Cont & Lyc Engines. (5/8-18 Thread) ..... P/N 399S9 ..... **$63.75**





OIL PRESSURE

Guaranteed accurate within 2% with a 1-year warranty. Weight an unbelievable 4oz.
K2A8MM . 0-80 PSI (w/sender)
P/N 10-01292 ..... **$415.00**



FUEL PRESSURE

This specially constructed instrument offers accuracy and durability in a lightweight (3.5oz) package. Perfect for home-built and custom applications. K2A8-8MM. 0-15 PS w/Sender(SET) ..P/N 10-01553 ..... **$415.00**



WESTACH 387-15KV PRESSURE SENDER

Electronic Pressure Sender, 15 psi, 0.5-4.5 vdc, 1/8" npt. P/N 10-05273 ..... **$339.00**



MANIFOLD PRESSURE GAUGE

2-1/4" Size 0-30 PSI & 0-50 PSI.
2A4-14 - 0-50 IN HG (square) not altitude compensated ..... P/N 10-04178 ..... **$88.75**
2A6-6 - 0-30 IN HG ..... P/N 10-04797 ..... **$88.75**



WESTACH VOLTMETERS

2" round.

Range	Pat No.	Price
18-28 VOLT	10-04184	**$96.75**
15-50 VDC	10-04185	**$87.75**

WESTACH EGT/CHT COMBINATION KITS

HOMEBUILDERS ENGINE ANALYZER KITS



Complete kits include CHT or EGT gauge, selector switch and probes for each cylinder of 4 or 6 cylinder engine. EGT kits furnished with long-life #712-2DWK probes.

Kit	4 Cyl.		6Cyl.	
	Part No.	Price	Part No.	Price
14MM CHT Kit	10-17114	**$311.95**	---	---
18MM CHT Kit	---	---	10-17218	**$405.95**
EGT Kit	10-17300	**$387.95**	10-17400	**$521.00**



FUEL LEVEL GAUGES (SQUARE)

2-1/4 Non-TSO'd fuel quantity indicators available for single or dual tanks. Require 0-5Vcapacitance senders (not incl.)
Instrument (Single) ..... P/N 2A7V **$89.95**
Instrument (Dual) ..... P/N 2DA4V **$165.75**
2A7-2, 0-30 OHM ..... P/N 10-04125 ..... **$89.95**
2A7, 240-30 OHM, Uses Float Sender P/N 11-01210 ..... **$89.95**
2AHT7V, Full Sweep Meter ..... P/N 10-04121 ..... **$128.75**
Sender (6"-12"Depth) ..... P/N 10-00797 ..... **$139.75**
AP-24-D120-5V Sender (12"- 24" Depth) ..... P/N 10-03875 ..... **$139.75**
395-5-5 6" Capacitance, non-bend sender ..... P/N 10-04344 ..... **$139.75**
395-5SB-5 Sender (6"-12" Depth-Bend.) ..... P/N 10-00798 ..... **$139.75**
395-5S-1B-5 Sender (12"-24" Depth-Bend) ..... P/N 10-01262 ..... **$139.75**
AP24B5-D120-SV Sender (24", 5" bend. section) ..... P/N 10-04412 ..... **$139.75**
Capacitance sender 12" long, 3" bend section ..... P/N 10-05725 ..... **$154.75**
Capacitance sender 24" long, 3" bend section ..... P/N 10-05738 ..... **$154.75**



FUEL LEVEL GAUGES (ROUND)

2C7V, 2" Round ..... P/N 10-04119 ..... **$76.95**
22C7, 240-30 OHM, Uses Float Sender
P/N WS2C7 ..... **$83.75**
2CHT7V-5, Fuel Sweep Meter
P/N 10-04120 ..... **$97.75**



WESTACH WATER TEMPERATURE GAUGE

2A9-1 Water Temperature Gauge 100-260f, 2 1/4" square, 8-30 vdc.
2-1/4" Westach Water Temp. Gauge Only
P/N 2A9-1 ..... **$89.75**
Westach Sender #399S1 Only
P/N 10-01288 ..... **$43.50**
Westach 2-1/4" Water Temp. Gauge with Sender
P/N 10-04948 ..... **$132.95**



OUTSIDE AIR TEMPERATURE

Square Gauge ..... P/N 2A3-3 ..... **$89.75**
Round Gauge ..... P/N 10-04131 ..... **$79.95**



CARBURETOR AIR TEMP

Provides instant icing check of carburetor.
2A3-1 - 2-1/4" square, -50°C to 50°C
P/N10-01243 ..... **$96.75**
2C3-1 - 2" round, -50°C to 50°C
P/N 10-03949 ..... **$83.75**
Sending Unit - Fits 1/4-28 Thread
P/N 399W **$59.95**



COOLANT TEMPERATURE

100° to 260°F, for aircraft and helicopters using coolants other than oil. .... P/N 10-01301* ... **$89.75**
Sending Unit ..... P/N 10-01249 .... **$45.65**



HOMEBUILDERS ADD-ON KITS

Add-on kits for single-position system already installed. Consists of selector switch & 3 or 5 probes for CHT or EGT to provide analyzer for 4 or 6 cylinder engines. EGT kits furnished with long-life #712-2DWK probes.

Kit	4-Cyl.		6-Cyl.		Type "k" probe	
	Part No.	Price	Part No.	Price	Part No.	Price
CHT Kit	10-01064	**$163.95**	10-01066	**$246.95**	10-03892	**$46.99**
EGT Kit	10-01065	**$217.95**	10-01067	**$343.95**		

**** These instruments may be powered by connection to 12V battery, magneto, distributor or alternator. If installation is to be made using other than 12V electric power, order one Magneto Adapter, P/N 103-18 ($6.30) and one Fuse Adapter, P/N 10-17000 ($6.30) for each instrument. For 24V operation, order one Adapter, P/N 329-24 ($2.30) for each instrument.***

WESTACH INSTRUMENTS

MADE IN THE U.S.A



AMMETERS (SQUARE)

Westach Ammeter, amp -30-0-+30A adc, 2 1/4" square, 50 mv f/s. Model with or without shunt.

With Shunt P/N10-01267 ..... **$145.75**
Without Shunt P/N 10-04116..... **$88.75**
-60 to +60A, & #237-3A Shunt
P/N K2A6-15 ..... **Set $145.75**



WESTACH AMMETER 2A6-15 (SQUARE)

Westach Ammeter, amp -60-0-+60 adc, 2 1/4"square, 50 mv f/s.

With Shunt ..... P/N 10-01277..... **$145.75**
Without Shunt .... P/N 10-04114..... **$88.75**



WESTACH AMMETER 2C6-22 (ROUND)

Westach Ammeter, amp -30-0-30 adc, 2" round, 50 mv f/s. Note: Gauge does not include shunt. Range: -60-0-30 adc. Size: 2" round. Shunt: Model 237-30

Ammeter 2C6-22 ..... P/N 10-04108 ..... **$76.85**
Shunt #237-30 ..... P/N 10-01306 ..... **$57.75**



WESTACH AMMETER 2C6-15 (ROUND)

Westach Ammeter, amp -60-0-60 adc, 2"round, 50 mv f/s. Note: Gauge does not include shunt. Range: -60-0-60 adc. Size: 2" Round. Shunt (Not Included): Model 237-60

Ammeter 2C6-15 ..... P/N 10-04104 ..... **$76.85**
Shunt #237-60 ..... P/N 10-01298 ..... **$57.75**



HOURMETER

Power Range, 5V-40V, Record running time of engine.
P/N 2A10-2 ..... **$151.75**
No sender required.



VOLTMETERS

Check generator & alternator charging

6-16 VDC ..... P/N 2A5..... **$96.75**
0-35 VDC..... P/N 2A5-2 ..... **$88.75**
No sender required.



WESTACH 2C4-7 GAUGE

Boost 0-30 psi, 2-Inch round, with 220-9, 203-17, 203-21
P/N 10-04155 ..... **$75.50**

SELECTOR SWITCHES





These switches are used with the Westach CHT, EGT, or CHT/EGT gauges to allow multiple cylinder engine analyzing. Switches included with Engine Analyzer kits & Add-On kits on following pages, or can order separately below. Non-TSO'd. These switches have two small connectors of same size.

2-Position ..... P/N 254-2F **$39.95**
4-Position ..... P/N 254-4F **$55.75**
4-Position (Dual) ..... P/N 254-4DF* **$89.75**
6-Position ..... P/N 254-6F **$69.75**

****To convert dual EGT/CHT to Engine Analyzer.***
FAA APPROVED SWITCHES

These switches are furnished with 96" leads.

WESTACH INSTRUMENT LIGHTING

An internal lighting fixture may be added to all 2" & 3" instruments. Comes with clear bulb and red & green boots.
P/N 10-01229..... **$8.50ea**

WESTACH BULLET CONNECTORS

Bullets are used to connect sockets and sleeves together on the back of Westach instruments. P/N 10-02795..... **$0.42**

WESTACH INSTRUMENTS FOR ULTRALIGHTS







Single CHT ... 10-00419 .... **$85.85** Single EGT ..... 10-01268 ... **$82.50**
Thermocouple for CHT (14MM) ..... P/N 10-01227 ..... **$39.95**
Probe for EGT ..... P/N 10-01225 ..... **$59.95**

SINGLE TACH *(Tachometer requires no sender.)*

Model	RPM	Powered By	Part No.	Price
2CT8A-2/6	0-8000	CDI	10-01302	$147.75

DUAL TACH/CHT (All CHT's are 0-600° F)

Model	RPM	Powered By	Part No.	Price
2DC9-8A-2/6	0-8000	CDI	10-02911	$221.95

WESTACH 2DC8 DUAL CHT



Cylinder Head Temp. Range: 100-700°F. Use 48" Type J thermocouples. Input: 9.81 mv @ 400F, Weight: 2.7 oz. P/N 10-01791 ..... **$154.00**

BULLET SHELL MOUNTING CASE

FOR 2" ROUND WESTACH GAUGES



Molded plastic housing clamps to ultralite tubing or motorcycle handle bar.Swivels 360° at any angle. Furnished with chrome plated installation hardware.
P/N 10-01290..... **$23.50**



WESTACH TACHOMETERS

FOR DUAL IGNITION

2" Round ..... P/N 10-01302 ..... **$147.75**
2" Square ..... P/N 2AT8A-2/6 ..... **$164.75**
3" Square ..... P/N 3AT8A-2/6 ..... **$187.75**



WESTACH SENDER 720-14RB

Proximity sensor, Hall effect sender for Bendix mag. 9/16 - 24 thd. 5-12 VDC. Weight: 7 ounces
P/N 10-00863 ..... **$179.95**

WESTACH EXTENSION LEADS

Complete extension leads, with connector terminals, for extending CHT or EGT leads up to Complete extension leads, with connector terminals, for extending CHT or EGT leads up to 10 ft. without affecting accuracy. Longer lengths give low reading, requiring recalibration of instrument.

18" Lead .. P/N 10-17900 .. **$10.50** 4 Ft. Lead..... P/N 10-18000.. **$14.50**
6ft Lead ... P/N 10-18100 .. **$13.60** 8 Ft. Lead..... P/N 10-18200.. **$14.50**
10ft Lead . P/N 10-18300 .. **$15.50** 12 Ft. Lead... P/N 10-18350.. **$16.50**

WESTACH GAUGE WIRE EXTENSION LEADS



10' and 5', 4 wire and 2 wire "Extension Leads" ideal for quick and easy extending CHT, EGT or Tach leads with simple slide together female ends. Female connectors on both ends mate with male posts on gauge backs and sender ends. Extensions will not effect gauge readings.

10 Foot 4 Wire
P/N 15-05341..... **$25.50**
5 Foot 4 Wire
P/N 15-06258..... **$18.50**
5 Foot 2 Wire
P/N 15-06259..... **$18.50**

IN

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WESTACH INSTRUMENTS

MADE IN THE U.S.A.

2-1/4-INCH DUAL INSTRUMENTS SAVE PANEL SPACE (SUPREME SPACE SAVERS)

TWO INSTRUMENTS IN ***ONE*** 2-1/4" SIZE CASE - PERFECT FOR THE HOME BUILDER

All pressure instruments come complete w/pressure senders only (matched to instrument). On all other instruments, order senders at bottom of page.



DUAL EGT-CHT
700-1700°F EGT
100-700°F CHT
P/N 2DA1 **$164.75**



DUAL EGT 700-1700°F
P/N 2DA2 **$164.75**



DUAL OIL PRESSURE OIL TEMPERATURE
0-80 PSI/100-260°F
P/N 2DA3MM **$536.00**
Complete w/ oil pressure sender.



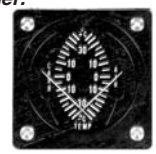
DUAL CHT
100-700°F
P/N 2DA8 **$165.75**
Celsius version
P/N 2DA8-2 **$165.75**



DUAL FUEL LEVEL
Uses capacitance type senders. 5V output.
P/N 2DA4V **$165.75**
2DA4(Old Style) E-F 240-30OHM Float **$165.75**



DUAL VOLT-AMMETER
6-16V/0-30 A
P/N K2DA10-21 **$220.95**
6-16KV/0-60 amp
P/N K2DA10-18 **$220.95**
Complete with Shunt



DUAL CARB TEMP-OUTSIDE AIR TEMP
-50° to +50° C.
P/N 2DA3-8 **$164.75**
Order 399W & 399-0T
Senders Separately

3-1/8" WESTACH GAUGES



TWIN CHT
3-1/8" Size; Wt. 10 Oz., 100-800°F
P/N 3DA8...**$188.75**
Order 2 thermocouples



TWIN EGT
3-1/8" Size, Wt. 10 Oz. 700-1700°F
P/N 3DA2...**$189.99**



COMBINATION EGT & CHT
3-1/8" size, Wt.10oz., 700-1700°F/ 100-800°F.
P/N 3DA1..**$189.95**
Order 1 EGT probe & 1 thermocuople.



RECORDING TACHOMETER
3-1/8" size Runs directly off magneto. 12V power required to run Hour Meter 0-3500 RPM ... P/N Y3AT32....**$300.95**



EGT – CHT GAUGES
3-1/8" Square EGT P/N 3A2-1 **$116.75**
Square CHT ..... P/N 3A1 ..... **$88.75**
3-1/8" Round CHT . P/N 3C1 ..... **$96.75**

All Pressure Instruments come complete with Pressure Senders only (matched to Instrument). On all other instruments order senders at bottom of page.

IN

SPACE SAVING GAUGES - THE WESTACH QUADS

Four electric instruments in one standard size 3-1/8" aircraft case. Weight - only 6 oz. Guaranteed for accuracy within 2%. 1 year warranty. Get four "like" readings or four different ones. Order Senders below except for pressure instruments.



QUAD CHT
P/N 3AQ1..**$436.00**



QUAD EGT.
P/N 3AQ2..**$368.00**



QUAD COMBO VOLTS/CHT OIL PRESS/OIL TEMP & OIL
Press. Sender Only
P/N 3AQ5MM.....**$854.00**

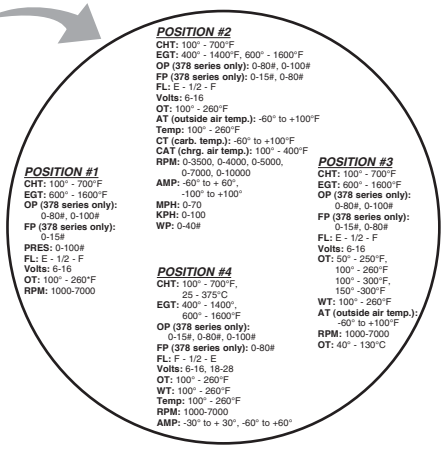


QUAD COMBO CHT/EGT OIL PRESS/OIL TEMP
P/N 3AQ4MM..**$898.00**

OTHER QUAD COMBOS AVAILABLE:

3AQ1-14 .....CHT/Volts/EGT/Amps..... **$457.00**
Quad Fuel Gauge..... WS3AQ9 ..... **$457.00**
Over 75 Quad Combos available.
Request availability of unlisted models.
****With Senders***

For custom quad gauges, request quotation & exact location of each function as shown in the diagram.



WESTACH SENDERS

EGT
712-2DWK (Long Life) 1" Tip **$59.95**
712-20DWK 1/2" Tip..... **$59.95**
712-4D (1/4" Plpe Bayonet) **$73.75**
712-4D1 (3/8"-24 for Lycomings)..... **$73.75**
712-4D6K (.8-1MM Bayonet for Rotax)..... **$83.75**
712-4D2 (1/8" NPT)..... **$73.75**
CHT
712-5W (18 MM Thermocouple) **$39.95**
712-4W (14 MM Thermocouple) **$39.95**
712-7D (3/8-24 Bayonet)..... **$81.99**
712-9W (10MM Thermocouple) **$39.95**

Oil Temp-399S7 1/8" NPT..... P/N 10-01249.....**$45.65**
Oil Temp-399S9 (cont., lyc.) ..... P/N 10-01236.....**$63.75**
Fuel Level- 6"-12" Depth ..... P/N 10-00797....**$139.75**
AP-Q12B3-D120-5V Capacitance fuel level sender 12" long ..... P/N 10-00798....**$139.75**
AP-Q24B3-D120-5V Capacitance fuel level sender 24" long..... P/N 10-01262....**$139.75**
Temp Send- 10X1.5mm thread, 1" tip, 4' lead, with crush washer 1,750 ohms @ 100F..... P/N 10-02641.....**$62.95**
Temp Send 10X1.5mm thread, 5/8" tip, 4' lead, with crush washer 1,750 ohms @ 100F..... P/N 10-02642.....**$62.95**
Westberg SS Trans-0-100 psi, 1/8" npt P/N 10-02640....**$320.00**

UL FLIGHT LINE INSTRUMENTS

UL FLIGHT LINE 2 INCH CHT GAUGE



Gauge electrical, bezel black dial, black, white, pointer red Indicating instrument electrical, black bezel, black dial, white character, pointers red.
- Front: Flat; Black
- Glass: Flat
- Pointer: Red, Hub Black, Night Design
- Dial Face: Background Dull Black,White, Red, Green
- Installation: Fixation Ring
- Operating Temperature: 50°C - 150°C / 120°F - 300°F
- Voltage: 12
- Dimension: 52 mm
- Engines: 912A, 912F, 912UL, 912S, 912ULS, 914F, 914UL
- Illumination: LED White, Dimmable

2" CHT 50-150C 150-300F ..... P/N 13-16017 ..... **$69.95**
2" CHT 50-150C 125-300F ..... P/N 13-16026 ..... **$81.75**

UL FLIGHT LINE 2 INCH FUEL LEVEL 0-4/4 UL LSA 12V DLT



Gauge electrical, bezel black dial, black, white, pointer red indicating instrument electrical, black bezel, black dial, white character, pointers red.

2" Fuel Level 0-4/4 Ul DLT3-180 ..... P/N 13-16019 ..... **$55.75**
2" Fuel Level 0-4/4 Ul DLT5-60/90 ..... P/N 13-16020 ..... **$55.75**

UL FLIGHT LINE 2 INCH PRESSURE GAUGE



Gauge electrical, bezel black dial, black, white, pointer red indicating instrument electrical, black bezel, black dial, white character, pointers red.
- Front: Flat; Black
- Glass: Flat
- Pointer: Red, Hub Black, Night Design
- Dial Face: Background Dull Black,White, Red, Green
- Installation: Fixation Ring
- Operating Temperature: 25°C - 65°C / 120°F - 300°F
- Voltage: 12
- Dimension: 52 mm
- Engines: 912A, 912F, 912UL, 912S, 912ULS, 914F, 914UL
- Illumination: LED White, Dimmable

2" Oil Pressure Gauge 0 - 10 Bar ..... P/N 13-16021 ..... **$89.95**
2" Pressure Gauge 0-10 Bar 0-145 Psi ..... P/N 13-16025 ..... **$81.75**

UL FLIGHT LINE 2 INCH TACHOMETER



Gauge electrical, bezel black dial, black, white, pointer red indicating instrument electrical, black bezel, black dial, white character, pointers red.

2" Engine Tach 0-7000 12v ..... P/N 13-16023 ..... **$227.95**
2" Rotor Tach 0-7000 12v ..... P/N 13-16024 ..... **$241.95**

UL FLIGHTLINE WING FLAP INDICATOR



Indicating Instrument Electrical. LED Backlight Technology. Stepper Motor. Low Weight. Character White. Wing Flap Sensor. Specifications: • Operating voltage: 12 • Installation diameter: 52mm • Resistance range: 3.180 • Special: MF, Option Warn-LED.

Indicator ..... P/N 10-06466 ..... **$85.95**
Angle Transmitter ..... P/N 10-06467 ..... **$71.75**

UL FLIGHT TEMP GAUGE



Gauge electrical, bezel black dial, black, white, pointer red Indicating instrument electrical, black bezel, black dial, white character, pointers red.
P/N 13-19001 ..... **$68.75**

UL FLIGHT LINE TEMP SENDER



UL Flight Line Temp Sender 150C M10x1 M10x5 T-6 T-3.
P/N 13-16029 ..... **$19.50**

UL FLIGHT LINE 2 INCH FUEL PRESSURE GAUGE



Fuel Pressure Gauge Rotax Flight Line. Gauge electrical, bezel black dial, black, white, pointer red indicating instrument electrical, black bezel, black dial, white character, pointers red.
• Front: Flat; Black • Glass: Flat • Pointer: Red, Hub Black, Night Design • Dial Face: Background Dull Black, White, Red, Green • Installation: Fixation Ring • Bar: 0 - 1 • Voltage: 12 • Dimension: 52 mm • Engines: 912A, 912F, 912UL, 912S, 912ULS, 914F, 914UL • Illumination: LED White, Dimmable
P/N 13-16022 ..... **$110.75**

UL FLIGHT LINE 2 INCH VOLTMETER



Gauge electric, incident-light, black bezel, black dial, white, pointer red Indicating instrument electrical, floodlight illumination, black bezel, black dial, white character, pointers red. 8-16V UL / LSA.
• Front: Flat; Black • Glass: Flat • Pointer: Red, Hub Black, Night Design • Dial Face: Background Dull Black, White, Red, Green • Installation: Fixation Ring • Operating Temperature: 8°C - 16°C • Voltage: 12 • Dimension: 52 mm • Engines: 912A, 912F, 912UL, 912S, 912ULS, 914F, 914UL • Illumination: LED White, Dimmable
P/N 13-16027 ..... **$81.75**

UL FLIGHT LINE FUEL PRESSURE CONNECTOR CABLE



UL Flight Line Fuel Pressure Connector Cable. • Connection: 3-wire DLPHI Packard • Engines: 912A, 912F, 912UL, 912S, 912ULS, 914F, 914UL

P/N 13-16018 ..... **$31.80**

UL FLIGHT LINE FUEL PRESSURE SENSOR



Medium petrol, diesel, AvGas, kerosene, 12V or 24V, stainless steel case medium petrol, diesel, aviation gasoline, jet fuel, housing stainless steel.
- Body: Stainless Steel
- Sensor: 0-1
- Voltage: 12V - 24V
- Engines: 912A, 912F, 912UL, 912S, 912ULS, 914F, 914UL
- Thread Fitting: M10X1

P/N 13-16028 ..... **$147.85**

UL FLIGHTLINE 2 INCH FUEL LEVEL GAUGE



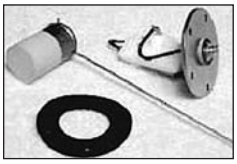
Fuel level gauge for float-operated sensor UL/LSA. Indicating instrument electrical, LED backlight technology, stepper motor, low weight, character white. ..... P/N 10-06471 ..... **$79.75**

UL FLIGHTLINE FLOAT OPERATED SENSOR RIGHT WING



Float-operated sensor. Robust passivated metal housing. Specifications: • Dimensions float-operat. sensor install. lateral: 156 / 148 / 107 • Full resistance: 180 • Empty resistance: 3 • Diameter of pitch circle and angle: 54 / 72°; 68°; 80°; 68°; 72° • Operating voltage: 6.24 • Electrical connection: DIN 6.3x0.8

Right Wing Sensor ..... P/N 10-06468 ..... **$57.75**
Left Wing Sensor ..... P/N 10-06469 ..... **$59.80**



FUEL LEVEL SENDERS

ISS Fuel Sender LH 6-12 Tank ..... P/N 10-01099 ..... **$37.60**
ISS Fuel Sender RH 6-12 Tank ..... P/N 10-01101 ..... **$37.60**
ISS Fuel Sender LH 10-15 Tank ..... P/N 10-01102 ..... **$42.95**
ISS Fuel Sender RH 10-15 Tank ..... P/N 10-01103 ..... **$41.85**
ISS Fuel Sender RH 10-15 Tank ..... P/N 10-01103 ..... **$41.85**
ISS Fuel Sender LH 15-.5-24 ..... P/N 10-01104 ..... **$44.50**
ISS Fuel Sender RH 15-.5-24 ..... P/N 10-01104 ..... **$44.50**
ISS Fuel Sender RH 27-36" Tank ..... P/N 10-01107 ..... **$57.25**
ISS Fuel Sender Gasket ..... P/N 10-01097 ..... **$1.95**
SS Wire Float Arm ..... P/N 10-01098 ..... **$6.50**

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MITCHELL INSTRUMENTS

MITCHELL AIRCRAFT INSTRUMENTS
2-1/4" ELECTRIC GAUGES

Mitchell Aircraft Instruments is a high quality, economical line of gauges which is ideal for the homebuilt aircraft market. These electric instruments are lighted, allow easy installation, and feature a 2 year factory warranty. Order gauges and senders separately as shown. 12V operation unless other wise noted. Gauges fit 2-1/4 panel hole. For 24 volt operation, order P/N PE-111-4074 Resistors ($3.50 each) for each instrument.



OIL TEMPERATURE

100-250° F Gauge..... P/N 10-25000...**$73.95**
100-250° F Sender (Rotax).. P/N 10-25005...**$53.75**
100-250° F Sender (LYC)..... P/N 10-25175...**$39.95**
120-300° F Gauge..... P/N 10-25010...**$66.75**
120-300° F Sender (Rotax).. P/N 10-25015...**$19.95**
120-300° F Sender (LYC)..... P/N 10-25180...**$39.95**

Rotax Senders are 1/8-18 NPT, Lycoming Senders are 5/8-18 VNF.



OIL PRESSURE

0-80 PSI Gauge.....P/N 10-25030 ...**$53.75**
0-80 PSI Sender.....P/N 10-25035 ...**$39.95**
0-100 PSI Gauge.....P/N 10-25040 ...**$53.75**
0-100 PSI Sender.....P/N 10-25045 ...**$39.95**
0-145 PSI Gauge use with Rotax sender.
P/N 10-03928 ...**$76.50**
0-150 PSI Gauge.....P/N 10-25050 ...**$53.75**
0-150 PSI Sender.....P/N 10-25055 .. **$39.95**



FUEL PRESSURE

0-30 PSI Gauge .....P/N 10-25060 ...**$66.75**
0-30 PSI Sender.....P/N 10-25065 ...**$39.95**
0-15 PSI Gauge.....P/N 10-25058 ...**$66.75**
0-15 PSI Sender.....P/N 10-25065 ...**$39.95**



EXHAUST GAS TEMPERATURE

0-1600°F EGT Gauge ..... P/N 10-02746 ....**$106.95**

KIT - Includes Sender, Weld-on adapter and 6 Ft. Lead with/ connector. 0-1600 EGT kit
P/N 10-25090 ....**$146.75**



CYLINDER HEAD TEMPERATURE

120-300F Gauge.....P/N 10-02717 ...**$59.75**
18MM Sender (Cont, Lyc)...P/N 10-25075 ...**$25.50**
14MM Sender (VW, Rotax).P/N 10-25080 ...**$14.75**
10 Ft. CHT Lead w/connector
P/N 10-25185 .....**$9.85**

MITCHELL 2-1/4" MECHANICAL GAUGES



OIL TEMPERATURE

110 - 270 F. 6 foot capillary supplied
P/N 10-02714 .....**$53.75**



OIL PRESSURE

0-100 PSI .....P/N 10-02706 ..... **$53.75**
0-150 PSI .....P/N 10-02712 ..... **$53.50**



FUEL PRESSURE

0-15 PSI.....P/N 10-02702 .....**$53.75**



MITCHELL D1-112-5240
ROTAX 912 TACHOMETER

Mitchell 2-1/4 Inch Mechanical Recording. FAA-TSO Approved. D1-112-5240 Special-Rotax 912
P/N 10-02744 ..... **$249.95**



AMMETER

60-0-60 Ammeter
P/N 10-25115 .....**$68.75**
P/N 10-01212 (30-0-30)**$53.75**



VOLTMETER

P/N 10-25105 (8-16V) **$53.75**
P/N 10-02747 (12-31V) **$65.95**
No Sender required.



OUTSIDE AIR TEMPERATURE

2-1/4" -10°F to +120°F
P/N 10-02715 .....**$122.95**



OUTSIDE AIR TEMPERATURE

2-1/4" Electric -25°C to +45°C
P/N 10-03137 .....**$149.75**
Sender..... P/N 10-02170..**$18.75**

GAUGE WIRING KIT

Fits all 2-1/4" Mitchell Gauges
P/N 10-02724 ..... **$6.50**



FUEL LEVEL

P/N 10-25130(10-180 OHM) .**$73.75**
P/N 10-02719(0-90 OHM) **$66.90**
P/N 10-02721(0-30 OHM) **$73.75**
P/N 10-02722(240-33 OHM) .**$67.75**
10-180 ohm Sender
P/N 10-25135 .....**$53.75**
0-90 ohm Sender
P/N 10-02172 .....**$53.75**
240-33 ohm Sender
P/N 10-02173 .....**$53.50**



TURBO

Mechanical Turbocharger Gauge. Gauge is mechanical. No sender required. P/N 10-25140 .... **$53.50**



CYLINDER HEAD TEMP GAUGE

For Rotax 120-300°
P/N 10-02717 .....**$59.75**
Sender: Probe Supplied w/ Rotax Engine.

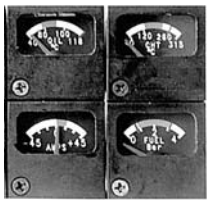


ROTAX OIL PRESSURE PRESSURE

2-1/4" Electric 24V 0-150 PSI
P/N 10-03928 .....**$76.50**
For use with Rotax Senders.

IN

MITCHELL MINIATURE MODULAR GAUGES



This line of miniature engine gauges from Mitchell is ideal for a wide variety of general aviation applications. They measure nearly 1.5" square and are stackable. The modular design allows them to be plugged from the front of the panel. The units are internally lighted. Complete standard panels are also available as shown in the steps below. All modular gauges after April 03, 2017 feature a new connector configuration. New style gauges will fit into existing frames but require changing the mating connector plate. Previous style connectors are now obsolete and no longer available.

Step 1 - Select your gauge(s) from the list below

Choose 14 volt or 24 volt

Note range marking for gauge(s) (free if information given at time of instrument cluster order)

Step 2 - Select your sendor(s) for gauge(s) from the list below

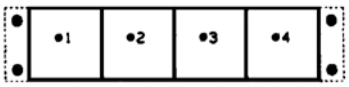
Any sendor with a * can also use a Rotax Engine Sender

Gauge Part Number		Gauge Description	Price	Sender Part Number		Sender Description	Price
Spruce #	Mitchell #			Spruce #	Mitchell #		
Pressure Gauges				**Pressure Senders**			
10-03621	D1-211-6060	Fuel Pressure 80 PSI	**$98.95**	10-25035	PS-211-9002	Pressure Sender 80 PSI	
10-10150	D1-211-6061	Fuel Pressure 15 PSI (FAA/PMA)	**$98.95**	10-25065	PS-211-9000	Pressure Sender 15/30 PSI (FAA/PMA)	**$39.95**
10-10152	D1-211-6064	Fuel Pressure 30 PSI	**$98.95**	10-25065	PS-211-9000	Pressure Sender 15/30 PSI	**$39.95**
10-04094	D1-211-6065	0 – 2 bar Fuel	**$125.95**	10-25065	PS-211-9000	Pressure Sender 15/30 PSI	**$39.95**
10-04139	D1-211-6097	Oil Pressure 150 PSI 10Bar	**$98.75**	**Rotax engine Sender**			
10-02725	D1-211-6092	Oil Pressure 150 PSI (FAA/PMA)	**$98.95**	10-25055	PS-211-9040	Pressure Sender 150 PSI (FAA/PMA)	**$39.95**
10-10166	D1-211-6090	Oil Pressure 100 PSI (FAA/PMA)	**$98.95**	10-25045	PS-211-9039	Pressure Sender 100 PSI (FAA/PMA)	**$39.95**
10-02726	D1-211-6093	Oil Pressure 80 PSI	**$98.95**	10-25035	PS-211-9002	Pressure Sender 80 PSI	**$39.95**
10-10168	D1-211-60…91	0 – 9 bar Oil	**$100.00**	10-25055	PS-211-9040	Pressure Sender 150 PSI	**$39.95**
10-04095	D1-211-6094	0 – 7 bar Oil	**$98.95**	10-25045	PS-211-9039	Pressure Sender 100 PSI	**$39.95**
10-04096	D1-211-6095	0 – 5 bar Oil	**$125.95**	10-25035	PS-211-9002	Pressure Sender 80 PSI	**$39.95**
10-02723	D1-211-6089	Liquid Pressure 80 PSI	**$98.95**	10-25035	PS-211-9002	Pressure Sender 80 PSI	**$39.95**
Temperature Gauges				**Temperature Sendors**			
10-02279	D1-211-6068	Oil Temp 100F-250F (FAA/PMA)	**$93.50**	10-25005	PS-211-8044	Temp Sender 1/8 250F (FAA/PMA)	**$53.75**
				10-25175	PS-211-8045	Temp Sender 5/8 250F (FAA/PMA)	**$39.95**
10-10154	D1-211-6066	Oil Temp 120F-300F (FAA/PMA)	**$93.75**	10-25015*	PS-211-8090	Temp Sender 1/8 300F (FAA/PMA)*	**$19.95**
				10-25180*	PS-211-8112	Temp Sender 5/8 300F (FAA/PMA)*	**$39.95**
10-10155	D1-211-6067	Oil Temp 40C-120C	**$93.50**	10-25005	PS-211-8044	Temp Sender 1/8 250F	**$53.75**
				10-25175	PS-211-8045	Temp Sender 5/8 250F	**$39.95**
10-02728	D1-211-6069	Oil Temp 50C-150C	**$93.50**	10-25015*	PS-211-8090	Temp Sender 1/8 300F*	**$19.95**
				10-25180*	PS-211-8112	Temp Sender 5/8 300F*	**$39.95**
10-10156	D1-211-6088	Liquid Temp 100F-250F	**$93.50**	10-25005	PS-211-8044	Temp Sender 1/8 250F	**$53.75**
				10-25175	PS-211-8045	Temp Sender 5/8 250F	**$39.95**
10-02746	D1-211-6101	EGT 0F-1600F	**$106.95**	10-02177	PS-211-8163	EGT Sender clamp - type K	**$38.95**
				10-04140	PS-211-8165	EGT Sender Probe - type K	**$44.50**
10-10170	D1-211-6102	CHT 100F-600F	**$106.95**	10-25080	PS-211-8152	CHT Sender 14mm - type J	**$14.75**
				10-02171	PS-211-8154	CHT Sender 12mm - type J	**$14.70**
				10-25075	PS-211-8168	CHT Sender 18mm - type J	**$25.50**
				10-25076	PS-211-8156	CHT Sender probe	**$94.75**
				10-25080	PS-211-8152	CHT Sender 14mm - type J	**$14.75**
				10-02171	PS-211-8154	CHT Sender 12mm - type J	**$14.70**
				10-25075	PS-211-8168	CHT Sender 18mm - type J	**$25.50**
				10-25076	PS-211-8156	CHT Sender probe	**$94.75**
10-02745	D1-211-6109	CHT Rotax 120F-300F	**$86.75**	Rotax engine Sender			
Voltmeter Gauges							
10-10164	D1-211-6086	Voltmeter 8-16 volts (FAA/PMA	**$86.75**				
10-10165	D1-211-6087	Voltmeter 12-31 volts	**$86.75**				
Ammeters Gauges				**External Shunts**			
10-10174	D1-211-6104	ammeter 45-0-45 amp	**$106.95**	10-10184	PS-211-9100	45 amp shunt	**$42.75**
10-10176	D1-211-6106	ammeter 75-0-75 amp (FAA/PMA)	**$105.95**	10-10185	PS-211-9101	75 amp shunt (FAA/PMA)	**$42.95**
Fuel Quantity Gauges				**Sender Resistance (E- F)**			
10-02730	D1-211-6071	right Fuel 240-30 omh	**$86.75**	240 - 33 Ohms			
10-03610	D1-211-6072	left Fuel 240-33 ohm	**$86.75**	240 - 33 Ohms			
10-03613	D1-211-6073	Fuel gauge 240-33 ohm	**$86.75**	240 - 33 Ohms			
10-10158	D1-211-6074	right Fuel 10-180 omh (FAA/PMA)	**$86.75**	10-25135	PS-211-8038	Fuel Sender 10-180 ohm (FAA/PMA)	**$53.75**
10-10160	D1-211-6075	left Fuel 10-180 ohm (FAA/PMA)	**$86.75**	10-25135	PS-211-8038	Fuel Sender 10-180 ohm (FAA/PMA)	**$53.75**
10-10162	D1-211-6076	Fuel gauge 10-180 ohm (FAA/PMA)	**$86.75**	10-25135	PS-211-8038	Fuel Sender 10-180 ohm (FAA/PMA)	**$53.75**
10-03614	D1-211-6077	right Fuel 0-30 ohm	**$105.95**	0 - 30 Ohms			
10-03615	D1-211-6078	left Fuel 0-30 ohm	**$105.95**	0 - 30 Ohms			
10-03616	D1-211-6079	Fuel gauge 0-30 ohm	**$105.95**	0 - 30 Ohms			
10-03617	D1-211-6080	right Fuel 0-92 ohm	**$86.75**	0 - 92 Ohms			
10-03618	D1-211-6081	left Fuel 0-92 ohm	**$86.75**	0 - 92 Ohms			
10-03620	D1-211-6082	Fuel gauge 0-92 ohm	**$86.75**	0 - 92 Ohms			
Blank							
10-02740	D1-211-6010	blank face gauge (FAA/PMA)	**$46.75**				

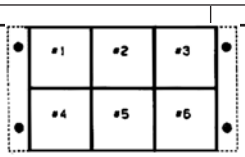
Step 3 - Select your frame for your gauge(s) from the list below

Select what postion your gauge(s) will go into. Postions are counted left to right (block style), top to bottom (vertical) starting at #1





Horizontal or Vertical Style



Block Style

Spruce #	Mitchell #	Gauge Capacity	Configuration	Price
10-02964	PM-211-9811	1 Gauge	1 Gauge	**$53.50**
10-04084	PM-211-6826	2 Gauges	1 Wide 2 High	**$57.95**
10-02739	PM-211-6808	2 Gauges	2 Wide 1 High	**$57.95**
10-04083	PM-211-6824	3 Gauges	1 Wide 3 High	**$64.95**
10-04079	PM-211-6809	3 Gauges	3 Wide 1 High	**$64.95**
10-04020	PM-211-6825	4 Gauges	2 Wide 2 High	**$71.95**
10-04082	PM-211-6823	4 Gauges	1 Wide 4 High	**$71.95**
10-01710	PM-211-6805	4 Gauges	4 Wide 1 High	**$71.95**
10-04080	PM-211-6810	5 Gauges	1 Wide 5 High	**$78.75**
10-01711	PM-211-6806	5 Gauges	5 Wide 1 High	**$78.75**
10-02738	PM-211-6807	6 Gauges	1 Wide 6 High	**$85.75**
10-01712	PM-211-6804	6 Gauges	6 Wide 1 High	**$85.75**
10-01708	PM-211-6803	6 Gauges	3 Wide 2 High	**$85.75**

Spruce #	Mitchell #	Gauge Capacity	Configuration	Price
10-04097	PM-211-6802	6 Gauges	2 Wide 3 High	**$85.75**
10-04081	PM-211-6822	7 Gauges	1 Wide 7 high	**$92.95**
10-04091	PM-211-6833	7 Gauges	7 Wide 1 High	**$106.95**
10-04090	PM-211-6832	8 Gauges	8 Wide 1 High	**$106.95**
10-01709	PM-211-6801	8 Gauges	1 Wide 8 High	**$98.95**
10-03915	PM-211-6800	8 Gauges	2 Wide 4 High	**$98.95**
10-04089	PM-211-6831	9 Gauges	9 Wide 1 High	**$114.50**
10-04085	PM-211-6827	9 Gauges	3 Wide 3 High	**$114.50**
10-04087	PM-211-6829	10 Gauges	2 Wide 5 High	**$121.95**
10-04086	PM-211-6828	10 Gauges	5 Wide 2 High	**$121.95**
10-04088	PM-211-6830	12 Gauges	2 Wide 6 High	**$142.95**
10-04092	PM-211-6835	15 Gauges	5 Wide 3 High	**$157.95**

Prices Subject to Change Without Notice

SWIFT ENGINE GAUGES

SWIFT TACHOMETERS




Swift Gauge Tachometers feature both clockwise and standard pointer type configurations. Swift Gauge Universal Tachometers can be used for both point and Ducati ignitions.

Size"	Description	Model	Range	Part No.	Price
2	Standard Pointer Type Tach.	TR-001D	0-8000 RPM CDI	10-00831	$54.95
2	Standard Pointer Type Tach."	TR-003	"0-8000 RPM Univer-sal Point and CDI"	10-01615	$56.75
2-1/4	Standard Pointer Type Tach.	T2-001U	0-8000 RPM Univer-sal Point and CDI	10-00816*	$61.95
2-1/4	Standard Pointer Type Tach.	T2-004	"0-8000 RPM For MZ 202 Engine"	10-04039	$69.95
3-1/8	Standard Pointer Type Tach.	T3-001U	"0-8000 RPM Univer-sal Point and CDI"	10-00817*	$75.75
2-1/4	Standard Pointer Type Tach.	R280D	0-8000 RPM Ducatti Ignition	10-00818	$59.75

*Works with Rotax-point & CDI Ignition, but not 912/914 engines.

SWIFT CHT GAUGES




Swift Gauge Cylinder Temperature Gauges work with most 2 cycle 2 cylinder engines.

Size"	Description	Model	Range	Part No.	Price
3 1/8	GaugevCHT / CHT Dual	C3-002	100-700ºF / 100-700ºF	10-02280	$79.95
3 1/8		C3-002C	0-340ºC / 0-340ºC	10-02281	$74.00
2 1/4		C2-002	100-700ºF / 100-700ºF	11-03960	$61.50
2 1/4		C2-002C	0-340ºC / 0-340ºC	10-01421	$61.75
2 Round		CR-002	100-700ºF / 100-700ºF	10-00486	$54.95
2 Round		CR-002C	0-340ºC / 0-340ºC	10-01416	$54.95
3 1/8	Gauge CHT Single	C3-001	100-700ºF	10-02283	$48.00
3 1/8		C3-001C	0-340ºC	10-02284	$49.95
2 1/4		C2-001	100-700ºF	11-03958	$34.50
2 1/4		C2-001C	0-340ºC	11-03959	$64.75
2 1/4		--	120-300ºF	10-06457	$49.95
2 Round		CR-001	100-700ºF	10-01412	$28.75
2 Round		CR-001C	0-340ºC	10-01413	$28.75
10 x 1.5 mm	CHT Sender	CP-001	Screw-in type, 4 feet metal shield wire	10-04051	$45.75
10mm		CP-010	10mm dia. ring, 4 ft metal shield wire	10-01438	$13.50
12mm		CP-012	12mm dia. ring, 4 ft metal shield wire	10-02286	$13.50
14mm		CP-014	14mm dia. ring, 4 ft metal shield wire	10-02287	$13.50
18mm		CP-018	18mm dia. ring, 4 ft metal shield wire	10-02288	$13.50

SWIFT EGT GAUGES




Size"	Description	Range	Part No.	Price
3 1/8	EGT / EGT Dual"	700-1700ºF / 700-1700ºF	10-02290	$74.00
3 1/8		200-900ºC / 200-900ºC	10-02291	$79.85
2 1/4		700-1700ºF / 700-1700ºF	10-00487	$59.85
2 1/4		200-900ºC / 200-900ºC	10-02292	$60.75
2		700-1700ºF / 700-1700ºF	10-01453	$54.95
2		200-900ºC / 200-900ºC	10-01454	$54.95
3 1/8	EGT Single"	700-1700ºF	10-02289	$49.95
3 1/8		200-900ºC	10-02293	$49.95
2 1/4		700-1700ºF	10-01457	$34.50
2 1/4		200-900ºC	10-01450	$57.75
2		700-1700ºF	10-01449	$28.85
2		200-900ºC	10-01458	$39.95
8X1.0mm	EGT Sender"	"8X1.0mm Screw-in Style 4 Feet Metal Shield Wire"	10-00489	$28.50
Clamp		"1"" - 1-3/4"" Clamp Style 4 Feet Metal Shield Wire"	10-02294	$25.50
Clamp		"1-1/4"" - 2"" Clamp Style 4 Feet Metal Shield Wire"	10-00488	$25.50

SWIFT GAUGE 2 1/4 INCH VOLTMETER 8-16V



Swift Gauge 2 1/4" Voltmeter. Colored dial markings with illuminated pointer. The graduation spacings of the scale at both ends have been reduced, making it easier to read in the range of 10 to 14 volts. Size: 2 1/4". Range: 8-16V. Similar to Falcon Gauge.

P/N 10-06456.....$49.95



SWIFT COMBINATION GAUGES

Swift Gauge Temperature Gauges work with most 2 cycle 2 cylinder engines.

Size"	Description	Range	Part No.	Price
3 1/8	CHT / EGT	100-700ºF / 700-1700ºF Square	10-02794	$79.95
3 1/8		0-340ºC/ 400-900ºC	10-02296	$79.95
3 1/8	EGT / TACH	700-1700ºF / 0-8000 RPM	10-02297	$110.00
3 1/8	CHT / TACH	0-340ºC / 0-8000 RPM	10-02314	$127.75
2 1/4	CHT / EGT	100-700ºF / 700-1700ºF Square	10-01404	$61.50
2 1/4		0-340°C/400-900°C Square	10-01405	$61.50
2 1/4	CHT / TACH	100-700ºF / 0-8000 RPM	10-02317	$82.75
2 1/4		0-340ºC / 0-8000 RPM	10-02318	$92.50
2	CHT / EGT	100-700ºF / 700-1700ºF	10-01400	$54.95
2		0-340ºC/ 400-900ºC	10-01401	$59.95
2	CHT / TACH	0-8000 RPM/ 340ºC	10-04034	$89.95
2	EGT / TACH	0-8000 RPM/ 400-900ºC	10-04036	$89.95
2-1/4	EGT / TACH	0-8000 RPM/ 700-1700ºF	10-04049	$115.75
2-1/4	EGT / TACH	0-8000 RPM/ 375-925ºC	10-04050	$115.75



SWIFT WATER TEMPERATURE / PRESSURE & OIL TEMPERATURE/ PRESSURE GAUGES

Size"	Description	Model	Range	Part No.	Price
2-1/4	Water Temp.	WT-001	100-260ºF / 40-120ºC	10-02320	$34.50
2 Rnd.		WT-001R	100-260ºF / 40-120ºC	10-02321	$28.75
2 Rnd.	Oil Temp.	OT-001R	120-300ºF / 50-150ºC	10-03404	$49.95
2-1/4		OT-001	120-300ºF / 50-150ºC	10-03403	$34.50
2 Rnd.	Oil Pressure	OP-060-001R	60 PSI	10-04063	$65.75
2-1/4		OP-080-001	80 PSI	10-04060	$67.75
2-1/4		OP-100-001	100 PSI	10-04058	$67.75
2 Rnd.	Oil Press / Oil Temp. Dual	OPT080-001R	120-300ºF / 80 PSI	10-04052	$54.95
2-1/4		OPT080-002	120-300ºF / 80 PSI	10-04054	$59.95
2 Rnd.		OPT100-001R	120-300ºF / 100 PSI	10-04053	$59.95
2-1/4		OPT100-002	120-300ºF / 100 PSI	10-04055	$60.75
2-1/4		OPT06-002C	50-150°C/6kg/cm2	10-04066	$60.75
-	Oil Pressure Transducer	SP-150PV	0-150 PSI, 10 Bar 5V	10-04056	$33.65
-		SP-100PV	0-100 PSI, 7 Bar 5V	10-04057	$33.65
2-1/4	Dual Oil Temp	PT2-7K15C	50-150C, 7kg	10-04064	$166.75
2		PT1-7K15C	50-150C, 6kg	10-04065	$118.80
2-1/4		PT2-6K15C	50-150C, 6kg	10-04066	$60.75
2		PT1-6K15C	50-150C, 6kg	10-04068	$118.75
"1/8"" NPT"	"1/8"" NPT Oil Temp.	OTS-001	"1/8"" NPT Oil Temp. Sender"	10-03406	$13.50
10X 1.5mm	Oil Temp. Sender	OTS-002	"Oil Temp. Sender For Rotax 914, 912"	10-03407	$15.85
5/8"	Lyc. Oil Temp. Sender	OTS-03	For Gauges 10-03403/10-03404	10-05840	$18.95



SWIFT FUEL QUANTITY INDICATOR

The Swift Gauge Fuel quantity indicator's resistance Empty R=240 Ohms Full R=40 Ohms. The Swift Gauge Fuel quantity sender is electronic capacitance type. 12" can be cut down to 9.5" 24" can be cut down to 12.5"

Size"	Description	Model	Part No.	Price
2-1/4	Single Gauge, 5V Input	F2-001-5	10-02264	$34.50
2-1/4	Dual Gauge, 5V Input	F2-002-5	10-02265	$58.95
2 Round	Single Gauge, 5V Input	FR-001-5	10-03873	$28.75
2 Round	Dual Gauge, 5V Input	FR-002-5	10-03874	$53.75
12"	FP-012-5 Bendable Sender, 5V Output	FP-012-5	10-03419	$57.75
24"	FP-024-5 Bendable Sender, 5V Output	FP-024-5	10-03421	$60.75
2"	Dual Fuel level 5V w/Alarm	DF1-VA	10-04034	$89.95
2-1/4"	Dual Fuel level 5V w/Alarm	DF2-VA	10-04036	$89.95
2-1/4"	12" Cap Fuel Level Sender, Bendable	SF-12A	10-04046	$61.75
2-1/4"	24" Cap Fuel Level Sender, Bendable	SF-24A	10-04047	$64.75

SWIFT ENGINE GAUGE EXTENSION CABLES

Swift Gauge extension wire is used to lengthen the existing wire that comes with engine gauges. It is temperature compensated wire. Available in lengths of 4-10 ft, 2 or 4 conductors. Pins must be crimped onto wire.

Size	Model No.	Description	Part No.	Buy
4'	Wire-042	2 Conductor, 4 Feet	10-02339	$5.75
4'	Wire-044	4 Conductor, 4 Feet	10-02340	$8.95
6'	Wire-062	2 Conductor, 6 Feet	10-02341	$8.95
6'	Wire-064	4 Conductor, 6 Feet	10-02342	$11.85
8'	Wire-082	2 Conductor, 8 Feet	10-02344	$11.85
8'	Wire-084	4 Conductor, 8 Feet	10-02345	$13.85
10'	Wire-102	2 Conductor, 10 Feet	10-02346	$13.85
10'	Wire-104	4 Conductor, 10 Feet	10-02347	$17.85

IN

Swift Gauges are made in China.

SWIFT ENGINE GAUGES

SWIFT TACHOMETER



2-1/4"



3-1/8"

Size	Description	Range	Part No.	Prce
2-1/4"	Tach Ducati Engine	0-8000 RPM	10-00818	$59.75
2-1/4"	Engine Tach	0-3500 RPM	10-06336	$77.75
2-1/4"	Engine Tach w/ Hourmeter	0-3500 RPM	10-06337	$104.90
2-1/4"	Rotor Tach	700 RPM	10-06338	$82.25
2-1/4"	Rotax 912/914 Tach	0-7000 RPM	10-06339	$76.75
2-1/4"	Rotax 912/914 Tach w/ Hourmeter	0-7000 RPM	10-06340	$104.90
2-1/4"	Rotax 582 Hirth Tach	0-8000 RPM	10-06341	$76.75
2-1/4"	Rotax 582 Hirth Tach w/ Hourmeter	0-8000 RPM	10-06342	$104.90
3-1/8"	Engine Tach	0-3500 RPM	10-06343	$90.75
3-1/8"	Engine Tach w/ Hourmeter	0-3500 RPM	10-06344	$117.95
3-1/8"	Rotax 912/914 Tach	0-7000 RPM	10-06345	$89.95
3-1/8"	Rotax 912/914 Tach w/ Hourmeter	0-7000 RPM	10-06346	$118.75

SWIFT DUAL FUEL LEVEL GAUGES



2-1/4"



Cap Fuel Level Sender

Size	Description	Range	Part No.	Prce
2"	Dual Fuel Level w/ Alarm	0-5V	10-04044	$57.75
2-1/4"	Dual Fuel Level w/ Alarm	0-5V	10-03418	$63.75
12"	Cap Fuel Level Sender - Bendable, Can Cut Alarm	-	10-04046	$61.75
24"	Cap Fuel Level Sender - Bendable, Can Cut Alarm	-	10-04047	$64.75

SWIFT AMMETERS







Size	Description	Range	Part No.	Prce
2"	Ammeter	60A-0-60A	10-05843	$66.75
2-1/4"	Round Ammeter	+/- 60A	10-05842	$99.75
2-1/4"	Round Ammeter	60A-0-60A 6-16V	10-03414	$149.00



SWIFT MANIFOLD PRESSURE GAUGE

Swift MAP2-50 Integrates the Highly Reliable MEMS Sensor: Precise, Durable Wide Voltage Supply Range 9-30 VDC. 10-50 inch Hg ABS. Colored Dial Markings. Size: 2 1/4".

P/N 10-06454.....$134.75

SWIFT TACH/CHT/EGT GAUGES



2"



2-1/4"

Size	Description	Range	Part No.	Prce
2-1/4"	Round Tach CHT	0-8000 RPM/ 340ºC	10-04034	$89.95
2-1/4"	Round Tach CHT	0-8000 RPM/ 100-700ºF	10-01626	$79.95
2-1/4"	Round Tach CHT/ EGT	0-8000 RPM/ 400-900ºF	10-04036	$89.95
2-1/4"	Tach /EGT	0-8000 RPM/ 700-1700ºF	10-04049	$115.75
2-1/4"	Tach /EGT	0-8000 RPM/ 375-925ºC	10-04050	$115.75
2-1/4"	CHT Compatable with J Type Probes	50-150ºC / 120-300ºF	10-06333	$48.50
2-1/4"	CHT Compatable with Rotax Sensors	50-150ºC / 120-300ºF	10-06334	$48.50
2-1/4"	Oil Pressure	0-10 BAR / 145 PSI	10-06335	$53.95

SWIFT OIL TEMP GAUGES



2-1/4"

Size	Description	Range	Part No.	Prce
2-1/4"	Oil Temp.	50-150ºC/120-300ºF	10-06347	$48.50
2"	Dual Oil Temp	50-150ºC / 6KG	10-04068	$118.75
2"	Dual Oil Temp	50-150ºC / 7KG	10-04065	$118.80
2-1/4"	Dual Oil Temp	50-150ºC / 7KG	10-04064	$166.75

SWIFT OIL PRESSURE GAUGES



2-1/4"

Size	Description	Range	Part No.	Prce
2-1/4"	Oil Pressure	0-10 BAR / 145 PSI	10-06335	$53.95
-	Oil Pressure Sensor	0-100 PSI / 7 Bar / 0.5-4.5V	10-04057	$33.65
-	Oil Pressure Sensor	0-150 PSI / 10 Bar / 0.5-4.5V	10-04056	$33.65

SWIFT SPEED SENSORS



Model Number	Dimensions	Description	Part Number	Price
SS1-M12P	12×60	Proximity, -500Hz, NPN, N.O.	10-06275	$15.85
SS1-M12H	12×26	Hall effect, -1000Hz, NPN, N.O.	10-06277	$21.75
SS1-M18P	18×68	Proximity, -500Hz, NPN, N.O.	10-06278	$21.75
ST-4128-4	1/4"-28 Thread, 1/4" Tip, 58" Leads	Temp probe - Screw in PT100 Thermistor -400-180°F/-40-80°C	10-06276	$25.50

IN

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MGL VEGA AIRSPEED INDICATOR



Measures airspeed from 16mph to 250mph and is well suited to slow aircraft due to very good sensitivity and linearity at low air speeds. Includes a flight timer since takeoff. Airspeed units can be set to miles per hour (mph), kilometer per hour (km/h) or knots (kts). Analog tape with programmable ranges for Vs0, Vs1, Vfe, Vno and Vne. Contains a programmable Vs and Vne airspeed alarm output. Records maximum airspeed reached in permanent memory.
P/N 11-15989.....**$370.00**

MGL VEGA ALT-5 ALTIMETER / VSI



An internal high accuracy 24 bit digital altitude sensor calculates altitude from –1000 ft up to a maximum of 35000 ft (-304m to 10668m). The ALT-5 outputs various formatted RS232 serial data protocols compatible with serial input transponders such as that from Garmin, Magellan, Northstar, Trimble, Microair etc. Provides a parallel Gillham code interface for transponders when used in combination with the MGL Avionics CNV-ALT. Built in encoder test function. The altimeter can display altitude in feet or meters. Local pressure can be set in millibars or inches of mercury. Contains a wide range VSI indicator from +/-20 ft/min to as high as +/-10000 ft/min. VSI units can be in feet/minute (ft/min) or in meters/second (m/s). User .
P/N 11-15988.....**$375.00**

MGL VEGA ASV-1 ALTIMETER / ASI / VSI



An internal high accuracy 24 bit digital altitude sensor calculates altitude from –1000 ft up to a maximum of 35000 ft (-304m to 10668m). The ASV-1 outputs various formatted RS232 serial data protocols compatible with serial input transponders such as that from Garmin, Magellan, Northstar, Trimble, Microair etc.. Provides a parallel Gillham code interface for transponders when used in combination with the MGL Avionics CNV-ALT. Built in encoder test function. The altimeter can display altitude in feet or meters. Local pressure can be set in millibars or inches of mercury. Contains a wide range VSI indicator from +/-20 ft/min to as high as +/-10000 ft/min. VSI units can be in feet/minute (ft/min) or in meters/second (m/s). Measures airspeed from 16mph to 250mph and is well suited to slow aircraft due to very good sensitivity and linearity at low air speeds. Includes a flight timer since takeoff. Airspeed units can be set to miles per hour (mph), kilometer per hour (km/h) or knots (kts). Contains a programmable Vs and Vne airspeed alarm output. Records maximum airspeed reached in permanent memory.
P/N 11-15990.....**$425.00**

MGL VEGA AHRS-1 COLOR AHRS COMPASS DISPLAY



Compass with slip indicator (requires MGL Avionics SP-6 sensor package). Horizon with optional slip, turn indicator & G-Force (requires MGL Avionics SP-7/9 sensor package). Turn and bank indicator (requires MGL Avionics SP-7/9 sensor package). Combined compass and horizon display with bank indicator, slip indicator & G-Force (requires MGL Avionics SP6 & SP-7/9 sensor package). Can be setup as an individual compass display, artificial horizon or both. The AHRS-1 / MAG-1 is connected to the AHRS / Compass sensor packages by a simple CAN bus interface. This allows for the optimum placement of the sensor packages in the aircraft. More then one AHRS-1 unit can be connected onto the CAN bus. This allows the compass, artificial horizon and the turn and bank indicator to be displayed on different units. G-Force indicator (MGL Avionics SP7 required).
P/N 11-15983.....**$295.00**

MGL VEGA MAP-3 MANIFOLD PRESSURE / RPM TEMP



Advanced fuel computer with various modes of operation. Supports single or dual fuel tanks. The FF-4 can connect to one or two fuel flow senders, fuel level senders or fuel injectors. The FF-4 can connect to a single fuel pressure sender. Differential fuel flow calculations are also supported for fuel return systems. The FF-4 has the ability to connect to a NMEA enabled RS232 GPS receiver for range based calculations. It can also accept a manually entered estimate cruising speed if a GPS is not available.. Standard automotive fuel level senders can be used, even with odd shaped tanks due to a comprehensive, multi-point calibration system. External RDAC interfacing via the CAN bus. An external output activates when an alarm condition has been reached.
P/N 11-15992.....**$365.00**

MGL VEGA FF-4 FUEL COMPUTER



Advanced fuel computer with various modes of operation. Supports single or dual fuel tanks. The FF-4 can connect to one or two fuel flow senders, fuel level senders or fuel injectors. The FF-4 can connect to a single fuel pressure sender. Differential fuel flow calculations are also supported for fuel return systems. The FF-4 has the ability to connect to a NMEA enabled RS232 GPS receiver for range based calculations. It can also accept a manually entered estimate cruising speed if a GPS is not available. Standard automotive fuel level senders can be used, even with odd shaped tanks due to a comprehensive, multi-point calibration system. External RDAC interfacing via the CAN bus. An external output activates when an alarm condition has been reached.
P/N 11-15991.....**$315.00**

MGL VEGA RPM-1 UNIVERSAL ENGINE / ROTOR RPM INDICATOR



Single or dual RPM display screens. Dedicated dual rotor / engine tachometer Includes a settable Hobbs meter which is password protected. Includes an engine running and flight timer. Includes a programmable maintenance timer for scheduled routine engine maintenance. Includes a magneto check function. Records maximum RPM reached for each channel. External RDAC interfacing via the CAN bus. An external output activates when a high alarm condition has been reached.
P/N 11-15993.....**$295.00**

MGL VEGA TC-4 THERMOCOUPLE EGT / CHT INDICATOR



5 different temperature display screens. Supports J, K and E type thermocouple probes. Temperatures can be displayed in ºC or ºF from -100ºC to 1200ºC (-148ºF to 2192ºF). High accuracy: Built in thermocouple linearization curves and cold junction compensation. Records maximum temperatures reached for each channel. Includes a trend graph display of each thermocouple channel. Engine leaning function according to peak EGT temperatures. Engine cruise mode to instantly identify changing EGT/CHT trends. External RDAC interfacing via the CAN bus. An external output activates when a high alarm condition has been reached.
P/N 11-15994.....**$305.00**

CIES SENDERS – BELITE INSTRUMENTS



CIES MAGNETIC FUEL LEVEL SENDER KITS

A better way to measure fuel. This Magnetic Field Sensor technology is patented by CiES Inc. for fuel level senders. These sensors use the basic premise that the electrical properties of certain ferromagnetic alloys, such as permalloy, are influenced by external magnetic fields. Like a compass that always points to magnetic North, no matter how you move the fuel - these fuel level senders always point to the float sitting on the surface.

The initial STC allows the CiES to replace the existing fuel quantity senders in: • Britten Norman BN2 • Beech 33, 35, 36, 55, 58 • Cessna 170, 172, 177, 177RG, 180, 182, 185, 206, 207 • Cirrus SR20 SR22 • Fairchild 24 • Gippsland GA8 • Maule • Mooney • Piper PA 23, PA 24, PA 28, PA 30, PA 31, PA 32, PA 39, PA 44 • Vulcanair P68 • Fairchild 24

Specifications: • CiES CC-Series fuel senders are TSO certified to C55a and associated SAE AS405C. • They have met all the DO-160(F) and DO-254 DAL (Design Assurance Level) Level D requirements for the TSO.

Vendor Part Number	Description	Part No.	Price
CC284022-B55A-105	Analog Sender Kit For Aux Tank B95	10-06508	**$3,280.00**
CC284022-B58-105	Analog Sender Kit For B58	10-06509	**$2,470.00**
CC284022-C170-105	Analog Sender Kit For Cessna C170	10-06510	**$850.00**
CC284022-C177-105	Analog Sender Kit For Cessna C177	10-06511	**$850.00**
CC284022-ACA7-105	Analog Sender Kit For American Champion 7ECA	10-06512	**$850.00**
CC284022-ACA8-105	Analog Sender Kit For American Champion 8KCAB	10-06513	**$850.00**
CC284022-C210-105	Analog Sender Kit For Cantilever Wing C210	10-06514	**$850.00**
CC284022-C172-105	Analog Sender Kit For Cessna 172/175	10-06515	**$850.00**
CC284022-F24-105	Analog Sender Kit For Fairchild 24	10-06516	**$790.00**
CC284022-GA8-105	Analog Sender Kit For Gippsland Airvan GA8	10-06517	**$850.00**
CC284022-M20CDE-105	Analog Sender Kit For Mooney M20CDE	10-06518	**$850.00**
CC284022-M20FGJK-105	Analog Sender Kit For Mooney M20FGJK	10-06519	**$1,700.00**
CC284022-M20LMS-105	Analog Sender Kit For Mooney M20IMS	10-06520	**$1,640.00**
CC284022-P24-105	Analog Sender Kit For Pilatus PC-6	10-06521	**$850.00**
CC284022-ARROW-105	Analog Sender Kit For Piper Arrow	10-06522	**$1,640.00**
CC284022-P24-105	Analog Sender Kit FoR Piper A22/24	10-06523	**$850.00**
CC284022-CHEROKEE-105	Analog Sender Kit For Piper PA28	10-06524	**$850.00**
CC284022-P32-105	Analog Sender Kit For Piper PA32	10-06525	**$1,640.00**
CC284022-P34-105	Analog Sender Kit For Piper PA34	10-06526	**$1,640.00**
CC284022-P44-105	Analog Sender Kit For Piper PA44 Not FAA Approved	10-06527	**$1,050.00**
CC284022-B55M-105	Analog Sender Kit For Main Tank B95	10-06528	**$3,280.00**
CC284022-CESSNA-105	Analog Sender Kit For Cessna C210, 182, 185, 206 Strut Wing	10-06529	**$850.00**
CC284022-0608-105	Analog Sender Kit For Vessna C210 Strut Wing Tip	10-06530	**$850.00**
CC284022-BTIP-105	Analog Sender Kit For Osborne Tip Tank	10-06531	**$850.00**
CC284022-0608-101	Digital Sender Kit For Cessna C210 Strut Wing Tip	10-06532	**$790.00**
CC284022-C150-101	Digital Sender Kit For Cessna C150/152	10-06533	**$790.00**
CC284022-C170-101	Digital Sender Kit For Cessna C170	10-06534	**$790.00**
CC284022-C177-101	Digital Sender Kit For Cessna C177	10-06535	**$790.00**
CC284022-C210-101	Digital Sender Kit For Cantilener Wing C210	10-06536	**$790.00**
CC284022-C172-101	Digital Sender Kit For Cessna 172/175	10-06537	**$790.00**
CC284022-BTIP-101	Digital Sender Kit For Osborne Tip Tank	10-06538	**$790.00**
CC284022-CESSNA-101	Digital Sender Kit For Cessna C210, 182, 185, 206 Strut Wing	10-06539	**$790.00**
CC284022-B55A-101	Digital Sender Kit For Aux Tank B95	10-06540	**$3,160.00**
CC284022-B58-101	Digital Sender Kit For B58	10-06541	**$2,370.00**
CC284022-T34-101	Digital Sender Kit For Beechcraft 45/T-34	10-06542	**$790.00**
CC284022-BN-101	Digital Sender Kit For BN2A MK III	10-06543	**$790.00**
CC284022-GA8-101	Digital Sender Kit For Gippsland Airvan GA8	10-06544	**$790.00**
CC284022-M20CDE-101	Digital Sender Kit For Mooney M20CDE	10-06545	**$790.00**
CC284022-M20FGJK-101	Digital Sender Kit For Mooney M20FGJK	10-06546	**$1,640.00**
CC284022-M20LMS-101	Digital Sender Kit For Mooney M20LMS	10-06547	**$1,580.00**
CC284022-ARROW-101	Digital Sender Kit For Piper Arrow	10-06548	**$1,580.00**
CC284022-P24-101	Digital Sender Kit For Piper PA22/24	10-06549	**$790.00**
CC284022-P23-101	Digital Sender Kit For Piper PA28	10-06550	**$1,580.00**
CC284022-CHEROKEE-101	Digital Sender Kit For Piper PA28	10-06551	**$790.00**
CC284022-P30-101	Digital Sender Kit For Piper PA30/40	10-06552	**$1,580.00**
CC284022-P31-101	Digital Sender Kit For Piper PA31	10-06553	**$3,160.00**
CC284022-P32-101	Digital Sender Kit For Piper PA32	10-06554	**$1,580.00**
CC284022-P34-101	Digital Sender Kit For Piper PA34	10-06555	**$1,580.00**
CC284022-P44-101	Digital Sender Kit For Piper PA44	10-06556	**$990.00**
CC284022-P68-101	Digital Sender Kit For Vulcanair P.68	10-06557	**$850.00**
CC284022-B55M-101	Digital Sender Kit For Main Tank B95	10-06558	**$3,160.00**
CC284022-MAULE-105	Analog Sender Kit For Maule Not FAA Approved	10-06559	**$850.00**
CC284022-MAULE-101	Digital Sender Kit For Maule	10-06560	**$790.00**

IN

BELITE FUEL GAUGES



1.75" Bezel

Pilots dream of having a fuel gauge that actually works. Here's one that does! Uses LEDs to provide a range of 0% to 100% in calibrated steps.

Single With 1.75" Square Bezel
P/N 10-04390 .....**$75.50**

Single With 2.25" Round Bezel
P/N 10-04392 .....**$98.75**

Dual With 1.75" Square Bezel
P/N 10-04738 ....**$119.95**

Dual With 2.25" Round Bezel
P/N 10-04739 ....**$124.95**

2.25" Single, Digital Universal LED Fuel Gauge. P/N 10-05312 .....**$99.95**

2.25" Dual, Digital Universal LED Fuel Gauge.. P/N 10-05313 ....**$139.95**

BELITE VERTICAL SPEED INDICATORS



3"x2"x1" portable

Rates up to 600 FPM, depending on model. Provides vertical speed information using a dimmable LED display that can be adjusted for viewing in bright daylight or reduced lighting conditions.

With 1.75" Square Bezel .... P/N 10-04350....**$124.95**

BELITE BINGO FLUID DETECTOR



Radiant Technology's Bingo Liquid Detector lets you know when you are running low on fuel. Install it wherever you want that indicator point to be. Screws into standard 1/8 NPT fitting. Attaches to remote LED for panel view (included). Also has LED on unit.

It can be installed in any kind of fluid tank, at whatever location you want. When fluid empties below that point, Bingo will light up an LED alarm.

It is ideal as a fuel warning device. If it is installed near the top of a header tank, it warns the pilot when only that much fuel remains. If it's installed at the 1/4 remaining point in your main tank, it will warn when fuel reaches that critical level.

Single Unit ..... P/N 10-06575 .....**$94.75**

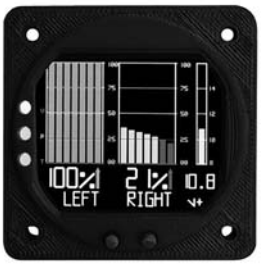
Three Pack ..... P/N 10-06577 .....**$279.95**

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BELITE INSTRUMENTS

BELITE RADIANT FUEL GAUGE



The RADIANT Single or Dual Tank Fuel Gauge from Belite shows current contents of one or two tanks and the system voltage. Optional Fuel Flow. Works with: float probes, capacitive probes, also Belite fuel probes. Shows fuel consumption trend from two tanks over the last 30 minutes. The picture shows a full left tank and a right tank that has steadily been draining over the last 30 minutes. Voltage is 10.8 volts. Direct sunlight readable (this display is *bright*.) Display is friendly with sunglasses, even polarized sunglasses. Single or dual fuel tank display, featuring a visual history of the last 30 minutes of fuel level in each tank. Optional is a digital fuel flow sensor, which adds real time fuel flow information. All instruments are designed for a standard 2.25" cutout, and use approximately 100milliamps of power from a supply of 8 to 14 volts. All instruments are dimmable.

For Capacitive Fuel Senders Or 0-5 Volt Input... P/N 10-06067..**$249.95**
For Resistive Or Float Based Fuel Senders..... P/N 10-06068..**$249.95**
For Belite Probes..... P/N 10-06071..**$249.95**

BELITE RADIANT G METER



Belite's RADIANT instrument line combines many functions into simple, small, lightweight units. The instruments utilize sunlight readable full color high contrast LCD screens which are also friendly with sunglasses. This instrument allows pilot to track G rate trend while doing a turn or aerobatic maneuver. Shows G trend history. All instruments are designed for a standard 2.25" cutout, and use approximately 100milliamps of power from a supply of 8 to 14 volts. All instruments are dimmable.

P/N 10-06073.....**$219.95**

BELITE RADIANT ANGLE OF ATTACK SYSTEM



Belite's RADIANT instrument line combines many functions into simple, small, lightweight units. The instruments utilize sunlight readable full color high contrast LCD screens which are also friendly with sunglasses. The Radiant Angle of Attack Sensor & Display System includes weather vane, sensor, LCD RADIANT color Display, aural output when graph is red zone. The vane is mounted on the leading edge of the wing and responds immediately to any change in angle of attack. The vane provides an electronic voltage level, proportional to angle, which is connected to a billiant, full color daylight readable cockpit AOA instruments. The instrument is mounted in the aircraft's panel. The actual angle of attack is shown in continuous digital format as well. This is a differential angle from the base (cruise) setting. The bar graph and the numerical value fall rapidly as the elevator is shoved forward. All instruments are designed for a standard 2.25" cutout, and use approximately 100 milliamps of power from a supply of 8 to 14 volts. All instruments are dimmable. P/N 10-06074.....**$599.00**

BELITE RADIANT SINGLE FUNCTION INSTRUMENTS ALTIMETER



Belite's Single Function Radiant instruments feature Radiant Screen Technology with big digits and easy to read graphs. These are alternatives to our Multi-Function Radiant instruments, but are lower cost and easier to use belite's exclusive radiant screen technology provides a vivid colorful display of information to the pilot. Instruments are daylight bright, crystal clear and sunglass friendly.

Altimeter .....P/N 10-06480 .....**$139.95**
Above Ground Altimeter .....P/N 10-06481 .....**$139.95**
Fuel Gauge.....P/N 10-06482 .....**$139.95**
Voltmeter .....P/N 10-06483 .....**$93.75**
Value Function Instrument.....PN 10-06485 .....**$186.75**

BELITE RADIANT MULTI-FUNCTION INSTRUMENTS



Belite's RADIANT instrument line combines many functions into simple, small, lightweight units. These instruments utilize sunlight readable full color high contrast LCD screens which are also friendly with sunglasses. These instruments show simultaneous ASI, Altitude and VSI information in a single glance, easy to read format. All of this information is presented digitally and graphically on a single vivid LCD screen. This instrument shows Air Speed (various ranges), VSI (+/- 2000 fpm), Altitude to 20K. Instruments are designed for a standard 2.25" cutout, and use approximately 100milliamps of power from a supply of 8 to 14 volts. These instruments are dimmable. Instruments are available with ranges of 100mph, 160mph, 100 knots or 160 knots.

100 MPH.....P/N 10-06258 .....**$279.95**
100 Knots .....P/N 10-06259 .....**$275.95**
160 MPH.....P/N 10-06260 .....**$275.95**
160 Knots .....P/N 10-06261 .....**$275.95**

BELITE RADIANT TURN COORDINATOR



The RADIANT Turn Coordinator provides a visual indication of turn rate along with a visual indication of slip / skid, utilizing an ultra bright, daylight readable color LCD display. In comparison to all other Turn Coordinators, this unit also provides a digital indication of degrees per second in the turn. Any pilot who has ever wanted to add a turn coordinator to an experimental aircraft panel has been put off by the complexity, weight, reliability, and price of traditional electric or vacuum units. This product solves all these problems. It utilizes a solid state gyro and accelerometer; it weighs less than 2 ounces, it attaches to any aircraft ship power system, and it allows for easy in flight calibration at the push of a button. The unit graphic design looks exactly like existing turn coordinators, so there is no learning curve for the pilot. Also, unlike some products, the unit's gyro will stabilize even if brought to power under aircraft upset conditions. This is the first avionic product from Belite which is also compatible with 28V aircraft electrical systems. The internal power regulator has been designed to withstand transients to 60 volts. Belite's RADIANT instrument line combines many functions into simple, small, lightweight units. The instruments utilize sunlight readable full color high contrast LCD screens which are also friendly with sunglasses. This instrument shows inclinometer and turn rate. All instruments are designed for a standard 2.25" cutout, and use approximately 100milliamps of power from a supply of 8 volts. All instruments are dimmable.

P/N 10-06082.....**$299.95**

BELITE LIQUID LEVEL FUEL PROBE SYSTEM



The Belite liquid level / fuel probe is designed to sense fuel or liquid level of any type and provide an electrical indication to instrumentation along a range of 0 to 5 volts. The unit is not TSO'd or PMA'd. Use only in appropriate aircraft as a backup to certified instruments and pilot calculations. Ideal for monitoring level of liquid in many other applications, such as agricultural spraying. Patent pending.

With 1/8" Probes..... P/N 10-06085.....**$99.99**

IN

MICROFLIGHT GAUGES

MICRO-1000 ENGINE GAUGES

Senders and probes are not included umless specifically noted. See lower half of the page for senders, probes, and other accessories. 2" gauges are round. 2 1/4" gauges are square.



OIL PRESSURE ELECTRIC

MICRO-1000 oil pressure electric includes 1/8 NPT SDR.
2 1/4" OP031 ..... P/N 10-01574 ..... **$108.95**
2" OP030 ..... P/N 10-01572 ..... **$96.00**



OIL TEMPERATURE ELECTRIC

Includes 1/8 NPT Sender
2 1/4" OT031 ..... P/N 10-01588 ..... **$99.50**
2" OT030 ..... P/N 10-01586 ..... **$86.75**



HOUR METER

AC or DC Powered
2 1/4" HO031 ..... P/N 10-01507 ..... **$49.95**
2" HO030 ..... P/N 10-01506 ..... **$37.50**



DC VOLTMETER

2 1/4" VM031 ..... P/N 10-01641 ..... **$66.95**
2" VM030 ..... P/N 10-01639 ..... **$54.85**



AMMETER ±30 AMPS

2 1/4" AG031 ..... P/N 10-01319 ..... **$71.25**
2" AG030 ..... P/N 10-01317 ..... **$58.50**



MICROFLIGHT DUAL TACH/EGT

2" Round Gauge Tachometer - Universal for single or dual ignition. EGT range: 700-1700°F EGT probe (clamp type) Sender not included
P/N 10-01628 ..... **$79.95**



MICROFLIGHT DUAL TACH/EGT

Dual: CHT/Tachometer. Size: 2" inch round. Range: 700-1700°F/0-8000rpm for single and dual ignition Similar to Falcon Gauge Made in China
P/N 10-01626 ..... **$79.95**

MICROFLIGHT SENDERS & ACCESSORIES



100# PRESSURE SENDER

HAS A 1/8" NPTF fitting.
OP030.2 ..... P/N 10-01573 ..... **$39.50**



TEMPERATURE SENDERS

Single-station senders for water and oil temperature gauges.

WT030.2 ..... P/N 10-01384 ..... **$15.75**
OT030.2 ..... P/N 10-01587 ..... **$16.50**



OIL PRESSURE FITTING ADAPTER FOR ROTAX

Oil pressure fitting adapter for Rotax. Straight Angle Adapter 1/8 NPT 10MM x 1.5.
P/N 15-08691 ..... **$29.50**



METRIC ADAPTER

M12x1 Male Thread, 1/8" NPT Female Thread.
ADP07 ..... P/N 10-01314 ..... **$5.50**



FLOAT-TYPE FUEL PROBES

6-23" Probe. Adjustable, 6-23"; 240-33 ohms standard: 5-hole ASME pattern. Requires mounting kit.
FGP031 ..... P/N 10-01489 ..... **$33.60**



UNIVERSAL PROBE MOUNT

Works well with plastic and other tank. Includes threaded attachment ring, gasket, and hardware. Standard 5-hole SAE pattern.
FMK01 ..... P/N 10-01501 ..... **$10.95**



COLOR TINT LAMPS

Color tint lamp boots. Set of Boots. Changes your instrument backlighting to red for night flying.
LB001 ..... P/N 10-01556 ..... **$1.80**

APPLICATION NOTE: Most current production Rotax® engines require 1/8NPT temperature and pressure senders.

THERMOCOUPLES

BAYONET TYPE

Threaded Fitting with 1/8" ..... P/N AN4076 ..... **$25.15**
Pipe thread to mate with bayonet type thermocouple.



UNIVERSAL REPLACEMENT PROBES

CHT Probe, Type J, Style AN 5541-1
P/N AN5541-1 ..... **$64.75**
EGT Probe, Type K MM-111
P/N 11-01022 ..... **$59.50**
CHT Probe, Type K (Hose clamps not required)
P/N 11-01023 ..... **$58.50**
Cessna CHT Probe S2334-3 - Must be used with the new Rochester Gauges. Cannot be used with the old Stewart Warner Gauges
P/N 06-00703 ..... **$376.00**
Note: These probes will only work with a grounded system.



ROCHESTER 3080-38 TEMPERATURE PROBE

3/8-24 NF3. 250°-550° Aircraft Temperature Probe.
P/N 3080-38 ..... **$119.85**



ROCHESTER 3080-37 OIL TEMPERATURE PROBE

3080-37 for cluster-type instrument. 5/8"-18, 10/32 Thread.
P/N 3080-37 ..... **$118.95**

THERMOCOUPLE LEADS



HEAVY-WEIGHT AN SPEC. WIRE LEADS

8 Ohm Resistance, Iron-Constantan, 90 In.
P/N 42535 ..... **$41.65**
8 Ohm Resistance, Iron-Constantan, 144 In.
P/N 42536 ..... **$55.75**
8 Ohm Resistance, Iron-Constantan, 20 Ft.
P/N 42537 ..... **$72.75**
EGT E.W. Rings ..... P/N 11-05672 . **$59.85**

IN

MICROFLIGHT GAUGES / VDO GAUGES

MICRO-1000 PYROMETERS



Superior to any other type of pyrometer, MICRO-1000 pyrometers still read the same. And we guarantee that, when properly installed, these pyrometers will be accurate within 2%. Like other MICRO-1000 gauges, these units come with our standard 2-year warranty. Order gauges, probes, and extension leads separately. NOTE: MICRO-1000 pyrometers are not compatible with other thermocouple probes. Order Micro-1000 Probes.

• 2% Accuracy • Easy-to-Read Dial • Backlighting • Standard • Temperature Compensated • Shock & Vibration Resistant • Designed & Built for Aircraft

Range	Description	Part No.	Price
0-600F/0-300C	CH131 2-1/4" Square CHT	10-01426	**$79.95**
0-600F/32-315C	CH130 2" Round CHT	10-01425	**$65.80**
0-600F/0-300C	CH141 2-1/4" Square Dual CHT	10-01429	**$111.95**
0-600F	CH140 2" Round Dual CHT	10-01428	**$113.50**
0-600F/0-1600F	CH141 2-1/4" Square CHT EGT Combo	10-01409	**$111.95**
0-600F/600-1600F	CH140 2" Round CHT EGT Combo	10-01408	**$106.90**
800-1800F/450-950C	CH131 2-1/4" Square EGT	10-01464	**$74.75**
800-1800F/430-980C	CH130 2" Round egt	10-01463	**$66.75**
800-1800F	CH141 2-1/4" Square Dual EGT	10-01467	**$107.95**
800-1800F	CH140 2" Round Dual EGT	10-02093	**$111.75**

MICROFLIGHT PROBES



A more expensive material than that of the more commonly found "J" type, the "E" type probe produces much greater accuracy at lower temperatures (less than 600°F). Extension wire is of the same material as the thermocouple to preserve the accuracy and temperature compensation qualities. NOTE: The 15' extension leads may be shortened up to seven feet. The EGT probes are high-quality Chrome/Alumel "K" types. Choose the weld-on boss type (below) for new engine installations. Choose the clamp-on type (below) to replace the existing probe. Order gauges, Micro-1000 probes and extensions separately.

Note: These are "K" type grounded probes, not for use on digital gauges. For use with Micro-1000 gauges.

Type	Part No.	Description	Price
EGT	10-01471	EP130 Type K Clamp Type Probe	**$61.75**
EGT	10-01475	EP130R Adjustable Rotax M8-1 Probe	**$49.75**
EGT	10-01477	EP131 Type K Weld on Boss Probe	**$30.80**
EGT	10-01478	EP132 Type K 1/8" NPT Adjustable Adapter Probe	**$54.85**
EGT	10-01479	EP133 Type K 1/4" NPT Adjustable Adapter Probe	**$46.25**
CHT	10-01441	CP132 Type K 10mm Probe	**$26.50**
CHT	10-05122	CP129 Type K 12mm Probe	**$24.60**
CHT	10-00823	CP130 Type K 14mm Probe	**$25.50**
CHT	10-01440	CP131 Type K 18mm Probe	**$26.50**

MICROFLIGHT LEADS

Part No.	Description	Price
10-01442	CHT 18G Thermocouple Lead 7 Ft	**$25.25**
10-01443	CHT 18G Thermocouple Lead 15 Ft	**$52.75**
10-01480	EGT 18G Thermocouple Lead 7 Ft	**$19.50**
10-01481	EGT 18G Thermocouple Lead 15 Ft	**$38.65**

Note: For a complete CHT ot EGT set, order gauge, probe, and lead.

VDO GAUGES & PROBES



EXHAUST GAS TEMP.

2-1/4" .... P/N 10-01462 ... **$179.95**
2" ..... P/N 10-01461 ... **$167.85**
250 -1650°F
With weld-on Boss type probe



OIL PRESSURE

2-1/4" ... P/N 10-01570 .. **$123.95**
2" ..... P/N 10-01567 .. **$110.95**
Includes 1/8NPT sender
2" round(Gauge Only)
P/N 10-01569 .... **$55.75**



OIL TEMP.

2-1/4" ... P/N 10-01583 ..... **$83.95**
2" ..... P/N 10-01579 ..... **$71.25**
Includes 1/8NPT probe
2" round(Gauge Only)
P/N 10-01581 .... **$49.75**



AMMETER - 12 VDC

2-1/4" ... P/N 10-02335 .... **$74.50**
2" ..... P/N 10-02334 .... **$61.75**
No shunt required



VOLTMETER-12 VDC

2-1/4" ... P/N 10-01638 ..... **$66.50**
2" ..... P/N 10-01637 ..... **$53.75**
With color arc



FUEL LEVEL-10-180 OHM

2-1/4" .... P/N 10-01485 ... **$51.75**
2" ..... P/N 10-00825 ... **$38.50**
Order only P/N 10-04788 probes for this instrument.



WATER TEMP.

2-1/4" .... P/N 10-01649 ... **$62.50**
2" ..... P/N 10-01646 .... **$49.25**
Includes 1/8NPT probe



HOUR METER-12VDC

2-1/4" ... P/N 10-01505 ..... **$66.50**
2" ..... P/N 10-01504 ..... **$53.80**
With minute hand



FLUID TEMPERATURE GAUGE

2" ..... P/N VDO180902D .. **$65.75**
Includes 96" capillary tubing and adapter kit.

VDO PROBES



VDO Float Probe 10-180ohms..... P/N 10-04788..... **$72.75**
VDO Float Probes - 240 ohms..... P/N 10-00826..... **$67.75**
Fuel Probe Mounting Ring ..... P/N 10-01502..... **$39.50**
VDO Temperature Probes - 1/8NPT
Water Probe 1/8" NPT ..... P/N 10-01648..... **$14.70**
Oil Probe 1/8" NPT..... P/N 10-01580..... **$21.50**
VDO CHT Probe - Type "J"
14mm ring type ..... P/N 10-01439..... **$38.50**
VDO EGT Probe - Type "K"
Weld-on Boss..... P/N 10-01461..... **$167.85**
Oil Pressure Sender 1/8"-27 NPT (30PSI)..... P/N 10-05471..... **$67.75**
Oil Pressure Sender 1/8" NPT (80 PSI)..... P/N 10-01568..... **$55.75**
Oil Pressure Sender 1/8-27 NPT (150 PSI)... P/N 10-04967..... **$73.75**
VDO Pressure Sender 1/8"-27 NPTF 80 PSI. P/N 10-06581..... **$68.75**

WARNING NOTICE:

****VDO pressure senders are not to be used with any type of fuel application.***
****VDO pressure senders may not be used in automotive braking systems.***
****VDO pressure senders are not suitable for use in aircraft.***

IN

AVIASPORT ROTAX INSTRUMENTS



ROTAX 912 2-1/4" CHT GAUGE FARENHEIT

Rotax 912 CHT Temp – F. For use with VDO sensor only. Red: 270-300. Yellow: 100-150, 220-270. Green: 130-220 Diameter: 57mm (2.25 in.). Motor: 912S. P/N 15-06646.....**$114.85**

ROTAX 912UL 2-1/4" CHT GAUGE



IM-549 - Water Temperature Indicator (CHT) Rotax 912 engine (80HP) and 914. 57 mm - Scale in °F. Designed specifically for Rotax 912 (80HP) and 914 with silkscreen red areas green and yellow. Diameter 57mm, 100-300 ° F range, distance between 2 º F indications in central area. Supply voltage 8-35V DC. It works with sensors that come from the factory with Rotax engines. P/N 15-08392.....**$120.75**



ROTAX 912 2-1/4" EGT GAUGE FARENHEIT

A540 Rotax 912 EGT Temp – F. For use with Aviasport Sender only . Red: 1500-2000. Yellow: 600-1100. Green: 1100-1450. Diameter: 57mm(2.25 in) P/N 15-05922 ....**$155.75**

OTHER ROTAX EGT GAUGES

IM-774 2" EGT 300-1000 C Rotax 914..... P/N 15-08550 ....**$109.99**
IM-775 2-1/4 EGT 300-1000 C Rotax 914..... P/N 15-08551 ....**$119.75**
IM-776 2 Dual EGT 300-1000 C Rotax 912 .... P/N 15-08552 ....**$118.75**
IM-777 2-1/4 Dual EGT 300-1000 C Rotax 912 . P/N 15-08553 ....**$121.75**
IM-778 2 Dual EGT 300-1000 C Rotax 914 .... P/N 15-08554 ....**$118.75**
IM-779 2-1/4 Dual EGT 300-1000 C Rotax 914 P/N 15-08555 ....**$121.75**
IM-780 2 EGT 600-1800 F Rotax 912 ..... P/N 15-08556 ....**$109.99**
IM-781 2-1/4 EGT 600-1800 F Rotax 912..... P/N 15-08557 ....**$113.75**
IM-782 2 1/4 Dual EGT 500-1300 F Rotax 503. P/N 15-08558 ....**$129.99**
IM-783 2.25 Dual EGT 500-1300 F Rotax 582 P/N 15-08559 ....**$129.95**



ROTAX 912 2-1/4" OIL PRESSURE GAUGE PSI

A572 Rotax 912 Oil Pressure – PSI. For VDO Sender only. Red: 0-12, 90-150 psi. Yellow: 75-90 psi. Green: 30-75 psi. Diameter: 57mm(2.25 in) P/N 15-05924.....**$119.75**

IN



ROTAX 912 2-1/4" OIL TEMPERATURE GAUGE FARENHEIT

A558 Rotax 912 Oil Temp. For use with VDO Sender only. Red: 90-120, 280-320. Yellow: 120-190, 230-270. Green: 190-230. Note: Not for 912iS and 914 engines. See "Alternate Items" part number 15-08399. Diameter: 57mm (2.25 in.) Motor: 912S/914. P/N 15-05926.....**$114.85**



ROTAX 912 2-1/4" TACHOMETER

A105 Rotax 912 Tachometer. 0-7000 rpm. Electronic Connection only. Red: 0-1200, 5800-7000. Yellow: 1200-1800, 5500-5800. Green: 1800-5500. P/N 15-05932.....**$145.85**



ROTAX 912 3-1/8" TACHOMETER

A149 Rotax 912 Tachometer - 3-1/8". 0-7000 range. Electronic connection only. Red: 0-1200, 5800-7000. Yellow: 1200-1800, 5500-5800. Green: 1800-5500. P/N 15-05930.....**$155.75**



ROTAX 912 2-1/4" VOLTMETER

A562 Rotax 912 Voltmeter. Red: 8-10, 14-16 volts. Yellow: 10-11, 13-14 volts. Green: 11-13 volts. P/N 15-06650.....**$115.75**



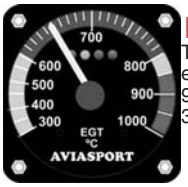
ROTAX 912 2-1/4" FUEL PRESSURE GAUGE BAR

A564 ROTAX 912 Fuel Pressure Bar. Requires Sender below. Red: 0-1.5 , 4-6 bar. Green: 1.5 – 4.0 bar. Diameter: 57mm (2.25 in.). Sensor: 7 PSI. P/N 15-06647.....**$127.75**



FUEL PRESSURE SENDER - 1/8 NPT

A603 Aviasport Fuel Pressure Sender. 1/8" NPT threads. P/N 15-06648.....**$185.95**



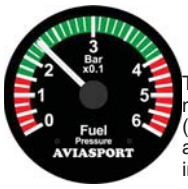
ROTAX 912 EGT 4 READING KIT

The IM-553 instruments have been designed especially to measure the EGT in Rotax® engines 912. Includes the IM-580 EGT Connection Box. 300-1000 °C P/N 15-08617.....**$184.99**



ROTAX 912UL 912 ULS 2-1/4" EGT KIT

The IM-540 instruments have been designed especially to measure the EGT in Rotax® engines 912. Includes the IM-580 EGT Connection Box. 800-1800 °F P/N 15-08620.....**$181.75**



ROTAX 912 2" INCH FUEL PRESSURE KIT

The IM-584 have been designed especially to measure the FUEL Pressure in Rotax® engines 912 (Series). Includes the IM-604 Sensor. The display areas are divided into red, green and yellow zones in line with Rotax limits. 0-6 Bar. P/N 15-08624.....**$299.00**



ROTAX 912 2-1/4" INCH FUEL PRESSURE KIT

Unlike mechanical instruments fuel pressure, electronic instruments use a high precision sensor to be installed close to the engine, avoiding cabin carry fuel lines. Includes the IM-604 Sensor. 0-8 PSI. P/N 15-08629.....**$423.00**



ROTAX 914 3 EGT 4 READING KIT

The IM-576 instruments have been designed especially to measure the EGT in Rotax® engines 914. Includes the IM-580 EGT Connection Box. The instruments use a pointer thats turns 240º, witch gives them great resolution. Their display areas are divided into red, green and yellow zones in line with the ROTAX limits. 600-1800 °F. P/N 15-08623.....**$184.95**

AVIASPORT ROTAX EGT TYPE K SENSORS



Probe for the measurement of the temperature of exhaust (EGT) for all ROTAX engines. It has a thread metric 8 and it can be installed directly on the M8 nuts that come from manufactures some 912 and 914 engines. On the outlets that do not have these nuts, it is necessary to weld a nut M8. Stainless steel jacket.
6 ft. .....P/N 15-09438 .....**$56.75**
9 ft .....P/N 15-09439 .....**$63.75**



AVIASPORT ROTAX EGT TYPE K SENSOR WITH CLAMP

Probe type clamp "K". Designed for engines ROTAX 447/503/582, you don't need welding. Simply drill the holes and tighten the clamp. Protected with stainless steel mesh. 2 meters cable length. P/N 15-09440 .....**$55.65**

VISIT WWW.AIRCRAFTSPRUCE.COM FOR A COMPLETE LIST OF INSTRUMENTS AND SENDERS.

TL ELEKTRONICS INSTRUMENTS

COMBINED ENGINE INSTRUMENT



• High performance, small dimensions & weight - an ideal instrument suitable for all types of engines • Set value limits at 2 levels (Warning & Alarm) for all measured values. In case these values are exceeded the instrument will warn you in time of any possible engine damage • Configure display to show temperature, pressure, rotations, battery voltage, engine hours, OAT, fuel consumption as you wish using the configuration program delivered with the instrument. Size: 3-1/8"

Digital eng. instr. for combinate engine values measuring ..... P/N 10-00893..... **$599.00**
Thermocouple probe for EGT (type K) M8x1 screw type - for all engines ..... P/N 10-00894..... **$37.75**
Thermocouple probe for CHT (type J) 12mm hole - for all engines ..... P/N 10-00895..... **$15.50**
Thermocouple probe for CHT (type J) 14mm hole - for all engines ..... P/N 10-00896..... **$16.55**
Thermocouple probe for CHT (type J) 18mm hole - for all engines ..... P/N 10-00897..... **$16.55**
Oil or water temp. sender (0 to 110°C/230°F) for Rotax 2-stroke..... P/N 10-00898..... **$35.00**
Oil or water temp. sender (0 to 150°C/300°F) for Rotax 4-stroke..... P/N 10-00899..... **$39.00**
Passive oil pressure sender (0 to 145 PSI, 1/8"-NPT) for all engines ..... P/N 10-00904..... **$57.95**
Passive speed sensor-all eng. (inductive sensor)..... P/N 10-00907..... **$25.00**
Active speed sensor-all engines (hall effect 3-wire sensor) 5-30V power supply req. ..... P/N 10-00909..... **$95.00**

FUEL COMPUTER



• Measure immediate fuel flow of your engine in liters/hour or liters/100 km and average fuel consumption • Set limit values at 2 levels (Warning & Alarm), for all measured values. In case these values are exceeded, the instrument will warn you prior possible failure or damage of the engine • Display at any time the fuel levels in the left, right or both fuel tanks. Size: 2-1/4"

Fuel computer without fuel-flow sensor..... P/N 10-00870 **..$359.95**
Metal high-quality flow sensor for all engines ... P/N 10-00871 **..$178.95**
Fuel Qty Sender Float (240-30 OHM)..... P/N 10-00056 ....**$39.95**
Active cap. fuel level sender (all aircraft) ..... P/N 10-00798 **..$139.75**

INTERCOM



• Intelligently managed voice activators (VOX) •Listen to your favorite music e.g. from CD/cassette directly to your headphones or attach your intercom to your mobile telephone • Control your intercom digitally using keys & displays • Record and play pre-takeoff or landing checklist directly to your headphones (checklist can easily be created on your PC and recorded into the intercom) • In case of accident simply switch on emergency broadcast, which will be re-played at short intervals and transmitted using a RDST w/pre-recorded message. Size: 2-1/4"

Intercom w/voice alarm, checklist & digital voice rec.
P/N 10-00867..**$459.00**
Connection cable to VHF airband-transceiver ... P/N 10-00869....**$52.00**

ALTIMETER WITH ENCODER



• 2 instruments for the price of one – altimeter & mode C encoder for all types of transponder • Set value limits at 2 levels (Warning & Alarm) for multiples • Display QNH or QFE levels with the option of setting zero • The instrument will provide a warning if an insufficient oxygen altitude is reached • The instrument will signal low altitude, e.g. after opening of undercarriage, MDA, approach. Size: 2-1/4"

P/N 10-00891 ....**$434.00**

VOLT-AMPERE METER



• First volt-ampere meter with 3-phase measurement of voltage, current & frequency • Connect up to 3 circuits for measuring current and voltage, for example instrument panel circuit, light circuit and flash and other circuit • Check the activity of the three-phase voltage converter for an artificial horizon using your voltmeter with the option of checking 400 Hz frequency • Set value limits at two levels (Warning and Alarm) for minimum & maximum voltage and current. Set the form of display either by gradual switching of voltage and current on the display at intervals chosen by you (SCAN function) or by displaying lowest or highest current-voltage. Size: 2-1/4"

Digital volt-ampere meter & frequency meter P/N 10-00883.....**$379.00**
Current shunt sensor for measuring to 50amps (for all aircraft)
P/N 10-00884.....**$45.50**

RPM & ENGINE HOURS



• Measure rotations & engine hours with the option to trigger the counting from a certain engine rotation rate (by your choice) so that you can divide taxing from flight time • Set value limits at 2 levels (Warning & Alarm) for all measured values. In case these values are exceeded the instrument will warn you in time of any possible engine damage • Several separate users with pilot/student option – suitable for several owners or in flight schools, where the instructor selects the student and the time will be measured only against his/her name. Size: 2-1/4"

Digital RPM w/ engine-clock & stop-watch .....P/N 10-00886....**$309.00**
Digital RPM w/ engine-clock, stop-watch & internal speed sensor
P/N 10-00887....**$389.00**

THERMOMETER



• Use the thermometer to measure up to 4 temperatures and oil pressure • Use the automatic choke function using the modeler's servo regulated by thermometer according to any of the measured temperatures e.g. CHT • Set value limits at 2 levels (Warning and Alarm) for all measured values. In case these values are exceeded the instrument will warn you at time of any possible engine damage • Set the form of display either by gradual switching of measured temperatures on the display at intervals selected by you (SCAN function) or displaying the closest temperatures to the limit values that you have set. Size: 2-1/4"

Therm. for 4 temp. & press. w/choke control P/N 10-00874.... **$315.00**
Thermocouple probe for CHT (type J) 12mm hole - for all engines
P/N 10-00876..... **$15.50**
Thermocouple probe for CHT (type J) 14mm hole - for all engines
P/N 10-00877..... **$16.55**
Oil or water temp. sender (0 to 150°C/300°F) for Rotax 4-stroke.
P/N 10-00879..... **$37.70**

G ACCELEROMETER



• Using the accelerometer measure the operational values of your aircraft on the vertical axis • Set value limits at 2 levels (Warning and Alarm) for all measured values. In case these values are exceeded the instrument will warn you in time of any possible damage to the aircraft • Always be informed of values approaching the limits, which could result in damage to the aircraft • Always be aware of exceeded values from the previous flight after switching on the instrument • Start of logging is carried out by a switch on the undercarriage or by an internal / external pressure sensor on attaining your selected speed. Size: 2-1/4".

Digital accelerometer.....P/N 10-00889 .....**$365.00**
Digital accelerometer w/ internal airspeed sens.
P/N 10-00890 .....**$445.00**

TL-3424-RAS ACCELEROMETER



The TL-3424 is complete weight acceleration management. The instrument incorporates a high-precision sensor for measuring acceleration in the vertical axis. The SAS version also incorporates a sensor for measuring the indicated airspeed, which enables the activation of memory recording. Both versions enable to utilize an undercarriage scanner that can also activate memory recording.

P/N 10-02312 ..... **$445.00**

TL INSTRUMENTS ARE FOR EXPERIMENTAL AIRCRAFT ONLY.

IN

AE FUEL GUARDIAN

AE FUEL GUARDIAN LOW FUEL ANNUNCIATION SYSTEM



This system gets your attention before you have to switch tanks. When the annunciator light flashes, you will know your precise fuel quantity and also the time to engine shut-down for that tank. HOW DOES IT WORK? - The optical fuel sensor is a non-contact sensor mounted in a single hole in the fuel tank. It operates by bouncing a beam of light into the sensors lens. If it is reflected back into the sensor, there is no liquid present. If it is not reflected back, it is dissipated into the liquid media. The sensor output is pulled down, or activated.The electronics constantly monitors the sensor outputs of both tanks. When a low fuel level is detected, the appropriate light starts to blink, getting the pilot's attention immediately. After the pilot sees the alarm, he can press the acknowledge button. This action turns the light on solid (continuous) denoting a low fuel quantity. This function of the annunciator eliminates the distracting flashing action of the lights for the pilot, yet he can still see that he has a low fuel indication. The AE Fuel Guardian also has an audio output that can be wired into the aircraft intercom or audio system if desired. The audio beep is only present when the annunciator lights are flashing. The AE Fuel Guardian annunciator lights can also be wired into the aircraft dimmer bus if desired for night flight. This system is 100% solid state and is compatible with 12VDC or 24VDC electrical systems. The installer sets the sensors to provide low fuel warning at whatever level is desired. System includes (2) annunciator panel lights, (2) optical sensors, (1) push button, Sensor drive and annunciator electronics enclosure, wiring, and lettering decals. For Experimental aircraft only.

Kit With One Sensor .....P/N 10-01811 ..... **$159.00**
Kit With Two Sensor .....P/N 10-00399 ..... **$210.00**

AE AG6 ANNUNCIATOR GAUGE METER



One Button, Multi-function,Aircraft Annunciator - Fuel Gauge, Several styles available (with low fuel warning and caution zones) Volt Meter & Current Meter (with low & high warnings and caution zones) A full service Aircraft Annunciator, Fuel Gauge, Oil Level Gauge, Volt Meter & Current Meter. Will display many different aircraft warnings. All devices feature user programmable alarms. Utilizes a push-button LCD display that is backlight with a 3 color LED. All functions are fully programmable by the user. The push-button/display can be used for programming, acknowledging the alarms, and paging thru up to 16 different screens or "annunciator points". Can automatically scan thru each screen or it can be done manually using the push-button. The pilot has the ability to mask or unmask annoyance alarms. ***NOTE***: Input devices not included. It is up to the user to provide input devices such as fuel senders, shunts, oil level sensors and input switches to drive the AG6 DISPLAY & PUSH BUTTON P/N 10-04180 .....**$169.95**

AE LOW OIL LEVEL SENSOR



Originally designed for small Lycoming engines, but can be utilized on several other engine types as well. Utilizes a 1/2" NPT fitting so that it can be inserted directly into the oil pan of most small Lycoming Engines. The 5/8" x 5/8" square bolt head of this sensor has been drilled (0.08" dia.) to accept a safety wire. Material: Stainless Steel construction Switch: Normally open when normal oil level, 30V @ 0.35Adc max. Temperature: -20°F to +280°F



You can utilize the "flashing panel light", a relay, or utilize your own panel indicator. The maximum current draw for any light or relay is 0.2Adc. The light can be mounted in the instrument panel using a 0.249" to 0.254" diameter mounting hole. The light supplied will operate from a +12Vdc system. To make this system +24V compatible, you will need to add a 12V zener diode in series with our flashing panel light.

AE Low Oil Level Sensor (sensor ONLY) ..... P/N 10-01812 ..... **$135.75**
AE Low Oil Level Sensor with blinking red LED (LED blinks when oil level is low)..... P/N 10-03891 ..... **$150.95**

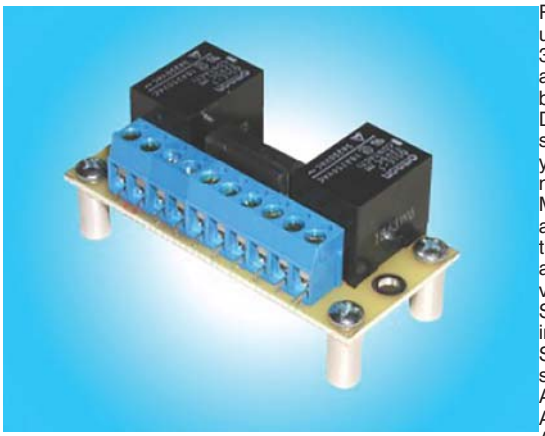
IN



AUXILIARY FUEL PUMP RELAY

The AFPR is a "Smart" Auxiliary Fuel Pump Relay. This device allows the pilot to flip oneswitch and quickly drain the contents of the auxiliary fuel tank without over stressing the auxiliary fuel pump. The AFPR will pump down the auxiliary fuel tank, and then automatically shut the fuel pump off when no fuel is detected. The AFPR includes a very reliable optical fuel sensor that can be easily installed in the auxiliary fuel tank or in the fuel line. The AFPR can be operated in and one of four modes of operation. The AFPR also has an output that can be used for a light to indicate when the fuel pump-down has been completed. Input Power: 12Vdc or 24Vdc, 0.1A max. Enclosure: 3.5" x 2.25 x 1.25" (89mm x 57 x 32mm) Fuel Sensor Mounting Hole: 0.475" (12mm) P/N 10-04343 ..... **$129.95**

AE AIRSPEED SWITCH & RELAY BOARD



RELAY BOARD USE: Control your Flap & Elevator Trim motors. This board allows you to use any inexpensive switch [Single Pole, Double Throw, (ON)-OFF-(ON), Spring Loaded, 3 Position] to control your flap and elevator trim motors. You can series as many switches as you desire control your flap & elevator trim motors. Free connection diagrams for relay boards and airspeed switch for several typical systems. ***AIRSPEED RELAY USE:*** Flap Deployment Protection at High Airspeeds When our relay board is used with our airspeed switch, you can protect you flaps from being actuated in the downward direction when your airspeed is too high (above the white arc). We provide the end user with easy connection diagrams for several different systems. Automatic Speed Adjust for Elevator Trim Motors Many have complained about the fast adjustment speed of elevator trim motors at high airspeeds. When our relay board is used with our airspeed switch, it eliminates this problem. You will have two speeds, fast for slower airspeeds, and slower for high airspeeds. The slower speed is adjusted by supplying this relay board a lower motor drive voltage. ***RELAY BOARD SPECIFICATIONS*** Each board includes two independent, Single Pole, Double Throw Relays. Relay contacts are protected against inductive sparking generated from switching inductive loads such as motors. For use on 12Vdc systems. Switch currents up to 10 Amps. Boards are stackable to 3 levels high for saving panel space. Mounting hardware included

AE Relay Board One.....P/N 10-01814 ..... **$45.65**
AE Relay Board Two Staked .....P/N 10-01815 ..... **$79.65**
AE Relay Board Three Staked.....P/N 10-01816 ..... **$81.90**
AE Airspeed Switch & Board .....P/N 10-01817 ..... **$93.00**

Prices Subject to Change Without Notice

AEROSPACE LOGIC FOUR CYLINDER EGT/CHT



The ECT204 is a full color EGT and CHT combination instrument that provides simultaneous, real-time display of all four cylinders. This kit includes four Type-K ungrounded, EGT thermocouple probes of your choice, four Type-J ungrounded, CHT thermocouple probes of your choice, and all connectors and installation hardware. Both Cylinder head and Exhaust gas temperature functionality is TSO'd and meets the temperature accuracy requirements of SAE AS8005 for a Class IIa (+/- 1%) instrument. Functional displays include: Real-time four cylinder temperature display: Menu select option for fast selection of display type, Automated rich-of-peak (ROP) leaning function for EGT, Automated lean-of-peak (LOP) leaning function for EGT, Automated shock cooling monitoring for CHT, P/N 10-05171.....**$1,525.00**

AEROSPACE LOGIC FUEL FLOW SINGLE ENGINE



This kit includes both instrument and fuel flow transducer. Fuel flow functionality is TSO'd and meets the repeatable accuracy requirements of SAE AS407B, +/- 0.1US Gallon per hour. Functional displays include: Graphical indication of fuel flow, Digital display of instantaneous fuel flow, Digital display of fuel used since flight commencement, and Fully programmable color indication to meet all aircraft marking requirements. The FF200K30 instrument kit is TSO'd and STC'd as a primary replacement instrument under all flight conditions (day/night VFR and IFR). The FF200K instrument kit includes the full installation wiring harness, fuel flow transducer for a maximum fuel flow of 30gph and all necessary install hardware for the instrument. Installer supplied couplings are needed to be supplied by the installer to mate to the fuel flow transducer, as required. P/N 10-05172.....**$925.00**

AEROSPACE LOGIC FUEL FLOW TWIN ENGINE



This kit includes both instrument and two fuel flow transducers Fuel flow functionality is TSO'd and meets the repeatable accuracy requirements of SAE AS407B, +/- 0.1US Gallon per hour. Functional displays include: Graphical indication of fuel flow, Digital display of instantaneous fuel flow, Digital display of fuel used since flight commencement, and Fully programmable color indication to meet all aircraft marking requirements. The FF202K30 instrument kit is TSO'd and STC'd as a primary replacement instrument under all flight conditions (day/night VFR and IFR). Includes the full installation wiring harness, fuel flow transducers for a maximum fuel flow of 30gph and all necessary install hardware for the instrument. P/N 10-05173.....**$1,595.00**

AEROSPACE LOGIC SINGLE TANK FUEL LEVEL



The FL201 instrument is an advanced, next generation airborne fuel level reporting instrument that supports two fuel tanks. Fuel level functionality is TSO'd and meets the repeatable accuracy requirements of SAE AS405C, +/- 1US Gallon. Functional displays include: Graphical indication of fuel level in the tank, Digital fuel quantity for the tank, Fully programmable color indication to meet all aircraft marking requirements, and Graphical fuel level indication, starting at power on. The FL201 instrument is TSO'd and STC'd as a primary replacement instrument under all flight conditions (day/night VFR and IFR). It is a requirement of the STC that this be the only fuel level indicator, when installed. The FL201 instrument utilizes the existing fuel senders.

P/N 10-05174.....**$586.00**

AEROSPACE LOGIC 2-1/4 ELECTRONIC ALTIMETER 35K



The ALT200 is the most accurate altimeter available for your aircraft. It exceeds all the requirements of TSO C10b, AS392C and AS8009B while providing the following functionality: • -1,000' to 35,000' • Digital altitude display • Graphical altitude trend display • User selectable for inHg and mb pressure settings • One press toggle between selected altitude and Standard Pressure Altitude.

P/N 10-06270.....**$1,678.00**

AEROSPACE LOGIC 2-1/4 ELECTRONIC VERTICAL SPEED INDICATOR 0-6000 FPM



The VSI200 is the most accurate Vertical Speed Indicator available for your aircraft. It exceeds all the requirements of TSO C8e and AS8016A while providing the following functionality: • Installer selectable for 0-2,000fpm, 0-3,000fpm, 0-4,000fpm or 0-6,000fpm rates of change. • Graphic bar indication of rate of change • Precision digital rate of change indication. • Fits standard 2-1/4" mounting hole. • wt: 4.3 oz

VSI..... P/N 10-006271.....**$710.00**

AEROSPACE LOGIC MANIFOLD PRESSURE & FUEL FLOW



The MF200 is an advanced, next generation manifold pressure and fuel flow combination instrument for flow rates up to 30gph. Manifold pressure functionality is TSO'd and meets the pressure accuracy requirements of SAE AS8042. Fuel flow functionality is TSO'd and meets the accuracy requirements of TSO C44c. Functional displays include: Primary - Real-Time analog data depiction and digital value display for both manifold pressure and fuel flow, Secondary - Real-Time analog data depiction and digital value display for both manifold pressure and fuel flow as well as fuel used, and Graphical trend display of manifold pressure and fuel flow data The MF200K30 is TSO'd and STC'd as a primary replacement instrument under all flight conditions (day/night VFR and IFR). This kit includes both an A200-PMP manifold pressure sensor and a A200-201A-6 fuel flow sensor for full functionality.

P/N 10-05176.....**$1,325.00**

AEROSPACE LOGIC SINGLE MANIFOLD PRESSURE



The MP200 is an advanced, next generation single manifold pressure instrument. Manifold pressure functionality is TSO'd and meets the pressure accuracy requirements of SAE AS8042. Functional displays include: Real-Time analog data depiction and digital value display of manifold pressure, Graphical trend display of manifold pressure data, and The MP200K is TSO'd and STC'd as a primary replacement instrument under all flight conditions (day/night VFR and IFR). This kit includes a A200-PMP manifold pressure sensor and all installation hardware.

P/N 10-05177.....**$763.00**

AEROSPACE LOGIC MANIFOLD PRESSURE & TACHOMETER - BENDIX



The MT200 is an advanced, next generation manifold pressure and tachometer combination instrument. Manifold pressure functionality is TSO'd and meets the pressure accuracy requirements of SAE AS8042. Tachometer functionality is TSO'd to C49b and accuracy requirements of AS404C. Functional displays include: Simultaneous, real-time analog data depiction and digital value display for both manifold pressure and tachometer, Graphical trend display of both manifold pressure and tachometer data. Display and tracking of engine time. The MT200 is TSO'd and STC'd as a primary replacement instrument under all flight conditions (day/night VFR and IFR) This kit includes a A200-PMP manifold pressure sensor, and a Hall Effect sensor for Bendix type single magnetos. The sensor is mounted in the vent hole (closest to the engine) of the magneto. The instrument will work on all 4, 6 and 8 cylinder aircraft engines. Includes all installation hardware.

P/N 10-05178.....**$1,225.00**

AEROSPACE LOGIC TM202 DUAL TACHOMETER KIT - BENDIX SINGLE MAGNETO



The TM202 is a precision dual tachometer that provides RPM data accurate to +/- 1RPM. It meets all the requirements of TSOC49b and provides the following functionality: RPM indication in both analog and digital format for both engines, including support for engines that require a limited RPM range, Independent engine time recording, Trend graph function representing RPM vs. Time for both engines simultaneously This instrument kit includes two Hall Effect sensors for Bendix type single magnetos. The sensors are mounted in the vent hole (closest to the engine) of the magneto. The instrument will work on all 4, 6 and 8 cylinder aircraft engines.

P/N 10-05179.....**$1,395.00**

AEROSPACE LOGIC MANIFOLD PRESSURE & TACHOMETER - SLICK



The MT200 is an advanced, next generation manifold pressure and tachometer combination instrument. Manifold pressure functionality is TSO'd and meets the pressure accuracy requirements of SAE AS8042. Tachometer functionality is TSO'd to C49b and accuracy requirements of AS404C. Functional displays include: Simultaneous, real-time analog data depiction and digital value display for both manifold pressure and tachometer, Graphical trend display of both manifold pressure and tachometer data., and Display and tracking of engine time The MT200 is TSO'd and STC'd as a primary replacement instrument under all flight conditions (day/night VFR and IFR) This kit includes a A200-PMP manifold pressure sensor, and a Hall Effect sensor for Slick/Unison type magnetos. The sensor is mounted in the vent hole (closest to the engine) of the magneto. The instrument will work on all 4, 6 and 8 cylinder aircraft engines. Includes all installation hardware. P/N 10-05223.....**$1,225.00**

AEROSPACE LOGIC CHT INDICATORS



Full color CHT instrument that provides simultaneous, real-time display of all cylinders. This kit includes thermocouple probes, all connectors and installation hardware. Functionality TSO'd and meets the temperature accuracy requirements of SAE AS8005 for a Class IIa (+/- 1%) instrument. Functional displays include: Real-time cylinder temperature display Single cylinder temperature monitoring while retaining graphic indications Graphic trend analysis and viewing of all cylinders simultaneously Programmable shock cooling monitor and indication TSO C43c

Part No.	Model No.	Description	Cyl.	Price
10-04485	CT204R2	CHT Instrument With 12mm Ring Probes	4	$875.00
10-04486	CT204R4	CHT Instrument With 14mm Ring Probes	4	$875.00
10-04487	CT204R8	CHT Instrument With 18mm Ring Probes	4	$875.00
10-04484	CT204B	CHT Instrument With Bayonet Probes	4	$958.00
10-04362	CT206R2	CHT Instrument With 12mm Ring Probes	6	$1,025.00
10-04365	CT206R4	CHT Instrument With 14mm Ring Probes	6	$1,025.00
10-04367	CT206RB	CHT Instrument With 18mm Ring Probes	6	$1,025.00
10-04358	CT206B	CHT Instrument With Bayonet Probes	6	$1,025.00
10-05171	ECT204	CHT And EGT Combo Kit without probes	---	$1,525.00

AEROSPACE LOGIC EGT INDICATORS



Full color EGT instrument that provides simultaneous, real-time display of all six cylinders. This kit includes six Type-K ungrounded, 1 1/2" EGT clamp type thermocouple probes, all connectors and installation hardware Exhaust gas temperature functionality is TSO'd and meets the temperature accuracy requirements of SAE AS8005 for a Class IIa (+/- 1%) instrument Functional displays include: Real-time cylinder temperature display, Menu select option for fast selection of display type, Automated rich-of-peak (ROP) leaning function, Automated lean-of-peak (LOP) leaning function, Single cylinder temperature monitoring while retaining graphic indications for all cylinders, and Graphic trend analysis and viewing of all cylinders simultaneously TSO C43.

Part No.	Model No.	Description	Cyl.	Price
10-04402	ET204P1	EGT Instrument With 1-1/2" Clamp Probes	4	$935.00
10-04403	ET204P2	EGT Instrument With 2" Clamp Probes	4	$935.00
10-04404	ET204P3	EGT Instrument With 2-1/2" Clamp Probes	4	$935.00
10-04405	ET204PB	EGT Instrument With Bayonet Probes	4	$975.00
10-04413	ET206P1	EGT Instrument With 1-1/2" Clamp Probes	6	$1,094.00
10-04414	ET206P2	EGT Instrument With 2" Clamp Probes	6	$1,094.00
10-04415	ET206P3	EGT Instrument With 2-1/2" Clamp Probes	6	$1,094.00
10-04416	ET206PB	EGT Instrument With Bayonet Probes	6	$1,150.00

IN



AEROSPACE LOGIC FUEL PRESSURE/AMMETER/ VOLTMETER

The FA200 is an advanced, next generation fuel pressure and ammeter combinational instrument This kit includes an A200-PSF fuel pressure sensor, an A200-HAS Hall Effect current shunt and all installation hardware. meets requirements of SAE AS408C. Functional displays include Real-Time analog data depiction and digital value display Graphical trend display of fuel pressure and ammeter data TSO C47a

Part no.	Model No.	Description	Price
10-04449	FA200K	Fuel Pressure And Ammeter Kit	$900.00
10-04451	FA200VK	Fuel Pressure And Ammeter Kit With Voltmeter	$950.00



AEROSPACE LOGIC TACHOMETER KIT

The TM200 is a precision tachometer that provides RPM data accurate to +/- 1RPM. RPM indication in both analog and digital format, including support for engines that require a limited RPM range,Engine time Trend graph function representing RPM vs. Time This instrument kit includes the Hall Effect sensor for single magnetos. The sensor is mounted in the vent hole (closest to the engine) of the magneto. The instrument will work on all 4, 6 and 8 cylinder aircraft engines. TSOC49b

Part no.	Model No.	Description	Price
10-04478	TM200B	Tachometer Kit For Bendix Mag	$795.00
10-04477	TM200S	Tachometer Kit For Slick Mag	$795.00
10-05179	TM202B	Tachometer Kit For Dual Bendix Mag	$1,395.00
10-05513	TM202S	Tachometer Kit For Dual Slick Mag	$1,538.00



AEROSPACE LOGIC FL-100 DUAL FUEL LEVEL INDICATORS

Fuel level functionality is TSO'd and meets the repeatable accuracy requirements of SAE AS405C, +/- 1US Gallon. Functional displays include: Graphical indication of fuel level in each tankSelectable digital fuel quantity for each tank Fully programmable color indication to meet all aircraft marking requirementsGraphical fuel level indication, starting at power onThe FL202 instrument is TSO'd and STC'd as a primary replacement instrument under all flight conditions. It is a requirement of the STC that this be the only fuel level indicator, when installed.The FL202 instrument utilizes the existing fuel senders.

Part No.	Model No.	Description	Price
10-05174	FL201	Single Tank Resistive 300 Ohm Fuel Level	$586.00
10-04432	FL202	Dual Tank Resistive 300 Ohm Fuel Level	$675.00
10-05515	FL251	Single Tank 0-5v Fuel Level	$599.00
10-04443	FL252	Dual Tank 0-5v Fuel Level	$745.00



AEROSPACE LOGIC OIL PRESSURE & TEMPERATURE

The OPT200 is an advanced, next generation oil pressure and temperature combinational instrument. Oil temperature is TSO'd and meets the temperature accuracy requirements of SAE AS8005, while oil pressure meets the requirements of AS408C. Functional displays include:Real-Time analog data depiction and digital value display for both pressure and temperature Graphical trend display of both oil pressure and temperature dataThe OPT200 is TSO'd and STC'd as a primary replacement instrument under all flight conditions.This kit includes an A200-TSO oil temperature sensor and an A200-PSO oil pressure sensor plus all installation hardware

Part No.	Model No.	Description	Price
10-04465	OPT200K	Oil Pressure And Temperature Kit	$999.95
10-04467	PT200VK	Oil Pressure And Temperature Kit With Voltmeter	$1,025.00
10-04469	OP202K	Dual Oil Pressure Kit	$1,150.00
10-04471	OP202VK	Dual Oil Pressure Kit With Voltmeter	$1,195.00
10-04473	OT202K	Dual Oil Temperature Kit	$899.00
10-04475	OT202VK	Dual Oil Temperature Kit With Voltmeter	$985.00



AEROSPACE LOGIC VOLMETER / AMMETER

The VA200 is an advanced, next generation voltmeter and ammeter combinational instrumentThe ammeter portion of this instrument may be used as either a normal ammeter, indicating both charge and discharge current or a loadmeter, displaying the total load on the alternator/generator. STC'd as a primary replacement

Part No.	Model No.	Description	Price
10-04480	VA200K	Voltmeter And Ammeter Kit Includes 100amp Shunt	$675.00



AEROSPACE LOGIC CLOCK & OUTSIDE AIR TEMPERATURE

The CA200 is an advanced, next generation airborne timepiece plus a seven input annuciator. It can scan seven 200 Series instruments and report any out-of-limit conditions the moment they occur; all on one instrument. The CO200 is identical to the CA200 with the exception of the annunciator function. Outside air temperature functionality is TSO'd and meets the temperature accuracy requirements of SAE AS8005 for a Class IIa (+/- 1%) instrument. Functional displays include: • UTC Time • Local Time • Chronograph • Flight Time and Interval Timer • Seven annunciator sense inputs (CA200 only) P/N 10-04348 .....**$550.00**

AEROSPACE LOGIC SENSORS AND PROBES

Description	Part No.	Price
A200-TEC5 EGT Probe Kit	10-04813	$214.95
A200-TEC20 EGT Probe Kit	10-04812	$199.75
A200-TEC25 EGT Probe Kit	10-04800	$195.75
A200-HAS Hall Effect Current Shunt	10-04808	$210.95
A200-PSF Fuel Pressure Sensor	10-04804	$349.00
A200-HMB Bendix Rotational Speed Sensor	10-04806	$230.95
A200-HMS Slick Rotational Speed Sensor	10-04807	$230.95
A200-PSO Oil Pressure Sensor	10-04805	$349.00
A200-TSO Oi; Temperature Sensor	10-04801	$224.95
A200-TCB Bayonet CHT Probe Kit	10-04799	$160.75
A200-PMP Manifold Pressure Sensor	10-04803	$326.00
A200-TSA Air Temperature Sensor	10-04802	$179.95

PLEASE SEE OUR WEBSITE FOR ADDITIONAL MODELS, INCLUDING STC'D MODELS.

Prices Subject to Change Without Notice

JPI ENGINE SCANNERS



J.P. INSTRUMENTS EDM-700 DIGITAL AND ANALOG EGT/CHT SCANNERS

All pilots know that to run their engines at peak performance means maximum efficiency! Maximum efficiency translates to substantial savings in fuel burned and engine maintenance. JPI's EDM-700 assures pilots of ***Peak Precision Engine Performance Simply and Economically.*** The EDM-700 includes: Computer assisted diagnostics for troubleshooting the entire system, 2-1/4" panel mount, Normalize mode, Graphics resolution, Automatically finds the first EGT to peak, display of OIL, OAT, IAT, CDT, voltage, shock cooling of two TIT's, one degree temperature resolution, selectable °C or °F, all functions have Hi/Lo pilot programmable limits, supplied with JPI's well known, grounded, fast response probes, TSO quality, FAA TSO/STC approved, 3 year warranty. All probes, harness, and hardware included. ***Data Recording -*** All EDM-700 and EDM-760 systems come with data recording and provide long term trend monitoring for maintaining ultimate engine health. Data Recording capability records and stores all displayed parameters and, at a later time, transfer the info to a palmtop or laptop PC. Retrieve all the data stored in the EDM-700 and 760 or only the new data recorded since your last retrieval. In either case, no data is erased in the EDM unit. PC program supplied with the unit will graph the data for display and use by other programs, such as MS Excel or Lotus 123. EDM-700 or 760 Data Recording contains a date and time clock. You may also program an aircraft ID, such as your aircraft registration no. or your name that will appear in the output data file.

Systems include EGT & CHT probes, harness, memory module, leads, and hardware

EDM-700 SINGLE ENGINE SYSTEMS

Description	Part No.	Price
EDM-700-4C 2-1/4" (No Fuel Flow)	10-00262	**$1,529.00**
EDM-700-4C 3-1/8" (No Fuel Flow)	10-02008	**$1,897.00**
EDM 700-4C with Fuel Flow 201 2-1/4" (Fuel Pump)	10-00263	**$2,008.00**
EDM-700-4C with Fuel Flow 201 3-1/8" (Fuel Pump)	10-02009	**$2,305.00**
EDM 700-4C with Fuel Flow 231 2-1/4" (Gravity Fed)	10-02845	**$2,008.00**
EDM 700-4C with Fuel Flow 231 3-1/8" (Gravity Fed)	10-02849	**$2,325.00**
EDM-700-6C 2-1/4" (No Fuel Flow)	10-00264	**$1,945.00**
EDM-700-6C 3-1/8" (No Fuel Flow)	10-02012	**$2,225.00**
EDM 700-6C with Fuel Flow 201 2-1/4" (Fuel Pump)	10-00265	**$2,326.00**
EDM 700-6C with Fuel Flow 201 3-1/8" (Fuel Pump)	10-02013	**$2,637.00**
EDM 700-6C with Fuel Flow 231 2-1/4" (Gravity Fed)	10-02844	**$2,343.00**
EDM 700-6C with Fuel Flow 231 3-1/8" (Gravity Fed)	10-02846	**$2,638.00**
EDM-700-8C 2-1/4" (No Fuel Flow)	10-28095	**$2,438.00**
EDM-700-8C 3-1/8" (No Fuel Flow)	10-02016	**$2,715.00**
EDM 700-8C with Fuel Flow 201 2-1/4" (Fuel Pump)	10-02852	**$3,015.00**
EDM 700-8C with Fuel Flow 201 3-1/8" (Fuel Pump)	10-02017	**$3,319.00**
EDM 700-8C with Fuel Flow 231 2-1/4" (Gravity Fed)	10-02853	**$3,015.00**
EDM 700-8C with Fuel Flow 231 3-1/8" (Gravity Fed)	10-02841	**$3,319.00**
EDM-700-9C 2-1/4" (No Fuel Flow)	10-28100	**$2,875.00**
EDM-700-9C 3-1/8" (No Fuel Flow)	10-02018	**$3,175.00**
EDM 700-9C with Fuel Flow 231 2-1/4" (Gravity Fed)	10-02862	**$3,275.00**
EDM 700-9C with Fuel Flow 231 3-1/8" (Gravity Fed)	10-02842	**$3,585.00**
Trade-in Price for EDM 700. Basic Gem, (Use old System wire harness and EGT/CHT/TIT Probes)	10-03611	**$1,295.00**
EDM 700 to EDM 800 Upgrade	10-06268	**$1,115.00**

Accessories

Description	Part No.	Price
EDM 700 Transducer (Fuel Pump)	10-27089	**$274.00**
EDM 700 Transducer (Gravity)	10-27094	**$274.00**
JPI EDM RPM Option	10-01720	**$269.00**
Fuel Flow Without Transducer	10-05199	**$399.95**
Fuel Flow With Transducer	10-05201	**$418.00**
JPI Replacement Rpm Sensor For Pressurized Slick Mag	10-05458	**$359.00**
JPI Replacement Rpm Sensor For Pressurized Bendix 1200 S	10-05459	**$370.00**
JPI Replacement Rpm Sensor For Pressurized Bendix 20 Series	10-05460	**$337.00**
JPI Replacement Rpm Sensor For Pressurized Dual Bendix Mag	10-05461	**$337.00**
JPI Standard RPM Vent Plug Sensorfor Bendix Mag.	10-05651	**$264.00**
JPI Standard RPM Vent Plug Sensor For Slick	10-05652	**$264.00**
TIT,Turbine Inlet Temperature Probe and Sensor	10-27090	**$165.00**
EDM Carb Temp Probe 1/4-24 Thread 400128	10-27103	**$175.00**
USB Integrated Option	11-06769	**$234.95**
USB Download Box	10-03149	**$169.95**
EDM-700/800/900 OAT Probe	10-27095	**$165.00**
700/760/800 Oil Temperature Probe & Sender	10-27100	**$165.00**
EDM 700 Induction Air Temperature Probe	10-02277	**$184.00**
EDM 700 Compressor Discharge Temperature Probe	10-03451	**$184.99**
EDM 700 IAT/CDT Induction Air & Compressor Temp.	10-27105	**$365.00**
5050-T CHT Bayonet Probe	10-18500	**$103.75**
M-113 CHT Gasket Probe	10-27093	**$103.75**
JPI Probe M113-3/8	10-03689	**$103.75**
M-111 Replacement EGT Probe	10-00830	**$102.75**
5/8" Oil Temp Probe Adapter for Lyc./Cont.*	11-09614	**$165.00**
1/4" Oil Temp Probe Adapter for Lyc./Cont.	10-05114	**$39.95**
Oil Temp Probe 400509 (5/8-18)	11-09614	**$165.00**
EDM Option CHT Gasket 14mm Probe	10-04157	**$103.95**
VDO Oil Press Sensor 1/4 NPT 0-150 PSI This oil pressure sender will not fit Rochester gauges.	10-04183	**$254.95**
EDM PC Interface Cable	10-27112	**$34.95**

All Systems which include Fuel Flow come with Transducers. 201 Transducer is for Aircraft with Fuel Pumps. 231 Transducer is for Gravity Fed Aircraft. *Oil Temperature Probe Collar Adapter, 5/8-18 port to 1/8 NPT Continental engines may require a "brass" oil probe adapter.

BASIC EDM-760 TWIN ENGINE SYSTEMS



The value of Digital engine temps for precision engine monitoring is well documented. JPI has merged the Analog and digital information into one gauge. The EDM-760 monitoring 29 channels of information with 14 columns of analog information. All EDM's have a built in voltmeter monitoring high and low system voltage. All the enhancements found on the single engine EDM-700 are included in the Twin engine EDM-760, including:
Digital display of OAT, TIT, CARB, IDA, CDT, and EGT/CHT, Shock Cooling displayed in degrees per minute with alarms, Normalize Mode levels the bar graph display for instant identification of engine trends during cruise, Automatically finds first cylinder to peak on each engine.

EDM-760 is shipped complete including everything necessary for installation. The package contains JPI Quick response EGT probes, Bayonet CHT probes with wiring harness, insulating sleeves, terminals w/mounting screws. Options like Oat, CDT/IAT are available and can be added later. Two year warranty on electronics. Size: 3-1/8" display with 14 columns, installed weight = 6 lbs. RS-232 Output port and one TIT function are included in system.

All EDM-760 systems come with data recording and provide long term trend monitoring to maintain ultimate engine health.Data Recording capability will records and stores all displayed parameters and, at a later time, transfer the info to a palmtop or laptop PC. Retrieve all the data stored in the EDM-760 or only the new data recorded since your last retrieval. In either case, no data is erased in the EDM unit.

The data will be saved to a PC in a compressed format file. PC program supplied with the Data Recording Option will decompress the data for display and use by other programs, such as MS Excel or Lotus 123.

EDM-760 Data Recording contains a date and time clock. You may also program an aircraft ID, such as your aircraft registration number or your name that will appear in the output data file.****4 Cylinder has 8 probes. 6 Cylinder has 12 probes.***

Description	Part No.	Price
EDM-760-6C 3-1/8" (No Fuel Flow)	10-28080	**$4,130.00**
EDM-760-6C with Fuel Flow 201 3-1/8" (Fuel Pump)	10-00640	**$5,145.00**
EDM-760-4C 3-1/8" (No Fuel Flow)	10-28085	**$2,551.00**
EDM-760-4C with Fuel Flow 201 3-1/8" (Fuel Pump)	10-00639	**$4,125.00**
Upgrade from GEM to 760 - UNIT ONLY	10-05887	**$2,525.00**

ACCESSORIES

Description	Part No.	Price
EDM PC Interface Cable +	10-27112	**$34.95**
EZ Trends (Free with new instrument)	10-27113	**$69.00**
Fuel Flow Without Transducer	10-05199	**$399.95**
Fuel Flow With Transducer	10-05201	**$418.00**

IN

JPI ENGINE SCANNERS



JPI EDM-730/830

The EDM-730/830 revolutionizes engine monitoring by the integration of brilliant full color graphical LCD display with the extremely popular EDM 700/800 series functionally and yet reduces the package size to the smallest on the market! The EDM-730 packs more features, functionality, and information onto its large full color screen than any other monitor available and features larger characters for easier reading. Oil pressure has also been added to the entire EDM series line. Mounting is a breeze due to its standard 3-1/8" format.

Model	Part No.	Price
EDM-730-4Cyl	10-03701	$1,557.00
EDM-730-4C W/ FF 201	10-03717	$1,959.00
EDM-730-4C W/ FF 231	10-03718	$1,959.00
EDM-730-6C	10-03703	$2,179.00
EDM-730-6C W/ FF 201	10-03719	$2,599.00
EDM-730-6C W/ FF 231	10-03720	$2,595.00
EDM-730-7C	10-05180	$2,305.00
EDM-730-7C W/ FF 201	10-05181	$2,720.00
EDM-730-7C W/ FF 231	10-05182	$2,720.00
EDM-730-8C	10-05183	$2,385.00
EDM-730-8C W/ FF 201	10-05184	$2,799.00
EDM-730-8C W/ FF 231	10-05198	$2,799.00
EDM-730-9C	10-05187	$3,627.00
EDM-730-9C W/ FF 231	10-05186	$3,965.00
EDM-830-4C W/ FF 201	10-03721	$2,575.00
EDM-830-4C W/ FF 231	10-03723	$2,575.00
EDM-830-6C W/FF 201	10-03724	$2,829.00
EDM-830-6C W/FF 231	10-03725	$2,837.00
EDM-830-7C W/ FF 201	10-05190	$3,065.00
EDM-830-7C W/ FF 231	10-05191	$3,065.00
EDM-830-8C W/ FF 201	10-05192	$3,305.00
EDM-830-8C W/ FF 231	10-05193	$3,305.00
EDM-830-9C W/ FF 201	10-05194	$3,550.00
EDM-830-9C W/ FF 231	10-05195	$3,550.00
Fuel Flow Without Transducer	10-05199	$399.95
Fuel Flow With Transducer	10-05201	$418.00

UPGRADE YOUR EDM 700 TO THE EDM 730, OR YOUR EDM 800 TO THE EDM 830

This upgrade program will allow you to swap out your 700 to the new 730 or 800 to the new 830 as the new 730 and 830 use a standard 3-1/8" mounting hole. The 730/830 will use the same JPI probes and will better display engine parameters with this plug and play upgrade. Core must be sent back to JPI.

Description	Part No.	Price
EDM 700 to EDM 730	10-03863	$1,295.00
EDM 800 to EDM 830	10-03864	$1,295.00



EDM 930 & 930T PRIMARY

True TFT Transflective Custom Display - Display brightness increases with ambient brightness, always sunlight readable. All gages have a Variable Scale and alarm limit to fit your engine. New form factor, panel size: 6"w X 4"h X 2.9"d. Records all engine parameters at 2 to 255 second intervals. Plot the data with EZplot. All probes and transducers supplied. High Flow transducer (120 GPH) included in EDM930T Compatible with and transmits RS-232 data to most MFD's, also sold less the display.

PISTON FUNCTIONS: • Tachometer/Hobbs • Manifold Air Press • 6 EGT/CHT • Oil Temp. • Oil Press • Fuel Quantity • Fuel Press • OAT • Carb. • Temp • TIT, TIT-2 • CDT • GMT • Votls/Amps 1-2 • Differential EGT • Shock cooling • GPH • Fuel remaining • Fuel Endurance • Fuel required to GPS waypoint • Fuel used • Percent of horse power • Receives data from any GPS and transmits data to any GPS.

IF NECESSARY PAPERWORK IS NOT PROVIDED & ANY CHANGES ARE REQUIRED, THERE WILL BE A $200 FEE

FAA TSO PRIMARY

Description	Part No.	Price
JPI EDM-930 (4)Cylinder Primary STC No Tank System	10-04909	$5,365.00
JPI EDM-930 (4) Cylinder Primary STC 2 Tank System	10-02111	$5,554.00
JPI EDM-930 (4) Cylinder Primary STC 4 Tank System	10-04731	$5,745.00
JPI EDM-930 (6) Cylinder Primary STC No Tank System	10-04911	$5,630.00
JPI EDM-930 (6) Cylinder Primary STC 2 Tank System	10-02112	$5,789.00
JPI EDM-930 (6) Cylinder Primary STC 4 Tank System	10-04732	$6,008.00
JPI EDM-930 (7) Cylinder Primary STC	10-02632	$7,893.00
JPI EDM-930 (8) Cylinder Primary STC	10-02633	$8,172.00
JPI EDM-930 (9) Cylinder Primary STC	10-02634	$10,082.00

EXPERIMENTAL PRIMARY

Description	Part No.	Price
EDM-930-4CP-0 (4 Cyl) for NO Tanks Experimental	10-05236	$4,564.00
EDM-930-4CP-2 (4 Cyl) for 2 Tanks Experimental	10-05237	$4,759.00
EDM-930-4CP-4 (4 Cyl) for 4 Tanks Experimental	10-05238	$4,915.00
EDM-930-6CP-0 (6 Cyl) for NO Tanks Experimental	10-05239	$4,849.00
EDM-930-6CP-2 (6 Cyl) for 2 Tanks Experimental	10-05240	$5,045.00
EDM-930-6CP-4 (6 Cyl) for 4 Tanks Experimental	10-05241	$5,225.00
EDM-930-7CP (7 Cyl) for 4 Tanks Experimental	10-05242	$5,365.00
EDM-930-8CP (8 Cyl) for 4 Tanks Experimental	10-05243	$5,482.00
EDM-930-9CP (9 Cyl) High Flow Transducer Experimental	10-05244	$6,010.00

JPI EDM 800 DIGITAL/ANALOG SCANNERS WITH AUTOMATIC HORSEPOWER COMPUTING



The EDM-800 instrument has all the advanced functions of the EDM-700, but incorporates some new features that can only be found on JPI products. No longer do pilots have to waste time looking up and guesstimating the present percentage of horsepower (HP). There are new easily readable digits located at the top of the EDM display which continually show the percentage of horsepower being used, and can also display RPM. What is truly unique about this new feature is that it can also display HP over lean. HP can be displayed for either carbureted or injected engines, even if they are turbocharged. Now you can be sure that you are within the horsepower limits of your engine, and in IFR conditions, this can be quite a task. At the present time HP is only available on single engine 4 and 6 cylinder engines. The EDM-800 calculates percent of horsepower in an Over lean condition. Lycoming & Continental horsepower charts stop at peak EGT on the first cylinder to peak. Gami has developed a method of going over lean on all cylinders. When you are over lean, every ounce of fuel is burned and used to create horsepower and heat. Cooling is accomplished by excess air in the combustion chamber. JPI has developed an algorithm to calculate horsepower based on fuel consumption and other factors. To obtain HP in this over lean condition you must have an EDM-800 engine analyzer which includes fuel flow, RPM, MAP, OAT, Memory and Gami tuned injectors. In addition to JPI's HP function, the EDM-800 also has a Memory Module that can store up to 25 hours of engine data, which can be downloaded to a laptop or palmtop PC. When using the memory function, all functions of the EDM will be recorded, including Fuel Flow and HP.

Description	Part No.	Price
EDM-800-4C w/Fuel Flow 201 2-1/4"(Fuel Pump)	10-02854	$2,870.00
EDM-800-4C w/Fuel Flow 201 3-1/8"(Fuel Pump)	10-02021	$3,165.00
EDM 800-4C w/Fuel Flow 231 2-1/4"(Gravity Fed)	10-02855	$2,870.00
EDM 800-4C w/ Fuel Flow 231 3-1/8"(Gravity Fed)	10-02843	$3,162.00
EDM-800-6C w/Fuel Flow 201 2-1/4"(Fuel Pump)	10-02856	$3,330.00
EDM-800-6C w/Fuel Flow 201 3-1/8"(Fuel Pump)	10-02857	$3,650.00
EDM 800-6C w/Fuel Flow 231 2-1/4"(Gravity Fed)	10-02859	$3,330.00
EDM 800-6C w/Fuel Flow 231 3-1/8"(Gravity Fed)	10-02858	$3,650.00
EDM 700 to EDM 800 Upgrade	10-06268	$1,115.00



J.P. INSTRUMENTS EDM-960

The EDM-960 is the latest graphic engine analyzer for Piston Engine Twins from JP Instruments. The EDM-960, STC'd as Primary engine instrument, takes the best from their EDM-760 and adds total engine display monitoring including Tach, % Horsepower, Hobbs, Manifold Pressure, EGT, CHT, Oil Pressure, Oil Temp, Fuel Flow, Outside Air Temp, Volts, and Amps plus optional Fuel Pressure, Fuel Quantity, and Turbine Inlet Temp. Each individual engine display has a scale and alarm limit to fit your particular airplane. As with the popular EDM-760, the EDM-960 has internal memory that records all engine parameters that can be recalled and displayed on your computer to keep track of the health of your engine. Plus: warnings for shock cooling and excess temperatures, leaning assist for both "lean of peak, and "rich of peak".

IF NECESSARY PAPERWORK IS NOT PROVIDED & ANY CHANGES ARE REQUIRED, THERE WILL BE A $200 FEE

Description	Part No.	Price
JPI EDM-960-6C Twin	10-03726	$14,871.00
JPI EDM 960-6C Twin 4 Tank System	10-04734	$15,664.00
JPI EDM 960 6C No Tanks	10-04914	$15,238.00
JPI EDM-960-4C Twin	10-03727	$13,686.00
JPI EDM 960-4C Twin 4 Tank System	10-04733	$14,617.00
JPI EDM 960 4C No Tanks	10-04913	$13,995.00
JPI EDM-960-7C Twin	10-05202	$16,007.00
JPI EDM-960-8C Twin	10-05196	$16,189.00
JPI EDM-960-9C Twin	10-05197	$16,624.00
JPI Type K Thermocouple Wire	10-18600	$1.25

JPI ENGINE SCANNERS

JPI EDM-740 INSTRUMENTATION SYSTEM



Functions included on EDM-740: All in One Engine Instrumentation that works. Start saving fuel today with JPI's exclusive Over lean (LOP) feature. All functions also show up in large digital display. Same as the EDM-830 plus now with Fuel Level and Fuel Pressure. User selectable landscape or portrait mode. For experimental aircraft only.
RPM Propeller, MAP Manifold Pressure, % HP Percent of Horse Power, EGT Exhaust Gas Temp., CHT Cylinder Head Temp, O-T Oil Temperature, O-P Oil Pressure, OAT Outside Air Temp., VDC Voltage, GPH Gallons per Hour, REQ Required to destination, USD Fuel used, H:M Endurance, MPG Miles per Gal, CLD Shock Cooling on all cylinders, DIFF Gami spread, USB Memory stick Data Recording, EZTrends Graphing program
Optional functions:TIT Turbine Inlets Temp., F-P Fuel Pressure, CDT Compressor Discharge., AMP Current amps, CRB Carburetor Temp , L-Tank Fuel Quantity, level, R-Tank Fuel Quantity, level
EDM 740 4C Experimental ..... P/N 10-05188 ..... **$2,425.00**
EDM 740 6C Experimental ..... P/N 10-05189 ..... **$3,105.00**
EDM 740 9C Experimental ..... P/N 10-05222 ..... **$4,195.00**

J.P. INSTRUMENTS EDM-790 ENGINE MONITORING SYSTEM



The EDM 790 system is the most advanced and accurate twin piston engine-monitoring instrument on the market. TSO'd for quality, the EDM 790 is not just another black box along for the ride. It is a Flight Engineer … a Maintenance Manager … For the price there is nothing that gets close to it. You can almost think of the EDM 790 as your personal flight engineer. It's always there, working in the background, constantly watching over your engine while you concentrate on flying the aircraft. You can make an entire flight without ever pushing a button, if you so choose. Yet your EDM will be monitoring your engine parameters three times a second and will warn you instantly if any parameter exceeds the programmed limit.
Features: • EGT 4 or 6 probes • CHT 4 or 6 probes • Volts • Shock cooling • Span (highest to lowest EGT) • EGT Normalize mode • LOP/ROP function • Power connector • All required Harness 20 ft • EZTrends Graphing Software free • Serial Data recording -25 hours • 3 year Warranty
Specifications: • FAA Approved under TSO-C43B, DO-160C, DO-178B Level C & STC, SA 2586 NM • Size 3-1/8 in panel mount 7.5 deep. Weight: 1 LB. • Standard Functions LeanFind, EGT/CHT, Shock Cooling, Voltage, Differential EGT, Normalize, Long term data module for Data Logging and TIT (if applicable for Engine). • Optional Functions Fuel Flow, Oil Temperature 1 & 2, Turbine Inlet 2 (TIT-2), Outside Air (OAT) and Carburetor Temperature (CRB).
4 Cylinder ..... P/N 10-05648 ..... **$3,450.00**
6 Cylinder ..... P/N 10-05649 ..... **$4,469.00**

JPI EDM 711 SYSTEMS



4 or 6 Cylinder. Configured like the EDM-700 or EDM-800, this is STC'd as the Primary Replacement for certified aircraft. Includes one primary function; CHT, Oil Temp, or T.I.T. To add a function, select P/N 10-00647, 10-00648, or 10-00649. Fuel Flow may also be added (P/N 10-00650), but the Transducer is sold separately.

Use P/N 10-27089 or 10-27094 for Transducer. When ordering, please provide Aircraft Make & Model, Engine Make & Model, Mag Type, and Redline for each function.

Description	Part No.	Price
EDM711-4C (configured as 700)	10-00641	**$1,912.00**
EDM711-6C (configured as 700)	10-00642	**$2,215.00**
EDM711-4C (configured as 800)	10-00643	**$2,905.00**
EDM711-6C (configured as 800)	10-03858	**$3,369.00**
Add Primary Functions to EDM711	10-00647	**$329.00**
Add Oil Temp Function to EDM711	10-00648	**$329.00**
Add Fuel Flow to EDM711	10-00650	**$460.00**
Fuel Flo Harness	10-04650	**$177.95**
EDM 4 Cyl. Harness	10-04661	**$199.00**
EDM 6 Cyl Harness	10-04663	**$329.00**

JPI EDM-350 EXPERIMENTAL ENGINE MONITORING SYSTEM



If all you want is EGT/CHT then the basic kits gives you everything you could want in a compact size with full customization features and the legendary JPI quality and accuracy. The Engine Data Management 350 system is the most cost effective, reliable piston engine experimental EDM instrument on the market. The basic kit includes: • EGT - Exhaust Gas Temperature • CHT - Cylinder Head Temperature • Included - Probes and Harness • VDC - Voltage • CLD - Shock Cooling on "All" Cylinders • ROP/LOP - Lean Find • DIFF - Engine Health • USB - Data Port built in • Data Record - 600 Hrs. at every 6 sec • EZTrends - Graphing software, including Google Earth Location
The compact Engine Data Management 350 system (3.5 square) is the most advanced and accurate piston experimental engine-monitoring instrument on the market. The EDM 350 is not just another black box along for the ride. It is a Flight Engineer, Maintenance Manager, and Backup Instrument. For the price there is nothing that gets close to it. Customize with 17 options, including FF. You can think of the EDM 350 as your personal flight engineer. It's always there, working in the background, constantly watching over your engine while you concentrate on flying the aircraft. You can make an entire flight without ever pushing a button, if you so choose. Yet your EDM will be monitoring your engine parameters three times a second and will warn you instantly if any parameter exceeds the programmed limit.

Description	Part No.	Price
4 Cylinder	10-06582	**$725.00**
6 Cylinder	10-06583	**$899.00**

JPI FUEL COMPUTERS

J.P. INSTRUMENTS SLIM LINE DIGITAL ENGINE INSTRUMENTS



These compact engine instruments from have a bright red display and feature central remote and individual alarms on all gauges. The gauges are easily stackable in a homebuilt aircraft panel, and come complete with sensors. Specify voltage. NOT FAA APPROVED. ***This is a secondary unit only. You must keep your original engine instrument***

Tachometer **-** Features quartz crystal and accuracy of 1 RPM. Resolution is 10RPM and includes red line alarm. Specify engine and magneto models, number of cylinders, voltage, and red line.
P/N 10-24900 ..... **$422.00**

Manifold Pressure **-** Features resolution of 0.1 inches mercury, accuracy of 0.1" Hg, solid state sensor, and over boost alarm. Range: 0-50".
P/N 10-24910 ..... **$329.00**

Outside Air Temperature (O.A.T.) **-** Features resolution of 1° and has range of -40 to 195°F. ..... P/N 10-24940 ..... **$278.95**

Oil Temperature **-** Features resolution of 1° and over temperature alarm of 235 F. ..... P/N 10-24960 ..... **$251.95**

Volt/Ammeter - Features resolution of 0.1 volts/amps and discharge alarm.
Volt/100 amp-14V ..... P/N 10-24920 ..... **$278.95**
Ammeter Shunt - (100 Amp) ..... P/N 10-24925 ..... **$70.75**
Volt/100 amp-28V ..... P/N 10-24921 ..... **$278.95**

Oil Pressure **-** gives readout in PSI and features resolution of 1 PSI and an under pressure alarm. ..... P/N 10-24930 ..... **$251.95**

Turbine Inlet Temperature (T.I.T) **-** Features resolution of 1° or 10° and a Hi-temperature alarm at 1650° F. ..... P/N 10-24950 ..... **$278.95**

CHT Gauge - ..... P/N 10-06064 ..... **$278.95**

Boom Pressure For Crop Planes - .... P/N 10-06063 ..... **$249.95**

Fuel Pressure **-** Features Resolution of 1 PSI and under pressure alarm.
Slimline Injected 10-32 PSI ..... P/N 10-24970-30A ... **$278.95**
Slimline Carb 1-8 PSI ..... P/N 10-24970-30B ... **$345.00**

JPI DIGITAL EGT/CHT SCANNERS



The Classic Scanner is perfect for any plane, especially for those pilots with a smaller budget. This scanner has proven reliance and durability compares with no other on the market. Kit plane builders love its reliability and durability for a great price. A large red LED display makes your engine monitoring flawlessly accurate, as the instrument scans through each cylinder of your plane's engine. EGT and CHT are both available and alarms are standard on this one. Temperature can also be monitored in degrees Fahrenheit or Centigrade, and the Scanner uses super accurate fast response probes. The Scanner also can let you know about shock cooling before its too late! The Scanner is FAA TSO approved and comes with a one year limited warranty.

Description	Part No.	Price
4 Cylinder	10-02924	**$1,095.00**
6Cylinder	10-02927	**$1,259.00**

ACCESSORIES / OPTIONS

Description	Part No.	Price
Fuel Flow Harness	10-04650	**$177.95**
Turbine Inlet Temperature TIT w/cable	10-27090	**$165.00**
Oil temperature probe w/cable - Lycoming	10-27100	**$165.00**
Outside Air Temperature OAT w/cable	10-27095	**$165.00**
Carburetor probe w/cable	10-27103	**$175.00**
Extra CHT Probe	10-18500	**$103.75**
Extra EGT Probe	10-00830	**$102.75**
Thermocouple Extension Wire Teflon (Sold by the foot)	10-18600	**$1.25**

J.P. INSTRUMENTS FUEL SCAN –450



- Continuous display of fuel burned,in upper display in Gallons per Hour. Liters and Lbs per hr also available.
- An amazingly low price includes Instrument harness and a Flow Scan 201 or 231 transducer.
- Upgrade your old Hoskins, or Shadin System. Will function with any K factors; connector is pin to pin compatible.
- Automatically calculates the K factor.
- All programming done from the front panel.
- Size 2.25" diameter (small hole)
- Light Weight 5 oz with Super Thin 1.5" depth
- Three year warranty. (yes, the only three year warranty around!)
- Serial port sends and receives data from all GPS units, even handhelds.
- Calculates fuel to next waypoint.

FS 450 Scanner Fuel Pump ..... P/N 10-00135 ..... **$642.00**
Fuel Scan 450 Gravity Fed+ ..... P/N 10-00134 ..... **$558.00**
FS-450R Fuel Scan Rotax (2 Transducers for aircraft with return fuel line) ..... P/N 10-00266 ..... **$1,029.00**
FS-450M-3 3-1/8" Twin Engine ..... P/N 10-03692 ..... **$1,024.00**
FS 450 H High Flow up to 120GPH ... P/N 11-13931 ..... **$1,015.00**

JPI EDM-900 SINGLE ENGINE PRIMARY



The EDM-900 has a built in EDM-800, plus many other gauges in combination together. Fits in a standard 3" hole no panel rework. Made in California. **EDM-900 System Includes:** EDM-900 ALL IN ONE Bright VGA Display, Pre-Wired Harness for all functions, All EGT/CHT probes, Oil Pressure Transducer, Oil Temperature Sensor, Fuel Pressure Transducer, Oat Sensor, RPM Sensor, One required, Manifold Pressure Transducer, 100 amp Shunt (2) (for Amps), Volts pick-up V-1 and V-2, 2 GB memory Download/upload stick, FloScan Fuel Flow Transducer w/ firesleeve, Demo DVD, and 3 year warranty.

FAA STC APPROVED.

Description	Part No.	Price
900-4CP-0 (4 Cyl) for NO tanks Primary	10-04857	**$3,841.00**
900-4CP-2 (4 Cyl) for L/R 2 tanks setup complete Primary	10-04858	**$4,115.00**
900-4CP-4 (4 Cyl) for L/R and Aux 4 tanks setup complete Primary	10-04859	**$4,278.00**
900-6CP-0 (6 Cyl) for NO tanks Primary	10-04860	**$4,258.00**
900-6CP-2 (6 Cyl) for L/R 2 tanks setup complete Primary	10-04861	**$4,437.00**
900-6CP-4 (6 Cyl) for L/R and Aux 4 tanks setup complete Primary	10-04862	**$4,628.00**
900-7CP-4 (7 Cyl) for L/R and Aux 4 tanks setup complete Primary	10-04863	**$4,803.00**
900-8CP-4 (8 Cyl) for L/R and Aux 4 tanks setup complete Primary	10-04864	**$4,985.00**
900-9CP-4 (9 Cyl) for L/R and Aux 4 tanks setup complete Primary	10-04865	**$5,156.00**

EXPERIMENTAL

Description	Part No.	Price
EDM-900-4CP-0 (4 Cyl) for NO Tanks	10-05226	**$3,075.00**
EDM-900-4CP-2 (4 Cyl) for 2 Tanks	10-05227	**$3,240.00**
EDM-900-4CP-4 (4 Cyl) for 4 Tanks	10-05228	**$3,521.00**
EDM-900-6CP-0 (6 Cyl) for NO Tanks	10-05229	**$3,425.00**
EDM-900-6CP-2 (6 Cyl) for 2 Tanks	10-05231	**$3,579.00**
EDM-900-6CP-4 (6 Cyl) for 4 Tanks	10-05232	**$3,865.00**
EDM-900-7CP-4 (7 Cyl) for 4 Tanks	10-05233	**$4,026.00**
EDM-900-8CP-4 (8 Cyl) for 4 Tanks	10-05234	**$4,227.00**
EDM-900-9CP-4 (9 Cyl) for 4 Tanks	10-05235	**$4,410.00**



ULTRAFLEX BRAIDED FIBERGLASS PROBE SLEEVES

Replacement 1/2 IN X 5 IN braided fiberglass sleeves like those furnished with JPI probes.
P/N 10-06282 ..... **$4.95**

IN



UBG-16 ULTIMATE BAR GRAPH ENGINE ANALYZER

UBG-16 features include: Sixteen input channel capability. Any channel may be set to display EGTs and CHTs, TIT, and Oil Temp in either digital or bar graph display, O.A.T, Carb. Temp, Cowl Temp, Other Temp, Oil Pressure, Fuel Pressure, Manifold Pressure, Gyro Pressure, R.P.M.,Fuel flow, Bus Voltage or Amps. Engine Analysis is performed automatically with sixteen pilot programmable Over-Temp limits and sixteen Under-Temp limits, a differential limit and a shock-cooling limit. Note: Unit is STC'd/PMA'd. Can only be used as a secondary engine monitor. For primary see the MVP-50.

Model	Description	Part No.	Price
UBG-16-4M	4-Cylinder Package. Includes 4 EGT probes, 4 CHT probes, 8 ea 6' harnesses and Data Recorder (MUX-8A)	10-00593	**$1,488.00**
UBG-16-6M	6-Cylinder Package. Includes 6 EGT probes, 6 CHT probes, 12 ea 6' harnesses, and Data Recorder (MUX-8A)	10-00594	**$1,888.00**
EGView	Software for analyzing downloaded software	10-01219	**$125.00**
Remote	UBG-16 Remote Head option.. Must be purchased at the same time as the UBG-16	10-02763	**$113.75**
UBG-16-4G-MEM	Electronics International Ubg-16 Engine Analyzer 4 Cylinder CHT Prime	10-01048	**$1,488.00**
UBG-16-6G-MEM	Electronics International Ubg-16 Engine Analyzer 6 Cylinder CHT Prime	10-01049	**$1,888.00**
UBG-16	UBG-16 Unit Only	10-02737	**$959.00**
UBG-16-REMOTE	EGT & CHT Remote Head Option 2-14" TSO'D. Must be purchased with unit. Cannot be purchased alone.	10-02763	**$113.75**

The UBG-16 input channels. Any of the following options can be added at any time. Each option uses 1 input channel unless otherwise noted.

Model	Options	Part No.	Price
FM -FLOW -180	FT-180: Fuel Flow Transducer (for very high flow rates), Stainless Steel, 3/4 - 16 (1/2" AN Male w/ 37' flare) 3.6 to 180 GPH, 1.78 PSI drop at 120 GPH, K Factor approx. 48,000, 9.6 Oz.	10-02764	**$497.00**
FM -FLOW -60	Flow Transducer Use w/ engine-driven fuel pumps up to 350 HP. 1/4" female NPT, .6-70+ GPH, .6 PSI drop @ 30 GPH, 2.3 PSI drop @ 60 GPH	10-25343	**$329.95**
FM -FLOW -90	TRANSDUCER For 350 to 550 HP engines or gravity-feed engines, 1/4" NPT, 2 to 125+ GPH, .05 PSI drop @ 20 GPH, .2 PSI drop @ 40 GPH.	10-02208	**$329.95**
FM -FLOW -P	FM-FLOW-P	10-03206	**$348.95**
10-0FM-FP	Secondary Fuel Pressure Includes PT-30GA Pressure Transducer. (Can be used with The UBG-16 and also with the FP-5L (Fuel Flow/Pressure w/ GPS Interface instrument)	10-25337	**$249.00**
FM-GYRO	Gyro Vacuum Includes Pressure Transducer.	10-25339	**$224.95**
FM-MP	Secondary Manifold Pressure Includes Pressure Transducer.	10-25338	**$224.95**
FM-OP	Secondary Oil Pressure Includes PT-100GA Pressure Transducer. (For use with UBG-16 or FP-5(L).	10-25336	**$224.95**
FM-RPM-4C	Secondary RPM Connects directly to the Mag Switch. (For use with UBG-16 or FP-5(L)	10-04818	**$224.95**
FM-RPM-6C	Secondary RPM Connects directly to the Mag Switch. (For use with UBG-16 or FP-5(L)	10-01786	**$221.95**
FM-TEMP-P-110	Egt Clamp Probe, 6 Cable	10-02188	**$215.95**
FM-TEMP-P-111	Tit Or Oil Temp Probe, 1/8 Npt, With Function Module	10-02765	**$249.00**
FM-TEMP-P-112	Tit Or Oil Temp Probe, 7/16-20 Thread 6 Cable	10-02766	**$249.00**
FM-TEMP-P-114	Tit Or Oil Temp Probe, 1/4" Npt 6 Cable	10-02767	**$249.00**
FM-TEMP-P-120	Oil Temp Probe, 5/8-18 Thread 6 Cable	10-02770	**$249.00**
FM-TEMP-P-128	OAT Or Carb Temp Probe 1/4-28 Thread 6 Cable	10-02769	**$249.00**
FM-VA	Secondary Volts/Amps w/S-50 Shunt Volts uses 1 input channel and Amps uses 1 input channel (i.e., monitoring volts and amps require the use of two of the UBG-16's input channels.	10-25342	**$209.95**
FM-VA-3	MVP And UBG Option 3 Input Volt Monitor	10-04841	**$179.00**
KEYSPAN	Keyspan Serial To USB Adapter	10-04978	**$43.75**

E.I. INSTRUMENTS


10-01355


10-01339


10-01348


10-01373

The entire line of Electronics International digital instruments offers precise readings at exceptional prices. All gauges are accurate to 1%. They are FAA-approved under STC No. 1626NM. Furnished complete with all probes & leads.

Single Engine	Description	Part No.	Price
E-1	Single-Channel EGT or CHT, STCd, TSOd, PMA'd 2 1/4" Mount, 2.5" Depth, 12 Oz. Kit,	10-01355	**$275.00**
C-1		10-01338	**$279.00**
T-1P	EGT, CHT or TIT, PRIMARY REPLACEMENTS STCd, TSO'd, PMA'd w/ Over-Temp Warning Light, 2 1/4" Mount, 2.5" Depth, 12 Oz.	10-01373	**$307.95**
E-1P		10-02762	**$319.95**
C-1P		10-01339	**$319.95**
EC-1	Switchable from EGT to CHT (1 of ea), STCd, TSOd & PMAd. 2 1/4" Mount, 2.5" Depth, 16 oz	10-01358	**$378.95**
EAC-1	STCd, TSOd, PMAd. - EGT/OAT/CHT Ice Zone Warning Light (from 10 to 39 degrees Celsius).	10-00806	**$425.00**
CA-1	STCd, TSOd, PMAd - CARB TEMP/OAT w/ Ice Zone Warning Light. (from 10 to 39 degrees Celsius)	10-01351	**$339.00**
A-1	OAT w/ Ice Zone Warning Light, STCd, PMAd, TSOd (light comes on between 10 and 39 degrees F).	10-01307	**$259.00**
E-4	EGT and CHT instruments, STCd, TSOd and PMAd. Four Channels (EGT or CHT)	10-01356	**$557.00**
C-4		10-01348	**$559.00**
E-6	EGT and CHT instruments, STCd, TSOd and PMAd Six Channels	10-01357	**$649.00**
C-6		10-01350	**$649.00**
EC-1P	3-1/8" EC-1P One Channel EGT/CHT Primary	10-00807	**$514.00**
TC-1P	TC-1P Single Channel TIT/CHT Primary	10-02736	**$505.00**
FOR TWINS - Orders for following instruments MUST specify type of probes: EGT hose clamp, TIT (hose clamp, 1/8" NPT, 1/4" NPT or 7/16 x 20). CHT, and OverTemp Limits.			
EE-1P	Dual Display EGT (1 L & 1 R), Over-Temp Lights, 3-1/8" mount	10-01447	**$619.00**
CC-1P	Dual Display CHT (1 L & 1 R), OverTemp Lights, 3-1/8" mount	10-02735	**$598.00**
TT-1P	Dual Display TIT (1 L & 1 R), OverTemp Lights, 3-1/8" mount	10-02733	**$600.00**
EC-1PT	Dual Display 1 EGT & 1 CHT w/ OverTemp Lights, 3-1/8" mount	10-02731	**$599.00**
TC-1PT	Dual Display 1 TIT & 1 CHT w/ OverTemp Lights, 3-1/8" mount	10-02732	**$585.00**
FOR TWINS - Not Primary Replacement Instruments, but STCd, PMAd, TSOd. Same order requirements and specifications as above:			
E-2	(one display, switchable from left to right engine, either EGT or CHT)	10-00098	**$498.00**
C-2		10-01661	**$491.95**
EC-2	(one display, switchable from EGT, L/R and CHT L/R).	10-01359	**$659.00**
FL-1M	SIngle Fuel Level Instrument is NON STC Experimental Aircraft Only. Designed to work with E.I.'s Magnetic Float Sensor P-300M.	10-05084	**$424.95**
FL-1V	Variable Voltage Single Fuel Level Instrument is NON STC Experimental Aircraft Only. Specify Voltage Range requirements	10-05086	**$424.95**
FL-2M	Dual Fuel Level Instrument is NON STC Experimental Aircraft Only. Designed to work with E.I.'s Magnetic Float Sensor P-300M.	10-05085	**$424.95**
FL-2V	Variable Voltage Dual Fuel Level Instrument. NON STC Experimental Aircraft Only. Specify Voltage Range requirements	10-05087	**$424.95**
P-300M	Magnetic Float Sensor	10-05097	**$348.00**


SR-8A (SINGLE DISPLAY)

SR-8A ENGINE ANALYZER

STCd, PMAd - EGT's, CHT's TIT, Oil Temp, OAT, Carb. Temp + others, up to 8 channels. Manual and Auto Diagnostics (Scan) Modes. Auto Detects the hottest EGT or CHT. Factory-set EGT Over-Temp Limit (1650'F). Factory-set EGT Under-Temp Limit (1100'F). Factory-set CHT Over-Temp Limit (500'F). Differential Limit set from back panel (95'F or 195'F). Selectable Scan Rate + Number of Channels to be Scanned. 2 1/4" Mount. 5.35" Depth. 16 Oz. Instrument. 1' F Resolution. Accuracy; 1/2%. Superior Sunlight Viewability. Backlit. Operates from 7.5 to 35 volts @at .3 amps.

Model	Description	Part No.	Price
SR-8A	SR-8A Instrument only (no probes or cables)	10-25220	**$425.99**
SR-8A-4	4 Cyl. SR-8A Package w/ 4 p-110 EGT probes, 4 P-100 CHT probes, 8 ea 6' Cables (uses all 8 inputs)	10-00599	**$916.00**
SR-8A-6	6 Cyl. SR-8A Package w/ 6 P-110 EGT probes, 2 P-100 CHT probes, 8 ea 6' Cables (uses all 8 inputs)	10-00603	**$915.00**

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US-8A, STCd / PMAd, ULTIMATE ENGINE ANALYZER



US-8A ULTIMATE ENGINE ANALYZER (DUAL DISPLAY)

Simultaneously displays EGT and CHT for Singles. (For Twins, call for model designation. May require two US-8As, depending on your requirements). Automatic Diagnostic Assist helps diagnose engine problems such as fouled plugs, burned valves, intake leaks, low compression, etc. Impressive Features Include: • Auto Scan up to 16 temperature channels • Re-programmable Temp Limits From the Front Panel (unavailable on competition's gauges in this category) Auto Detection of hottest EGT and hottest CHT + pilot-programmed Over - Temp and Under-Temp limits • Programmable Scan Rate for each channel displayed (rather than competition making that decision for you) • One° | STEADY Resolution | 6lbs. | Standard 2-1/4" hole (or use an EI adapter plate for 3-1/8" holes)
ATTENTION: Probes can be substituted / consult your sales rep prior to order
Note: Unit is STC'd/PMA'd. Can only be used for secondary EGT/CHT only. For primary see MVP-50
E.I. products include all documentation and certifications

SINGLE-ENGINE US-8A PKG PRICES			
Model	**Description**	**Part No.**	**Price**
US-8A-4	4-cylinder engines without a Primary CHT gauge already installed. Includes 4 EGT probes, 4 CHT probes and 8 ea 6-ft harnesses	10-00595	**$1,108.00**
US-8A-4G	4-cylinder pkg for a/c w/ Primary CHT gauge already installed. Includes 4 EGT probes, 3 CHT probes, 1 P-102 Gasket Type CHT probe and 8 ea 6 ft harnesses	10-03283	**$1,119.00**
US-8A-6	6-cylinder pkg for a/c without a Primary CHT gauge already installed. Includes 6 EGT probes, 6 CHT probes & 12 ea 6-ft harnesses	10-00596	**$1,350.00**
US-8A-6G	6-cylinder pkg for a/c with a Primary CHT gauge already installed. Includes 6 EGT probes, 5 CHT probes, 1 P-102 Gasket Type CHT probe and 12 ea 6-ft harnesses	10-03284	**$1,350.00**
NOTE: The UBG-16 can accommodate to 16 probes (w/ cables): EGT, CHT, OAT, Carb Temp, and / or Oil Temp			
TWIN-ENGINE US-8A PKG PRICES:			
US-8A-4T	4-cylinder Twin pkg for a/c without Primary CHT gauges already installed. 4 EGTs L&R and 4 CHTs L&R. Includes 8 EGT probes, 8 CHT probes and 16 ea 20-ft harnesses.	10-00597	**$2,025.00**
US-8A-4G-T	4-cylinder Twin pkg for a/c with Primary CHT gauges already installed. 4 EGTs L&R and 4 CHTs L&R. Includes 8 EGT probes, 6 CHT probes, 2 P-102 Gasket Type CHT probes and 16 ea 20-ft harnesses.	10-00602	**$2,025.00**
US-8A-6-T	6-cyl Twin pkg (scans all EGTs L&R + 2 CHTs L&R). Includes 12 EGT probes (for 6 channels of EGT on both engines), 4 gasket CHT probes (for 2 channels of CHT on each engine), plus 16 ea 20-ft harnesses. (For more than 12 EGTs and 2 CHTs L&R, + add'l temps, order 2 US-8As)	10-00598	**$2,290.00**

E.I. DIGITAL/GRAPHIC INSTRUMENTS

These Digital/Graphic Instruments are solid state and hold their accuracy over time and a range of environmental conditions. The colorful Graphic Analog display emits green, yellow, or red lights enabling the pilot to spot problems immediately without interpreting a needle. Gauges mount in 2-1/4" instrument holes.



TACHOMETER - R-1, TACHOMETER: STCd, PMA'd and TSO'd as PRIMARY REPLACEMENT. Features a 210 degree graphic analog display with green, yellow, and red LEDs. Accurate 10 RPM resolution digital display. Flight Timer. Tach Timer. Peak RPM Recorder. Automatic Mag Drop Calculation. Connects to both "P" leads through isolators (no magnetic pick-ups required). 2 1/4" Mount. 3.65" Depth. 10 Oz. Unit. Superior sunlight viewability. Backlit. Operates from 7.5 to 30 volts @ .3 amps. Note: This instrument may come with labels on the faceplate rather than silkscreening, depending on you're a/c's required markings..

P/N 10-25200 ..... **$448.00**



OIL PRESSURE/TEMPERATURE - OPT-1, OIL TEMP/PRESSURE: STC'd, PMAd and TSO'd as PRIMARY REPLACEMENT. OPT-1 features dual 90 degree graphic analog displays w/ green, yellow, and red LEDs. Accurate to 1 PSI and 1°F Resolution. External Oil Press and Temp Transducers (no oil in the cockpit). 2 1/4" Mount. 3.65" Depth. 22 Oz. Kit. Superior sunlight viewability. Backlit. Operates from 7.5 - 35 volts @ .3 amps. Note: This instrument may come with labels on the faceplate rather than silkscreening, depending on you're a/c's required markings.

P/N 10-25205 ..... **$498.00**



MANIFOLD PRESSURE - M-1, MANIFOLD PRESSURE. STC'd, PMA'd & TSO'd as PRIMARY REPLACEMENT. 210 degree graphic analog display w/ green, yellow, and red LEDs. Accurate 1" Mercury Resolution digital display. Connects to std pressure line through 1/4" male flare union. 2 1/4" Mount. 3.65" Depth. 13 Oz. Unit. Viewable in direct sunlight. Backlit.. Operates from 7.5 to 30 volts @ .3 amps. Note: This instrument may come with labels on the faceplate rather than silkscreening, depending on you're a/c's required markings.

P/N 10-25210 ..... **$479.95**



VOLTS/AMPS - *VA-1A, VOLTS/AMP.* STCd, PMAd as PRIMARY REPLACEMENT. Internal Shunt. Discharge @ High Voltage Warning Lights. 100 amp capability. .1 volt & .1 amp 1% Resolution. Accuracy: 2 1/4" Mount. 2.5" Depth. 9 Oz. Unit. Viewable in direct sunlight. Backlit. Operates from 7.0 to 40 volts @ .1 amp.

P/N 10-00809 .....VA-1A (internal shunt) **$335.00**

VA-1A-XX, VOLTS/AMP - STCd, PMAd as PRIMARY REPLACEMENT. (For use with External Shunt. Discharge and High Voltage Warning Lights. 100 amp capability (or order VA-1A-300 for 300-amp capability). .1 volt and .1 amp Resolution. Accuracy: 1%. 2 1/4" Mount. 2.5" Depth. 9 Oz. Unit. Superior sunlight viewability. Backlit. Operates from 7.0 to 40 volts @ .1 amp.

P/N 10-01378 .....VA-1A-50 (S-50 external shunt) **$379.00**
P/N 10-01394 .....VA-1A-300 (S-300 external shunt) **$378.95**
P/N 10-03207 .....RSVA-3 Remote Switch **$89.75**

ELECTRONICS INTERNATIONAL LED INTENSITY CONTROL



Controls the intensity of the green LED's on the UBG-16, R-1, M-1, OPT-1, FL-2, FP-5(L), and other EI instruments. This unit can be connected to any one or all of these instruments at the same time. It provides linear control of the intensity of the green LED's for low ambient light or night operation. Mounts in a 1/4" hole. Operates on a 12 or 24 volt system.
E.I. products include all documentation and certifications.

Description	Part No.	Price
EI LED Intensity Control - CP1	10-02035	**$27.85**
EI LED Intensity Control - CP1A Allows Pilot to run current (to power lighting)	10-06280	**$39.00**

IN

Prices Subject to Change Without Notice



FP-5 FUEL FLOW + HORSEPOWER

PMAd and STCd - Same amazing Fuel Flow/Horsepower Instrument as our FP-5L, but without GPS interface. Features: • HORSEPOWER to 1% hp • FLOW Displayed in Gallons, Pounds, Liters or British Gallons. • AUTOMATIC K-Factor Calibration for UNSURPASSED • ACCURACY. • FUEL USED Displays "Used for Flight" and "Used Since Fill Up" • FUEL REMAINING Displays fuel remaining to 1/10 gallon. • SCAN MODES Manual and Automatic. • RECURRING FUEL USED ALARM Pilot Programmable! • AUXILIARY Channel To monitor one of the following options: EGT, OAT, Carb Temp, Oil Temp, Manifold Pressure, Gyro Vacuum, RPM, Volts or Amps • Pilot Two LOW FUEL ALARMS Pilot Programmable! • TIME TO EMPTY automatically calculated and displayed. Specs: 2-1/4" mount, 3.65" deep, 28 oz. pkg, Backlit, Superior Viewing in Sunlight, External Warning Line. Operates from 7.5 to 30 volts @ .3 amps.

Model	Description	Part No.	Price
FP-5	Instrument Only FUEL FLOW w/ HP (instrument only, no transducers)	10-25300	**$567.00**
FP-5-60	FUEL FLOW w/ HP w/ FT-60 flow xdr, up to 350HP, engine-driven fuel pump	10-25304	**$499.00**
FP-5-90	FUEL FLOW w/ HP, w/ FT-90 Flow Transducer, for aircraft w/ 350-550 HP or without an engine-driven fuel pump	10-00260	**$515.00**
FP-5-180	FUEL FLOW w/ HP, includes HIGH FLOW Transducer (for aircraft w/ more than 550HP)	10-03208	**$1,049.00**



FP-5L FUEL FLOW, PRESSURE, HORSEPOWER AND GPS PMAd & STCd PRIMARY REPLACEMENT INSTRUMENT

Positively the best Fuel Flow/Horsepower Instrument there is! Nothing else even comes close. The FP-5L's High-Powered Features Include: • HORSEPOWER, to 1 percent hp. No other fuel gauge provides this! • FLOW, displayed in Gallons, Pounds, Liters or British Gallons. • AUTOMATIC K-Factor Calibration for UNSURPASSED ACCURACY. • FUEL DISPLAYS: "Used for Flight", "Used Since Fill Up", "MPG", "Fuel Required to. • Destination", "Fuel Remaining", "Time to Empty." • SCAN MODES: Manual and Automatic. • RECURRING FUEL USED ALARM Pilot Programmable. • 2 LOW FUEL ALARMS Pilot Programmable w/ Red Warning LED. • FUEL REMAINING displayed to 1/10 Gal. • AUTOMATICALLY CALCULATES AND DISPLAYS "Time to Empty", "Fuel Req to Dest," and "Fuel Reserve.". Displays Nautical and Statute Miles per Gallon. Multiple Data Outputs & Inputs, Handhelds & Panel Mounts. One-of-a-kind AUXILIARY Channel can be used to monitor an additional function (choose one):EGT, TIT, CHT, OAT, Carb Temp, Oil Temp, Cowl Temp, Fuel Pressure, Gyro Vacuum, Manifold Pressure, Volts or Amps. Specs: 2-1/4" mount, 3.65" deep, 28 oz. pkg, Backlit for Night Operation, Superior Sunlight Viewability, External Warning Line. Operates from 7.5 to 30 volts @ .3 amps.

Models	Description	Part No.	Price
FP-5L	Fuel Flow w/ Horsepower & GPS input/output (instrument only; no transducers)	10-01217	**$575.00**
FP-5L/FT-60	Fuel Flow w/ Horsepower & GPS input/output with FT-60 - PRIMARY	10-05017	**$952.00**
FP-5L/FT-60/P	Fuel Flow w/ Horsepower & Pressure GPS input/output with FT-60	10-25310	**$947.00**
FP-5L/FT-90	Fuel Flow w/ Horsepower & GPS input/output with FT-90	10-05019	**$775.00**
FP-5L/FT-90/P	Fuel Flow w/ Horsepower & Pressure GPS input/output with FT-90	10-05018	**$889.95**
FP-5L-60	Fuel Flow w/ Horsepower & GPS input/output, includes FT-60 Flow Transducer	10-01045	**$558.00**
FP-5L-90	Fuel Flow w/ Horsepower & GPS input/output, includes FT-90 Flow Transducer	10-01050	**$558.00**

FP-5 & FP-5L AUXILLARY OPTIONS

The FP-5 & FP-5L feature an Auxiliary Channel. Any one of the following choices can be added to at any time.			
FFDM-1 w/ FT-60	FUEL FLOW Differential Module, for aircraft with a Pressure Carburetor. Includes FT-60 or FT-90 Flow Transducer to measure the returned fuel. Please specify FT-60 or FT-90. DOES NOT use up the FP-5's Auxiliary channel.	10-25325	**$339.95**
FFDM-1 w/ FT-90		10-03190	**$329.95**
FM-Temp-P-110	EGT hose clamp probe and 6' cable. Compensates HP reading when leaning.	10-02188	**$215.95**
FM-Temp-P-128	OAT or CARB Temp probe (1/4"-28 thread) and 6' cable	10-02769	**$249.00**
FM-Temp-P-120	Secondary OIL Temp probe (5/8"-18 thread) and 6' cable	10-02770	**$249.00**
FM-Temp-P-111	Secondary TIT or OIL Temp probe (1/8: NPT adjustable depth) and 6' cable	10-02765	**$249.00**
FM-Temp-P-112	Secondary TIT or OIL Temp probe (7/16-20 thread adjust. depth) and 6' cable	10-02766	**$249.00**
FM-Temp-P-114	Secondary TIT or OIL Temp probe (1/4" NPT adjust. depth) and 6' cable	10-02767	**$249.00**
FM-OP	Secondary OIL PRESSURE. Includes PT-100GA Pressure Transducer	10-25336	**$224.95**
FM-FP	Secondary Fuel Pressure. Includes PT-30GA Pressure Transducer	10-25337	**$249.00**
FM-MP	Secondary Manifold Pressure. Includes Pressure Transducer	10-25338	**$224.95**
FM-RPM 6C	Secondary RPM. Connects directly to the Mag Switch	10-01786	**$221.95**
FM-Gyro	Gyro Vacuum. Includes Pressure Transducer	10-25339	**$224.95**
FM-VA	Secondary Volts or Amps (one or the other) w/ S-50 amp shunt.	10-25342	**$209.95**
AV-17	Voice Annunciator. Connects through the Audio Panel or Intercom. The 1"x1" control panel mounts on your instrument panel. The 4.1"x 2.6"x 1.7" control box mounts under the instrument panel. See all Annunciator Panels on our "Accessories" page.	10-00181	**$249.95**



MVP-50P GLASS PANEL ENGINE & SYSTEM MONITOR

MVP-50P Non-Certified Engine Monitoring System For Standard System installs or FADEC System installs. FADEC NOTE:If already equipped with "FADEC System" MVP-50P will pull data directly from FADEC, minimal hardware rewuired but is included. ***E.I. products include all documentation and certifications.*** The MVP-50P replaces over 15 Engine Instruments and 50 Functions in a single, full color, enhanced TFT glass display instrument. It features excellent viewability, even in direct sunlight. The MVP-50 is an unrivaled Engine and Aircraft System Monitor with an easy-to-read and easy-to-use format. There are Pilot-Programmable colors, ranges and limits and a voice alarm for each instrument displayed. Its "System Page" displays trims, flaps, wheel status lights, many system parameters and annunciators. This is the most powerful engine and system analyzer on the market, featuring the following displays: Bar Graph (with Scan and Hottest Cylinder modes), Rich-of-Peak, Lean-of-Peak, Full Digital, Normalized and Differential. The MVP-50P's instant red and yellow visual warnings, as well as voice annunciators for all Programmed Limits, eliminate the need to constantly scan an entire panel for possible problems. **In-Flight Data:** The MVP-50P provides many "Flight Data Screens" to reduce cockpit clutter and pilot workload. **Some of these screens are**: Fuel Management, Timers, Clocks and Date, Weight and Balance, Data Recording, Custom Checklists (Start, Taxi, Run-up w/ Mag Drop, Take Off, Landing, Emergency, Custom Flight Plans, General Information (Aircraft Performance, Engine Diagnostics, VSI Lights, Airspeed, VFR Minimums, Altitude Table, Light Gun Signals, Transponder Codes, Frequencies, Real-Time Out (providing telemetry for UAV racers, etc.). **Plus Additional Screens:** Flight Log, Max Data Log, Min Data Log and others. And it's easy to create your own Custom Screens and download them to the MVP-50P through its USB port. Compatible with OP Technologies and Chelton. EGView Charting Software is also available for use with the MVP-50P. **Other Functions Included:** Help Screen; EGT & CHT Differentials; Shockcooling; Horsepower; Weight & Balance Data and Graph; GPS Interface and Data; Fuel Efficiency; Fuel Used for Trip; Fuel Used Since Fill Up; Time to Empty; Distance to Empty; Fuel; Time and Distance to Way Point; Fuel Reserve; Time Reserve; Distance Reserve; Up and Down Timers; Flight and Tach Timers; Engine Hours; Date; Local and Zulu Time; Voice Warnings; Data Recording: selectable .33 – 6 min., 665 hours @ 6 seconds!

Experimental	Description	Part No.	Price
MVP-50P-4	4-Cylinder Pkg	10-01192	**$4,648.00**
MVP-50P-6	6-Cylinder Pkg	10-01191	**$5,098.00**
MVP-50P-7	7-Cylinder Pkg	10-03174	**$4,675.00**
MVP-50P-8	8-Cylinder Pkg	10-03175	**$5,443.00**
MVP-50P-8W	8-Cylinder Water-Cooled Pkg	10-03178	**$4,605.00**

Experimental	Description	Part No.	Price
MVP-50P-9	9-Cyl. Radial Pkg	10-03176	**$5,575.00**
MVP-50P-12W	12-Cylinder Water-Cooled Pkg	10-03177	**$4,715.00**
MVP-50P-4-FADEC	4-Cyl. FADEC Pkg	10-03173	**$4,163.00**
MVP-50P-6-FADEC	6-Cyl. FADEC Pkg	10-03172	**$4,163.00**

Certified	Description	Part No.	Price
MVP-50P-4-C	4 Cylinder Certified	10-03867	**$5,548.00**
MVP-50P-6-C	6 Cylinder Certified	10-03868	**$5,998.00**
MVP-50P-8-C	8 Cylinder Certified	10-03869	**$6,268.00**
MVP-50P-4T-C	Twin 4 Cylinder Cert.	10-05083	**$10,985.00**
MVP-50P-6T-C	Twin 6 Cylinder Cert.	10-05082	**$11,885.00**

OPTIONAL OUTPUT INTERFACES AVAILABLE FOR MVP PKGS LISTED ABOVE

Models	Description	Part No.	Price
-OPT	Allows the MVP to provide engine data to an OP Technologies unit.	10-03169	**$667.00**
-RTDO	Real-Time Data Out. Can be used to provide telemetry for UAV's, racers and other applications.	10-03168	**$590.00**

ACCESSORIES FOR MVP PKGS

EGView	EGView Charting Software. Use for analyzing and downloading data to the MVP-50P.	10-01219	**$125.00**
USB-64	USB Memory Stick, 64 MB or larger. Used to upload and download data to the MVP-50P.	10-03186	**$32.95**
CP-1-MVP	LED Intensity Control Pot. External pot used to control the display intensity.	10-03211	**$35.00**
EDC-33P-4/6	4/6 Cylinder Engine Data Converter. Adding a second EDC to the MVP allows. Additional pressures, annunciators and other functions to be monitored on the MVP (uses the Input Port 3 on the MVP).	10-03184	**$879.00**
MVP-50P Head Only	Display unit only! May be used to display parameters in a second location Display Only	10-01193	**$2,959.00**
PT-30ABS-MVP	Absolute Pressure Transducer, 0 to 40 In Hg (Manifold Press or Cabin Altitude).	10-03238	**$136.75**
XDS-6	One 6 ft TC harness w/ crimped D-Sub pins. Use to interface any temperature Probe to the MVP system. Temperature Probes for MVP-50P & MVP-50T. Specify length at time of order.	10-03192	**$34.50**

TEMPERATURE PROBES FOR MVP-50P & MVP-50T

Models	Description	Part No.	Price
P-100-MVP	CHT probe, screw-in, 3/8"-24	10-00808	**$87.50**
P-101MVP	CHT probe, Military Bayonet.	10-00438	**$89.95**
A-101MVP	CHT Adaptor for P-101 Probe, 3/8"-24	10-00374	**$11.95**
P-102-18-MVP	CHT probe, 18mm gasket.	10-01368	**$87.95**
P-102-14-MVP	CHT probe, 14mm gasket	10-02037	**$89.75**
P-102-12-MVP	CHT probe, 12mm gasket	10-02038	**$89.95**
P-102-3/8-MVP	CHT probe, 3/8" gasket, piggy-backs on a primary CHT probe	10-02039	**$87.95**
P-110-F-MVP	Fast-Response EGT/TIT probe, Hose Clamp Type, .125"D	10-00376	**$89.95**

Models	Description	Part No.	Price
P-111-MVP	Std TIT probe, 1/8" NPT, .187" D	10-02040	**$89.95**
P-111-F-MVP	Fast Response TIT probe, 1/8" NPT, .187" D	10-02041	**$93.75**
P-112-MVP	Std TIT probe, 7/16"-20, .187" D	10-00378	**$89.95**
P-114-MVP	Std TIT probe, ¼" NPT, .187" D	10-00379	**$89.95**
P-114-F-MVP	Fast Response TIT probe, ¼" NPT, .125" D	10-02042	**$102.95**
P-120-MVP	OIL Temp probe, 5/8"-18	10-00302	**$83.00**
P-104-MVP	Universal Temp probe, #6 hole	10-00380	**$89.85**
XDS-6'	One 6 ft TC harness w/ crimped D-Sub pins. Use to interface any temperature Probe to the MVP system. Specify length at time of order.	10-03192	**$34.50**

PRESSURE TRANSDUCERS AND MODULES

(Each includes a Cbl-4D-6' harness when ordered w/ the MVP-50 & MVP-50T)

PT-30GA-MVP	Pressure Transducer, 0 to 40 PSI (see Accessories page for details)	10-03232	**$169.95**
PT-300GA-MVP	Pressure Transducer, 0 to 300 PSI (see Accessories page for details)	10-01203	**$178.95**
PT-3000S-MVP	Pressure Transducer, 0 to 3000 PSI (see Accessories page for details)	10-03236	**$227.95**
PT-30ABS-MVP	Absolute Pressure Transducer, 0 to 36 In Hg (Manifold Press or Cabin Altitude)	10-03238	**$136.75**
PT-30ALT-MVP	Altitude Transducer	10-03239	**$360.95**
PT-60ABS-MVP	Absolute Pressure Transducer, 0 to 70 In Hg (Manifold Pressure)	10-03240	**$149.95**
PT-05Diff-MVP	Differential Pressure Transducer, 0 to 60 In Hg (Vac Pressure or Cabin Diff Pressure)	10-03241	**$136.95**
PT-04H20-MVP	Differential Pressure Transducer, 0 to 5 In H20	10-03242	**$227.95**
DPIM-1-30-MVP	Differential Pressure Interface Module for aircraft that require fuel pressure to be Measured in reference to the upper deck. Includes a PT-30GA pressure transducer to measure the upper deck pressure.	10-03205	**$348.95**
Cbl-4D-6'	One 6' 4-wire cable with crimped D-Sub pins. Used to interface any pressure transducer, fuel flow transducer or fuel level probe to the MVP system. Add $.95 per foot to the price for anything over the standard 6' length.	10-03183	**$52.75**

FUEL FLOW TRANSDUCERS AND MODULES

FT-60	Fuel Flow Transducer (Red Cube), .6 to 70+ GPH	10-01196	**$259.00**
FT-90	Fuel Flow Transducer (Gold Cube), 3 to 125+ GPH	10-01224	**$259.00**
FT-180	Fuel Flow Transducer (Black Cube), 5 to 250+ GPH	10-01197	**$428.00**
FFDM-1-MVP-FT60	Fuel Flow Differential Module for aircraft w/ a pressure carburetor. Includes FT-60 or FT-90 transducer to measure the returned fuel. Please specify FT-60 or FT-90 at time of your order.	10-03244	**$348.95**
FFDM-1-MVP-FT90		10-03245	**$346.95**
FM-Flow-P	Measures Fuel Flow from a pulsed injector signal.	10-03206	**$348.95**

FUEL LEVEL PROBES AND MODULES

RFLM-4-12	Resistive Fuel Level Module. Must be used w/ EI's "EDC" to measure up to 4 Resistive Fuel Level Sensors.	10-02772	**$89.95**
RFLM-4--24		10-03231	**$89.75**
P-300C	3/4" Capacitive Fuel Level Probe w/ Accessories. (see our Accessories Page for details.) Specify Probe length at time of order.	10-00382	**$362.00**
P-300C-Mini-1/8"	3/16" Capacitive Fuel Level Probe (see our Accessories Page for details)	10-03193	**$239.95**
P-300C-Mini- 1/4"		10-03194	**$239.95**

VOLTS AND AMPS MODULES AND SHUNTS

FM-VA-MVP-50	Volts/Amps Module. Allows any temperature or pressure channel on EI's EDC to measure Voltage and Current on a separate bus. Comes w/ an S-50 or S-300 shunt.	10-03247	**$172.95**
FM-VA-MVP-300		10-03248	**$172.95**

MVP SCREEN ANNUNCIATOR INTERFACE UNITS

VI-221	Voltage Interface Unit. Allows any temperature or fuel level channel on our EDC to measure the output voltage of any device. This voltage measurement can then be used to drive an annunciator (Canopy Latch, Gear Lights, Baggage Door, etc.) that will be displayed on the MVP screen.	10-03187	**$7.50**

Prices Subject to Change Without Notice

SUPER CLOCK INSTRUMENTS



ASC-5A - Displays Local & Zulu Time in 12 or 24 hr format, Up & Down Timers w/ alarms, Altitude (as seen by ATC), and OAT. Several programmable alarms, including Assigned Altitude, Level Off, Deviation Alarm and an Approach Alarm + a recurring alarm to alert you at a programmable interval, for checking fuel.

P/N 10-02914 ..... **$479.95**

SC-5 - Displays Local (12 or 24-hour format) & Zulu Time. 10-year Lithium battery keeps the clock running even if the a/c battery is removed. Displays an Up Timer, which starts running when the engine is started, acting as an automatic Flight Timer. The Up Timer may be started, stopped or reset. Recurring Alarm may be set to alert you at appropriate time intervals, e.g., if set for 30 minutes, there will be an alarm at 30 minutes, 60 minutes, 90 minutes, etc. Alarm can be used as a reminder to check fuel level or switch tanks at set time intervals.

P/N 10-01612 ..... **$285.00**

FUEL LEVEL INSTRUMENTS



For TC holders, STC holders or Experimental Aircraft No STCs. FL-1CA Fuel Level Instrument . The FL-1CA is to be used w/ EI's P-300C Capacitive Fuel Probe (custom order probe length from 6" to 20'). The FL-1CA features a 210 degree Arc of LEDs for an excellent "field of vision" reference and a Digital Display. Can display in gallons (one or one-half gallon increments), pounds or liters. Specifications: 2 1/4" Mount, 3.65" Depth, 10 Oz. Unit, Viewable in direct sunlight and Backlit for night operations.

Model	Description	Part No.	Price
FL-1CA	The FL-1CA is to be used w/ EI's P-300C capacitive fuel probe (order from 6" to 20' long). 210 degree LED arc + a digital display. Can display in gallons (one or one-half gallon increments), pounds or liters. Specifications: 2 1/4" Mount, 3.65" Depth, 10 Oz. Unit, Viewable in direct sunlight and Backlit for night operations.	10-00386	$399.95
FL-1RA- 12/24	The FL-2RA-12 designed to be used on a 12-volt system w/ resistive fuel probes. Features a 210 degree LED arc + a digital display. Max resistance between 90-270 ohms. Can display in gallons (one or one-half gallon increments), pounds or liters. Specifications: 2 1/4" Mount, 3.65" Depth, 10 Oz. Unit, Viewable in direct sunlight and Backlit.	12V 10-03209 24V 10-00388	 $399.95 $394.00
FL-2CA	The FL-2 is a fuel level instrument featuring dual 90 degree LED arcs + a digital display. The FL-2 can display in gallons (one or one-half gallon increments), pounds or liters. Specifications: 2 1/4" Mount, 3.65" Depth, 10 Oz. Unit, Viewable in direct sunlight, Backlit, Operates from 7.5 to 35 volts at .3 amps.	11-03788	$394.00
FL-2RA- 12/24	The FL-2 is a fuel level instrument featuring dual 90 degree LED analog displays and a digital display. The FL-2 can display in gallons (one or one-half gallon increments), pounds or liters. FL-2 Specifications: 2 1/4" Mount, 3.65" Depth, 10 Oz. Unit, Viewable in direct sunlight, Backlit, Operates from 7.5 to 35 volts at .3 amps. Please specify 12/24 volt at the time of order.	11-03789	$398.00
FL-2RA-24		11-07104	$389.95



MVP-50T GLASS PANEL MULTI-FUNCTION DISPLAY

Replaces 15 engine gauges and 50 functions. Remarkable full-color, enhanced TFT Glass Display (excellent viewability, even in direct sunlight) Pilot-Programmable Colors, Range Markings, Limits and Voice Alarms (for each parameter monitored) "System Page" to display Trims, Flaps, Wheel Status Lights, and many other system parameters and annunciators. 27 Pilot-Customized Annunciators at the top of the "Main Page". Fuel Management, Timers, Clocks, Date, Weight & Balance. Data Recording (.33 – 6 min, 665 hours @ 6 seconds). Pilot-Customized Checklists and Flight Plans. General Info, Flight Log, Start Log, Max & Min Data. Pilot easily can generate Custom Screens and download them to the MVP-50P through the USB port. Help Screen, GPS Interface and Data, Fuel Efficiency, Fuel Used for the Trip, Fuel Used Since Fill Up, Time to Empty, Distance to Empty, Fuel to Way Point, Time to Way Point, Distance to Way Point, Fuel Reserve, Time Reserve, Distance Reserve, Up Timer, Down Timer, Flight Timer, Engine Hours, Cycles, Date, Local and Zulu Time. Other functions, such as Fuel Level, Gyro Vac, Hydraulic Pressure, etc., may be added by purchasing an appropriate probe & harness, or transducer, etc. See our Accessories, "Probes and Transducers" section on previous page. Using your current Resistive Fuel probes require our FFLM-4-XX to interface with the MVP-50T System. Torque, Oil Pressure & Temperature, Fuel Flow & Pressure, OAT, Amps, Volts, Multiple Fuel Screens, Pre-wired Harness, N1 and N2 hookups. Includes EDC (Engine Data Converter), cables and harnesses, transducers, shunt (for amps), USB Download/Upload Memory Stick, and our AV-17CP (Voice Warning Control Panel). Only 5.55"x 5.15"x 2.4" deep

Eperimental	Description	Part No.	Price
MVP-50T-PT6	Pratt & Whitney PT-6 Turboprop Pkg	10-03160	$6,175.00
MVP-50T-W	Walters Engine Turboprop Pkg	10-03161	$6,175.00
MVP-50T-G	Garrett Turboprop Pkg	10-03162	$6,175.00
MVP-50T-L	Lycoming Turboprop Pkg	10-03163	$6,175.00
MVP-50T-A	Allison Turboprop Pkg	10-03164	$6,175.00
MVP-50T-J85	General Electric J85 Jet Engine Pkg	10-03165	$6,175.00
MVP-50T-L39	L39 Aircraft Pkg	10-03166	$7,725.00
Certified	**Description**	**Part No.**	**Price**
MVP-50T-PT6-C	Pratt & Whitney PT-6 Turboprop Pkg	10-05090	$8,575.00
MVP-50T-W-C	Walters Engine Turboprop Pkg	10-05089	$8,575.00
MVP-50T-G-C	Garrett Turboprop Pkg	10-05091	$8,575.00
MVP-50T-L-C	Lycoming Turboprop Pkg	10-05092	$8,575.00
MVP-50T-A-C	Allison Turboprop Pkg	10-05093	$8,575.00
MVP-50T-J85-C	General Electric J85 Jet Engine Pkg	10-05094	$8,575.00
MVP-50T-L39-C	L39 Aircraft Pkg	10-05101	$8,575.00
OPTIONAL INTERFACES AVAILABLE FOR PKGS LISTED ABOVE			
-OPT	Allows the MVP to provide Engine Data to an OP Technologies unit.	10-03169	$667.00
-RTDO	Real-Time Data Out. Can be used to provide Telemetry Data for UAV's, racers and other applications.	10-03168	$590.00
ACCESSORIES			
USB-64	USB Memory Stick, 64 MB or larger. Used to upload & download data to the MVP.	10-03186	$32.95
CP-1-MVP	LED Intensity Control Pot. External pot used to control the display intensity.	10-03211	$35.00
EDC-33T	Turboprop/Jet Engine Data Converter. Adding this second EDC to the MVP allows monitoring of additional temperatures, pressures, annunciators and other functions.	10-03185	$2,060.00
MVP-50T Display Head	May be used to display parameters in a second location. (display only)	10-03202	$3,550.00

INSTRUMENTS FOR TURBOPROP AIRCRAFT



10-03249 10-03264 10-03265 10-03267 10-03268

Model	Description	Part No.	Price
R-1-N1	RPM INSTRUMENT, TSOd, PMAd (no STCs). Digital 1% Resolution Display + 210 degree LED arc display with green, yellow and red LEDs. 2 1/4" Mount, 3.65" Depth, 10 Oz. Viewable in direct sunlight, Backlit, Operates from 7.5 to 30 volts @ .3 amps.	10-03249	$789.00
R-1-N2	RPM Instrument displayed in RPM. TSOd, PMAd (no STCs). Digital 10 RPM Resolution Display + 210 degree LED arc display with green, yellow and red LEDs. 2-1/4" Mount, 3.65" Depth.	10-03264	$790.00
M-1T	PRESSURE OR TORQUE INSTRUMENT, TSOd, PMAd (no STCs). 1 PSI or 1% Resolution + 210 degree LED arc display with green, yellow and red LEDs. 2 1/4" Mount, 3.65" Depth, 10 Oz. Instrument. Backlit.	10-03265	$790.00
M-1-ITT	INERT-Turbine Temperature Instrument IN Celsius. TSOd/PMAd (no STCs). Digital display (1 degree C resolution) + 210 degree LED arc with green, yellow and red LEDs. 2 1/4" Mount, 3.65" Depth, 10 Oz.	10-03266	$790.00
M-1-TOT	Turbine Outlet Temperature INC. TSOd/PMAd (no STCs).	10-03267	$790.00
OPT-1-FV-60	AC BUS VOLTAGE & FREQUENCY, TSOd/PMAd (no STCs). The "-60" instrument is for a 60 Hz. bus and the "-400" instrument is for a 400 Hz. bus. Accurate Digital Display can be switched between Voltage and Frequency, displays in Volts and Hz. 2 1/4" Mount, 3.65" Depth, 10 Oz. Instrument.	10-03268	$790.00

IN

AP-7H OR AP-7V LED ANNUNCIATOR PANEL



(H = Horizontal Mount; V = Vertical Mount) When mounted in front of the pilot, the AV-7 Annunciator Panel's bright red LEDs give a quick warning of any out-of-limit condition. Can be connected to these E.I. instruments: US-8A or SR-8A, FP-5(L) and/or FL-2, R-1, M-1, and OPT-1. A control switch will dim or turn off the warning LEDs. Simple to install (requires only 8 ea. 1/2" holes to mount). Connect to a small 3" x 2" x 1" Control Box tie wrapped to a wire bundle under the instrument panel. Size: 5.3" x .9", 10 Oz. Kit, Operates on a 12 or 24-volt system. Includes: Annunciator Panel, Control Box and all wires and connectors.

Vertical ..... P/N 10-03288 ..... **$165.00**
Horizontal (Pictured) ... P/N 10-03289 ..... **$165.75**

AL-1 RED CHROME ANNUNCIATOR LIGHT



The AL-1 makes an excellent indicator light for displaying boost pump on, gear status, power on, flags, etc. Also, it can be used as a remote warning light for any E.I. instrument featuring an external warning line. The AL-1 is more attractive, operates on less power and is smaller than the old fashioned indicator lights.

The AL-1 has a service life of over 1000 times that of incandescent bulbs. Mounts in a 5/16" hole. Size: .4" diameter x 1" depth. Operates on a 12 or 24-volt system. Comes with 32" leads.

Red ..... P/N 10-04164 ..... **$18.95**
Yellow ..... P/N 10-04165 ..... **$18.95**
Blue ..... P/N 10-04166 ..... **$18.95**
Orange ..... P/N 10-04167 ..... **$18.95**
Green ..... P/N 10-04168 ..... **$18.95**

AV-17 VOICE ANNUNCIATOR



The AV-17 can provide up to 17 verbal warnings through your headset, ending the need to constantly scan the instrument panel. Eliminate concern about missing an alarm at a critical moment. The instant a monitored alarm occurs, the Voice Annunciator will chime in the headset and a pleasant female voice will announce a phrase, such as: "Check Oil Pressure," or "Check Altitude," etc. The AV-I7's voice alarm in the headset provides an instant and clear understanding of what's going on in the cockpit without the hassle of having to scan instruments, decipher functions, interpret readings or translate numerous bells, buzzes or beeps. The AV-17 connects to the headset through the Audio Panel or Intercom or may be connected directly to the headset. The AV-17 receives most of its warning signals from any one or more of Electronics International's instruments which feature a warning light. However, other alarm inputs can be received from any warning device that drives a horn or light. It is not necessary to activate all 17 of the AV-17's warnings. A "Check Bus Voltage" warning is built into each AV-17. Further voice alarms can be activated as EI instruments are added to the panel. The AV-17 is compact. A 4.1" x 2.6 x 1.7" Control Box tie wraps under the instrument panel. A 1" x 1" Control Panel mounts on the aircraft instrument panel. The Control Panel allows you to turn the VoiceAnnunciator on or off, and allows you to acknowledge, and thereby deactivate, any active alarm for either 1 minute or 10 minutes. The AV-17 voice alarms are activated by pulling the appropriate control line to ground (0 volts).

AVI-1 INVERTER - This inverter allows a positive voltage to activate one AV-17 control line. Use with the AV-17 when utilizing inputs from gauges other than Electronics International's.



AV-17 ..... P/N 10-00181 ..... **$249.95**
AVI-1 Inverter ..... P/N 10-03292 ..... **$18.95**

RC-1 TACH DRIVE CAP

The RC-1 is a Tach Drive cap. The thread pattern is 7/8 x 18 and fits most Tach Drive Lines.

P/N 10-01223 ..... **$5.95**

FIELD TEST DEVICES

Models	Description	Part No.	Price
FCD-FF	Outputs a variable fuel flow signal.	10-03295	$276.95
FCD-FP	Outputs a variable fuel pressure signal (0 to 50+ PSI).	10-03296	$58.95
FCD-OP	Outputs a variable oil pressure signal (0 to 100+ PSI).	10-03297	$276.95
FCD-RPM	Outputs a variable RPM signal (800 to 2800 RPM).	10-03298	$276.95
FCD-AMP	Outputs a 50mV signal. Used to test the VA-1A-XX Volt/Amp Instrument.	10-03301	$276.95
FCD-CFL	Outputs a variable capacitive fuel level signal.	10-03302	$58.95
FCD-RFL	Outputs a variable resistive (0-250 ohms) fuel level signal.	10-03303	$58.95

PROBE EXTENSION CABLES

Description	Part No.	Price
EI XS-20 Extension 20 FT Slip on Connectors	10-02032	$64.50
EI XCS-20 Extension 20 FT Circular To Slip on Connectors	10-02033	$64.50
EI XP-6 Extension 6 FT Precision Connectors	10-02034	$39.00
XCO-6 Extension 6 FT Circular to Overlap Connectors	10-05708	$36.50
EI XO-6 Extension 6 FT Overlap Connectors	10-05620	$36.50
EI Overlap Connectors OLC-1- Eliminates the need for soldering, crimps, and expensive connectors	10-05470	$1.65

REMOTE SWITCHES

A remote switch may be used to upgrade many single-channel E.I. instruments to multi-channel EGT and/or CHT engine analyzers. This is an excellent way to insure your engine is operating properly. Specifications for all switches: Body - 1"x 1"x 1.5" depth, front panel - 2"x 1.15", STC'd / PMA'd



RS-4-1S - Upgrades any unit to read four channels of EGT or CHT, Package includes: Unit, (3) 6' cables, (3) probes. Specify probe type with order.
P/N 11-01688 ..... **$290.95**

RS-4-2S - Upgrades any two channel unit to read four channels of EGT and CHT, Package includes: Unit, (6) 6' cables, (3) EGT probes, (3) CHT probes P/N 11-01689 ..... **$419.95**



RS-6-1S - Upgrades any unit to read six channels of EGT or CHT, Package includes: Unit, (5) 6' cables, (5) probes. Specify probe type with order.P/N 11-01690 ..... **$394.50**

RS-6-2S - Upgrades any 2 channel unit to read six channels of EGT and CHT, Package includes: Unit, (10) 6' cables, (5) EGT probes, (5) CHT probes P/N 11-01691 ..... **$617.00**



RS-8-1S - Upgrades any unit to read eight channels of EGT or CHT, Package includes: Unit, (7) 6' cables, (7) probes. Specify probe type with order.
P/N 11-01692 ..... **$499.00**



RS-12-1S - Upgrades any unit to read 12 channels of EGT or CHT, Package includes: Unit, (11) 6' cables, (11) probes. Specify probe type with order. P/N 11-01693 ..... **$666.00**

PRIMARY REMOTE SWITCHES



REMOTE SWITCHES for use w/ EI 1 or 2 channel EGT/CHT instruments. STCd, PMAd. Available for single and twin engine applications.

RS-5-1PS - Upgrades any primary TIT/CHT unit to read 4 channels of EGT or CHT, Package includes: Unit, (4) 6' cables, (4) probes. 15 oz. kit Specify probe type with order.....P/N 11-01694 ..... **$365.95**

RS-5-2PS - Upgrades any primary TIT/CHT unit to read 4 channels of EGT and CHT, Package includes: Unit, (8) 6' cables, (4) EGT probes, (4) CHT probes. 2.2 lb. kit.....P/N 11-01695 ..... **$490.95**

RS-7-1PS - Upgrades any primary TIT/CHT unit to read 6 channels of EGT or CHT, Package includes: Unit, (6) 6' cables, (6) probes. 27 oz. kit. Specify probe type with order.....P/N 11-01696 ..... **$457.95**



RS-7-2PS - Upgrades any primary TIT/CHT unit to read 6 channels of EGT and CHT, Package includes: Unit, (12) 6' cables, (6) EGT probes, (6) CHT probes. 3.2 lb. kit.....P/N 11-01697 ..... **$666.00**

PROBES



P-100 CHT Probe; screw-in type, Standard with most kits. Can be used in a pressure environment. 700°F max. P/N 10-00808.....**$87.50**



P101 - CHT Probe; Military Bayonet type, 1/4 turn locking for quick removal. To be used with the A-101 adaptor. 700°F max. P/N 10-00438.....**$89.95**



A101 - CHT Adaptor; 3/8" - 24, to be used with the P-101 CHT probe.
P/N 10-00374.....**$11.95**



P-102 - CHT Probe; Gasket type, 18mm, 700°F maximum. P/N 10-01368.....**$87.95**



P-110 - EGT/TIT Probe; Hose clamp type, used with 13/64" hole. Standard with most kits. Weight: 1.6 oz. P/N 10-01591.....**$87.95**



P-110 - EGT/TIT Probe with 6" cable
P/N 10-25225....**$114.95**

FAST RESPONSE P-110 - EGT/TIT Probe; Hose clamp type, used with .130" hole. Optional with most kits. Weight: 1.6 oz. Probe only
P/N 10-00376.....**$89.95**

P-110-F-XCO-6 - EGT/TIT Fast Response .130" dia Probe with 6ft. Lead P/N 10-00377....**$134.95**



P-111 - TIT Probe; 1/8" NPT with adjustable depth. (with cable) P/N 10-25235....**$126.45**



P-112 - TIT Probe; 7/16"-20, with adjustable depth. (without cable) P/N 10-00378.....**$89.95**



P-114 - TIT Probe; 1/4" NPT with adjustable depth. (without cable)
P/N 10-00379.....**$89.95**



P-104 - Universal Probe; Used to measure surface temperatures, 700°F max.
P/N 10-00380.....**$89.85**



P-128 - Oat Probe 1/4-28" Thread. 700 Degrees Fahrenheit Max.
P/N 10-05858.....**$86.75**

P-128 - Carb Temp 1/4-28" Thread. 700 Degrees Fahrenheit Max.
P/N 10-05859.....**$83.00**

IN

Prices Subject to Change Without Notice

ELECTRONICS INTERNATIONAL CGR-30 PRIMARY ENGINE MONITOR SYSTEM



Easily replace several of your aircraft's primary and non-primary engine instruments with one EI CGR. For example, simply replace your existing tach with a CGR. In addition to replacing our tachometer, the STC'd CGR will replace MANY of your existing primary and non-primary instruments in the same instrument, in the one 3-1/8h hole. The CGR mounts flush with your panel and doesn't protrude from your panel (as competitor's gauges do). E.I. products include all documentation and certifications.

Available Functions: The CGR-30P comes standard with a state-of-the-art, full color bar graph which assists with ROP/LOP leaning. Additionally, the bar graph has both normalized and digital readout screens. No other bar graph in the industry comes close to providing the number of options the CGR-30P offers. In addition to its bar graph, the CGR-30P can be configured to display a combination of the functions listed: • RPM • M.P. • EGT/CHT Bar Graph • Oil Pressure • Oil Temperature • TIT • Hyd Pressure • C.O. • OAT • Vac. • Fuel Pressure • Fuel Level • Fuel Flow • Fuel Remaining • Fuel Used • Fuel -GPS Related Data • Low Fuel Alarm • Recurring Fuel Alarm • Volts • Amps • Flight Timer • Tach Timer • Local Time • Zulu Time • Annunciators • Data Recording • USB Port • External Caution Lights • And More

Model No.	Description	Part No.	Price
CGR-30P-4-B	4-Cylinder Basic Package with RPM, Fuel Flow, EGT/ CHT Bar Graph, Fuel Remaining, Volts, OAT, Tach Time, Local Time, Zulu Time, Flight Timer, Fuel Used for the Flight, Fuel Used Since Fill-up and all GPS/Fuel Flow Data.	10-05428	**$2,998.00**
CGR-30P-4-P	4-Cylinder Premium Package with RPM, EGT/ CHT Bar Graph, Fuel Remaining, Fuel Used, FPS/Fuel Flow Data, Engine Time, Tach Time, 5 Primary Functions of your choice and 5 Non-Primary functions of your choice.	10-05429	**$3,538.00**
CGR-30P-6-B	6-Cylinder Basic Package with RPM, Fuel Flow, EGT/ CHT Bar Graph, Fuel Remaining, Volts, OAT, Tach Time, Local Time, Zulu Time, Flight Timer, Fuel Used for the Flight, Fuel Used Since Fill-up and all GPS/Fuel Flow Data.	10-05430	**$3,648.00**
CGR-30P-6-P	6-Cylinder Premium Package with RPM, EGT/ CHT Bar Graph, Fuel Remaining, Fuel Used, FPS/Fuel Flow Data, Engine Time, Tach Time, 5 Primary Functions of your choice and 5 Non-Primary functions of your choice.	10-05431	**$3,948.00**
CGR-30C-EDC	Stand alone system or companion to CGR-30P. Provides up to 16 Primary Replacement Engine Instruments, with EDC	10-05758	**$2,648.00**
CGR-30C	Stand alone system or companion to CGR-30P. Provides up to 16 Primary Replacement Engine Instruments without EDC	10-05759	**$1,748.00**
CGR-30 Combo Packages	Combo Package 4 Cylinder, Single Engine	10-06564	**$4,997.00**
	Combo Package 4 Cylinder, Twin Engine	10-06566	**$8,824.00**
	Combo Package 6 Cylinder, Single Engine	10-06565	**$5,395.00**
	Combo Package 6 Cylinder, Twin Engine	10-06567	**$9,644.00**

PRINCETON CAPACITIVE FUEL PROBES



Intended for Experimental Aircraft - This is not a certified unit

• Easy Push Button Calibration - Simple push buttons make calibration easy and accurate. No sensitive screw adjustments to make. Place the probe in tank, connect power and press EMPTY. Fill tank and press FULL. Calibration is complete. ***• Steady Readings -*** Digital filtering minimizes the effects of fuel slosh providing greater accuracy. ***• Proven Design -*** Designed specifically for the aircraft that are subject to harsh environments, such as vibration, temperature, and electrical noise. Probes designed for industrial applications can fail under these conditions. Proven reliability with over 10 years of history. ***• SAE 5 Hole Bolt Pattern -*** Industry standard flange mount compatible. ***• Unique Press fit installation option -*** Simply drill a 1/2" hole and use a rubber bushing to seal and hold the probe in place. ***• No Moving Parts -*** Nothing to wear out. ***• Output*** - 0 to 5 Volts ***• Compatible Fuel Quantity Gauges -*** UMA P/N: 18-260-1C1 (P/N 10-02410) Westach P/N: 20A4V (P/N 10-01255) & 2A7V (P/N 10-01246) and other 0-5V gauges. Mounting Options: ***• Unique Pressfit Installation -*** Can be mounted in plastic tank by drilling a 1/2" hole. A rubber grommet is used to hold the probe in place. ***• Standard SAE 5-Hole Bolt Pattern -*** A backing plate and seal are used to secure the probe to the tank. Standard Lengths of 12, 18, & 24 inches. Flange mount with standard SAE 5-hole pattern, or rubber grommet press fit. Probes may be shortened up to 1/2 of their measurable length. 0, 3, or 5 inch bendable section. 2 or 5 set points.

Ordering: (LL-BB-SS-MM)

LL - Length (12, 18, 24 inches or 25 to 48 inches custom)
BB - Bendable Section (NB= non-bendable, 3B= 3 inch, 5B= 5 inch)
SS - Set points (1S= Empty, 2S= Empty/Full or 5S= Empty,1/4,1/2,3/4,Full)
MM - Mounting method (PF= Press Fit Bushing, FM= Flange Mount Gasket)

Example: A 12", non-bendable, 2 set point probe using a press fit mounting part number would be 12-NB-2S-PF.

Description	Part No.	Price
Standard, 1 Or 2 Set Point, Pf Or Fm Mounting	10-00257	**$89.00**
Standard, 5 Set Point, Pf Or Fm Mounting	10-00258	**$139.95**
Standard Sae 5-hole Flange Mounting Kit	10-00259	**$22.75**
Advanced Npt Model, 1,2,or 5 Set Point, Npt Mount.	10-00256	**$189.95**
NPT Electronics module	10-05465	**$89.95**
1 Set Point Fuel Level Probe	10-05775	**$89.00**
2 Set Point Fuel Level Probe	11-09544	**$89.95**
5 Set Point Fuel Level Probe	11-11848	**$135.99**
Accessories	**Part No.**	**Price**
Wire For Capacitance Fuel Probe	11-03996	**$1.75**
Fuel Tank Bushing	05-01039	**$0.32**
ISS Fuel Sender Gasket	10-01097	**$1.95**

IN

SKYSPORTS CAPACITIVE FUEL SYSTEMS



The Skysports fuel monitoring system is a capacitance system which has no float and no moving parts except the needle on the gauge. Used in hundreds of various ultralight, homebuilt, and military aircraft, these fuel systems have been very popular due to their accuracy and durability. The Skysports fuel probe electronically measures the level of fuel in the tank, and sends the signal through the wire harness to the gauge. Available for single or dual tank use and for 12 or 24 volt operation. The system includes the gauge, probe, 8 ft. wire harness, mounting hardware, & instructions.

The SkySports 240-33ohm fuel systems are no longer available. They have been replaced with a new 0-5V system. These new systems, (listed below) can be used on both 12 or 24 volt aircraft. The older 240-33ohm gauge and probes are not interchangeable with the new 0-5V gauge or probes. However the installation of the systems are the same.

Note:The Skysports 240-33ohm older style probes are only available as special order upon request.

ROUND GAUGE SYSTEMS

Description	Part No	Price
2" Round 6" Straight Probe	10-04509	**$193.21**
2" Round 12" Straight Probe	10-04495	**$195.21**
2" Round 24" Straight Probe	10-04496	**$195.21**
2" Round 12" with 3" Bendable Probe	10-04497	**$195.21**
2" Round 24" with 3" Bendable Probe	10-04498	**$199.21**
2" Round 12" with 5" Bendable Probe	10-04499	**$195.21**
2" Round 24" with 5" Bendable Probe	10-04501	**$195.21**

SQUARE GAUGE SYSTEMS

Description	Part No.	Price
2-1/4" Square 6" Straight Probe	10-04511	**$213.01**
2-1/4" Square 12" Straight Probe	10-04502	**$215.01**
2-1/4" Square 24" Straight Probe	10-04503	**$215.01**
2-1/4" Square 12" with 3" Bendable Probe	10-04504	**$215.01**
2-1/4" Square 24" with 3" Bendable Probe	10-04505	**$219.01**
2-1/4" Square 12" with 5" Bendable Probe	10-04506	**$215.01**
2-1/4" Square 24" with 5" Bendable Probe	10-04507	**$215.01**

INDIVIDUAL COMPONENTS

Description	Part No.	Price
2" Gauge Only	10-04119	**$76.95**
2-1/4" Gauge Only	10-01246	**$96.75**
12" Straight Probe	10-03758	**$89.75**
6" Straight Probe	10-03753	**$87.75**
24" Straight Probe	10-03773	**$89.75**
12" with 3" bend probe	10-03746	**$89.75**
24" with 3" bend probe	10-03774	**$93.75**
12" with 5" bend probe	10-03761	**$89.75**
24" with 5" bend probe	10-03776	**$89.75**
Installation Kit	10-03731	**$28.50**



MGL CAPACITANCE FUEL LEVEL SENDERS

MGL Avionics Capacitance Probe is available in 12" or 24" long. The senders can be bent above the black mark on the probe (first several inches only), and they can be cut to length.

12 inch Sender .....P/N 11-14306 ..... **$65.00**
24 inch Sender .....P/N 11-14307 ..... **$65.00**

INSIGHT ENGINE MONITORS



GRAPHIC ENGINE MONITOR 602/603/610 UPGRADES

Graphic Engine Monitor - STC'd Single Engine - Normally Aspirated 4 or 6 Cylinder. The GEM 602 is designed for use with all 4 or 6 cylinder piston engine aircraft. The instrument graphically displays up to 12 critical engine temperatures in a single instrument in an easy-to-read bar- graph format on a brilliant plasma display.

Model No.	Part No.	Description	Price
610-C262-U	10-04932	Insight 4C or 6C Upgrade GEM to G2	$1,684.00
610C-363-U	10-05261	Insight 4C or 6C Upgrade GEM to G3	$2,375.00
610-C-463-U	10-05267	Insight 4C or 6C Upgrade GEM to G4	$3,295.00
1210C-063-U	10-04699	Insight 4C or 6C Upgrade Gemini 1200 to G4 Twin	$4,625.00
1210-C-063-2-U	10-05271	Insight 4C or 6C Upgrade to G4 Twin	$1,975.00

GEM PROBES

GEM 602 Wire Harness ..... P/N 10-03576 ..... **$199.00**
#2870 EGT Probe ..... P/N 2870 ..... **$89.00 /ea.**
#2852 CHT Spring Probe ..... P/N 2852 ..... **$89.00 /ea.**
#2853CHT Gasket Probe ..... P/N 10-00827 ..... **$91.00 /ea.**
#2855 CHT Adapter Probe* ..... P/N 2855 ..... **$163.00 /ea.**
#2856 CHT Probe** ..... P/N 2856 ..... **$163.00/ea.**
#1200-015 OAT Cable 10ft. ..... P/N 10-05890 ..... **$26.00**
Use with factory spring probe **Use with 3/8 x 24 threaded factory probe



MGL E3 UNIVERSAL ENGINE MONITOR

The E3 universal engine monitor combines in one compact 2.25" format instrument all that is needed to monitor most smaller aircraft engines from two-stroke ultralight engines to medium sized four strokes such as from Rotax, Continental and Lycoming. Also most automotive engine conversions can benefit from the use of the E3 engine monitor. P/N 11-06442 ..... **$309.00**

INSIGHT G3 GRAPHIC ENGINE MONITOR



The original GEM was a solitary player. The G3 instrument has two control knobs that operate combination rotary and push button switches. The top knob in general controls screen selection while the bottom knob controls items within the given screen. Each screen assigns its own functional needs to the controls that may change depending on context. A screen may also label the controls with guidance information like "Push to exit". The G3 is also designed to expand and grow with the times. Less than half of its true potential has been released at this time. The instrument can be updated to acquire new features by loading the SD card via the internet. Another great feature is why not have the G3 instrument diagnose itself? Then you don't have to disassemble the airplane or even touch the wiring. The probe diagnosis page indications are in green for normal readings and red for readings that fail the criteria set at the bottom of the screen. System Monitors: EGT, CHT, Fuel Flow, RPM, Manifold Pressure O, il Temp/Pressure, OAT, TIT, Carb Temp, HP%, Prop Balance, Clock/Calendar

Description	Part No.	Price
Insight GEM G3 4C Single Engine	10-03195	$3,029.00
Insight GEM G3 4C Single Engine Dual Turbo	10-05262	$3,345.00
Insight GEM G3 4C Single Engine Turbo	10-04685	$3,196.00
Insight GEM G3 6C Single Engine	10-03196	$2,995.00
Insight GEM G3 6C Single Engine Dual Turbo	10-05263	$3,295.00
Insight GEM G3 6C Single Engine Turbo	10-04686	$3,149.00



INSIGHT TRUE FLOW 500

A new concept in fuel flow computers, True Flow 500 is designed to give pilots a simple and efficient way of reading fuel information directly on the GPS fuel pages. Eliminates tedious installation and set-up proce and set-up proceuredures that are required for other fuel flow computers. Install True Flow 500 on top of the engine and connect fuel lines, GPS power, ground and RS232 RX input. Works on fuel infected or carburated engines, but not on carburated engines with a fuel return line. Many other STC's for installation on certificated aircraft. Unit is TSO'd for Beechcraft Aircraft Only. P/N 11-01913 ..... **$748.00**

INSIGHT G1 SINGLE ENGINE COLOR MONITOR - COMPLETE SYSTEM



Single Engine - 2.25 Bezel. Protect Your Engine By: • Saving Fuel On Every Flight By Leaning Accurately And Safely • Revolutionary New Leaning Process • See Lean Peak In Order And Temperature Spread • Seeing Simultaneous EGT, CHT, TIT Bars And Temperatures • Save Time Trouble-Shooting • Continuous Probe Diagnosis That Confirms System Integrity • Extensive List Of Primary Approved Aircraft Models • SD Card Software Updates • FAA & TC Primary STC • EGT, CHT, & TIT

Also available with Carburetor Temperature and/or for G1 Field Update Kit, see Accessories.

Description	Part No.	Price
Insight G1 4C Single Engine	10-04916	$1,498.00
Insight G1 4C Single Engine Turbo	10-04918	$1,595.00
Insight G1 6C Single Engine Turbo	10-04919	$1,725.00

INSIGHT G2 SERIES SINGLE ENGINE COLOR MONITOR - COMPLETE SYSTEM



G2 Series Single Engine Color Monitor - Complete System - 2.25 Bezel

Save Fuel, Save Money, Save Your Engine! Affordable Engine Monitoring you can't afford to be without.

Top reasons to install a G2: • Best lean of peak process in the industry • The only nozzle balance analysis, the key to lean of peak • The only probe diagnostic scree • Comprehensive data log - windows files SD card • Over the web software updates - constant improvement • GEM plug compatible - easy install • Best technical support

Description	Part No.	Price
Insight G2 4C Single Engine	10-04924	$1,899.00
Insight G2 4C Single Engine Turbo	10-04927	$2,223.00
Insight G 6C Single Engine	10-04926	$2,059.00
Insight G 6C Single Engine Turbo	10-04928	$2,405.00



G4 GRAPHIC ENGINE MONITOR

The original GEM was a solitary player. The G4 will operate standalone too but will also interface with other data sources and report information to other instruments like MFD's. All of the devices the G4 connects to today didn't exist in '79. The G4 is also designed to expand and grow with the times. Less than half of its true potential has been released at this time. The instrument can be updated to acquire new features by loading the SD card via the internet. The G4 update takes only a second while the instrument remains mounted in the airplane.

Single Engine		
Description	**Part No.**	**Price**
Insight G4 4C Single Engine	10-04687	$3,675.00
Insight G4 4C Single Engine Turbo	10-05264	$4,111.00
Insight G4 4C Single Engine Dual Turbo	10-05265	$4,125.00
Insight G4 6C Single Engine Dual Turbo	10-05266	$4,395.00
Insight G4 6C Single Engine	10-04688	$3,875.00
Insight G4 6C Single Engine Turbo	10-04689	$4,378.00
Twin Engine		
Description	**Part No.**	**Price**
Insight G4 4C Twin Engine	10-04690	$5,753.00
Insight G4 4C Twin Engine Turbo	10-04692	$5,995.00
Insight G4 4C Twin Engine Dual Turbo	10-05268	$5,895.00
Insight G4 6C Twin Engine	10-04691	$6,068.00
Insight G4 6C Twin Engine Turbo	10-04693	$6,319.00
Insight G4 6C Twin Engine Dual Turbo	10-05269	$6,295.00

INSIGHT G9 GRAPHIC ENGINE MONITOR

Pilot settable lean threshold target. Colored box appears at peak. Lean boxes show temperature of how much lean or rich. Colored boxes show lean or rich. Lean boxes change at lean threshold. Fuel flow guidance for leaning. Fuel flow at each cylinder peak (GAMI SPREAD). In-flight exhaust valve analysis. EGT temperature bars with numbers. CHT temperature bars with number, yellow warning and redline. TIT temperature bar with number, yellow warning and redline.

Description	Part No.	Price
Insight 7 Cylinder G9	10-06229	$5,412.00
Insight 8 Cylinder G9	10-06230	$7,765.00
Insight 8 Cylinder G9	10-06231	$5,530.00
Insight 8 Cylinder G9	10-06232	$7,883.00
Insight 9 Cylinder G9	10-06233	$5,648.00
Insight 9 Cylinder G9	10-06234	$7,995.00
Insight 14 Cylinder	10-06235	$8,995.00

Prices Subject to Change Without Notice

FUEL TOTALIZERS - FUEL GAUGES

SHADIN MINIFLO TOTALIZERS



MINIFLO SYSTEMS - Miniflo is the miniature fuel flow meter which constantly displays fuel flow in the lower windows. The fuel used and fuel remaining functions are continuously computed and can be displayed in the upper window by pressing the appropriate button. Endurance (time remaining) can be displayed in the upper window by using the rotary switch. STC's for most aircraft. Power: 12-28V DC Furnished in gallons readout (pounds also available). Weight: 31 oz. (meter& transducer). Size: 3.25"x 1.25"x 7.5". Miniflo now provides all features of standard Miniflo system plus a Loran interface as described in Digiflo above. This gives the pilot NM/Gal, Gallons to Destination and Gallons of Reserve. Specify aircraft and engine model on all Miniflo orders.Prices vary according to aircraft model.

Single Engine GPS Miniflo ..... P/N 10-24735.... **CALL FOR PRICE**

SHADIN DIGIFLOW TOTALIZERS



Digiflo-L is a Digital Fuel Management System designed to provide complete fuel management information under real flight conditions without any manual entry of data (after eztry of the initial fuel on board information).Digiflo-L is connected to the engine fuel flow transducer for fuel flow information and to the Loran-C or GPS receiver serial port for navigation data (ground speed, distance and estimated time en route).This system is also capable of transmitting the fuel information to the Bendix/King KLN-88, KLN-90, and Garmin GPS navigation receivers, for additional calculations and display of fuel management data.

Single Engine GPS Digiflo .....P/N 10-02212 ..... **Please Call**
Twin Engine GPS Digiflo.....P/N 10-02213 ..... **Please Call**

SHADIN F/ADC-200 FUEL/AIR DATA COMPUTER



The affordable Shadin F/ADC-200 Fuel/Air data computer maximizes aircraft range and fuel economy by providing automatic updating to your GPS for true air speed, winds aloft, wind components, density altitude, OAT, pressure altitude, fuel flow rate, fuel used, fuel required to destination, fuel endurance, and more. Interfaces with most popular GPS units including Bendix King KLN series, Garmin 150, 155, 165, Trimble 2000/3000 series, and Arnav. Please specify aircraft make/model, engine make/model, serial number of aircraft, and GPS make/model at time of order. P/N 10-24768 ..... **Please Call**

IMPORTANT: For all Shadin orders, please specify engine make and model number; aircraft make and model number; specify gallons, pounds or liters on readout and if Loran or GPS will interface. Specify make and model.

SHADIN SYSTEMS PRICING - Prices for Shadin Microflo, Digiflo, & Miniflo systems vary according to aircraft/engine models. Call Aircraft Spruce for your best pricing on any Shadin system. Aircraft Spruce guarantees to meet or beat any competitor's current advertised prices.

FUEL LEVEL SYSTEM BY DATCON



This Datcon fuel gauge and senders are designed for use with 12 volt electrical systems in automotive, marine and homebuilt aircraft applications. The gauges have a round 2" diameter case with chrome bezel. Mounting brackets and instructions are furnished. 240-33 Ohms.

Gauge No. 100177 with steel case.....P/N 100177 ..... **$58.75**
Lighting Kit (12V) .....P/N 06215-00 ..... **$6.50**

UNIVERSAL SENDER FOR DATCON GAUGES



This Fuel Level Sender has removable mounting plate which can rotate 180° to mount on either right hand or left hand position. For tanks 6"-15" deep.

P/N 05-16710.....**$51.95**

STEARMAN STYLE FLOAT-TYPE FUEL SIGHT GAUGE



Float type fuel sight gauge used in Stearman dusters. Plastic tube with fuel level marking and 3/4" male pipe thread fitting. 16" long overall, 8" tank depth. 5-1/2" travel. Use AN867-6 Aluminum Welding Flange to mate with above gauge. P/N 10435 ..... **$69.85**
Aluminum Welding Flange to mate with above gauge.
P/N AN867-6..... **$15.60**

SPIRAL ACTION FUEL GAUGE



A precision magnetic gauge for narrow vertical tanks. Rubber float travels on spiral rod to record fuel level on hermetically sealed side-reading dial marked E, 1/4, 1/2, 3/4, F. All aluminum construction. Housing has 1-1/2" NPT male threads for connection to threaded bushing (see below). Available in two lengths:

Length 'L' 15", Float Travel 12-3/4"..... P/N 05-16900..... **$69.85**
Length 'L' 19", Float Travel 16-3/4"
P/N 05-17000..... **$78.80**



Welding Bushings - 6061 aluminum, 2-1/4" O.D., 1/4" wall. Available in 1" & 2" length. Use with welding ring to provide base for attaching to fuel tank with bolts or rivets. Ring may be welded at any point along bushing to permit depth adjustment. Specify bushing length. For use with Spiral Action Gauge.

1"Bushing .....P/N 10362-1 ..... **$14.45**
2"Bushing .....P/N 10362-2 ..... **$15.75**



Welding Ring - 6061 aluminum, 4-3/8" O.D., 2-1/4" I.D. to fit above welding bushings. For use with Spiral Action Gauge..... P/N 10363 ..... **$6.80**

ROCHESTER 8341-R7090 SENDER



These fuel senders are designed for top mounting in unpressurized aluminum, stainless steel, or plastic fuel tanks in all types of marine vessels. They include special features and protection from corrosion problems (internal and external to the fuel tanks) which make them the quality standard for the industry. Standard configuration, with the lead hole at 12:00, has the float arm swinging at 3:00. The float arm on this sender is 24" [609mm] long measured from the pivot point allowing it to be cut to an appropriate length to gauge any tank depth from 6" [152mm] to 25" [635mm]. The float and the washers are furnished unassembled to the float arm. The cutting and crimping process is to be done prior to the float assembly. The fuel sender is equipped with a thick film resistance card with a range of 0 to 90Ù. The recommended gasket for use under the head is made of nitrile rubber and must be ordered separately. P/N 10-02045 ..... **$26.99**

MECHANICAL FUEL GAUGE



Lever-action gauge measures fuel level from full to empty on fractional dial. Matte-white markings on 2" black dial with red "No Take-off" sector below the 1/4 full mark. Cork float has 4" travel. Wire arm 12" long may be cut off to required length, wire bent to 90° angle to secure cork float. 1-13/16" between mounting hole centers. Hermetically sealed dial assembly has magnetically driven, silicone-damped or position pointer to prevent flutter..... P/N 05-16700.... **$105.75**

Accessories

Replacement Fuel Float ..... P/N 05-03395..... **$3.35**
Weld Adapt FLANGE 10361 ..... P/N 10361 ..... **$10.45**
Gasket for 05-16700..... P/N 15-4..... **$3.65**

LUSCOMBE/AERONCA TYPE FUEL GAUGE



This direct reading fuel quantity gauge is usable in tank depths up to 9" such as Luscombe & Aeronca. Not FAA approved. Excellent for homebuilt aircraft. Displays fuel level from full to empty. Size: 1-1/2" diameter face.

Fuel Gauge ..... P/N 05-00029 ..... **$44.50**
Rebuild kit for Fuel Gauge..... P/N 05-00031 ..... **$12.50**

GAS GAUGE TOOL SETS



Use the Gas Gauge Tool Set to remove or install gauges. It helps prevent damage to chrome inner & outer nuts. Available in standard (economical version) and deluxe (heavy-duty version). The tool used on the standard (outer nut) has been specifically designed to work on the original or new style nut. The tool used on the deluxe (inner nut) has a tight fitting handle, which you will need to hammer in. This offers you better leverage & sure grip. Heavy-duty version. Standard..... P/N 05-06813 ..... **$9.95**
Deluxe ..... P/N 05-06814 ..... **$21.75**

GAS GAUGE FLOAT



Gas Gauge Float (Modern Neoprene Cork). Modern Neoprene Float: This float is alcohol and gas resistent, and will not sink. It is not affected by modern ethanol based fuels. Highly recommended. USA made.

Modern Neoprene Float: ..... P/N 05-06815 ..... **$8.50**

GAS GAUGE NUT



Gas Gauge Nut available in two versions:
Inner - Chrome Plated - Large..... P/N 05-06817 ..... **$10.50**

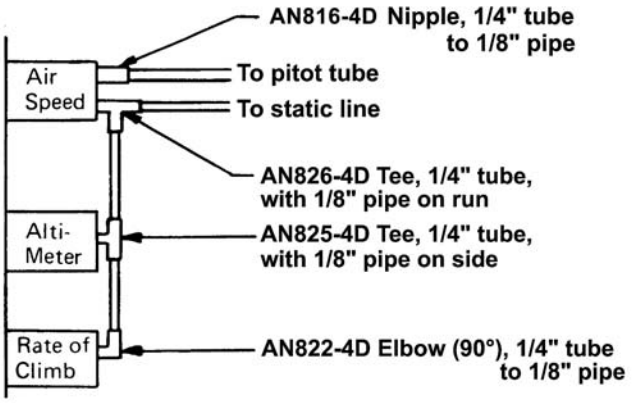
IN

SELECTING FITTINGS FOR INSTRUMENT HOOKUPS

1. Make sketch of instrument layout.
2. Draw lines showing routing of tubing from instruments to the fire wall or other locations.
3. Determine diameters of instrument lines. 1/4" diameter tubing is used for most instruments. The artificial horizon and directional gyro should have at least 3/8" diameter lines.
4. Select the required AN or Nylo-Seal fittings.

EXAMPLE NO. 1: HOOKUP OF AIRSPEED, ALTIMETER, & RATE OF CLIMB

The aluminum lines (1/4-in. diameter) will be flared and attached to the fittings with AN818-4D nuts and AN819-4D sleeves.



EXAMPLES OF EQUIVALENT AN-TYPE AND NYLO-SEAL FITTINGS

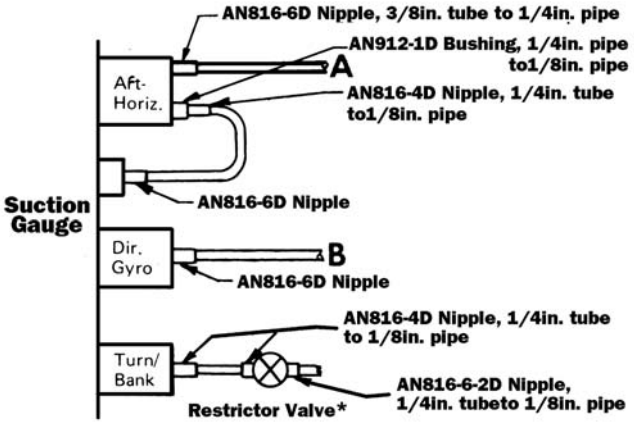
AN Fitting	Thread Size	Nylo-Seal Fitting
AN816-4D Nipple	1/4 tube x 1/8 pipe	268-N 1/4
AN816-6D Nipple	3/8 tube x 1/4 pipe	268-N 3/8
AN818-4D Nut	1/4 tube	Nuts and Sleeves
AN818-6D Nut	3/8 tube	are included with
AN819-4D Sleeve	1/4 tube	all Nylo-Seal
AN819-6D Sleeve	3/8 tube	fittings.
AN822-4D Elbow	1/4 tube x 1/8 pipe	269-N 1/4 x1/8
AN825-4D Tee	1/4 tube, 1/8 pipe on run	272-N 1/4 x1/8
AN826-4D Tee	1/4 tube, 1/8 pipe on side	271-N 1/4 x 1/8
AN912-1D Bushing	1/4 pipe x 1/8 pipe	No Equivalent

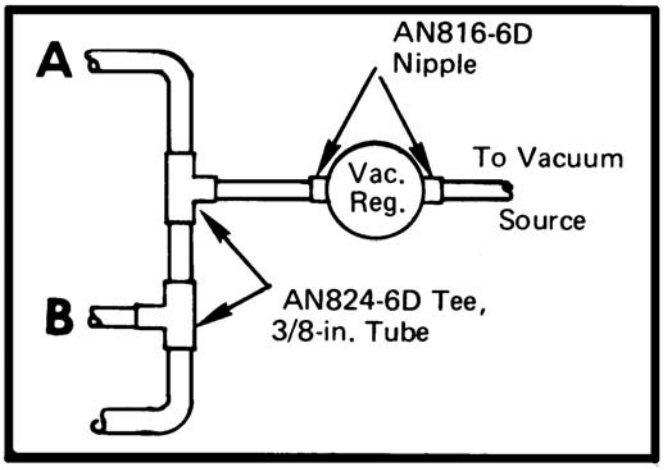
*Use AN816 Nipple and Nyloseal 266-N Female Connector to transition from AN-type fittings to Nyloseal fittings.

Each connection between the aluminum lines and the fittings requires either all AN818-4D nut and AN819-4D sleeve (1/4-in. line) or an AN818-6D nut and an AN819-6D sleeve for 3/8-in. line.
*Turn/Back vacuum set at 2 In. Hg.

IN

EXAMPLE NO. 2: HOOKUP OF GYRO INSTRUMENTS





HELPFUL HINTS

It is good practice to put some form of water trap in both the pitot and static lines. It should be placed at the lowest practical point in the system between the pressure source and the instrument. The trap can be a simple T-fitting with a cap:

TELEDYNE SEALED BATTERIES

The Gill LT Sealed line provides reliable sealed valve regulated lead acid (VRLA) batteries with higher starting power, higher residual power and faster re-charging. These batteries are ideal for the high demands of Jet, Rotor and Turbo aircraft and for anyone who needs more power. They are backed by a 2 year mfg. warranty and do not require a capacity check for a full 18 months.



LT SEALED BATTERY SPECIFICATIONS

Model	Volts	Amp Hours	30 Minute Emergency Capacity	Max Weight lbs.	Power Performance (A)						Part No.	Price
					73F (23C)		0F (-18C)		-22F (-30C)			
					IPP	IPR	IPP	IPR	IPP	IPR		
7025-20	12	20	32	22.9	875	700	635	430	440	320	11-13274	**$240.95**
7035-28	12	28	45	30.0	1,599	1,088	1,100	840	850	600	11-11312	**$282.95**
7242-14	24	14	22	29.0	1,200	270	720	230	512	200	11-15282	**$579.00**
7243-14	24	14	22	29.2	1,200	270	720	230	512	200	11-13534	**$581.00**
7243-16	24	16	25	29.9	1,100	480	640	300	495	250	11-11210	**$553.00**
7246-20	24	20	28	43.9	1,250	850	810	550	610	410	11-15485	**$688.00**
7407-28	24	28	45	66.5	1,599	1,088	1,100	840	850	600	11-14426	**$3,711.00**
7638-36	24	36	63	84.9	1,660	1,260	1,300	985	980	775	11-10756	**$2,089.00**
7638-44	24	44	70	88.6	1,857	1,247	1,677	1,051	1,411	948	11-12594	**$2,333.00**
7638-44ST	24	44	70	91.5	1,857	1,247	1,677	1,051	1,411	948	11-16277	**$2,855.00**
7638-44T	24	44	70	88.6	1,857	1,247	1,677	1,051	1,411	948	11-14439	**$2,476.00**
7638-48P	24	48	75	97.3	2,200	1,600	1,660	1,240	1,350	1,005	11-14093	**$2,246.00**
7638-53	24	53	80	95.8	1,959	1,323	1,526	1,021	1,225	828	11-10759	**$2,647.00**
7639-25	24	25	45	61.8	1,503	1,002	1,104	734	793	596	11-10758	**$2,009.00**
7639-27	24	27	45	61.8	1,503	1,002	1,104	734	793	596	11-07462	**$2,094.00**
7639-30LT	24	30	50	66.3	1,627	1,173	1,180	870	849	642	11-13535	**$1,896.00**
7639-34	24	34	55	66.4	1,636	1,168	962	774	761	604	11-10757	**$2,044.00**
7641-20	24	20	35	44.3	1,430	920	850	560	630	410	11-06245	**$2,084.00**

FREE UPS GROUND* SHIPPING IN 48 STATES NO UPS HAZARDOUS CHARGE.
***SOME RESTRICTIONS MAY APPLY.**

FOR EASY BATTERY LOOK-UP FOR YOUR AIRCRAFT, PLEASE VISIT http://www.aircraftspruce.com/catalog/elpages/gillappchart.php. NOTE: The application data is intended as a reference guide only. Some installations may vary and require airframe or battery box modification. Some applications may require field approval and some listings are pending FAA approval. Verify correct battery model for your aircraft before ordering.

GILL DRY CHARGE BATTERIES

The Gill dry charge battery is the original and only Dry Charge aircraft battery still available due to its extremely long shelf life (in the unfilled state) and its every day reliable performance. It's the smart economic choice when you don't need a sealed battery but do want long life.



DRY CHARGED (FLOODED NOT SEALED) BATTERY SPECIFICATIONS

Model	Volts	Amp Hours (C1)	30 Minute Emergency Rate. (A)	Electrolyte (Qts.)	60 Second Discharge at -18°C (0°F, A)	Weight lbs	Part No.	Price
G-25	12	18	30	2	225	21.3	11-01833	**$189.95**
G-35	12	23	40	3	250	27	11-01832	**$238.95**
G-240	24	8	13	3	106	23	11-01655	**$455.95**
G-241	24	8	13	3	106	24.3	11-01656	**$421.95**
G-242	24	10	17	3	150	27	11-01657	**$447.95**
G-243	24	10	17	3	150	28	11-01658	**$452.95**
G-244	24	18	30	4	225	38.5	11-01555	**$514.00**
G-245	24	18	30	4	225	39.5	11-01660	**$515.00**
G-246	24	19	32	4	250	41.5	11-01661	**$474.95**
G-247	24	19	32	4	250	42.5	11-01772	**$555.00**
G-6381C	24	43	70	9	445	80	11-04155	**$1,780.00**
G-6381E	24	43	70	9	445	80	11-01557	**$1,765.00**
G-639E	24	24	40	5	345	55	11-04158	**$1,499.00**
G-640C	24	14	25	3	180	34	11-04159	**$1,024.00**
G-640E	24	14	25	3	180	34	11-04160	**$947.00**
G-641	24	18	30	4	275	41.5	11-02488	**$1,254.00**
GE-50C	24	31	55	8	325	80	11-03808	**$946.00**
GE-50E	24	31	55	8	325	80	11-03809	**$908.00**
GE-51C	24	22	35	5	235	56	11-09810	**$33.00**
GE-51E	24	22	35	4	235	56	11-04192	**$834.00**
GE-54C	24	10	16	3	106	34	11-01558	**$882.00**
GE-54E	24	10	16	3	106	34	11-09842	**$838.00**
G-88	12	65	108	8	500	78	11-04011	**$1,160.00**
G-639C	24	24	40	5	345	55	11-04157	**$1,537.00**



GILL BATTERY ELECTROLYTE (ACID)

Battery electrolyte (battery grade sulfuric acid) in sealed polyethylene pouch with self-contained dispenser tube, packaged in sturdy cardboard container. Specific gravity 1.285. Detailed filling & disposal instructions on container.

2 Qts.....P/N 11-00300 .....**$7.65**
3 Qts.....P/N 11-00305 .....**$10.75**

Free UPS Ground* Shipping in 48 States No UPS Hazardous Charge.
***Some restrictions may apply.**

FOR EASY BATTERY LOOK-UP FOR YOUR AIRCRAFT, PLEASE VISIT http://www.aircraftspruce.com/catalog/elpages/gillappchart.php.
NOTE: The application data is intended as a reference guide only. Some installations may vary and require airframe or battery box modification. Some applications may require field approval and some listings are pending FAA approval. Verify correct battery model for your aircraft before ordering. Dry charged Gill Batteries are furnished with electrolyte (except overseas) unless requested otherwise.

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CONCORDE BATTERIES

Concorde Battery Corporation has hand crafted safe and reliable batteries in West Covina, California for over 40 years. A dedicated Research & Development Department continuously improves and refines the Recombinant Gas (RG®) product line resulting in industry leading performance and reliability in sealed Valve Regulated Lead Acid (VRLA) batteries.Concorde batteries are the choice of OEM, DOM, owners and pilots due to unmatched performance, quality, safety and customer support.
Concorde Batteries are certified for installation, and as Original Equipment, on more aircraft than any other lead acid battery.
NOTE - The STCs for some aircraft may be required at an additional cost please call 877-4-SPRUCE (777823) if applicable to your aircraft.
Concorde batteries are designed with large positive and negative plates, aircraft quality terminals (brass terminal bolts with conical silicon bronze lock washers), and robust over the partition intercell connections. These unique features contribute to an increase in capacity, greater sustained starting power in extreme heat and at sub-zero temperatures and increased longevity. RG® Series batteries feature fully aerobatic sealed construction; no spillable electrolyte or flammable gas emissions.

CONCORDE GENERAL AVIATION SEALED LEAD ACID BATTERIES



RG-25



RG-25XC



RG-35A



RG-35AXC



RG-24-11



RG-24-11M



RG-380E/44

"XC" in the model number indicates extra cranking power. "M" in the model number indicates manifold venting.

Model No.	Battery Type	Connect Type	Amp Hour	Volt	Part No.	Price	Model No.	Battery Type	Connect Type	Amp Hour	Volt	Part No.	Price
RG-25	Sealed Lead Acid	A	22	12	**11-03879**	**$239.95**	RG-12LSA	Sealed Lead Acid	A	11.00	12	11-09455	**$255.95**
RG-25XC	Sealed Extra Crank	A	24	12	**11-03880**	**$282.95**	RG24-15	Sealed Lead Acid	A	13.60	24	11-03878	**$586.00**
RG-35A	Sealed Lead Acid	A	29	12	**11-03881**	**$297.95**	RG24-15M	Sealed Lead Acid	A	13.60	24	11-04951	**$636.00**
RG-35AXC	Sealed Extra Crank	A	33	12	**11-03882**	**$319.00**	RG24-16	Sealed Lead Acid	A	13.60	24	11-05112	**$598.00**
RG-2411	Sealed Lead Acid	A	11	24	**11-03876**	**$545.00**	RG24-20	Sealed Lead Acid	A	19	24	11-00174	**$714.00**
RG-2411 M	Sealed Lead Acid	A	11	24	**11-03877**	**$579.00**	RG-380E/44*	Sealed Lead Acid	E	42	24	11-03883	**$2,673.00**
RG24-9	Sealed Lead Acid	M	9	24	**11-11608**	**$486.00**	RG24-12	Sealed Lead Acid	M	11	24	11-11612	**$539.00**
RG24-10	Sealed Lead Acid	M	9	24	**11-11609**	**$509.00**							

CONCORDE CORPORATE BATTERIES

Model	Capac-ity	Connector Type	Weight	Part No.	Price
RG-28-7	9	GG	32	11-11613	**$2,319.00**
RG-42	17	E	44	11-11614	**$2,667.00**
RG-45	12	U	35	11-11616	**$1,839.00**
RG-46	12	E	35	11-11617	**$2,089.00**
RG-47	17	U	44	11-11618	**$2,162.00**
RG-49	17	E	44	11-11619	**$2,045.00**
RG-76	44	E	102	11-11621	**$4,839.00**
RG-91	22	E	57	11-11643	**$3,379.00**
RG-120	0.7	W	5	11-11645	**$1,183.00**
RG-121-1	2	L	8	11-11647	**$1,286.00**
RG-121-2	2	L	8	11-11650	**$2,127.00**
RG-121-3	3.3	L	12	11-11654	**$1,479.00**
RG-121-4	3.3	L	12	11-11655	**$2,354.00**
RG-122-1	2	L	8	11-11656	**$1,387.00**
RG-122-2	2	L	8	11-11657	**$2,229.00**
RG-122-3	3.3	L	12	11-11658	**$1,574.00**
RG-122-4	3.3	L	12	11-11659	**$2,668.00**
RG-123	11	F	28	11-11660	**$2,248.00**
RG-123-1	11	F	28	11-11661	**$1,725.00**
RG-124	17	N	43	11-11662	**$5,074.00**
RG-124-1	17	N	43	11-11664	**$4,135.00**
RG-125	3.5	J	14	11-11666	**$1,539.00**
RG-126	3.5	K	14	11-11668	**$1,669.00**
RG-128-1	3.8	P	16	11-11673	**$2,274.00**
RG-128-2	3.8	P	16	11-11676	**$2,515.00**
RG-128-3	3.8	P	16	11-11678	**$2,373.00**
RG-129	3.8	B	16	11-11681	**$3,790.00**
RG-130-1	11	F	28	11-11682	**$2,405.00**
RG-130-2	11	F	28	11-11687	**$3,066.00**
RG-132	6	Y	16	11-10853	**$2,349.00**
RG-135	2	V	8	11-11689	**$2,456.00**
RG-140	7	E	16	11-11694	**$2,039.00**
RG-145-1	17	E	44	11-11695	**$2,857.00**
RG-145-2	17	E,L	44	11-11696	**$3,651.00**
RG-203	12	E	8	11-11699	**$2,292.00**
RG-206	17	E	43	11-11388	**$2,428.00**

Model	Capac-ity	Connector Type	Weight	Part No.	Price
RG-209	22	E	52	11-11701	**$4,706.00**
RG-222	17	E	43	11-11385	**$2,697.00**
RG-223	17	E	44	11-11702	**$2,926.00**
RG-224	24	E	52	11-11383	**$3,039.00**
RG-235	44	E	88	11-13428	**$3,398.00**
RG-300	11	X	11	11-11703	**$1,743.00**
RG-325	17	M	53	11-11704	**$1,975.00**
RG-330	17	M	63	11-11706	**$2,724.00**
RG-332-1	38	BB,II	90	11-13429	**$5,593.00**
RG-332-2	38	BB,II	90	11-13430	**$6,423.00**
RG-343	38	E	29	11-11707	**$2,594.00**
RG-350	38	U	42	11-11386	**$2,556.00**
RG-355	38	U	42	11-11387	**$2,527.00**
RG-380E/40B	38	E	85	11-11708	**$2,674.00**
RG-380E/40D	38	E	86	11-13431	**$4,684.00**
RG-380E/40K	38	E	86	11-11709	**$2,903.00**
RG-380E/40KH	38	E		11-11711	**$5,081.00**
RG-380E/40KS	38	E	88	11-11712	**$3,139.00**
RG-380E/40KSH	38	E	88	11-11713	**$5,676.00**
RG-380E/40L	38	E	86	11-11456	**$3,327.00**
RG-380E/40LH	38	E	86	11-11714	**$5,082.00**
RG-380E/40LS	38	E	88	11-11716	**$3,310.00**
RG-380E/40LSH	38	E	88	11-11718	**$5,321.00**
RG-380E/44	42	E	90	11-03883	**$2,673.00**
RG-380E/44K	42	E	92	11-11623	**$3,292.00**
RG-380E/44KH	42	E	92	11-11624	**$5,028.00**
RG-380E/44KS	42	E	93	11-11625	**$3,294.00**
RG-380E/44KSH	42	E	93	11-11626	**$5,272.00**
RG-380E/44L	42	E	92	11-02949	**$3,294.00**
RG-380E/44LH	42	E	92	11-11627	**$5,026.00**
RG-380E/44LS	42	E	93	11-11628	**$3,486.00**
RG-380E/44LSH	42	E	93	11-11629	**$5,210.00**
RG-380E/46	46	E	90	11-11630	**$2,809.00**
RG-380E/46K	46	E	92	11-11631	**$2,892.00**

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CONCORDE BATTERIES

CONCORDE CORPORATE BATTERIES

Model	Capacity	Connector Type	Weight	Part No.	Price
RG-380E/46KH	46	E	92	11-11632	**$5,308.00**
RG-380E/46KS	46	E	93	11-11634	**$3,111.00**
RG-380E/46KSH	46	E	93	11-11635	**$5,644.00**
RG-380E/46L	46	E	92	11-11636	**$2,939.00**
RG-380E/46LH	46	E	92	11-11637	**$5,054.00**
RG-380E/46LS	46	E	93	11-11638	**$3,502.00**
RG-380E/46LSH	46	E	93	11-11639	**$5,290.00**
RG-380E/53K	53	E	94	11-11640	**$3,474.00**
RG-380E/53KH	53	E	94	11-11641	**$5,538.00**
RG-380E/53KS	53	E	95	11-11644	**$3,766.00**
RG-380E/53KSH	53	E	95	11-11646	**$6,157.00**
RG-380E/53L	53	E	94	11-11649	**$3,536.00**
RG-380E/53LH	53	E	94	11-11651	**$5,538.00**
RG-380E/53LS	53	E	95	11-11652	**$4,107.00**
RG-380E/53LSH	53	E	95	11-11653	**$5,808.00**
RG-380E/60B	48	E	100	11-11663	**$4,846.00**
RG-380E/60F	48	E	100	11-11665	**$6,206.00**
RG-380E/60K	48	E	100	11-11667	**$3,388.00**
RG-380E/60KH	48	E	100	11-11672	**$5,098.00**
RG-380E/60KS	48	E	102	11-11674	**$3,151.00**
RG-380E/60KSH	48	E	102	11-11677	**$5,686.00**
RG-380E/60L	48	E	100	11-10837	**$3,424.00**
RG-380E/60LH	48	E	100	11-11679	**$5,098.00**
RG-380E/60LS	48	E	102	11-11684	**$3,598.00**
RG-380E/60LSH	48	E	102	11-11686	**$5,328.00**
RG-385	13	E	36	11-11688	**$2,735.00**

Model	Capacity	Connector Type	Weight	Part No.	Price
RG-390E	28	E	64	11-11384	**$2,597.00**
RG-390E/KH		E	64	11-11717	**$4,735.00**
RG-390E/KSH		E	66	11-11719	**$4,843.00**
RG-390E/L	28	E	64	11-11721	**$3,280.00**
RG-390E/LH		E	64	11-11723	**$4,735.00**
RG-390E/LS	28	E	66	11-11725	**$3,178.00**
RG-390E/LSH		E	66	11-11728	**$4,843.00**
RG-390ES	28	E	64	11-11730	**$2,651.00**
RG-390E/25	25	E	55	11-11732	**$2,435.00**
RG-390E/25L	25	E	57	11-11733	**$2,647.00**
RG-390E/25LS	25	E	59	11-11736	**$3,290.00**
RG-390E/25S	25	E	55	11-11738	**$2,179.00**
RG-400E/13	13	E	38	11-11741	**$1,851.00**
RG-407	27	E	64	11-10836	**$3,775.00**
RG-412-1	15	E	50	11-11740	**$3,157.00**
RG-412-2	15	G & E	50	11-11739	**$4,773.00**
RG-418-1	24	E	66	11-13432	**$4,983.00**
RG-418-2	24	G & E	666	11-13433	**$6,050.00**
RG-427	34	E	81	11-12015	**$4,350.00**
RG-441	44	E	90	11-11737	**$5,209.00**
RG-442	44	E	90	11-11735	**$5,815.00**
RG-443	11	E	29	11-02948	**$2,631.00**
RG-445C	18	C	45	11-11731	**$2,434.00**
RG-445E	18	E	45	11-11729	**$2,441.00**
RG-500	17	E	45	11-04738	**$2,882.00**
RG-600-1	17	E	45	11-11726	**$2,868.00**
RG-600-2	17	E	45	11-11724	**$2,895.00**
RG-616	6	HH	18	11-13434	**$2,515.00**
RG-641	17	E	43	11-12016	**$2,122.00**

CONCORDE ARINC SERIES EMERGENCY BATTERIES

Model	Capacity	Connector Type	Weight	Part No.	Price
RG-131	12	H	36	11-13436	**$3,419.00**
RG-150-1	3.5	Z	18	11-13437	**$5,492.00**
MB-150-1	3.5	N/A	16	11-13439	**$2,363.00**
RG-150-2	3.5	Z	18	11-13440	**$7,973.00**
MB-150-2	3.5	N/A	16	11-13441	**$4,845.00**
BS-150-A	N/A	Z	---	11-13442	**$2,494.00**
RG-150-1-[y]	3.5	Z	18	11-13443	**$4,762.00**
MB24-3.5-1	3.5	N/A	---	11-13444	**$2,039.00**
RG-150-2-[y]	3.5	Z	18	11-13445	**$6,888.00**
MB24-3.5-2	3.5	N/A	---	11-13446	**$4,184.00**
BS-150-C	N/A	Z	---	11-13447	**$2,150.00**

Prices Subject to Change Without Notice

POWERSONIC BATTERIES



P/N 11-03153

Power Sonic sealed maintenance-free batteries allow safe, trouble-free operation in any position. You never need to add electrolyte; gases generated during over charge are recombined in a unique "oxygen cycle". Under normal operating conditions, 4 or 5 years of dependable service can be expected in standby applications, or between 200 and 1000 charge/discharge cycles, depending on depth of discharge. Temp. range: -76° to +140°F.

3-AMP BATTERY - Model: Powersonic PS-1230, PPS SKU: 35L116S1 Shipping Weight: 3 lbs, Dimensions: 5.23"L x 2.64"W x 2.36"H, Voltage: 12 Volts, Capacity: 3 Amp Hour(s), Chemistry: Lead.
P/N 11-03153 ..... **$29.95**

18-AMP BATTERY - Model: Powersonic PS-12180NB, PPS SKU: 35L105S3, Shipping Weight: 14 lbs, Dimensions: 7.13"L x 2.99"W x 6.57"H, Voltage: 12 Volts, Capacity: 18 Amp Hour(s), Chemistry: Lead.
P/N 11-03154 ..... **$73.75**

26-AMP BATTERY - Model: Powersonic PS-12260NB, PPS SKU: 35L107S1, Shipping Weight: 18 lbs, Dimensions: 6.56"L x 6.97"W x 4.92"H, Voltage: 12 Volts, Capacity: 26 Amp Hour(s), Chemistry: Lead
P/N 11-03155 ..... **$102.75**

FULL SPECTRUM POWER LITHIUM BATTERIES



Full Spectrum Power makes no compromise in the design and construction of their lightweight batteries. These batteries deliver the highest current, at consistent voltage, powering the world's fastest motorcycles. Full Spectrum Power is the only battery company in the powersports market that uses real, certified cells from A123 Systems. These are the finest cells on the planet. Every Full Spectrum Power battery is designed and manufactured in the USA, using engineering and assembly methods derived from years of working with factory race teams in AMA Superbike, Supercross, Motocross, Drag Racing, Land Speed Racing, and Flat Track. Technology which was only available to the factory teams is now available to everyone! Full Spectrum batteries are now available to the Ultralight & LSA market. Not FAA Approved for Aircraft use.

PULSE SERIES

PULSE P1 BATTERY - • Save an average of 7 lbs. on a 600cc bike • 130 cranking amps / 2.5 amp hour capacity • Integrated Protection Circuit (IPC) • Heat, impact, and water resistant case • 100% Made in the USA. • Dimensions: 4.5 in (L) x 2.5 in (W) x 3.75 in (H) • Weight: 15.1 oz • Common Applications include: 600cc sportbikes (race trim); Dirt bikes less than 450cc..... P/N 11-10701 ..... **$138.75**

PULSE P2 BATTERY - • Save 7 lbs. on a 1000cc bike • 240 cranking amps / 5 amp hour capacity • Integrated Protection Circuit (IPC) • Heat, impact, and water resistant case • 100% Made in the USA • Dimensions: 4.5 in (L) x 2.5 in (W) x 3.75 in (H) • Weight: 1.6 lbs. • Common Applications include: 1000cc inline 4-cylinder sportbikes; V-Twin sportbikes up to 1098cc..... P/N 11-10702 ..... **$219.95**

PULSE P3 BATTERY - • Save 7 lbs. on a 1200cc bike• 390 cranking amps / 7.5 amp hour capacity• Integrated Protection Circuit (IPC)• Heat, impact, and water resistant case• 100% Made in the USA • Dimensions: 4.5 in (L) x 3.5 in (W) x 3.75 in (H) • Weight: 2.2 lbs. • Common Applications include: 1300cc inline 4-cylinder sportbikes; 1200cc twins; Drag racers using total-loss ignition systems P/N 11-10703 ..... **$269.00**

Full Spectrum Hold Down Bracket for P1 & P2
P/N 11-10754 ..... **$43.95**

ANTIGRAVITY 16 CELL SMALL CASE BATTERY



480 Cranking Amps. It is the smallest 16-Cell lithium battery made at only 4.5" Length x 3.25" Depth and 5.25" height (to the top of the terminals) P/N 11-12104 ..... **$260.99**

ANTIGRAVITY 20 CELL OEM YTX12-20 BATTERY



600 Cranking Amp and extremely compact size 5.8" Length x 3.4" Depth and 5.12" height (to the top of battery) P/N 11-12105 ..... **$422.99**

ODYSSEY DRYCELL BATTERIES



11-01651



11-02233



11-01945

Odyssey batteries, with an eight year design life saves you time and money because you do not have to replace your battery as often. It is also the ONLY battery that is capable of delivering a large number of deep cycles – up to 400 when fully discharged or up to 500 when discharged to 80%. Odyssey battery will maintain up to 50% state of charge after 2 years if stored at room temperature (77°F). At temperatures lower than 77°F, storage times will be even longer. The cranking power of Odyssey batteries is double to triple that of equally sized conventional batteries, even when the temperature is as low as -40°F. 2 Year Warranty. **Note: MJ=Metal Jacket. See website for additional Specs.**

Part No.	Model	Dimensions	Weight	Price
11-06954	PC-625	6.7" x, 3.90" x 6.89",	13.2	**$976.00**
11-08081	PC-545	7/8" x 3-3/16" x 5-1/8"	11.7	**$112.99**
11-08082	PC-545MJ	7.0" x 3-3/8" x 5-1/8"	12.6	**$127.99**
11-02233	PC-680	7.15" x 3.00" x 6.65"	15 Lbs.	**$128.99**
11-05173	PC-925	6-15/32" X 6-7/8" X 4-7/8"	24 lbs	**$187.99**
11-01651	PC-925MJ	6-9/16"x 6-7/8"x 5-11/16"	24 Lbs.	**$200.99**



METAL JACKET (TRAY)

For Odyssey 680Amp battery
P/N 11-02234 ..... **$22.50**



HOLD DOWN BRACKET FOR ODYSSEY 680AMP BATTERY

This hold down bracket for the Odyssey PC 680 battery can be easily mounted in any orientation. Color: Black. P/N 11-01853 ..... **$38.75**



YUASA BATTERY Y50-N18L-A-CX

The Yumicron CX generates more power, requires less maintenance, and lasts longer than any other conventional battery. Specifications: Battery Family: Yumicron CX, Battery Type: Y50-N18L-A-CX, Voltage: 12 Capacity: 20 Dimensions: 8.125" x 3.5625" x 6.4375" Weight: 11.2 lbs. Metric Dimensions: 205mm x 90mm x 162mm Metric Weight: 5.1 kg, Acid Volume: 47.3 oz., Amps: 2 Electrolyte needed: 47.3 oz.
P/N 11-09496 ..... **$104.75**



YUASA BATTERY YB12C-A

YB12C-A YUASA Battery ships dry acid required. 12V, 5"d x 18"w x 14"h. Weight is 5.0 lbs.
P/N 11-07542 ..... **$59.95**



BATTERY TERMINAL TOOL

This unique tool is designed to provide positive tightening of battery terminals on all popular brands of lead/acid aircraft batteries without over-torquing and without the danger of an electrical short. The tool is made from steel for rugged service and is fully insulated with a rubber hand grip for protection against electrical shorts. P/N 12-16200 ..... **$21.95**



BATTERY CORROSION GUARD

Battery Corrosion Guard forms a thin protective coating that will neutralize battery acid on all treated areas. It is an excellent way to clean the battery, hold down straps, and all metal parts you want to protect including cables, clamps, box, and posts. Excellent for aluminum battery boxes. Widely used in the aircraft, truck, and boat industries.

3 oz. can..... P/N 11-00310..... **$16.65**
8 oz can..... P/N 11-00320..... **$24.75**
11 oz. can..... P/N 11-09615..... **$31.50**



PULSETECH POWERPULSE

PowerPulse is not a charger. It's a performance device designed to help batteries charge faster and provide maximum performance and power. Used extensively by the consumers and the U.S. Military worldwide for almost ten years. The PowerPulse system can also be used together with an existing charging system. In fact, it will work even faster and stronger. This means batteries can be both charged and desulfated at the same time.

12V ..... P/N 11-07464 ..... **$46.75**
24V ..... P/N 11-10461 ..... **$49.95**

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BATTERY BOXES - BATTERIES

ALUMINUM BATTERY RACKS & BOXES



RACK



BOX

These top quality battery racks and battery boxes are constructed from 5052 aluminum and are heli-arc welded. A corrosion resistant epoxy powder coating is applied using a electrostatic process and oven baked for a long lasting finish. Complete hold down hardware kits are provided with all racks and boxes , and mount flange are pre-drilled for mounting ease using 3/16" diameter bolts. Use battery racks when mounting in a ventilated area. Use battery boxes when mounting battery in a confined area. where enclosed battery protection is required. Battery boxes include a 1/4" tube for venting and drainage. Specify make and model of battery and horizontal or vertical mount when ordering.

Battery Racks				Battery Boxes			
P/N	Model	Dims.	Price	P/N	Model	App.	Price
11-00105 Horiz.	HR-25	8"H x 5-3/16"W x 7-7/8"L	$124.95	11-00125 Side load	HB-25	8"H x 5-3/16"W x 7-7/8"L	$183.95
11-00110 Vertical	VR-25	8"H x 5-3/16"W x 7 7/8"L	$124.95	11-00130 Top Load	VB-25	8"H x 5-3/16"W x 7-7/8"L	$183.95
11-00115 Horiz.	HR-35	8"H x 5-3/16"W x 9-7/8"L	$132.85	11-00135 Top Load	HB-35	8"H x 5-3/16"W x 9-7/8"L	$188.95
11-00120 Vertical	VR-35	8"H x 5-3/16"W x 9-7/8"L	$130.95	11-00140 Top Load	VB-35	8"H x 5-3/16"W x 9-7/8"L	$188.95

CESSNA FIREWALL MOUNTED BATTERY BOX



Firewall battery box for Cessna Models 170, 170A, 170B, 180 thru 180K, 185 thru 185E, A185E, A185F STC Approved: SA02333AK-D. Note: Does not include battery..... P/N 05-04766 .....**$439.00**

BOGERT STAINLESS STEEL PIPER BATTERY BOXES



Replace Piper Battery Boxes * Metal & Plastic replacement approved. * Stainless Steel Construction * Brass screw-in vent-tubes. * Better than original drain tube * Battery Box Modification included.

BOX	MODEL		AIRCRAFT S/N
06-Bba	PA-18	A	ALL SN
06-Bba	PA-18	AS	ALL SN
06-Bba	PA-18	S	ALL SN
06-Bba	PA-18		18-1215-18-309025
06-BBc	PA-20	135	934 & Up
06-BBc	PA-20S	135	ALL SN
06-BBc	PA-22	108	ALL SN
06-BBc	PA-22	135	1021, 1022, 1024 AND UP
06-BBc	PA-22	150	ALL SN
06-BBc	PA-22	160	ALL SN
06-BBc	PA-22S	160	ALL SN
06-BBc	PA-22S	135	ALL SN
06-BBc	PA-22S	150	ALL SN
06-BBa	PA-24	180	103-243687
06-BBa	PA-24	250	ALL SN
06-BBa	PA-24	260	ALL SN
06-BBa	PA-24	400	ALL SN
06-BBa	PA-24	260B	ALL SN * Call For 4247-4300
06-BBa	PA-24	260C	ALL SN
06-BB	PA-28	140	ALL SN
06-BB	PA-28	150	ALL SN
06-BB	PA-28	151	ALL SN
06-BB	PA-28	160	ALL SN
06-BB	PA-28	161	28-7716001-28-8216236
06-BB	PA-28	180	ALL SN
06-BB	PA-28	181	ALL SN
06-BBa	PA-30		ALL SN
06-BBb	PA-32	260	ALL SN
06-BBb	PA-32	300	ALL SN
06-BBb	PA-32	301	ALL SN
06-BBb	PA-32	260B	ALL SN
06-BBb	PA-32	260C	ALL SN
06-BBb	PA-32	260D	ALL SN

BOX	MODEL		AIRCRAFT S/N
06-BBb	PA-32	260E	ALL SN
06-BBb	PA-32	300B	ALL SN
06-BBb	PA-32	300C	ALL SN
06-BBb	PA-32	300D	ALL SN
06-BBb	PA-32S	300E	ALL SN
06-BB	PA-32	301T	ALL SN
06-BBb	PA-32S	300	ALL SN
06-BBa	PA-39	(C/R)	ALL SN
06-BB	PA-28	235	ALL SN
06-BB	PA-28	236	ALL SN
06-BB	PA-28	140B	ALL SN
06-BB	PA-28	140C	ALL SN
06-BB	PA-28	140D	ALL SN
06-BB	PA-28	140E	ALL SN
06-BB	PA-28	150B	ALL SN
06-BB	PA-28	150C	ALL SN
06-BB	PA-28	160B	ALL SN
06-BB	PA-28	160C	ALL SN
06-BB	PA-28	160S	ALL SN
06-BB	PA-28	180B	ALL SN
06-BB	PA-28	180C	ALL SN
06-BB	PA-28	180D	ALL SN
06-BB	PA-28	180E	ALL SN
06-BB	PA-28	180F	ALL SN
06-BB	PA-28	180G	ALL SN
06-BB	PA-28	201T	ALL SN
06-BB	PA-28	B-235	ALL SN
06-BB	PA-28	C-235	ALL SN
06-BB	PA-28	D-235	ALL SN
06-BB	PA-28	E-235	ALL SN
06-BB	PA-28	F-235	ALL SN
06-BB	PA-28R	150	ALL SN
06-BB	PA-28R	200	ALL SN
06-BB	PA-28R	201	ALL SN
06-BB	PA-28R	201T	ALL SN
06-BB	PA-28RT	201T	ALL SN
06-BB	PA-28S	180	ALL SN
06-BBa	PA-30	B	ALL SN
06-BBa	PA-30	C	ALL SN

GELL CELL BATTERIES



• Maintenance-free operation • Excellent shelf life • Long cycle life • Can be mounted on its side • Delivered fully charged and ready for use • No corrosive gas generation • 300 Starting AMPS • Warranty 1 year or 100 hours. • Quality construction provides superior resistance to shock and vibration • DOT AND IATA approved for shipment by air as dry cells **Note: FOR EXPERIMENTAL AIRCRAFT ONLY.** P/N 11-03156 .....**$149.95**

AEROTAR CESSNA BATTERY BOX



Cessna Battery Box (C614002-0101).
P/N 08-15785.....**$899.99**

FIBERGLASS BATTERY BOX



Available as standard fiberglass battery box or as gel coated version. Gel coated battery box is same dimensions but with gray gel coating. Sturdy, lightweight, corrosion-resistant. Accommodates both 25 amp and 35 amp batteries. With hold-down tabs and drain outlet. Note: For experimental aircraft only.
Coated .....P/N 05-15354 .....**$135.75**
Uncoated .....P/N 05-15353 .....**$99.00**

BOGERT BATTERY BOXES



Many battery boxes in Piper and Cessna aircraft are 30, 40 or 50 years old and battery acid, vibration as well as time have taken their toll. Acid leaking into the belly of your airplane can severally damage the structure where you can't see it, between the laps of aluminum and the rivets. STC/PMA FAA approved for most Piper Aircraft. Protects your investment. Replaceable vent fittings. Eliminates acid leaks in the aircraft. Improves starting performance. Eliminates extra connection on outside of the battery box Positive battery box venting. Includes lid.

See our website for application list.

Part No.	Description	Price
11-06954	Piper 18/24/30/39	$976.00
11-13480	Piper 20/22	$824.00
11-13481	PA-23	$1,295.00
11-13482	Piper 24-260	$955.00
11-13484	Piper 28/32	$822.95
11-13485	Piper 28-161	$1,277.95
11-13486	Piper 31	$1,282.95
11-13487	Piper 32	$822.95
11-13488	Cessna 150	$872.95
11-13489	Cessna 172	$872.95
11-13490	Cessna 180/182/185/188	$872.95
11-13491	Bogert Positive And Negative Cables	$49.75

BOGERT BATTERY BOX MODIFICATION



The Battery Box Mod greatly improves battery performance. It modifies Piper Metal Battery Boxes to eliminate the braided straps and ground connections known for heat generating, high resistance connection.
Hard starting and other electrical problems can often be tracked back to poor battery and group connections. Use this inexpensive mod with a new positive and negative cable if your battery box is still mechanically sound.
P/N 12-16400.....**$117.85**

BOGERT BATTERY BOX NYLON FLANGES



Improve Starting Performance. Easier Removal & Installation of Battery. May prolong life of battery and starter. Less expensive to modify existing box than to replace. Compatible with our famous "Low Loss" Cable Kits! Eliminate extra connection on outside of the battery box. Do away with the troublesome braided negative strap.
Nylon Flanges replacement or experimental..... P/N 11-02892.... **$38.75**
Nylon Flanges STC'd / PMA'd..... P/N 11-02893.... **$78.75**

BOGERT CONCORDE BATTERY POST ADAPTERS



The Concorde copper battery adapter raises the battery terminal height to match the standard G-35 battery terminal. Moves the cable to battery connection inward away from the battery box to increase clearance and promote safety. Aligns the battery connection with the battery box cable cut outs and sealing grommets to reduce stress on the cable and adapter plates which reduces maintenance. Can be moved from battery to battery. - PMA'd
P/N 11-02891.....**$59.75**

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Prices Subject to Change Without Notice

BATTERY CHARGERS AND TESTERS

GILL 12/24 VOLT CHARGER TDMC-90



Offers adjustable amperage in 0.5A increments for 12 and 24 volt batteries. Circuit protection: reverse and short circuit protected. 24 hour selectable timer, with LED display. Offers constant current or constant voltage methods for the most efficient charging. Once the constant current mode times out, the charger reverts to float charging at the selected voltage (12V or 24V), keeping the battery fully charged. Input: 115-230 VAC @50-60 Hz, 2 Amps. Output: 14.4 or 28.8 VDC, 0-4 Amps. Operating Temperature: +20ºF to 120ºF. Weight: 9 pounds.

P/N 11-01540 ..... **$886.00**

GILL GC-012 12 VDC CHARGER



Light weight / High strength aluminum case, Fully automatic: 3 stage charger can be left on the battery for long periods, Charge Status LED's: Power on, charging and full charging. Circuit protection: reverse polarity and short circuit protected (fused). UL and CE approved. Power cord length 6 feet and 4 foot Charger cord with alligator clips included Charge control: Modified constant current charge to a constant finishing voltage, then to a float standby. Supported with a 2 year warranty.

12VDC .....P/N 11-09985 ..... **$116.75**

GILL GC-024 24VDC CHARGER



Light weight / High strength aluminum case. Fully automatic: 3 stage charger can be left on the battery for long periods. Charge Status LED's: Power on, charging and full charging. Circuit protection: reverse polarity and short circuit protected (fused). UL and CE approved. Power cord length 6 feet and 4 foot Charger cord with alligator clips included. Charge control: Modified constant current charge to a constant finishing voltage, then to a float standby. Supported with a 2 year warranty.P/N 11-10570 ..... **$160.90**

GILL GC-024E CHARGER



This light weight GC-024E charger is designed for larger batteries with the Elcon connector. Elcon Assembly for Quick Set-Up . Light Weight / High Strength Aluminum Case. Full Automatic: 3 Stage Charger can be left on the Battery for long periods. Charge Status LEDs: Power On, Charging and Fully Charged. Circuit Protection: Reverse Polarity and Short Circuit Protected (Fused).UL and CE Approved. Power Cord Length: 6 Feet. Charge Cord Connected to Elcon Assembly. Charge Control: Constant potential then reverts to a float standby. Supported with a 2 Year Warranty. Input: 110-240 VAC 50/60 Hz +/-10% Auto Switch. Output Equalizer Voltage: 28.8 VDC +/-0.2V. Output Float Voltage: 26.8 VDC +/-0.2V. Dimensions: 7.2"W X 3.1"H X 7.8"D. Weight: 2.6 pounds.

P/N 11-13011 ..... **$345.00**

GILL TCT-1000 12V/24V CAPACITY TESTER



The TCT -1000 Battery Capacity Analyzer has been designed to perform automatic capacity testing of 12 and 24 Volt lead-acid batteries. This unit is capable of accurately measuring the capacity of a fully charged battery with a rating between 10 and 59 amphours. It is self-contained and easy to operate. The load tester will display, in percentage, the conformance to the battery's one hour rating. .....P/N 11-03302 .....**$1,468.00**

CONCORDE AIRCRAFT BATTERY PARASITIC LOAD TESTER



This Parasitic Load Tester Adaptor (PLTA) measures the parasitic load / drain on aircraft batteries when the master switch is off and the aircraft is inactive. The adaptor is designed to mate with a MS3509 style quick disconnect receptacle. Measuring parasitic load is easy to do by connecting the PLTA between the battery receptacle and the aircraft mating plug. The PLTA is a molded polypropylene body equipped with separate test leads for connection to a digital multimeter (DMM). It is rated for loads up to 10 amperes and is equipped with a 10 amp fuse. P/N 11-09841 ..... **$48.50**

TELEDYNE GROUND POWER BATTERIES

Model	Voltage	Wt. Dry	Acid	Part No.	Price
T1100	4	70	None	11-10767	**$583.00**
T1100L	4	70	None	11-10768	**$620.00**
T2200	8	118	None	11-10765	**$741.00**
T2200L	8	118	None	11-10769	**$796.00**
T6200	12	147	None	11-10766	**$846.00**
T6200L	12	147	None	11-10770	**$972.00**

L= Lektro Start Cart

BC-5000 BATTERY CAPACITY TESTER



From Concorde, a portable, light weight unit designed to provide the operator with an economical, easy, and accurate means for capacity testing aircraft batteries. Fully automatic testing for 12 Volt AND 24 Volt lead acid aircraft batteries. Powered by the battery being tested - No AC power required. Constant current load adjustable in 1.0 Amp increments 10 to 55 Adc. 50 mv voltage resolution. 10 LBS / 4.5 KG Length 12" (30 cm). Width 9" (23 cm). Height 10" (25 cm). LCD display. Overtemperature protection. Audio alert when capacity test is complete.

P/N 11-07388 ..... **$1,395.00**

BC-6000 BATTERY CAPACITY TESTER



From Concorde, the BC-6000 is a portable, light weight unit similar to the BC-5000 with an added feature for printing test reports. Plugged into a USB port, the B-6000 will create test reports directly from your computer. Tests both 12V and 24V lead acid batteries with capacity ratings from 10 AH to 55 Adc. Powered by the battery being tested - No AC power required. Constant current load adjustable in 1.0 Amp increments 10 to 55 Adc. 50 mv voltage resolution. 10 LBS / 4.5 KG Kg. Length 12" (30 cm). Width 9" (23 cm). Height 10" (25 cm). LCD display. Overtemperature protection. Audio alert when capacity test is complete or malfunction of unit. USB 2.0 port for test report print out.

P/N 11-10482 ..... **$1,525.00**

BC-7000 BATTERY CAPACITY TESTER



From Concorde, the BC-7000 is similar to the BC-6000 with the benefit of adjustable current loads in smaller increments and the ability to use on Lead Acid or Ni-Cd batteries. The unit is AC powered. Fully automatic testing for 12V AND 24V aircraft batteries. Universal AC power input 85 -265Vac (47 to 63Hz). Constant current load adjustable in 0.1 Amp increments from 0.5 to 15Adc. Constant current load adjustable in 1.0 Amp increments from 15 to 50 Adc. 10mv voltage resolution. Displayed battery capacity (CI) %. 10 LBS / 4.5 KG. Length 12" (30 cm). Width 9" (23 cm). Height 7.5" (19 cm). LCD Display. USB 2.0 port for test report print out. Overtemperature protection. Audio alert when capacity test is complete or malfunction of unit.

P/N 11-10483 ..... **$2,195.00**

BC-8000 BATTERY CHARGER & CAPACITY TESTER



The BC-8000 has been designed to provide the operator with a cost effective battery charger and capacity tester in one unit. The step by step digital display is easy to program in order to set it and forget it. For use on Nickel Cadmium or Lead Acid Batteries.

Capacity Tester Features:

- Adjustable constant current load in 0.1 Ampere increments from 0.5 Ampere to 15 Ampere (+/- 1.5%)
- Adjustable constant current load in 1.0 Ampere increments from 15 Ampere to 55 Ampere (+/- 1.0%)
- USB 2.0 port for PC connection
- BC Report Utility software for hard copy printout of test results

Charger Features:

- Adjustable output from 3.0 to 36.0 Vdc
- Adjustable output amperes from 0.05 to 25 Adc
- Constant voltage (CV) or constant current (CC) charge
- Adjustable charge time from 1-999 min
- Single or two step charge routine

Common Features:

- Universal AC power input 90~264vac (47 to 64Hz)
- 10mv voltage resolution 4 line LCD display
- Over temperature protection
- Audio warning when capacity test is complete or if the unit malfunctions
- Real time internal clock with battery backup

P/N 11-10484 ..... **$4,360.00**

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SCHAUER BATTERY CHARGERS

BATTERY CHARGERS BY SCHAUER

Over 70 years of manufacturing experience assures, the user of the finest line of battery chargers—solid state circuitry, non-aging silicon rectifiers at low prices. All chargers furnished with complete operating instructions. One year warranty



P/N 11-00885 Shown

JAC1212, JAC0524, & JAC0724 - Fully Automatic - World-Wide Universal Input, Electronic Charger. Intelligent chargers follow battery impedance to end of charge cycle for all battery types. Fully automatic. Red LED indicates AC power on, yellow LED indicates battery is charging, green LED indicates float mode. Aluminum case.

Amps	Volts	Size	Weight	Part No.	Price
12	12	6.5"W x 3.5"H x 1.8"D	1.8 lbs.	11-00890 (2)	**$89.95**
5	24	6.5"W x 3.5"H x 1.8"D	1.8 lbs.	11-00885 (1)	**$83.75**
7	24	6.5"W x 3.5"H x 1.8"D	1.8 lbs.	11-00889 (1)	**$91.75**

(1) DC cordsets 3' long: with ring terminals or XLR connector.
(2) With stripped leads



MODEL JAC2024H - Intelligent chargers follow battery impedance to end of charge cycle for all battery types. Fully automatic. Green LED indicates AC power on, yellow LED indicates battery is charging, yellow LED off indicates float mode. Charge control: constant current charge to a constant voltage, then to a float standby. Current limiting. Fully automatic 3 stage charger can be left on the battery in maintaining/float mode. Can be set for any type lead acid battery, including conventional, maintenance free, deep cycle, gelled-type, valve regulated batteries. Cyclic voltage: FLOODED 2.5 volts/cell; GEL & AGM 2.4 volts/cell. 2.6 volts/cell for 36 & 48 volt batteries. May be preset to customer's specification for battery type. Not intended for use as a DC power supply. Continuous - 100% duty cycle. Low voltage start: will start charging a deeply discharged battery with terminal voltage less than 4 volts. Reverse polarity and short circuit proof. Aluminum case. AC Input 115/230 volts, 50 or 60Hz Input voltage autosensed. 20 AMPS / 24 Volts. 10"W x 7.5"H x 3"D. 6.5 lbs P/N 11-00891 ..... **$279.95**

MANUAL CHARGERS

Manual chargers must be disconnected when battery is charged to prevent overcharging and damage to the battery. Normal indication that battery is charged is when ammeter stabilizes for one hour.

BATTERY CHARGER 24V/5AMP



Fully Automatic. World-Wide Universal Input Electronic Charger. Intelligent chargers follow battery impedance to end of charge cycle for all battery types. Fully automatic. Red LED indicates AC power on, yellow LED indicates battery is charging, green LED indicates float mode. Aluminum case.

With Battery Clips ..... P/N 11-00885 ..... **$83.75**
With Ring Terminals ..... P/N 11-14678 ..... **$83.75**

BATTERY CHARGER 24V/7AMP WITH BATTERY CLIPS



Intelligent chargers follow battery impedance to end of charge cycle for all battery types. Fully automatic. Red LED indicates AC power on, yellow LED indicates battery is charging, green LED indicates float mode. Aluminum case. P/N 11-14737 ..... **$119.75**



BATTERY CHARGER 24V/30AMP WITH BATTERY CLIPS

Intelligent chargers follow battery impedance to end of charge cycle for all battery types. Fully automatic. Red LED indicates AC power on, yellow LED indicates battery is charging, green LED indicates float mode.
P/N 11-14738 ..... **$378.00**

BATTERY CHARGER 24V/3AMP WITH BATTERY CLIPS



Intelligent chargers follow battery impedance to end of charge cycle for all battery types. Fully automatic. Red LED indicates AC power on, yellow LED indicates battery is charging, green LED indicates float mode. Aluminum case. P/N 11-14736 ..... **$99.85**

BATTERY CHARGER 24V/2AMP WITH BATTERY CLIPS



Intelligent chargers follow battery impedance to end of charge cycle for all battery types. Fully automatic. Red LED indicates AC power on, yellow LED indicates battery is charging, green LED indicates float mode. Aluminum case.
P/N 11-14735 ..... **$48.50**

BATTERY CHARGER 12V/5AMP WITH RING TERMINALS



Intelligent chargers follow battery impedance to end of charge cycle for all battery types. Fully automatic. Red LED indicates AC power on, yellow LED indicates battery is charging, green LED indicates float mode. Aluminum case.
P/N 11-14733 ..... **$106.75**

BATTERY CHARGER 12V/2AMP WITH BATTERY CLIPS



Intelligent chargers follow battery impedance to end of charge cycle for all battery types. Fully automatic. Red LED indicates AC power on, yellow LED indicates battery is charging, green LED indicates float mode. Aluminum case.
P/N 11-14732 ..... **$45.95**

BATTERY CHARGER 12V/25AMP WITH BATTERY CLIPS



Intelligent chargers follow battery impedance to end of charge cycle for all battery types. Fully automatic. Red LED indicates AC power on, yellow LED indicates battery is charging, green LED indicates float mode.
P/N 11-14734 ..... **$239.00**



SCHAUER CESSNA PLUG ADAPTER

Schauer Cessna Plug Adapter With SB50 Gray Connector. P/N 11-14741 ..... **$82.75**



SCHAUER PIPER PLUG ADAPTER

Schauer Piper Plug Adapter With SB50 Gray Connector. P/N 11-14742 ..... **$53.75**



SCHAUER DC BATTERY CLIP ADAPTER

Schauer DC Battery Clip Adapter With SB50 Gray Connector. P/N 11-14739 ..... **$15.65**



SCHAUER 5/16 INCH DC RING TERMINAL ADAPTER

Schauer 5/16" DC Ring Terminal Adapter with SB50 Gray Connector. P/N 11-14740 ..... **$15.50**

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BATTERY CHARGERS

AVIATION BATTERY CHARGER



Industrial quality charger. Is user programmable to charge all lead acid batteries, wet cell, AGM, or gel type. A digital volt meter and amp meter gives the operator REAL information, along with a tri-color LED to track charge progress. For safety, polarity protected, and current limited. Can be left connected and charging while engine is started. Prevents sulfation of battery if left connected, no need for an extra product. Will turn on and recover batteries with as little as 2 volts. 3 year warranty, Made in U.S.A

P/N 11-14846 ..... **$279.00**

POWERALL JUMPSTARTER WITH BLUETOOTH SPEAKER



Easy to use Emergency Jump starter & portable Power bank with the added bonus of a 5W audiophile speaker.
The PowerAll Journey is the world's first and only all-in-one portable 600A emergency 12V vehicle jump starter with built-in 5W Bluetooth™ speaker. The jump start feature is powerful enough to start up a V8 engine, making it a must have emergency accessory for all your vehicles. Equipped with an ultra-bright 110 lumen LED flashlight with SOS and strobe features to assist you in the dark and emergency situations. It's also equipped with two 5V / 2.1A USB ports to charge your mobile devices on the go. Designed with a portable IPX5 shock proof exterior, the Journey is protected from water, dust, sand and snow. Enjoy your favorite music playlist with your friends and family all day long with its built-in 16,000mAh lithium battery. It plays louder and longer than any 5W speaker on the market with its combination of advanced technologies and audiophile sound tuning that reproduce the fullness, clarity and depth of your music the way the artist intended. The PowerAll Journey is truly the only multi-purpose portable jump starter and power bank out on the market.

P/N 11-14679 ..... **$149.95**

BATTERY AND ALTERNATOR CONDITION TESTER



Instant and accurate battery condition status: indicates if battery is "healthy" or in need of charging Instant status of your alternator/ charging system: determines whether battery or alternator is at fault. Non-Aviation / Not for Aircraft.

P/N 11-04302 ..... **$15.60**

ZEUS POWER BANK BATTERY CHARGER



The ZEUS Power Bank is a portable battery charger that can charge many electronic devices via USB port, such as MP3 players, mobile phones, cameras, portable gaming devices, and other USB compatible devices. The ZEUS Power Bank comes with everything you see in the photo , a user guide and travel bag. It's easy, portable and perfect for anyone on the go! Ideal for long flights, outdoor activities where anytime anywhere remote charging is needed. NOTE: Recharge the power bank through any computer via USB port or with a 5V wall adaptor. Not all USB Wall chargers will work with the power bank and it may be damaged if not charged with a compatible USB power source.

P/N 11-09964 ..... **$59.95**

RC ALLEN ESP BATTERY BACKUP



Part No.	Description	For Use With	Price
10-04171	RC Allen ESP 14V 702-0014-01	1. RCA26AK-1,-3,-4,-6,-7,-8 2. RCA 26EK-10 3. RCA2600 -2,-3	**$725.00**
10-04645	RC Allen ESP 14V 702-0014-02	1. RCA26AK -2, -5 2. RCA26EK -1, -2, -3, -4, -5, -6, -7, -8, -9, -11, -12, -13,-14	**$725.00**
10-04525	RC Allen ESP 28V 702-0028-01	1. RCA26BK -2, -3, -6, -7, -8, -9, -10, -11, -12, -14, -15, -16, -20, -22, -26, -28, -29, -30, -32, -34, -35, -36, -37 2. RCA26EK -1, -2, -3, -4, -5, -6, -7, -8, -9, -11, -12, -13, -14	**$725.00**
10-04646	RC Allen ESP 28V 702-0028-02	1. RCA26EK-10 2. RCA2600-2, -3	**$725.00**

ZAMP KICKER SOLAR BATTERY MAINTAINERS



The Zamp Kicker Battery Maintainer is designed to fully charge and maintain a battery at proper voltages without the damaging effects caused by unattended bench top and trickle chargers.

Watts	Amps	Dimensions	Part No.	Price
10	6	11"w x 13"l x 1"h	11-10027	$169.00
20	6	16.4:w x 17.5"w x 1"h	11-10026	$243.00
40	6	Dim. closed: 16"w x 17"L x 3"h Dim. open: 32"w x 17"L x 1.5"h	11-10025	$359.00

MICRO-START PERSONAL POWER SUPPLY XP-1



World's smallest Jump Starter and Personal Power Supply. Just charge it once and take your power where ever you go. So small it fits in your pocket, yet so powerful it can jump-start Motorcycles, Cars and Trucks! Amazingly, it will also power and charge your electronics. Built in flashlight with an S.O.S. pattern. Whatever you do, don't get stuck without back-up power again!

P/N 11-12103 ..... **$143.95**

EMERGENCY CHARGE SYSTEM EBPA299



Keep cellphones and all personal devices charged. When electricity is unavailable simple attach 12volt (car style) adapter to the handheld power pack, plug in and go stay connected 300 hours of talk/standby time (Results may vary)• 9 AA Batteries included.

P/N 11-04739 ..... **$39.95**

XTREME CHARGE X2 DUAL BATTERY CHARGER



The Xtreme Charge X2 is a dual-station, 12-volt maintenance charger. The Xtreme Charge X2, works with all types and sizes of 12-volt lead-acid batteries.

P/N 11-06866 ..... **$179.75**

KELLY BC3000 BATTERY ANALYZER



"Your Battery M.D." Portable and cordless the BC-3000 is a lightweight fully automated battery analyzer assessing the health of all lead-acid aircraft batteries with an ampere hour range of 1-59. Connect the battery using the included quick battery connection adapters, the unit automatically senses and selects 12 or 24 volts,

P/N 08-07161 ..... **$1,824.00**

PACEMAKER MAINTENENCE CHARGER



The Pacemaker charger will work with all Full Spectrum Power battery systems as well as most other 12v lithium lightweight batteries.
Pacemaker is fully automatic, ensuring that your lightweight battery is always properly charged. LED indicator lights alert you to the state of charge of your system at a glance.

P/N 11-13890 ..... **$49.00**

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BATTERYMINDER® BATTERY CHARGERS

AVIATION-SPECIFIC MAINTENANCE CHARGER-DESULFATOR

These ensure 100% charge to sealed and wet-cell lead-acid aviation batteries made by Concorde, Gill, Hawker, Odyssey, etc. Temperature compensation prevents overcharging. Designed to be left connected whenever plane is hangered. Supplied with battery clips for temporary or bench connection to battery. Patented high frequency pulse desulfation is designed to reverse and eliminate harmful battery sulfation, the #1 cause of early battery failure.
NOTE: Aviation batteries require different charging voltages than automotive, marine or other battery types. General purpose chargers can over time severely shorten battery life and performance. Aviation specific chargers are multi-stage, microprocessor controlled and sense ambient temperature sensing to prevent under or overcharging. They are very "smart", yet operate automatically. These are the only type recommended/approved by major battery manufacturers.

AVIATION SPECIFIC MODELS

Model Suffix	Battery Types
-S2	Standard Aviation, Gill (sealed + wet-cell, flooded)
-S3	Hawker-Odyssey, Gill LT 7000
-S5	Concorde (sealed AGM + wet-cell, flooded

BATTERYMINDER® S3 12V AVIATION SOLAR CHARGER / MAINTAINER / DESULFATOR FOR AGM



Actively monitor you battery's voltage any time the sun is up. The internal program adjusts its output several times a second based on this reading to quickly and correctly charge your battery. When used as a maintainer, it is guaranteed to maximize your battery's life and storage capacity. The long-term float (maintenance) stage can add years of service. For AGM "Pure Lead" Aviation Batteries, such as Gill 7000 Series, Odyssey, Hawker, etc. One year 100% money back guarantee. Five year "no hassle" warranty.
5 Watt ..... P/N 11-09898..... **$163.99**
15 Watt ..... P/N 11-09901..... **$215.99**

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MAINTENANCE CHARGER WIRING FOR FAA-CERTIFIED AND EXPERIMENTALS



The BatteryMINDer comes with a set of insulated spring clips for temporary or bench connections to the battery terminals. But to realize all its benefits the BatteryMINDer must remain powered and connected to the battery relay (not battery terminals directly) whenever the aircraft is not flying. The following products allow a quick connection without removing access panels.
For FAA-certified aircraft, the Model BM-AIK2 Airframe Interface Kit provides all the aviation-grade parts that your certified mechanic will need to fabricate and install a quick-connect maintenance charger harness. Includes charger adapter to the Anderson style plug.
Installation of this kit is eligible as a minor alteration, so the aircraft can be returned to service by the mechanic's logbook entry. No STC, field approval, or Form 337 is required.
Experimental, amateur-built aircraft may install the BatteryMINDer Model RTA-2415EXP maintenance charger harness. For optimum reliability and safety, should be wired to the battery relay, not directly to the battery terminals.
Model BM-AIK2 Airframe Interface Kit.....P/N 11-10835 ..... **$69.95**
Model RTA-2415EXP .....P/N 11-14576 ..... **$29.95**

BATTERYMINDER® CEC1-AA 12V AND 24V MAINTENANCE CHARGER-DESULFATOR



Over the last decade, BatteryMINDers have earned a reputation among pilots, maintenance shops, and aviation press as the very best battery charging and full-time maintenance solution. The new CEC1-AA series builds on that technology to improve battery condition analysis, diagnostics, and weak battery recovery. The BatteryMINDer features 12 LED indicators to tell you everything you need to know about your battery's condition, and the operation of the charger. There are no controls as such because its operation is completely automatic. Multistage charging begins with battery condition analysis and reporting, then a Soft-Start stage to recover deeply discharged batteries if necessary. Bulk charging stage applies constant current up to 85% of charge, then Absorption stage applies constant voltage to 100%.
Automatic testing every 12 hours make sure battery will hold its charge. Continuous pulse desulfation restore and preserves airworthy battery capacity. Maintenance or Float stage with ambient temperature compensation ensure battery is never under or overcharged by regulating voltage with temperature extremes. The payoff for this effort is maximum battery capacity for strong cool engine starts and emergency reserves, while dramatically extending the airworthy service life of your battery, which reduces operating costs. Select appropriate model by battery voltage and type (see battery chart above).
NOTE: BatteryMINDer does not recommend connecting charger to aircraft battery terminals while it is installed in the aircraft. Charger comes with alligator clip harness, suitable for bench or temporary connections. For permanent quick-connect options, see harness options below for FAA-certified and Experiment aircraft.

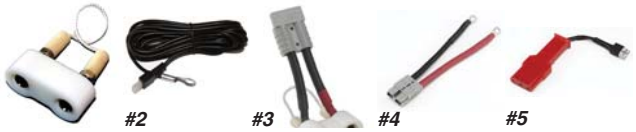
BatteryMINDer Aviation-Calibrated CEC1 Models

	-S2	-S3	-S5
12 Volt 128CEC1-AA	Gill (Sealed + Flooded [Wet Cell/ Filler Cap])[1]	Hawker-Odyssey[2]	Concorde (Sealed Valve-Regulated AGM + Flooded [Wet Cell/Filler Cap])[4]
24 Volt 244CEC1-AA	Gill (Sealed + Flooded [Wet Cell/ Filler Cap])[1]	Hawker-Odyssey[2] Gill LT 7000 Series[3]	Concorde (Sealed Valve-Regulated AGM + Flooded [Wet Cell/Filler Cap])[4]

[1] Exclusively for Gill EXCEPT the Gill LT 7000 Series
[2] Exclusively for that brand
[3] Exclusively for that brand
[4] Exclusively for Concorde

Description	Part No.	Price
12V Model 128CEC1-AA-S2 (Gill)	11-14347	**$229.99**
12V Model 128CEC1-AA-S3 (Odyssey)	11-14348	**$229.99**
12V Model 128CEC1-AA-S5 (Concorde)	11-14349	**$229.99**
24V Model 244CEC1-AA-S2 (Gill)	11-14350	**$229.99**
24V Model 244CEC1-AA-S3 (Odyssey)	11-14351	**$229.99**
24V Model 244CEC1-AA-S5 (Concorde)	11-14352	**$229.99**

BATTERYMINDER® AVIATION ACCESSORIES



Accessories for use with 28252-AA ONLY				
1	11-09561	ELCTC ELCON Type Connector	optional	**$64.75**
2	11-09558	ABS-2825 Temperature/Voltage Sensor	included	**$31.95**
3	11-09559	A2ELCON Anderson Gray to ELCON-type	optional	**$88.75**
4	11-09560	A2RT 11/32" Ring Terminals	optional	**$38.50**
5	11-09562	A2GPU-1 Anderson to "Cessna"-type GPU Plug Assembly	optional	**$104.75**

BATTERYMINDER® CIGARETTE LIGHTER ADAPTER



12-V / 24-V w/15A Pwr Plug. Works with ALL BatteryMINDer products.
P/N 11-07209 ..... **$10.99**

Prices Subject to Change Without Notice

AVTEK PRODUCTS —BATTERY CHARGERS



AVTEK 1ST ALERT ELECTRICAL FAILURE SYSTEM

An early warning detection system that is simple, flawless, & reliable. Detects alternator failure, broken/slipping belts, leaky diodes, regulator failure or if you forgot to turn OFF the master switch after tie down. Uses a reliable MicroCircuit and will never need repair. Has a pulsing red panel mounted LED that is larger and 15 times brighter than normal LEDs and will alert you at the first sign of trouble. Weighs only 1.5 oz. and installs quickly. The LED begins to pulse every time you first turn on the master switch and hit the starter key/button and will go out as the Alternator/Generator comes on so you know everything is alright before you depart. First Alert is now armed & ready to detect any in-flight electrical problems. Size: 3.25" length x 2" width x 1.25" height. Indicate your aircraft voltage when ordering. P/N 11-01259 .....**$159.00**

AVTEK BONDING AND GROUND KIT



Do your Panel Instruments Bounce and become erratic? Does your Starter turn your Engine SLOWLY and you have a new fully charged battery? Do you see an ugly corroded Battery Post soon after you clean the Post? These are symptoms of BAD Ground/ Bonds. When the Resistive Corrosion is developed at the Starter the result is slow turning during starts. Mechanics miss-diagnosing the problem and a NEW Starter is purchased needlessly. Kit includes: * FAA-APPROVAL * Three (3) Jumper One for the panel, starter and your battery...and Aluminum Fasteners * DVD step by step how to Power-Point Presentation * Sealant . P/N 11-07359 .....**$249.95**



PULSETECH QUADLINK MULTI STATION CHARGER KITS

The 4-Station QuadLink 12V Battery Maintenance Charger Kit includes an Xtreme Charge Battery Charger & Desulfator and a QuadLink 4-Channel Battery Multiplier enabling you to easily charge, maintain and desulfate up to FOUR 12V batteries at a time without the expense of buying three additional chargers or the hassle of monitoring and swapping batteries on a lone charger.

The 8-Station QuadLink 12V Battery Maintenance Charger Kit includes both an X2 Xtreme 2-Station Pulse Maintenance 12V Battery Charger and two QuadLink 4-Channel Battery Multiplies allowing you to charge, maintain and desulfate up to EIGHT individual 12V (VRLA, AGM and flooded cell) batteries, up to FOUR 24V commercial systems composed of two 12V batteries connected in series such as those in generators, buses, heavy trucks and fork lifts or 12V batteries in 36 and 48V series connected configurations.

4 Station..... P/N 11-11379.....**$189.75**
8 Station..... P/N 11-11380.....**$362.00**

LOW BATTERY ALARM



These are a micro processor-controlled low battery alarm. The purpose of this product is to alert you of low battery voltage. This will allow you to prevent damage to the battery. Featuring a wide range of settings, the Low Battery Alarm can be preset to meet voltage specifications. The device comes with an LED indicator for visual reading along with a buzzer to warn of low voltage. Multi-color LED configurations indicates the battery status.

Applications: Battery Backup Systems, RV house batteries, Trolling motor battery, Marine batteries, Auxiliary Power Units (APU), Travel trailers, Power gate backup battery, Generator battery, Battery backup safety equipment, Bass Boat Central Approved Manufacturer, Bass Boat Supplies and Accessories.

Low Battery Alarm XL (5V to 24V).....P/N 11-10010 .....**$43.65**

PORTABLE STARTING SYSTEMS



KWIKSTART MODEL 6255 - Exclusive Heavy-Duty Sealed Lead Acid/AGM Battery. Built-in Charger recharges unit with AC cord (included). Instantly Jump-Starts WITHOUT the need for another vehicle. 12 Volt DC Accessory Outlet to Power and/or recharge DC Electronics. 1700 Peak Amps. LED Battery Status Indicator. 32" Heavy-Duty Cables for True Portability and Technician Ease of Use. Unit includes DC to DC cigarette lighter cord Patented. Weight: 22 LBS

P/N 11-08698 .....**$175.75**



MODEL 6275 KWIKSTART - Two 12 Volt 22 AH Heavy-Duty Sealed Lead Acid/AGM Battery provides "Best in Class" Performance. "Smart" 1000 mA Internal Charger with Built-In Overcharge Protection - Prolongs battery life. Up to 100 Hours of Portable 12 Volt DC. Two Position "ON/OFF" Switch with Easy-to-Read LED Battery Status Indicator. 12 Volt DC Accessory Outlet to Power and/or Recharge DC Electronics. Heavy Duty Clamps with 2AWG 66" Long Cables. Use Any Standard Extension Cord to Charge. Unit includes DC to DC cigarette lighter cord. P/N 11-08699 .....**$368.00**

PORTABLE POWER AND JUMP STARTER



12/24 Volt 720 CCA Portable Power & Jump Starter. r the Professional Market. • Two 12 Volt 22Ah Heavy-Duty Battery provides "Best in Class" Performance • Jump starts A of power • Three position"12V/OFF/24V" Switch with Easy- Battery Status Indicator • Two 12 Volt DC Accessory Outlet to Power and/or Recharge DC Electronics • LED Work Light • Ideal for jump-starting cars, trucks, boats, RV's and tractors • Up to 100 hours of portable 12 Volt DC for power tools, work lights and more • Heavy Duty 500A Insulated Clamps • Designed for rough use • UL listed external wall charger • Patented. P/N 11-14030 .....**$379.00**

BATTERY TENDER CHARGER



BATTERY TENDER PLUS - 6V @ 1.25A 12V @ 1.25A. The Battery Tender Plus is a 1.25 amp battery charger designed to fully charge a battery and maintain it at proper storage voltage without the damaging effects caused by trickle chargers. Included is a quick connect harness for hard to reach areas. ***DO NOT USE P/N 11-03015 WITH GILL OR CONCORDE AVIATION BATTERIES.***

Voltage	Amps	Description	Part No.	Price
12Volt	1.25A	Battery Tender Charger	11-03157	$45.85



POWER TENDER PLUS - 12V @ 5A 24V @ 2.5A WATERPROOF, Shock & Vibration Resistant, Lightweight (LESS THAN 4 POUNDS), compact charger designed for either portable operation or permanent mounting. Charges and maintains both flooded and sealed, maintenance free, AGM, lead acid batteries. Float / Maintenance function maintains batteries at proper storage voltage without the damaging effects caused by trickled chargers. The Power Tender PLUS is easy to use, it's rugged, its compact, it's packed with power, and it's backed by the reputation of the undisputed battery charger industry leader, DELTRAN. Note: Part does not come the Alligator clips. PN 11-06403. Note: Not for use with Gill or Concorde Aviation Batteries.

Voltage	Amps	Description	Part No.	Price
12Volt	5A	Power Tender Plus	11-03016	$86.75
24Volt	2.5A	Power Tender Plus	11-03015	$84.75

Power Tender Alligator Clip ..... P/N 11-06403.....**$4.60**



BATTERY TENDER JUNIOR

120 VAC /60 Hz input. Includes Ring Terminals and Alligator Clips with BLACK (6, 8, & 12V) QDC. Note: Not for use with Gill or Concorde Aviation Batteries. 12V 0.75A..... P/N 11-05164.....**$28.50**
8V 1.25A..... P/N 10-06024.....**$37.95**
6V 1.25A..... P/N 10-06023.....**$37.95**

AVIATION SOLAR CHARGER / MAINTAINER / DESULFATOR



PANEL SERIES- 12 VOLT, 5 WATT & 15 WATT

Actively monitor your battery's voltage any time the sun is up. Quickly and correctly charge your battery. The long-term float (maintenance) stage can add years of service. One-year 100% money back guarantee, five-year "no hassle" warranty. **Qualifies for FREE DMM**

BatteryMINDer SCC005-S2..... 5 Watt ..... P/N 11-02008..... **$163.99**
BatteryMINDer SCC005-S3..... 5 Watt ..... P/N 11-09898..... **$163.99**
BatteryMINDer SCC015-S2..... 15 Watt ..... P/N 11-09899..... **$215.99**
BatteryMINDer SCC015-S3..... 15 Watt ..... P/N 11-09901..... **$215.99**



FREE DIGITAL MULTI-METER (DMM) DT-830B when you purchase a select BatteryMINDer unit and register your warranty at www. BatteryMINDers.Com. Get seven functions and nineteen ranges to cover AC and DC voltage, resistance, DC amps, battery and diode testing. Includes 23" leads and low battery indicator. Requires one 9-V battery (not included).

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OPTIMATE DIAGNOSTIC DESULFATING CHARGERS AND TESTERS



OPTIMATE 6 can SAVE a neglected / sulfated* leadacid battery unable to accept charge from the engine charging system (even after jump starting). The micro processor controlled multi step charging system with cell equalizing is suitable for deep cycle and starter (SLI) batteries and the ampmatic auto current control takes the guesswork out of charge current selection. During the continuous maintenance and testing cycle the battery is tested daily and recharged as necessary. Hook it up, walk away, OptiMate6 does the rest, automatically, safely. Recommended for all lead-acid batteries from 15Ah – 240Ah. P/N 11-07221..... **$142.75**



OPTIMATE PRO-S has a charging system able to save a neglected *sulfated battery that cannot accept charge from a standard charger or the engine charging system. Battery power is optimized during bulk, absorption & cell balancing charge modes, and then tested to verify charge retention. Battery life is extended if left connected to OptiMate PRO-S when vehicle/craft/equipment is not in use. Initializes, desulfates & charges 1 x 12V battery at a time – from small to large.
P/N 11-07222..... **$168.75**



OPTIMATE 5 VOLTMATIC - Advanced 6V & 12V battery care for power sport / auto / marine size batteries. OptiMate 5 VoltMatic can SAVE & CHARGE all 6V & 12V lead-acid batteries. Simply connect the charger to the battery, the VoltMatic micro-processor automatically makes the correct charge voltage selection for a 6V battery in any condition or healthy* 12V battery and then proceeds to charging. Charging Amps: 4A (6V) / 2.8A (12V) (Ampmatic). Use: Indoor / Outdoor (lowest temperature: -4°F / -20°C). Save: Low Volt Start of 1V + 2-step desulphation recovery. Ideal for: STD, AGM & GEL 6 & 12V batteries from 8 – 120Ah (up to 192Ah for 6V). Input: Global (100-240V 50-60Hz), high efficiency (CEC listed), fully sealed. Style: Weatherproof case with wall mounts, with 6ft / 180cm AC supply lead and 6ft / 180cm charge lead ending in SAE connector. Weatherproof battery lead & standard battery clip set included.
P/N 11-14751..... **$106.75**



OPTIMATE 7 SELECT TM-251 - 9-step 14.4V/14.7V 10A Battery Saving charger-tester-maintainer with 13.6V 8A powersupply (BC - California & Oregon approved) The world's most advanced 10 Amp battery charger for starter & deep cycle batteries! OptiMate 7 Select is perfect for starter and deep cycle 12V batteries that demand accurate temperature controlled charging and unsupervised safe long term maintenance. Voltage selection (14.4V / 14.7V) ensure the battery receives charge at the correct voltage.
P/N 07-18075..... **$169.95**



OPTIMATE 7 SELECT TM-261 - 8-step 12V 10A/24V 5A Battery Saving charger-tester-maintainer (BC - California & Oregon approved) The world's most advanced 12V & 24V battery charger! OptiMate 7 12V-24V is perfect for high performance 12V and 24V starter and deep cycle batteries that demand accurate temperature controlled charging and unsupervised safe long term maintenance. Designed for sensitive electronics:The SAVE program has been designed for SAFE fully automatic low volt start (from 0.5 Volts) and PULSE recovery of deep discharged batteries connected to very sensitive electronics e.g. light aircraft, industrial equipment P/N 07-18076..... **$161.95**



OPTIMATE 7 SELECT TM-271- OptiMATE Lithium 4s 9.5A / 5s 7.5A TM-271, 10-step 12.8/16V 9.5A Battery saving charger-tester-maintainer (BC - California & Oregon approved) The ultimate professional battery charger for 12.8V/16V Lithium batteries. OptiMate Lithium LFP Select is perfect for high performance 12.8V (4s) and 16V (5s) LiFePO4 / LFP batteries that demand fully automatic, fast and accurate temperature controlled charging. Perfect for 12.8V / 16V LiFePO4 / LFP batteries sized from 2.5 to 200 Ah. Power saving stand-by mode. Full electronic protection against errors.
P/N 07-18077..... **$161.95**



OPTTIMATE LITHIUM 4S 5A - Ultimate LiFePO4 professional level battery charger. High efficiency diagnostic charger and tester for LiFePO4 / LFP batteries. Perfect for charging and seasonal maintenance of a 12.8V-13.2V LiFePO4 / LFP battery sized from 2 to 100 Amp-hour. SAFE: No risk of overcharging. Totally safe for vehicle electronics. Sparks suppressed. Safe for long-term battery maintenance. Automatic shut-down if short-circuited or battery disconnected. 3-year limited replacement warranty. P/N 11-14676..... **$154.75**

A battery discharged over time that has built up chemical resistance to charging, but otherwise undamaged and measuring at least 2V.



AUXILIARY POWER UNIT (APU) & BATTERY CHARGER

Designed to supply filtered DC bus power through standard APU receptacle in private and commercial aircraft. Up to 25 or 50 amp is available for operating avionics and flight control systems when the master switch is activated. It can also charge the battery through the plug at a 10 amp rate. Output is current limited, and will withstand starting loads. Voltage is limited to prevent battery overcharging.
DC Current and voltage are displayed on panel meters, voltage accurate to 00.00 ***NOTE: Available with piper plug too.***

Model	P/N	DC Amps	DC Volts	AC Power	Dimensions H.W.D.	Wt.	Price
Single Pin Plug 14v 25amp	11-07068	25	14	117 volts 60hz. 3 amps	8.5x10x12	22	**$645.00**
3 Pin Plug 14v 25amp	11-05662	25	14	117 Volts 60hz. 3amps	8.5x10x12	22	**$632.00**
Single Pin Plug 28v 25amp	11-07067	25	28	117 volts 60hz. 6 amps	8.5x10x12	33	**$696.00**
3 Pin Plug 28v 25amp	11-08146	25	28	117 volts 60hz. 6 amps	8.5x10x12	33	**$696.00**

SOLAR PULSE



Specifications	SolarPulse 2W	SolarPulse 5W
Pulse Frequency:	22-28 kHz	22-28 kHz
Max Charging DC Voltage:	16.5 V, 250 mA	16.5 V, 350 mA
Reverse Polarity Protected:	Yes	Yes
Circuit Box Dimensions:	3.25" x 2.25" x 1.5"	3.25" x 2.25" x 1.5"
Solar Panel Dimensions:	4.75" x 8.56" x .125"	8.875" x 8.75" x 0.125"
Box to Lugs Wire Length:	3 feet	3 feet
Box to Panel Wire Length:	17 feet	17 feet
Termination:	.375" Lugs	0.375" Lugs
Weight:	1.35 lb.	1.65 lb.

* Unique solar charger provides clean, quiet energy
* Cleans battery plates of large, damaging lead-sulfates so batteries can accept, store and release MAXIMUM power when you need it
* Helps offset energy-robbing key-off parasitic loads (see chart below)
* Works with all lead-acid batteries (flooded cell, AGM and gel)
* Ideal for virtually any kind of vehicle and equipment in areas with out access to electrical power
* Low-profile industrial-strength solar panel mounts flat (no frame required) so it's virtually indestructible
* Prevents the normal loss of battery power on vehicles stored out side no matter how long they sit unused — even months at a time
* Helps extend battery life up to 3X longer
* Choose from three models: 2-Watt, 5-Watt and 6-Watt
* The 5-Watt solar panel is almost HALF THE SIZE of other 5-watt panels yet offers full 5-watt power
* The smaller 5-watt panel provides more installation options
* The 6-watt model is ideal for emergency rescue and law enforcement vehicles because it has a unique rectangular solar panel designed to easily mount on any light bar
* 2- and 5-Watt models include 17-feet of wire between circuit box and solar panel, and the 6-Watt includes 14 feet of wire
* Five-year limited warranty

2WATT .....P/N 11-07120 ..... **$89.95**
5WATT.....P/N 11-07121 ..... **$159.75**



REDIPULSE PRO-12 CHARGE/MAINTENANCE SYSTEM

The PulseTech Pro-12 Charge/Maintenance System. It is designed to keep new batteries "factory-fresh" while they rest on the shelf waiting to be installed or sold. Batteries that sit idle suffer from damaging sulfation buildup (lead sulfate deposits on the battery plates). This buildup is the main cause of battery problems and failure. The Pro-12 uses our scientifically-proven ReNew-IT Pulse Technology to keep these deposits off the plates. By removing these energy-dampening deposits, your batteries are stronger than ever. This means your "shelf-life" warranty issues and other battery-related expenses are reduced dramatically.
P/N 11-07122..... **$169.95**

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Prices Subject to Change Without Notice

POWER PRODUCTS ACTIVATOR 282/282V 24V AIRCRAFT BATTERY CHARGER



The Activator 282/282V is a direct connect, fully automatic 2 Amp charger capable of charging a 24 volt military or aviation battery of any rating from zero to full capacity. It is also a standby maintenance unit without the use of "trickle" charging, thus extending the life and durability of the battery. There is no gassing, heat or other detrimental results of trickle or float charge. The digital voltmeter continuously displays battery voltage during charge and standby.

282 ..... P/N 11-13888 ..... **$895.00**
282V ..... P/N 11-16338 ..... **$995.00**

POWER PRODUCTS 25 AMP BATTERY CHARGER ALPHA 25



Isolated charge - one or two batteries. Charges all 12 and 24 volt Lead Acid batteries and 1-22 cell NiCads. Current adjustable from 0 to 25 amps. True constant current (CI) for NiCad batteries or constant potential (CP) for Lead Acid batteries. Digital ammeter and voltmeter read charge current and voltage for either battery. Selectable charge time from 1 to 999 minutes with digital elapsed time. Operates on either 115 or 230 VAC.

P/N 11-13887 ..... **$3,695.00**

POWER PRODUCTS BETA D-50 BATTERY ANALYZER 50 AMP



Discharge capacity tester for all types of Nickel Cadmium, sealed or vented Lead Acid aircraft batteries. Services any voltage or type of battery. Constant current discharge adjustable from 0.1 to 50 amperes. Selectable low voltage cutoff. Selectable discharge time from 1 to 999 minutes with digital elapsed time readout. Audible alarm at end of test. Meters & timer lock-in their reading for amp-hr capacity. Accept and Fail lights for simplified GO/NO-GO test. Operates on either 115 or 230 VAC. P/N 11-13889 ..... **$2,819.00**

POWER PRODUCTS BATTERY CHARGER ANALYZER CM-1550 CML



The CA-1550 CML Charger/Analyzer is a portable or benchmounted self-contained unit for charging and discharging capacity testing aircraft or ground support batteries. It is simple to use and does not require programming or use of a computer. Digital read-outs of volts, amperes and time are clearly displayed. The CA-1550 CML has been designed to accurately charge, test and guarantee the emergency capacity of sealed or vented lead-acid or nickel-cadmium batteries. Guaranteed emergency capacity is especially important for aircraft batteries.

P/N 11-13886 ..... **$5,139.00**

POWER PRODUCTS AC25C 12 VOLT BATTERY CONDITIONER AND CHARGER



Dual output charger for all types and ratings of Nickel Cadmium, sealed or vented Lead Acid aircraft batteries. • Isolated charge - one or two batteries. Charges all 12 and 24 volt Lead Acid batteries and 1-22 cell NiCads. Current adjustable from 0 to 25 amps. • True constant current (CI) for NiCad batteries or constant potential (CP) for Lead Acid batteries • Digital ammeter and voltmeter read charge current and voltage for either battery. • Selectable charge time from 1 to 999 minutes with digital elapsed time. • Operates on either 115 or 230 VAC. P/N 11-15069 ..... **$3,295.00**

POWERVAMP 12V GA PACK



A tough, budget-priced, dual voltage GPU designed for the private operator and general aviation, it uses the same top-quality, high discharge batteries as in other Powervamp packs. Ideal for smaller turbine helicopter operators, all piston aircraft or where the starting of 24 volt trucks and plant and 12 volt automobiles is a useful feature. Polyethylene case allows the pack to sit in flooded sites up to 200mm (8in) deep without water ingress. The 12 volt outlet provides a CCA of 470 amps and a peak amp figure of 925. The 25.4 volt DC outlet will deliver up to 850 amps with power control by removable key and 1000 amp switch. Supplied with 2m (6ft) output lead with rubber NATO plug and 2m (6ft) output lead with 1000 amp cast brass, braided and fully insulated, 'Vulture beak' colour-coded alligator clips. It is cleared for air transportation with key removed. P/N 11-13206 ..... **$710.50**

POWERVAMP 12/24V GA PACK



Ideal for smaller turbine helicopter operators, all piston aircraft or where the starting of 24 volt trucks and plant and 12 volt automobiles is a useful feature. The deep drawn polyethylene case allows the pack to sit in flooded sites up to 200mm (8in) deep without water ingress. The 12 volt outlet provides a CCA of 470 amps and a peak amp figure of 925. The 25.4 volt DC outlet will deliver up to 850 amps with power control by removable key and 1000 amp. This pack is supplied with 2m (6ft) output lead with rubber NATO plug and 2m (6ft) output lead with 1000 amp cast brass, braided and fully insulated, 'Vulture beak' colour-coded alligator clips. It is cleared for air transportation with key.

P/N 11-13207 ..... **$1,285.00**

POWERVAMP COOLSPOOL 17-28V



Coolspool 17 Advanced portable mini GPU designed as a lightweight emergency starting GPU for piston aircraft and light/medium turbine helicopters. The Coolspool 17 has power, performance and features that far exceed any other comparable mini GPU. With a nominal voltage of 26–28 volts (for Eclipse-type aircraft) or 28–30 volts DC (for aircraft with a higher upper voltage limit – typically for single turbine helicopters), spool-up performance of this 17 amp/hr pack is more than 12% faster than a similar capacity 24V unit, with minimum weight penalty. Faster spool-ups mean cooler starts, aiding engine life.

P/N 11-13208 ..... **$1,420.00**

POWERVAMP COOLSPOOL 29-28V



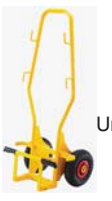
The 28 volt (nominal) 29 amp/hr Powervamp Coolspool 29 portable GPU was developed for larger turbine aircraft and helicopters where portability requirements limit weight and size, but the need to maintain voltage above minimum FADEC limits during the start cycle is critical. This requirement demands that the GPU voltage is at the top of the FADEC upper limit before starter engagement. P/N 11-13209 ..... **$2,135.00**

POWERVAMP 100M AMP POWER SUPPLY



Able to provide 100 amps of continuous power, Powervamp's standard PS100 is a 28V power supply designed to power flight decks of larger corporate/business aircraft using any AC single phase 110/230 volts 50/60 Hz input. It is supplied as the factory-approved product by one of the largest business aircraft manufacturers in the US.

P/N 11-13210 ..... **$3,480.00**



POWERVAMP COOLSPOOL UNIVERSAL SINGLE TROLLEY

Universal Single Trolley.

P/N 11-15419 ..... **$309.00**

SEE OUR WEBSITE FOR COMPLETE SELECTION OF POWERRVAMP PRODUCTS

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RED BOX POWER UNITS

Red Box Model	Description	Part Number	Price
START UNITS, LEAD ACID			
RB25A-12	RED BOX - 12V HAND PORTABLE START UNIT	11-09806	**$1,450.00**
RB25A-24	RED BOX - 24V HAND PORTABLE START UNIT	11-09807	**$1,450.00**
RB50A-12	RED BOX - 12V HAND PORTABLE START UNIT	11-09814	**$1,995.00**
RB50A-24	RED BOX - 24V HAND PORTABLE START UNIT	11-09815	**$1,995.00**
RB75A-12	RED BOX - 12V HAND PORTABLE START UNIT	11-09819	**$2,250.00**
RB75A-24	RED BOX - 24V HAND PORTABLE START UNIT	11-09820	**$2,250.00**
RB60A-28	RED BOX - 28V HAND PORTABLE START UNIT	11-15545	**$2,700.00**
RB85A-28	RED BOX - 28V HAND PORTABLE START UNIT	11-15546	**$2,890.00**
RB50AT-24	RED BOX - 24V TWIN RB50A PORTABLE START UNIT	11-15547	**$4,700.00**
RB60AT-28	RED BOX - 28V TWIN RB60A PORTABLE START UNIT	11-15548	**$6,000.00**
RB85AT-28	RED BOX - 28V TWIN RB85A PORTABLE START UNIT	11-15549	**$6,400.00**
RB75AT-24	RED BOX - 24V TWIN RB75A PORTABLE START UNIT	11-15550	**$5,200.00**
TC400A/28C	95A for 1 hr; 55A for 2hr; 39A for 3hr. Max Current 5200A/3500A nominal	11-15561	**$7,500.00**
START UNITS, LITHIUM			
RBL2500-28	RED BOX - HAND PORTABLE LITHIUM START UNIT	11-15551	**$2,600.00**
RBL4000-28	RED BOX - HAND PORTABLE LITHIUM START UNIT	11-15552	**$3,500.00**
RBL4000-28TWIN	Thermal bag for Twin RBL4000 (Included w/ new RBL4000 Twin system)	11-15553	**$6,950.00**
SWITCHABLE START UNITS (12V AND 24V)			
RB25A 12/24	RED BOX- SWITCHABLE 12V AND 24V- LEAD ACID	11-15554	**$1,900.00**
RB50A 12/24	RED BOX- SWITCHABLE 12V AND 24V- LEAD ACID	11-15556	**$2,600.00**
RBL2500-14/28	RED BOX- SWITCHABLE 12V AND 24V- LITHIUM	11-15557	**$3,700.00**
CONTINUOUS DC POWER SUPPLY			
RBPS25	RED BOX - 14/28V 25AMP POWER SUPPLY	11-09824	**$900.00**
RBPS50	RED BOX - 14/28V 50AMP POWER SUPPLY	11-09825	**$1,350.00**
RBPS75	RED BOX - 14/28V 75AMP POWER SUPPLY	11-09826	**$2,250.00**
RBPS100	RED BOX - 14/28V 100AMP POWER SUPPLY	11-15559	**$2,670.00**
RBSC50	RED BOX - 14/28V 50AMP POWER SUPPLY	11-15560	**$3,050.00**
RBSC100	RED BOX - 14/28V 100AMP POWER SUPPLY	11-09827	**$4,195.00**
RBSC150TC	RED BOX - 14/28V 150AMP POWER SUPPLY	11-15565	**$6,100.00**
RBSC225	RED BOX - 14/28V 225AMP POWER SUPPLY	11-15564	**$7,500.00**
TC3000 RANGE, COMBO START AND CONTINUOUS POWER			
TC3000/50-4	RED BOX - COMBINATION START AND CONTINUOUS POWER UNIT	11-15563	**$6,100.00**
HYBRED, COMBO START & CONTINUOUS (* START POWER IS FROM BATTERIES, CONTINUOUS POWER FROM ENGINE)			
HYBRED/170-4	RED BOX - COMBINATION START AND CONTINUOUS POWER UNIT	11-15562	**$14,600.00**
CONTINUOUS POWER FROM BATTERIES, START POWER TOO			
TC400A/28C	95A for 1 hr; 55A for 2hr; 39A for 3hr. Max Current 5200A/3500A nominal	11-15561	**$7,500.00**
ACCESSORIES, EXTRAS & OPTIONS			
CART/TROLLEY FOR TWIN AN SINGLE START UNITS			
ETOL50FPS	Single Trolley for RB50A and RB75A and RB60A and RBL4000	11-09817	**$569.00**
OPTIONS FOR TC3000, HYBRED, AND RBSC150(150 AMPS CONT. UNITS AND UP)			
TCASTKIT	Handle Bar and Extra Castors Option	11-09829	**$450.00**
TCASTB	TOW BAR FOR TC 3000/400	11-09828	**$170.00**
CABLES , LEADS			
RBYTC	Y CABLE FOR RED BOX	11-09808	**$180.00**
RBYTCPS	Y CABLE FOR RBPS UNITS	11-15566	**$225.00**
RE-CELL KITS FOR "RESALE" CAPACITY MATCHED BATTERIES			
TCEL30GSET	RE-CELL FOR RB50A	11-09818	**$650.00**
TCEL40GSET	RE-CELL FOR RB75A	11-09823	**$800.00**



RED BOX START POWER RB25A POWER UNITS

These power packs are designed for starting of piston, turboprop or turbine aircraft and helicopters in the field or in remote locations and Red Box units may be carried safely on board all aircraft. The power packs are "all weather" units and being modular, can be used in single or dual format. They can be used or stored in any orientation, even inverted. Cells used are cleared as non-hazardous cargo for carriage in the aircraft. They are able to operate in extremes of temperature and have excellent standby characteristics. They are maintenance free and do not require cycling. They can be re-celled "on condition" at any Red Box service center in the world and are designed to give years of repeated service. In addition to aviation, these highly portable units can be used with Armored Fighting vehicles and Military equipment. They can be recharged from the automatic charging system, which is supplied in the package, or from any vehicle using a suitable interface.

Model	Description	Part No.	Price
RB25A	12V Power Unti	11-09806	**$1,450.00**
RB25A	24V Power Unit	11-09807	**$1,450.00**
RB50A	12V Power Unti	11-09814	**$1,995.00**
RB50A	24V Power Unti	11-09815	**$1,995.00**
RB75A	12V Power Unti	11-09819	**$2,250.00**
RB75A	24V Power Unit	11-09820	**$2,250.00**



RED BOX CONTINUOUS POWER UNITS

Compact, lightweight and highly portable power units. Red Box systems may be carried safely on board all aircraft.

They are designed to give continuous high quality DC power for crew training, aircraft servicing in the workshop, on the ramp or in the field. This continuous power supply is ideal for diagnostic work, pre-flight checks or for continuous powering of equipment during operations, without draining the onboard aircraft batteries. There is a range of built in safety features and the units are simple to use. This switchable unit will produce a steady 14.4 or 28.8 Volts up to the fully rated output current with power factor correction. The power supplies are multi-fan cooled with built-in thermal management for operation up to 50°C ambient environments. The safety features include over current and short circuit protection. The power modules conform to EMC standards for noise emissions and immunity.

Model	Description	Part No.	Price
RBP525	25 Amp Power Unit	11-09824	**$900.00**
RBP550	50 Amp Power Unit	11-09825	**$1,350.00**
RBP575	75 Amp Power Unit	11-09826	**$2,250.00**
RBPS100	100 Amp Power Unit	11-09827	**$4,195.00**
TOWBAR	Towbar	11-09828	**$170.00**
HANDLE	Towbar Handle and Caster Kit	11-09829	**$450.00**

IFDR USB POWER SUPPLIES FOR INSTRUMENT PANEL



Approved for FAA Certified Part 23 Aircraft and Part 27 and 29 Rotorcraft. Smartphones / iPhones / Cell and Mobile Phones. Tablets and iPads. GPS Units. Cameras / GoPros. GPS Receivers / Augmenters. 2.1 amps (Output Current). Input Voltage: 9 - 48 VDC. Output Voltage: 5 VDC +/- 0.25 (10 watt). Green LED Internal Backlight. Weight: 2.6 ounces. Dimensions: 1.5" W x 1.5" H x 2.1" D (panel cut 0.785" x 0.785"). One year limited warranty.

Description	Part No.	Price
Single USB Power for Panel Mount	13-19298	**$239.95**
Single USB Power for Round Panel Mount	13-19774	**$236.95**
Single USB Power for Remote Mount	13-19299	**$239.95**
Single USB Power for IFDR Panel Mount iPads	13-19301	**$239.95**
Dual USB Power for Panel Mount	13-19303	**$292.95**
Dual USB Power for Round Panel Mount	13-19775	**$289.95**
Dual USB Power for Remote Mount	13-19304	**$292.95**
Dual USB Power for IFDR Panel Mount iPads	13-19306	**$292.95**



MCI TRUE BLUE TX16 LITHIUM ION BATTERY

A lithium-ion battery exclusively offered for experimental aircraft. The TX16 is designed with the same architecture as certified True Blue Power® battery products and offers the experimental market a safe and reliable lithium-ion battery. Model: TX16. Battery Technology: Lithium-ion. Voltage Output: 26.4 VDC Capacity (1C rate): 16 amp-hour. Weight: 15.6 lbs.. Maintenance: 2 years. Useful Life: 8 – 10 years.

P/N 11-14919 ..... **$4,895.00**



MCI TRUE BLUE TB17 LITHIUM-ION BATTERY

The TB17 Advanced Lithium-ion Battery uses the most sophisticated lithium-ion chemistry available, providing aviators with an unmatched advantage of power, safety, life and energy.

Ideal for the piston, turbine, and emergency power market, the TB17 starts the aircraft's engine quickly and features superior energy density — Nanophosphate® lithium-ion cells offer 3x the energy per kilogram, resulting in a battery that is 45% lighter than lead-acid or nickel-cadmium alternatives.

This advanced battery system is engineered to deliver an overall lower cost of ownership with a 2-year maintenance schedule, efficient engine starts, extended useful life and intelligent battery status communication to the cockpit.

P/N 11-15375 ..... **$5,695.00**



CHARGEMASTER 1 AMP SELECTABLE 6 OR 12 VOLT BATTERY CHARGER

Schauer 1A, 6V/12V Automatic Battery Charger / Maintainer – Model CM1A • Fully Automatic Battery Charger / Maintainer / Conditioner • 1 Amp, 6 or 12 volt • LED charging indicator lights • 10 ft. charging cable • Battery Clips and Ring Terminal connections included – quick disconnect • Reverse Polarity, Short Circuit, Output protection 3.9" x 2.6" x 1.5", 1.5 lbs • Overload & Internal Overheat For any type Lead Acid battery – wet, VRLA, Gel, AGM • UI, cUI, BC approved.

P/N 11-14320 ..... **$36.70**



CHARGE MASTER SMART CHARGE PLUS MAINTENANCE

Schauer ChargeMaster 6A max., 12V Multi-Current Automatic Charger / Maintainer – Model CM6A • Fully Automatic Battery Charger / Maintainer / Rejuvenator • Selectable Charge Rate: 1 / 4 / 6 amp • Selectable Charger Voltage: 14.1 / 14.4 / 14.7 VDC (match to battery manufacturer specifications) LED Charging indicator lights • 7 Charging Modes: Soft Start, Bulk Charging, Absorption, Equalization, Analysis, Float, Maintenance • Battery Clips and Ring Terminal connectors – quick disconnect Reverse Polarity, Short Circuit, Internal Overheat and Timer protection • Eco energy saving mode • Battery Rejuvenation for batteries in poor condition / Sulphated (US Patented) • 7.5" x 3.8" x 2", 2.4 lbs. • For any type Lead Acid battery – wet, VRLA, Gel, AGM • UL, cUL, BC approved.

12V 1/4/6 Amp.....P/N 11-14332 ..... **$62.75**
12V 1/8/12 Amp.....P/N 11-14333 ..... **$92.75**

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EARTH X LITHIUM BATTERIES



Note: Not FAA Approved. Intended for use in experimental aircraft only. EarthX Lithium batteries are designed to be a replacement of a standard 12 volt lead-acid battery. The batteries will work with any vehicle charging system and "modern" lead-acid battery chargers, thanks to the built-in battery management system. And the batteries are an exceptional value given the fact they last years longer than a lead-acid battery.

Model	Volts	1 Hr 1C Rate	Crank Amps (PCA/ CCA)	Wt.	Case Size L x W X H (In.)	Part No.	Price
ETX680C	12	12.4	680/320	3.9 lb	5.9 x 4.5 x 3.9	11-14292	**$379.00**
ETX680	12	12.4	680/320	4.1 lb	6.5 x 3.1 x 6.6	11-13907	**$379.00**
ETX900	12	16	900/420	5.0 lb	6.5 x 3.1 x 6.6	11-13926	**$449.00**
EXT1200	12	24.8	1200/600	7.7 lb	6.6 x 3.4 x 6.9	11-13930	**$725.00**
ETX900-VNT	13.2	16	840/400	5.4lb	6.5 x 3.1 x 6.6	11-16211	**$549.00**

EARTH X EMERGENCY JUMP PACK CHARGER



The EarthX Jump Pack is light and compact so you can take it anywhere and start just about everything with 400 burst cranking amps (airplane, car, up to a V8 truck, boat, motorcycle, atv, and snowmobile). The entire kit only weighs 1.4 pounds and comes with the jump pack unit, the wall charger, jumper cables, a 3 prong phone accessory plug in and the case! P/N 11-14072 .....**$129.00**

EARTH X ALUMINUM BATTERY BOXES



Aluminum battery box designed specifically for the ETX680, ETX900 series of EarthX batteries. This battery box was engineered to be strong enough to withstand 30 G of force yet only weighs 7 ounces or 198 grams and will fit the ETX680 and ETX900 like a glove. This unique design allows for simple, easy installation with the dimensions: 6.5" L x 3.1" W x 6.6" H. P/N 11-14074 .....**$49.00**

MULTI-USE ALUMINUM BATTERY BOX - For the ETX680, the ETX900 or the PC680. Dimensions: 7.1" L x 3.1" W x 6.5-6.6 (adjustable)"H or (180mm x 80mm 166-168mm). P/N 11-14136..... **$59.00**

EARTH X JUMP PACK CIGARETTE LIGHTER CHARGER



This adapter charger is designed to be used with the EarthX Jump Pack so you can charge on the go. Simply plug into the 12V Auxiliary Port, (also known as an Accessory Port or Cigarette Lighter socket) and start charging. 43" long, 15VDC output, 5.5mm x 2.1mm DIN Connector.

P/N 11-14073 .....**$14.95**

EARTH X EMERGENCY JUMP PACK CHARGER



Premium quick connect permanent battery lead for power sport batteries that can either charge your battery or be used to jump start your b
attery quickly and easily! Designed to carry 400 amps so it can be used as both your charging pig tail or for a jump start.

P/N 11-15073 .....**$29.99**

AEROVOLTZ LITHIUM BATTERY



Aerovoltz Lithium Iron Phosphate batteries are designed to replace the lead acid batteries that currently power most of the two and four cycle engines in Aviation. Features: • Up to 80% smaller than the stock battery • Up to 10 lbs. lighter than the stock battery • Designed, developed, and assembled in the USA • Completely "dry" technology so batteries can be mounted in any direction • Non-toxic and recyclable • Impact and water resistent • No special charger required.

Visit our website for Safety Tips

Description	Volts	Part No.	Price
AVO2-4-Cell	12	11-10028	**$114.85**
AVO2-8-Cell	12	11-10029	**$173.75**
AVO2-12-Cell	12	11-10030	**$229.95**
AVO2-16-Cell	12	11-10031	**$282.95**

BATTERY CAPACITY TESTER BC-9000



The BC 9000 has been designed to provide the operator with accurate battery charging with ease of operation. Charger Features include: • Universal AC power input 90~264vac (47 to 63hz) • Adjustable DC output from 3.0 to 36.0 Vdc (0.1 steps) • Adjustable DC Current Output from 0.05 to 25Adc • Constant Voltage or Constant Current Charge • Adjustable charge time from 1-999 min • Single or two step charge routine. • 4 line LCD display • Removable DC Charge Cord • Fan Cooled • 14.00" L (335.6mm) 9.250" W (234.6mm) • 9.50" H (241.3mm) 14lbs (6.350kg)

P/N 11-15071 .....**$1,895.00**

QUIET POWER CHARGERS



The QUIET POWER® QP™-100 Series Dual USB Charging Port is designed specifically for aircraft cockpit and cabin installation and is compatible with both standard and high-power USB. Simultaneously charges two USB powered devices, including cell phones, tablets, radios, ADS-B receivers and GPS devices. An Auxiliary Charging Port is available in the QP101-QP104 series products, producing 5, 9, 11 or 12 Volts DC. USB port is dual 5 VDC. Input Voltage Range 10–36 VDCon QP-100,101,& 102. It is 13.2-36 VDC on Q 103 & 104.

Part No.	Description	Price
11-13834	Non Lit No Aux Qp-100	**$239.95**
11-13835	Lit No Aux Qp-100l	**$249.95**
11-13836	Non Lit 5 Volts Qp-101	**$289.95**
11-13837	Lit 5 Volts Qp-101l	**$299.95**
11-13838	Non Lit 9 Volts Qp-102	**$289.95**
11-13839	Lit 9 Volts Qp-102l	**$299.95**
11-13840	Non Lit 11 Volts Qp-103	**$289.95**
11-13841	Lit 11 Volts Qp-103l	**$299.95**
11-13842	Non Lit 12 Volts Qp-104	**$289.95**
11-13843	Lit 12 Volts Qp-104l	**$299.95**

QUIET POWER CHARGING CABLE KITS



Auxiliary Charging Port for the Quiet Power Chargers. Auxiliary Charging Port Kit comes compete with a device specific charging cord and a barrel power jack (2.5mm ID x 5.5mm OD). The barrel power jack is designed to be panel mounted, allowing for quick disconnect of the charging cord.

Model	Plug	Plug Size	Cable	Part No.	Price
QPC-001	Barrel	2.5mm ID x 5.5mm OD	4	11-13844	**$33.95**
QPC-002	Barrel	2.1mm ID x 5.5mm OD	4	11-14451	**$33.95**
QPC-003	Barrel	1.3mm ID x 3.5mm OD	4	11-14452	**$33.95**
QPC-004	Barrel	1.7mm ID x 4.0mm OD	4	11-14453	**$33.95**
QPC-005	Barrel	1.7mm ID x 4.75mm OD	4	11-14454	**$33.95**
QPC-006	Barrel	0.9mm ID x 3.2mm OD	4	11-14455	**$33.95**
QPC-007	Barrel	3.3mm ID x 5.5mm OD	4	11-14456	**$33.95**

AEROVOLTZ BALANCE CHARGER KIT



The only charger on the market designed specifically to work with the Aerovoltz battery. The primary advantage is the balance charging function. The Balance mode balances the voltage of each cell or cell pack while charging. By balance charging your you insure that the battery is operating at its maximum power. Periodic balance charging can also double the expected life of your battery. This charger is not required to operate your Battery, but it is highly recommended.

120V ..... P/N 11-13081.....**$114.85**
240V ..... P/N 11-13082.....**$116.75**

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Prices Subject to Change Without Notice

START PAC® STARTERS - POWER SUPPLIES

START PAC® PORTABLE STARTING UNITS

The new patent pending Start Pac QC models have separate removable batteries that can be changed in 15 seconds. This feature allows the user to change the batteries in the field without needing to send the Start Pac back to the shop or manufacturer. Batteries have no memory effect and can be recharged at anytime. Made in the USA. Certain aircraft will allow the ship's generator to back charge a GPU. In this manner, Start Pacs can be recharged in the field without an AC source indefinitely.
NOTE: When storing the Start Pac for more than 30 days, remove the battery pack from the charging unit and store separately.



MODEL 1324-1 QC - * 13 AMP hours @ 10 Amp Hour Rate * 1300 AMPS Peak Current complete with built in charger, power plug and cables. * 15.5"x4"x11.75" * 35 LBS. Complete * Units are 24 VDC output with a universal charger that will accept 90-240 VAC 50/60 hertz. Will start turbine or piston engines up to 500 horse power. Has a 4.5 amp charger and will provide a charge time of approx. 4 hours. Will give two to three starts between charges. This portable unit is mainly designed for emergency starting in remote locations. This unit is not designed for repeated daily starts or maintenance functions.

1324-1 QC .....P/N 11-04538 .....**$1,194.00**
1324-1 QC-RBS (Battery Set) .....P/N 11-07231 .....**$613.00**



MODEL 2300 QC - Built in chargers, power plug and cables. 24/26 VDC output, with universal chargers that will accept 90-240 VAC 50/60 hertz. * 26 AMP hours @ 10 Hour Rate * 2300 AMPS Peak Current * Trolley avail. * 19.2"x7.5"x11.5" * 69 LBS. Complete. For starting engines up to 1500 horse power and give four to six starts between charges. This unit has a dual redundant 4 amp chargers.. When plugged into an AC source, 8 amps at 28VDC, is available for maintenance functions without depleting the batteries. Recharge time is approx. 3-1/2 hours.

2300 QC .....P/N 11-06780 .....**$2,303.00**
2300QC-B (Batteries) .....P/N 11-06781 .....**$882.00**



MODEL 6028 QC - All In One air portable/ carry-on START PAC® with built in chargers, power plug and cables. Units are 28.5 VDC output, with universal chargers that will accept 90-240VAC 50/60 hertz. 26 AMP hours @ 10 Hour Rate. 2300 AMPS Peak Current. Available with separate trolley.19.2"x7.5"x11.5". 77 LBS. Complete.

6028 QC .....P/N 11-06783 .....**$3,049.00**
6028 QC-B (Batteries) .....P/N 11-07189 .....**$1,081.00**



MODEL LI2800 QC - A full 28VDC battery pack and will provide superior starts on all electrically-started turbine engines. It has dual, redundant chargers with a total of 7 amps output and a recharge time of approximately 4 hours. * 28 AMP hours @ 10 Hour Rate * 2400 AMPS Peak Current * L 19.2" x W 7.5" x H 9.75" * 46 LBS. Complete. Utilizes the latest technology in Lithium batteries. (can be left in a completely discharged state without causing damage)

Li2800 QC.....P/N 11-06782 .....**$3,877.00**



START PAC®ONE™ - START PAC® ONE™ is the smallest and lightest emergency 28V aircraft jump starter in the world. At an incredible weight of just 7 lbs. it is the only choice for emergency starting in urgent situations and isolated locations. The ONE is designed for piston and small to medium turbine engines as well as aircraft with over-voltage protection sensitivity. The START PAC® ONE™ comes with a battery charger, charging bag, and ballistic nylon carrying case. 28V and suitable for over-voltage sensitive aircraft. 10 amp hours. 1500 AMPS Peak Current. LED Voltmeter. 7 lbs./3.18 kg. L 15 3/4" x W 3.75" x D 2 1/2". Not to be used as an aircraft battery charger.

One™ .....P/N 11-14192 .....**$2,546.00**



QUICK CHANGE TROLLEY - The Start Pac® QC trolley is a light weight accessory for either the Start Pac® Models 1324-2QC, 1628QC, 2300QC or the 6028QC

P/N 11-06775 .....**$323.00**

START PAC® POWER SUPPLIES

The entire aircraft electrical system can be powered up for GPS programming and electrical maintenance. Thus the on board aircraft battery can be saved for starting. Do not use for starting as starter motors require far more amperage than is available from the StartPac® Portable Power Supply. Not for battery charging. Made in the USA.



MODEL 53025/12VC - Do not cover or enclose this Start Pac® when using, as this will inhibit airflow needed for cooling purposes. Use a minimum of 12# wire size for the AC extension cord. 12 Volt output unit. * AC INPUT: 90 to 240 VAC, 7 amps * DC OUTPUT: 25 amps @ 14.2 Volts * 9 Lbs./4.08 kilos complete * 14" long, 5.25" wide, 5.5" high * Continuous duty fan cooled * Over current protection * Over voltage protection * Over temperature protection. Designed to power up 12 Volt aircraft systems. The voltage output is set to 14.2 Volts. Maximum amperage output is 50 amps which is adequate for most light aircraft. If overloaded, the 53025/12 will trip off and reset itself after a short period of time. This unit is ideal for powering up new and old aircraft with glass cockpits.

Standard Plug 53025 - 12V .....P/N 11-04536 .....**$626.00**
Standard Plug 53025-24V .....P/N 11-04537 .....**$647.00**
Piper Plug 53025-12V .....P/N 11-10088 .....**$626.00**



MODEL 53050 - Specifications: * No duty cycle, output voltage 28.5 VDC * AC input is universal 90-240 Volts. * Over current protection * Over voltage protection * Over temperature protection * Forced air-cooling * DIMENSIONS: Wt. 10 lbs./4.54 kilos 14" X 5.25" X 5.50". A 28.5 Volt continuous DC power supply when plugged into 110/220 Volt single phase AC power. Will deliver full 50 amp DC output continuously, but will not provide enough current for aircraft engine starting or mining equipment starting.

53050.....P/N 11-06833 .....**$1,068.00**



MODEL 53105 - Specifications: * Maximum continuous 105 amps +5%. No duty cycle. * AC input 190-240 Volts. * Over current protection. * Over voltage protection. * Over temperature protection. * Forced air cooling. * 8 foot power cable. * Weights 26 lbs./11.80 kilos complete with power cable. * 14.5"x7"x13.75". A 28.5 Volt continuous DC power supply when plugged into 220Volt single-phase AC power. Will deliver full 105 amp DC output, but will not provide enough current for engine starting. 53105.....P/N 11-06834 .....**$2,039.00**

START PAC® GROUND POWER UNITS

The following dimensions apply to each of the 3300s: 38"x21"x20" Handle Height 48". Avoid discharging the batteries completely as damage can result.



MODEL 3324 - Combination power supply and battery pack. Batteries: * 78 Amp Hours at 10 hour rate * 24 Volt DC - 25.5 Volts at rest Sealed cells non- hazardous Valve regulated high amperage output lead acid * 3200 Peak Amps Power supply / charger: * Multi- unit 58 Amp DC continuous output * 28 - 28.5 Volt output from 0 - 58 amp load * Battery recharge time from fully discharged - 2 hours * AC Input - 110 Volt or 220 Volts (only 1) Limitations : 200 amps maximum DC load.

3324.....P/N 11-07225 .....**$5,125.00**
3324-RBS (Battery Set) .P/N 11-07234 .....**$1,132.00**

FOR ADDITIONAL GROUND POWER UNITS PLEASE CALL OR VISIT OUR WEBSITE AT WWW.AIRCRAFTSPRUCE.COM

START PAC QUICK CHARGE GROUND POWER UNIT



These ground power units are designed to perform starting, powering up aircraft systems and maintenance functions. When connected to AC power, the depleted batteries can be charged in a matter of hours with the built in power supply/battery charger.

Volts	Amps	Part No.	Price
24	50	11-14337	**$5,664.00**
24	105	11-14338	**$5,763.00**
24	200	11-14339	**$6,515.00**
24	300	11-14340	**$7,082.00**
28	400	11-14341	**$5,673.00**
28	105	11-14342	**$6,065.00**
28	200	11-14343	**$6,781.00**
28	300	11-14344	**$7,244.00**
28	400	11-14345	**$7,749.00**

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START PAC® STARTERS

START PAC LI2600QC STARTER 26VDC



The all new Patent Pending Start Pac model Li2600QC utilizes the latest technology in Lithium batteries. These batteries provide the same power as the lead-acid type but are 42% lighter and 32% smaller. In addition, lithium batteries have two other major advantages: twice the battery life of lead-acid batteries and no sulphation problems (can be left in a discharged state without causing damage to the battery plates).

This compact portable Lithium Ion starting unit is a full 26VDC battery pack and will provide superior starts on small to medium size turbine engines. It has a built in charger with a total of 4.0 amps output and a recharge time of approximately 6 hours.

This unit is especially designed for aircraft that will not accept a full 28 volt battery pack (actually reads 30-31 volts). Aircraft such as the Phenom 100 and Eclipse 500 will accept this 26 volt unit (actually reads 28.5 volts).

Specifications: 23 amp hours at 10 Hour rate, 2400 AMPS Peak Current, 30 lbs. complete Dimensions: L 16" x W 3.75" x H 12" Patent pending, Not to be used as an aircraft battery charger Lithium ion batteries can be damaged by deep discharges. Do not run the batteries down below 20 volts, a spike during a start is okay. Voltages below 20 begin the damage to the batteries. At 18 volts, the batteries will be damaged beyond repair. .....P/N 11-09515 .....**$2,729.00**

START PAC LI2000QC STARTER 28.5VDC



The all new Patent Pending Start Pac model Li2000QC utilizes the latest technology in Lithium batteries. These batteries provide the same power as the lead-acid type but are 42% lighter and 32% smaller. In addition, lithium batteries have two other major advantages: twice the battery life of lead-acid batteries, no sulphation problems (can be left in a discharged state without causing damage to the battery plates).

This compact portable Lithium Ion starting unit is a full 28VDC battery pack and will provide superior starts on small to medium size turbine engines. It has a built in charger with a total of 3.5 amps output and a recharge time of approximately 6 hours.

Specifications: 20 amp hours at 10 Hour rate, 2400 AMPS Peak Current, 30 lbs. complete, Dimensions: L 16" x W 3.75" x H 12", Patent pending, Not to be used as an aircraft battery charger, Lithium ion batteries can be damaged by deep discharges. Do not run the batteries down below 23 volts, a spike during a start is okay. Voltages below 23 begin the damage to the batteries. At 18 volts, the batteries will be damaged beyond repair.....P/N 11-09516 .....**$2,848.00**

START PAC LI2800QC TWIN PAC STARTER, 28.5VDC



The all new Start Pac Model Li2800 QC Twin Pac utilizes the latest technology in Lithium Batteries. These batteries provide the same power as the lead-acid type but are 42% lighter and 32% smaller. The multi-purpose Li2800QC Twin Pac can be easily broken down into 2 separate units for easy transport and shipping. In addition, lithium batteries have two other major advantages: twice the battery life of lead-acid batteries, no sulfation problems (can be left in a discharged state without causing damage).

This powerfully versatile Lithium Ion Twin Pac starting unit is a full 28VDC battery pack and will provide superior starts on all electrically-started turbine engines. It has dual, redundant chargers with a total of 7 amps output and a recharge time of approximately 4 hours.

Specifications: 56 AMP hours at 10 hour Rate, 4800 AMPS Peak Current L 19.2" x W 7.5" x H 9.75" each unit, Twin Pac trolley L 19" x W 23" x H 12" not including removable handles 109 lbs. Complete with Twin Pac Trolley, 46 lbs. complete for each unit when separated. Not to be used as an aircraft battery charger Lithium ion batteries can be damaged by deep discharges. Do not run the batteries down below 23 volts, a spike during a start is okay. Voltages below 23 begin the damage to the batteries. At 18 volts, the batteries will be damaged beyond repair.
P/N 11-09517 .....**$7,862.00**

START PAC LI2700QC STARTING UNIT



This compact portable Lithium Ion starting unit is a full 26VDC battery pack and will provide superior starts on all electrically-started turbine engines. It has dual, redundant chargers with a total of 9 amps output and a recharge time of approximately 4 hours. The engineers at Start Pac specifically designed the Li2700QC Lithium aircraft starter for aircraft with over voltage protection relays that are set lower than most aircraft so that they can not accept more than 29.5 volts from an external starting source. Some of these aircraft include the Agusta Westland AW139, Sikorsky S-76, Eclipse 500, Phenom 100 and Phenom 300. This unit is designed for engine starting only.

Specificatons: • 31 AMP hours @ 10 Hour Rate • 2400 AMPS Peak Current • L 19." x W 7.5" x H 9.75"/ L 49cm x W19cm x H29cm • 46 lbs./20.8 kg Complete weight with built in charger and aircraft cable • Not to be used as an aircraft battery charger.

P/N 11-14709 .....**$3,859.00**

START PAC LI2700QC STARTING UNIT SUPER PAC



This compact portable Lithium Ion starting unit is a full 26VDC battery pack and will provide superior starts on all electrically-started turbine engines. It has dual, redundant chargers with a total of 9 amps output and a recharge time of approximately 4 hours. The engineers at Start Pac specifically designed the Li2700QC Lithium aircraft starter for aircraft with over voltage protection relays that are set lower than most aircraft so that they can not accept more than 29.5 volts from an external starting source. Some of these aircraft include the Agusta Westland AW139, Sikorsky S-76, Eclipse 500, Phenom 100 and Phenom 300. This unit is designed for engine starting only.

Specifications: • 31 AMP hours @ 10 Hour Rate • 2400 AMPS Peak Current • L 19.2" x W 7.5" x H 9.75"/ L 49cm x W19cm x H29cm • 46 lbs./20.8 kg Complete weight with built in charger and aircraft cable • Not to be used as an aircraft battery charger.

P/N 11-14748 .....**$4,697.00**

START PAC LI2700QC STARTING UNIT TWIN PAC



This powerful Lithium Ion starting unit is a full 26VDC portable battery pack and will provide superior starts on all electrically-started turbine engines. This versatile Twin Pac can be used as a single unit or separated for two complete Lithium units that can be easily carried on board. It has redundant chargers with a total of 18 amps output and a recharge time of approximately four hours. The engineers at Start Pac specifically designed the Li2700QC as an airplane starting unit with voltage protection relays that are set lower than most aircraft so that they cannot accept more than 29.5 volts from an external starting source. Some of these aircraft include the Agusta Westland AW139, Sikorsky S-76, Eclipse 500, Phenom 100 and Phenom 300. This unit is designed for engine starting only.

Specifications: • 31 AMP hours @ 10 Hour Rate • 62 AMPS Peak Current • 2400 AMPS Peak Current • L 38.4" x W 7.5" x H 9.75"/ L 98cm x W19cm x H29cm • 120 lbs./ 55 kilos Complete with Twin Pac trolley • Not to be used as an aircraft battery charger.

P/N 11-14749 .....**$7,859.00**

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Prices Subject to Change Without Notice

BYCAN POWER SYSTEMS – GPU'S

BYCAN POWER SYSTEM PS-1450



The Bycan PS-1450 Aircraft Ramp Power Supply and Battery Charger is a dual-purpose aircraft flight line service and maintenance tool. The unit has a filtered 14 volt DC power supply with up to 50 amperes capability for tests of aircraft electrical systems and a secondary mode for recharging run-down batteries. The PS-1450 plugs directly into the aircraft APU connector and is tied to the electrical system when the master switch is activated.

The battery charging mode is selectable by a front panel switch. The charging process is fully automatic. When the charge is in progress a red LED is illuminated. This is replaced by a green LED when the aircraft battery is fully charged. The on/off switch on the unit also resets the unit. The 28 volt version, PS-2850 provides 50 amperes of filtered DC at 28 volts. Dimensions: 9" x 12" 8". Weight: 38lb.

Bycan Power Supply/Charger 14V .....P/N 11-09195 .....**$584.00**
Bycan Power Supply 14V 50Amps.....P/N 11-09196 .....**$675.00**
Bycan Power Supply 14V 50HZ .....P/N 11-09197 .....**$598.00**
Bycan Power Supply 14V Piper.....P/N 11-09198 .....**$629.00**

BYCAN POWER SYSTEM PS-2850



The PS-2850 plugs directly into the aircraft APU connector and is tied to the electrical system when the master switch is activated.

The battery charging mode is selectable by a front panel switch. The charging process is fully automatic. When the charge is in progress a red LED is illuminated. A green LED replaces this when the aircraft battery is fully charged. The on/off switch on the unit also resets the unit. The 14-volt version, PS-1450 provides 50 amperes of filtered DC at 14 volts.

P/N 11-07870 .....**$773.00**

BYCAN POWER SYSTEM PS-28100



The PS-28100 will furnish up to 100 amps at 28 VDC. It plugs into the APU connector on the engine cowling and automatically disconnects the battery so that it will not be drained by the servicing processes. A valuable ramp accessory.

100 amperes filtered 28 volt supply. Aircraft APU connectors furnished. Operates from 120/208/220/240 VAC, 60 Hz . 8 foot DC cable furnished. Ferro-resonant regulated supply . DC current limited Front panel meter, controls.

Portable, weighs only 62 lb. One year warranty

Extensive testing by FBO's. Dimensions:10" x 13" x 9". Weight: 62lb.

28V, 100AMP - Standard Plug ..... P/N 11-07822.....**$995.00**
28V, 100AMP - Piper Plug..... P/N 11-07823.....**$998.00**
28V, 100AMP - Pilatus PC-12 ..... P/N 11-07824.....**$999.00**
28V, 100AMP - Eclipse E-500..... P/N 11-07825.....**$975.00**

BYCAN POWER SYSTEM PS-14100



The PS-14100 will furnish up to 100 amps at 14 VDC. It plugs into the APU connector on the engine cowling and automatically disconnects the battery so that it will not be drained by the servicing processes. A valuable ramp accessory.

100 amperes filtered 14 volt supply. Aircraft APU connectors furnished. Operates from 120/208/220/240 VAC, 60 Hz . 8 foot DC cable furnished. Ferro-resonant regulated supply . DC current limited . Front panel meter, controls . Portable, weighs only 61 lb. One year warranty . Extensive testing by FBO's. Dimensions: 10" x 13" x 9". Weight: 61 lbs.

Bycan Power Supply 14V Standard ..... P/N 11-09191.....**$678.00**
Bycan Power Supply 100V 50HZ ..... P/N 11-09192.....**$697.00**
Bycan Power Supply 14V Piper..... P/N 11-09193.....**$739.00**
Bycan Power Supply 100V 50MZ Piper ..... P/N 11-09194.....**$759.00**

QUICKI DUAL 12-24VDC ULTRA FAST CHARGER



The Quicki Dual Voltage / Dual USB charger is a compact and powerful device for ULTRA FAST charging your portable electronics. Built for rugged use in any 12 or 24 Volt vehicle, it provides 2.4 Amps of charging power to both USB ports (4.8A Max, 60W). A combination of internal over-voltage, over-current and internal UL-approved fuse provide superior protection of your devices while charging. FCC approval ensures the device won't create RF interference with nearby electronics and radios. Designed for use in Aviation, Commercial Vehicles, Marine, Utility applications and Automotive use. Compact design (3" x 1.1") with LED status indicator. Tested to ensure compatibility with Apple, Android, Tablet and other USB-compatible devices, the Quicki charger provides super fast recharging.

P/N 11-14110 .....**$18.50**

AMI-1800 GPU



The AMI-1800 ground power unit (GPUs) performs aircraft starting and maintenance functions at a much more compact size and price than traditional GPUs. The AMI ground power units can be used on the ramp and are portable enough to fly with the airplane or helicopter to remote locations. The unit can be used for maintenance functions for prolonged periods while connected to an AC power source for shop or hangar applications. The versatile AMI GPUs offer tremendous cranking amperage when used for aircraft starts on the ramp or in remote locations. The GPU's internal batteries are Drycell technology which translates to no maintenance, no external leaks and no corrosion. Length: 17.00 Inches. Width: 5.70 Inches. Height: 10.20 Inches. Weight: 58 lbs. 1800 Peak Amps. 25 Amps Continuous. 50 Amp Hour. 38 Minute Recharge Rate P/N 11-14749 .....**$7,859.00**

AMI-2400 GPU



The AMI-2400 Ground Power Unit performs aircraft starting and maintenance functions at a much more compact size and price than traditional GPUs. The AMI ground power units can be used on the ramp and are portable enough to fly with the airplane or helicopter to remote locations. The unit can be used for maintenance functions for prolonged periods while connected to an AC power source for shop or hangar applications. The versatile AMI GPUs offer tremendous cranking amperage when used for aircraft starts on the ramp or in remote locations. The GPU's internal batteries are Drycell technology which translates to no maintenance, no external leaks and no corrosion. Length 19.25 Inches. Width 7.25 Inches. Height 10.20 Inches. Weight 80 lbs. 2400 Peak Amps. 25 Amps Continuous. 80 Amp Hour. 60 Minute Recharge Rate

P/N 11-14753 .....**$4,550.00**

AMI-2400-50 GPU



The AMI-2400-50 Ground Power Unit performs aircraft starting and maintenance functions at a much more compact size and price than traditional GPUs. The AMI ground power units can be used on the ramp and are portable enough to fly with the airplane or helicopter to remote locations. The unit can be used for maintenance functions for prolonged periods while connected to an AC power source for shop or hangar applications. The versatile AMI ground power units offer tremendous cranking amperage when used for aircraft starts on the ramp or in remote locations. The GPU's internal batteries are Drycell technology with no maintenance, no external leaks and no corrosion. Length 19.25 Inches. Width 7.25 Inches. Height 12.20 Inches. Weight 85 lbs. P/N 11-14754 .....**$5,450.00**

AMI-4500 GPU



The AMI-4500 Ground Power Unit (GPU) performs aircraft starting and maintenance functions at a much more compact size and price than traditional GPUs. These ground power units can be used on the ramp and are portable enough to fly with the airplane or helicopter to remote locations. The unit can be used for maintenance functions for prolonged periods while connected to an AC power source for shop or hangar applications. The versatile AMI GPUs offer tremendous cranking amperage when used for aircraft starts on the ramp or in remote locations. The GPU's internal batteries are Drycell technology which translates to no maintenance, no external leaks and no corrosion. Length 19.75 Inches. Width 14.50 Inches. Height 10.20 Inches. Weight 170 lbs. 4500 Peak Amps. 50 Amps Continuous. 160 Amp Hour. 60 Minute Recharge Rate P/N 11-14755 .....**$7,995.00**

AMI-4500-100 GPU



The AMI-4500-100 Ground Power Unit (GPU) performs aircraft starting and maintenance functions at a much more compact size and price than traditional GPUs. The AMI ground power units can be used on the ramp and are portable enough to fly with the airplane or helicopter to remote locations. The unit can be used for maintenance functions for prolonged periods while connected to an AC power source for shop or hangar applications. The versatile AMI GPUs offer tremendous cranking amperage when used for aircraft starts on the ramp or in remote locations. The GPU's internal batteries are Drycell technology which translates to no maintenance, no external leaks and no corrosion. Length 19.75 Inches. Width 14.50 Inches. Height 12.20 Inches. Weight 170 lbs. P/N 11-14756 .....**$9,895.00**

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GROUND STARTING COMPONENTS/GPU'S

AIRCRAFT JUMPER CABLES

Cable is heavy duty, 4 ga. copper, 15 ft. long, twin extruded to help prevent tangling, and room temperature flexible at 40 degrees below zero. Fully insulated clamps wont arc or spark and are rated 500 amps, have a solid copper jaw, and have a flexispring strain relief to prevent cable breakage. Polarity light warns if clamps are connected incorrectly, preventing electrical system damage and personal injury. Available in two styles (above).



6141 - Jumper Cable with standard 3-pin Lexan female plug (equivalent to AN2551) on one end and alligator clamps on other end. P/N 11-02952.....**$150.00**



6142 - Jumper Cable with special Piper single-pin plug on one end and alligatorclamps on other end. P/N 11-02953 .....**$149.95**

REPLACEMENT PAIR OF 500 AMP CLAMPS



Used on #6141 and #6142 jumper cables. (above)
P/N 11-06202 ..... **$42.50**

3 PIN JUMPER PLUG AN2551



Standard 3-pin female plug equivalent to AN2551 plug. Red Lexan construction screws together in minutes. Sleeves are solid copper, silver plated. With solenoid pin. Corrosion proof. Mates with AN2552-3A external power receptacle. P/N 11-03158 ..... **$37.50**

PIPER TYPE PLUG



Mates with 11041 socket. Electrical conductors and connections are designed for maximum efficiency and long life. With ground return terminal. Single pole. Brass female contact with spring-grip tension provides solid engagement with the socket. Cable clamp holds wires firmly in place. Diecast housing. Accepts up to 0AWG cable. P/N 11-03159 ..... **$29.80**

PIPER TYPE SOCKET



Self-grounding socket. Single pole. Diecast housing, spring-loaded door. Solid brass contact, 3/8" (9.5mm) diameter, with insulated tip to prevent short circuits. Rubber boot protects terminals and connections. Accepts up to 0AWG cable. Fits 2" (50.8mm) diameter hole. Flange holes 21/64" (8.6mm) diameter, 2 15/16" (74.6mm) on centers. Mates with 11042 plug.
P/N 11-00500 ..... **$24.85**

EXTERNAL POWER RECEPTACLE



This external power receptacle is designed to mount in a hole in the skin of aircraft. Hole is then covered with hinged access door (not included). Mates with AN2551 type plugs. Model 4621B.
P/N AN2552-3A..... **$87.99**

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PLUG & JUMP



The Plug & Jump is a very portable unit which can be carried in the aircraft at all times because it is so lightweight. It can be used to start the aircraft from an ordinary car using standard jumper cables. It comes in two models; The Universal Model is used for Cessna, Beechcraft, etc. (3 pin plug) and the Piper Model is a single pin. The Plug and Jump is a simple conduit of power from any external power source to the aircraft. It is not a battery in and of itself. The Plug n Jump can be used for either 28V or 14V systems.
Universal Model .....P/N 11-00971 ..... **$82.95**
Piper Model.....P/N 11-00972 ..... **$93.95**

MASTER RELAY



(Battery Solenoid) - Applicable to all homebuilts. Continuous duty. 12V and 24V. **Not for certified aircraft.** Features: * High current capacity control * Isolated or grounded coils * Enclosed in dust-resistant case * Longer steel encasement permits lower heat rise and more sensitive operation on Type 71
111-226 (12V).....P/N 11-03161 .....**$32.85**
111-226 (24V).....P/N 11-05799 .....**$36.90**

STARTER RELAY



(Starter Solenoid) - For 12V intermittent duty. Adequate current capacity for most engines.
P/N 11-03162 .....**$12.95**



PORTABLE POWER SUPPLY

These portable power supplies are an excellent way to power your avionics on the ground while you train or practice in the cockpit. Especially helpful in learning how to operate glass cockpit avionics and panel mount GPS units. To use the Portable Power Supply plug the cord into an AC wall outlet, and then connect the plug into the external power receptacle on your aircraft. Furnished with power supply plug. Manufactured in U.S.A.
This unit can also be used as a battery charger, by using the battery clip adapter which is provided with the unit.
12V Port Power Supply 3 Pin Plug.....P/N 11-05084 .....**$257.00**
12V Port Power Supply Single Pin .....P/N 11-05085 .....**$226.00**
24V Port Power Supply 3 Pin Plug.....P/N 11-05086 .....**$329.00**
24V Port Power Supply Single Pin .....P/N 11-05087 .....**$293.95**



RED BARON AUXILLIARY POWER UNIT (APU)

The RB-14/28 Red Baron APU is designed to operate avionics equipment in private and commercial aircraft. The Red Baron will output 14 or 28VDC at up to 25 amps. The voltage is filtered to eliminate hum and is regulated against input AC line voltage changes. The output DC voltage and current are displayed on front panel meters. The DC is also protected by a circuit breaker. Selection of output voltage is by a front panel switch which is protected by a switch guard. Closing the guard forces the switch to 14V position. The RB-14/28-25 plugs directly into the APU receptacle on the aircraft. It comes equipped with either the standard 3 prong connector or Piper coaxial connector. The housing is steel, powder coated in red, for optimum flight line safety. Rubber feet and handle are included. The AC and DC cable lengths are 8ft.
This unit comes with selectable output voltages. AC Input: Volts (VI)115, Amps (II) 4.5/9, HZ (FI)60. DC Output: Volts (VO) 14 / 28, Amps (IO) 25, Watts (WO) 350/700. Dimensions: H10" x L8" x W10". Weight: 32(LB).
Standard Connector .....P/N 11-02142 ..... **$685.00**
Piper & Standard Connector .....P/N 11-02143 ..... **$729.00**

THE BLUE ANGEL AIRCRAFT POWER SUPPLY



The Bycan BA-14/2850 Aircraft Ramp Power Supply and Battery Charger is a multi- purpose aircraft flight line service and maintenance tool. The unit has a filtered 14 & 28 volt DC power supply with up to 50 amperes capability for tests of aircraft electrical systems and a secondary mode for recharging run-down batteries. This ramp or hangar accessory is an absolute must for avionics service, gear and flap actuator exercising and other electrical system service. The BA-14/2850 plugs directly into the aircraft APU connector and is tied to the electrical system when the master switch is activated. Selection of output voltage is by a front panel switch which is protected by a switch guard. Closing the guard forces the switch to the 14 volt position. The battery charging mode is selectable by a front panel switch. The charging process is fully automatic. When the charge is in progress a red LED is illuminated. This is replaced by a green LED when the aircraft battery is fully charged. The on/off switch on the unit also resets the unit. This unit comes with selectable output voltages and Battery Charger. AC Input: Volts (VI)115, Amps (II) 9/18, HZ (FI)60. DC Output: Volts (VO) 14 / 28, Amps (IO) 50, Watts (WO) 700 / 1400. Dimensions: H9" x L12" x W8". Weight: 46(LB)
Piper & Cessna Plugs 110V (2 Adapters) ..... P/N 11-06390 .**$1,249.00**
Cessna Plug 220V (1 Adapter) * For Europe .. P/N 11-06391 .**$1,233.00**
Cessna Plug 220V (1 Adapter)..... P/N 11-06392 .**$1,495.00**

AVIATION GROUND POWER UNITS (GPU)



Safe, Affordable, Airframe Power for Piston and Light Turbine Aircraft, the Enhanced Flight 2800 Series GPU achieves a remarkable 89% electrical efficiency to provide up to 2,000W of power. Its cool running, switching-mode power modules provide massive amounts of stable, noise-free 28V DC power from a 90-230 volts AC input. It will safely power the most delicate airframe systems with laboratory-grade DC without risk of costly damage to sophisticated avionics, instruments, or electronic equipment. This new generation GPU is designed as a practical alternative to large, expensive start carts, battery chargers, and other devices designed for spinning starter motors. Unique, ergonomic design features dual, removable cord/tool caddies. Choose 35A or 70A output. Comes with 2-meter output cable with 3-pin AN2551 NATO power plug, compatible with standard AN2552-3A or MS3506-1 aircraft external power receptacle. Not for turbine engine motoring or start assist. Option of integral BatteryMINDer 244CEC1-AA multi-stage maintenance charger-desulfator for lead-acid aviation batteries. Ambient temperature compensation ensures precise charging under all conditions. Airframe charging harness kit included.
24V 35A GPU..... P/N 11-10831.....**$845.00**
24V 35A GPU built-in BatteryMINDer ..... P/N 11-14771.....**$1,145.00**
24V 70A GPU ..... P//N 11-10833.....**$1,195.00**
24V 70A GPU built-in BatteryMINDer ..... P/N 11-14772.....**$1,495.00**

Prices Subject to Change Without Notice

POWER PANELS

POWER PANELS FOR HOMEBUILTS



Mini Power Panel



Homebuilder's Power Panel

Based on a heavy duty printed circuit board that eliminates the bus bars an provides a user serviceable and logical arrangement of all power system components. Only DC rated switches and quality resettable thermal circuit breakers are utilized. Connections to the panels are via screw type terminal blocks. The avionics 'sub' bus is filtered. All metal parts are stamped aluminum. Lexan overlay on the faceplate. Complete documentation and suggested wiring diagrams are included. ***Standard Power Panel: 8 Switches:*** Fuel Pump, Landing Light, Strobe Lights, Navigation Lights, Panel Power, Pitot Heat, Radio Master, and a Cessna type split master switch for master solenoid and alternator field control. ***18 Circuit Breakers:*** Fuel Pump, Landing Light, Strobes, Nav Lights, Panel Power, Pitot, Alternator Field, Gyros, Gauges, Trim, and Spare, (on Radio Bus) Radio1, Radio 2, GPS, Transponder, Audio, Avionics. ***Dims & Wt:*** 2.25"H x 13.00"W x 7.50"D, approximately 3.0 lbs. ***Mini Power Panel: 6 Switches:*** (main panel) Fuel Pump, Landing Light, Strobe Lights, Navigation Lights, Panel Power, (side panel) has a Cessna type split master switch for master solenoid and alternator field control. ***13 Circuit Breakers:*** Fuel Pump, Landing Light, Strobes, Nav Lights, Panel Power, Engine Instruments, & Spare, (on Radio Bus) Radio1, Radio 2, GPS, Transponder, Avionics, (side panel) 30 amp alternator output breaker. ***Dims & Wt:*** (main panel) 2.375"H x 8.375"W x 6.50"D, (side panel) 2.375"h x 2.5"w x 2.0"d, approximately 2.5 lbs.

Homebuilders Panel ..... P/N 11-11675..... **$743.00 ea**
Mini Power Panel..... P/N 11-11680..... **$595.00 ea**

LIGHT SPORT POWER PANEL





The Light Sport Power Panel was designed for LSA and light aircraft applications. It offers a new degree of flexibility in modern "Glass Panel" equipped aircraft. The electrical power bus is split into three segments including the Main Bus, Radio Bus and the Essential bus. The Radio Bus is switched and filtered. The Essential Bus can wire direct to the Main Bus or easily connected to a back up system such as the Composite Design Power Guard to allow dependable, constant power to critical flight and engine instruments. As with all Composite Design power systems, this panel is rugged, serviceable and dependable. **Specifications**: • 6 Switches: Fuel Pump, Landing Lite, Nav Lite, Strobes, Radio Bus Master, and Cessna type split master for Master Solenoid and Alternator Field. • 14 Circuit Breakers: Main Bus - Fuel Pump, Landing Lite, Nav Lite, Strobes, Panel Power, Accessories • Radio Bus (Filtered) Radio 1, Radio 2, Transponder, GPS, Audio Panel • Essential Bus EFIS#1, EFIS#2, Flight Instruments, Engine Data • Dimensions & Weight: 2.375"H x 10.5"W x 6.5"D, approx 2.25 pounds.

28V ..... P/N 11-09207..... **$660.00**
14V ..... P/N 11-09206..... **$648.00**

POWER GUARD MODULE



The Power Guard Module manages up to 10 Amps of secondary power for aircraft accessories that require back-up power. Typical accessories include electronic ignition, electronic engine/flight instrumentation and EFIS systems. The module works with a small 7-10 A secondary battery. The on board circuitry includes a secondary battery master relay, primary power controls, filter and charging circuit. Dims: 4.75"L x 2.75"W x 1.2"H

P/N 11-02044..... **$135.95**

SOLID STATE AVIONICS ELECTRONIC SWITCH



This Avionics Switch is a solid-state SMT device designed to replace the conventional mechanical relays earlier used. The switch incorporates MOSFET (Metal Oxide Silicon Field Effect Transistor) transistors for switching the high current with no moving parts and no any electrical arc to prevent fuel fumes ignition. The Avionics Switch requires only one toggle switch of any quality and any type to control the power for up to 7A each, different electronic / avionic equipment The Avionics Switch is enclosed in an aluminum enclosure for EMI/RFI protection and for easy installation onto the aircraft.

P/N 11-04335..... **$152.00**

VERTICAL POWER VP-X



The VP-X integrates with many popular EFIS products enabling you to monitor and control your entire electrical system on the EFIS display. In addition using the EFIS for attitude, navigation, and engine information, you now can use the EFIS display to monitor the health of your electrical system, view and control the status of individual circuits, and respond to circuit faults.

Vertical Power offers these capabilities through the use of a patented electronic circuit breaker (ECB) technology that is at the core of all of our products. Of course, ECBs provide circuit protection like old-fashion thermal circuit breakers, but ECBs do a lot more than just detect circuit faults. ECBs are intelligent, configurable, and offer capabilities not otherwise available with old-style breakers. For example, ECBs can detect a burned-out landing light or disable the starter circuit while the engine is running.

The VP-X supports a single bus electrical architecture with a single or dual alternator configuration. It additionally supports the ability to measure the voltage on an aux battery. There are enough circuits to wire a typical RV (including the RV-10), Glastar, Lancair Legacy, Velocity, Cozy, or other 2 to 4 place aircraft.

Specifications:

- Power: 4-32 volts DC, 60A max continuous
- Weight: 1.9 lbs

Note: Either a wiring harness kit or connector-only kit is required with the VP-X system.

Vertical Power VP-X-PRO ..... P/N 11-09293 ..... **$2,195.00**
Vertical Power VP-X Sport ..... P/N 11-09294 ..... **$1,495.00**
VP-X Pro Wiring Harness ..... P/N 11-09295 ..... **$595.00**
VP-X Sport Wiring Harness ..... P/N 11-09296 ..... **$525.00**
VP-X Sport Connector-Only Kit ..... P/N 11-09834 ..... **$215.00**
VP-X Pro Connector-Only Kit ..... P/N 11-09835 ..... **$215.00**
VRX Mounting Tray ..... P/N 11-13135 ..... **$165.00**
Crimp Tool (Req. w/ Connector-Only kit) .. P/N 11-09836 ..... **$69.95**



VERTICAL POWER PPS PRIMARY POWER SYSTEM

Finally, a simple and reliable primary power solution. The Vertical Power Primary Power System (PPS) is an entirely new approach to the master, starter, and charging circuit on your experimental aircraft or LSA. It combines the functions of multiple high-current, electro-mechanical components into a single, solid-state device that installs in minutes with plug-and-play simplicity. Plus, the high-reliability of the PPS means you won't find yourself stranded on a deserted landing strip without the power to start your plane. The PPS is a new power distribution component that handles your aircraft's high-current power. It controls the flow of power from the battery to the starter and supplies power to the Vertical Power VP-X (or a traditional bus) for your electrical system loads. The PPS also supports the charging circuit by completing the B-lead connection to the alternator.

PPS ..... P/N 11-15519..... **$1,475.00**
Wiring Harness..... P/N 11-15520..... **$145.00**
Connector Kit ..... P/N 11-15521..... **$57.95**

RADIO STACK POWER PANEL



The Radio Stack Power Panel is designed to fit neatly in the 6.25" radio stack format. It is well suited for LSA and light aircraft applications, offering a new degree of flexibility in modern "Glass Panel" equipped aircraft. The power bus is split into three segments including the Main Bus, Radio Bus and the Essential Bus. The Radio Bus is switched and filtered. The Essential Bus can be wired directly to the Main Bus or easily connected to a back up system such as the Composite Design Power Guard. This allows dependable, constant power to critical flight and engine instruments. As with all Composite Design power systems, this panel is rugged, serviceable, and dependable. P/N 11-10081 ..... **$720.00**

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POWER SUPPLIES – VOLTAGE CONVERTERS



TRUE BLUE POWER® MD835 EMERGENCY POWER SUPPLY

Automatically supplies 24.5 VDC power for critical or standby equipment. 4.5 Amp-hour battery with Nanophosphate® lithium-ion cell chemistry Lightweight 4.7 lbs. – 8 lbs. Input Voltage: 24–32 VDC. 5V module connector available. Direct replacement for PS-835/PS-855 or forward-fit installations. 2-year capacity check, 10-year replacement life. (approx.) 3.1"H x 12.6"L x 2.3"W Mounts in standard ¼ ATR Rack. Maintains full charge by recharging during normal flight operations. Remote mounted self-test switch required. FAA TSO C179a certified. Part 23 AML STC Certified. Qualified to RTCA/DO-160F and RTCA/DO-311. Designed and built in the USA. Two year limited warranty.

MD835 ..... P/N 11-08713 ..... **$4,255.00**
MD835 28V/5V ..... P/N 11-15297 ..... **$5,185.00**
5V module connector.... P/N 10-04776 ..... **$1,154.00**



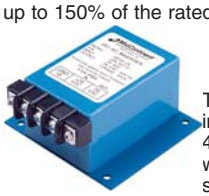
TRUE BLUE POWER® TI500 STATIC INVERTER

DC-to-AC static inverter produces 115 volts at 60 Hz for 500 watts of "wall outlet" power from an aircraft's 28 VDC input. Has the same connector and footprint of legacy designs, plus overload and short-circuit protection up to 150 percent of the rated load. Supplies power for various cabin accessories, such as laptops, cell phones and iPods, Compact design. Remote On/Off feature, 500VA rated output power, 85-90% efficiency, Input voltage: 20-36 VDC, Input current: 20A at 28 VDC input, Output voltage: 115 VAC, Frequency: 60 Hz ± 1%, Single phase, true sine wave output, Overload and short-circuit protection up to 150% of rated load, Rated from -65 F°to +160°F (-55°C to +71°C), FAA TSO-C73 certified and RTCA DO-160F qualified, Designed and built in the USA., USA, Two year limited warranty P/N 11-09613 ..... **$2,507.00**



TRUE BLUE POWER TI1200 STATIC INVERTER

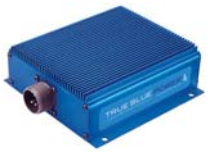
The TI1200 DC-to-AC static inverter produces 115 volts at 60 Hz for 1200 watts of "wall outlet" power from an aircraft's 28 VDC input. Lighter and smaller than competing inverters, the TI1200 has the same connector and footprint of legacy designs, plus overload and short-circuit protection up to 150% of the rated load.....P/N 11-10743 ..... **$3,789.00**



TRUE BLUE POWER® DC/AC INVERTER

This classic DC to AC solid- state "peanut" inverter provides a reliable source of 26 volt, 400 Hz, AC power. Versatile, compact and lightweight, it is ideal for use with Stormscope bootstrap and multifunction display installations. Input: 11-40VDC @ 0.75 amp. Output: 26 VAC,400 Hz, Single Phase, 10 volt-amperes.....P/N11-07062 ..... **$499.00**

MID-CONTINENT TRUE BLUE TI250 STATIC INVERTER



A lightweight power converter that translates a 20 to 36 VDC input to a 115 VAC output at 60 Hertz and provides 250 watts (VA) of power. The alternating current output is defined as a pure sine wave with less than 2% of total harmonic distortion for clean, noise-free, harmonic-free power to supply nearly any common commercial or consumer load rated for a nominal input of 115VAC. FAA certified to TSO C73 and tested to rigorous environmental standards and levels of RTCA DO-160. P/N 11-12858 ..... **$1,720.00**

MID-CONTINENT TRUE BLUE POWER TC230 DC TO DC CONVERTERS



A lightweight power converter that translates a direct current (DC) input of 14 volts to an output of 28 volts direct current (DC) output. Converting an input operation voltage range of 10-18 V DC to 28VDC makes the TC230 suitable for power to a wide variety of general, business, or commercial aviation applications. The unit is rated for a nominal output of 230 watts to power avionics, instrumentation, lighting, and many other applications. FAA certified to TSO-C71 and tested to rigorous environmental standards and levels of RTCA DO-160G. Ideal choice for aircraft power needs while reducing the challenges associated with other similar products.

Description	Part No.	Price
10-18 VDC in, 28 VDC out, 230 watts	10-06250	**$631.00**
10-18 VDC in, 28 VDC out, 230 watts with remote on/off feature	10-06251	**$631.00**

MID-CONTINENT INSTRUMENTS TS420-1 EMERGENCY POWER SUPPLY



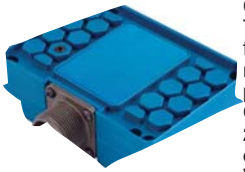
Simultaneously provides one primary power output and three lighting power outputs. Pitot/Static ports or optional electrical input provides ability to work in automatic mode without pilot intervention. Arms at beginning of flight. Activates instantly upon power loss. Recharges during flight. Turns off after flight. Utilizes sealed lead-acid cells for reliability and cold weather performance. Lighting outputs can power LED or incandescent lighting at 5, 14 or 28 VDC. Remote, mini-annunciation switch (with automatic dimming) controls test and manual operations. Quality Mil-Spec connectors included. Field replaceable battery module(s). Amp-hours of power at 18V: 2.5 Ah. Total system weight: 5.0 lbs. Designed and built in the USA. One year limited warranty. P/N 10-04770 ..... **$2,621.00**



TRUE BLUE AC-DC CONVERTER 280 WATTS

The highly efficient TC280 AC-to-DC Converter produces 280 watts of power from an aircraft's 115 VAC input. Engineered to run cooler and featuring a fanless design, the TC280 saves energy and reduces weight. It produces enough energy to power electronic equipment throughout the aircraft, including in-seat, cabin and cockpit power applications. It has a compact and lightweight design that can be conveniently mounted in the floor or cabin wall. Supplies 280 watts of 28 volt power. Greater than 88% energy efficiency. Compact and lighter design weighing only 2.0 lb. Input transit, overload, and short circuit-protection. Designed and built in Wichita, KA, USA. P/N 11-14193 ..... **$1,817.00**

TRUE BLUE POWER CONVERTER 24-36 VDC TC120



The TC120 is a multi-purpose DC-to-DC Converter with a variable input and output. This converter is an ideal power source for low-voltage DC accessories and equipment. Supplies 120 watts of 24–36 volt power. Greater than 88% energy efficiency. Compact and lighter design weighing only 2.0 lb. Input transit, overload, and short circuit-protection. Designed and built in Wichita, KA, USA.

P/N 11-14270 ..... **$341.00**

TRUE BLUE DC TO AC STATIC INVERTER 1200 WATTS



28 VDC to 230 VAC 1200VA, 50 Hz, Sine wave. The TI1200 Series DC-to-AC Inverter produces 1200 watts of power from the aircraft's 28 VDC input. It is ideal for in-flight entertainment and galley equipment, such as microwaves and coffee makers. P/N 11-14268 ..... **$3,786.00**

TRUE BLUE DC TO AC STATIC INVERTER 250 WATTS



28 VDC, 115/26 VAC 250VA, 400 Hz, Sine wave. The highly-efficient TI250 Series DC-to-AC Inverter produces 250 watts of power from the aircraft's 28 VDC input. Engineered to run cooler and featuring a fanless design, the TI250 Series saves energy and reduces weight. At only 2.2 pounds, these inverters are lighter and smaller than competing units and include overload, short-circuit and ground fault interrupter protection.

P/N 11-14267 ..... **$2,255.00**



MID-CONTINENT TRUE BLUE MOUNTING ADAPTER

Mounting adapter for TI500 Mid-Continent True Blue DC To AC Static Inverter 500 Watts.

P/N 11-14269 ..... **$62.95**

MID-CONTINENT TRUE BLUE POWER CONVERTER 24-36 VDC TC120



The highly efficient TC120 DC-to-DC Converter produces 120 watts of power from an aircraft's 28 VDC input. Engineered to run cooler and featuring a fanless design, the TC120 saves energy and reduces weight. It produces enough energy to power electronic equipment throughout the aircraft, including in-seat, cabin and cockpit power applications.

P/N 11-14449 ..... **$369.00**

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Prices Subject to Change Without Notice

VOLTAGE CONVERTERS - POWER PANELS

TRUE BLUE DUAL USB CHARGING PORTS



The self-contained TA102 Dual USB Charging Port is a modern addition to any cockpit and interior cabin. Each USB port is designed to supply the electric current needed to charge any standard or high-power device with a USB interface. The TA102 protects itself and the charging device from short-circuit, power surges and over-current potential.

Description	Part No.	Price
10-32VDC	11-12159	**$359.00**
10-32VDC, Lighted	11-13044	**$395.00**
10-32VDC, Bottom Connector	11-13093	**$359.00**
10-32VDC, Lighted, Bottom Connector	11-13094	**$395.00**
Accessories		
MCI TA102 Circular Rear Mount Kit	11-13084	**$149.95**
MCI TA102 Instrument Panel Mounting Kit	11-13085	**$129.75**
MCI TA102 Front Mounting Kit	11-13086	**$178.75**

TRUE BLUE TA202 DUAL USB CHARGING PORT



Model No.	Description	Part No.	Price
6430202-1	10-32 VDC, Dual Type-A / Type-C Rear connector	11-14397	**$395.00**
6430202-2	10-32 VDC, Dual Type-A / Type-C Bottom connector	11-14430	**$453.00**
6430202-3	10-32 VDC, Dual Type-C / Type-C Rear connector	11-14431	**$386.00**
6430202-4	10-32 VDC, Dual Type-C / Type-C Bottom connector	11-14432	**$386.00**
6430202-5	10-32 VDC, Dual Type-A / Type-A Rear connector	11-14433	**$359.00**
6430202-6	10-32 VDC, Dual Type-A / Type-A Bottom connector	11-14434	**$359.00**
6430202-7	10-32 VDC, Single Type-C Rear connector	11-14435	**$232.95**
6430202-8	10-32 VDC, Single Type-C Bottom	11-14436	**$232.95**
6430202-9	10-32 VDC, Single Type-A Rear connector	11-14437	**$228.95**
6430202-10	10-32 VDC, Single Type-A Bottom connector	11-14438	**$219.95**
6430202-19	10-32 VDC, Single Type-A Rear connector, Lighted	11-14938	**$226.95**
6430202-17	10-32 VDC, Single Type-C Rear connector, Lighted	11-14939	**$237.95**
6430202-13	10-32 VDC, Dual Type-C / Type-C Rear connector, Lighted	11-14940	**$399.00**

MCI CONVERTERS

AmeriK-ing #	MCI #	Description	Part No.	Price
AK-551-9	6430120-1	Functional equivalent Different Connector	11-14270	**$395.00**
AK-551-9M	6430120-1	Functional, Equ., Same connector	11-14270	**$453.00**
AK-551-9M1	6430120-2	Functional, Equ., Same connector, remote feature	11-14449	**$386.00**
AK-551-9M2	6430120-1	Functional, Equ., Same connector	11-14270	**$386.00**

BATTPACK BATTERY BACKUP



The BattPack Battery Backup System can be used as an emergency/secondary power source for aircraft lighting. The 14V or 28V system will provide up to one hour or more of lighting for the FiberLite instrument lighting system (that uses LEDs light sources) or the Glow Strip (electroluminescent lamp) glare shield lighting system or for other low current draw lighting such internally lighted instruments.

14V - BP12V..... P/N 11-06595 ..... **$47.85**
28V - BP24V..... P/N 11-06596 ..... **$57.85**

DELUXE COCKPIT VOLTAGE CONVERTER

11-04330



DC-DC Converter, Device to reduce voltage from 28V to 12V. Allowing the user to operate 12V items in a 28/24V airplane. The device is fully electronic, no passive elements generating heat. It is fully protected and fused. A green LED indicates normal and abnormal conditions (overload). The unit is enclosed in a small precision machined aluminum box with integrated heatsink. Input is via a fused lighter plug and output is via a female light receptacle. Size: 1.3"x 1.3"x 2.3"; Weight: approx. 5.0 oz.

3 AMP.28-12V DC-DC Converter ..... P/N 11-04330 ..... **$58.75**
10 AMP.28-12V DC-DC Converter ..... P/N 11-04331 .... **$108.75**

Y-COUPLER – Heavy duty device that allows user to split the output of their cigarette lighter outlet in their airplane or to be used in conjunction with one of the above Cockpit Voltage Converters (running multiple items of one converter). This device is fuse protected (6.0A)

02YC Y-Coupler ..... P/N 11-00401 ..... **$17.75**

INVERTER – Simple solution for a 28 Volt airplane. Plug it in to the 28 Volt lighter socket and out comes 117 Volts. 2 AC sockets. Max Wattage is 800W. Over and undervoltage warnings. On-Off switch. All metal enclosure. Dimensions: 7" x 5" x 2". Weight: 2 lbs 4 oz.

110I 28-110V Inverter ..... P/N 11-00402 ..... **$88.75**

EXP BUS PRODUCTS



EXP TRAY EX-110- he EXP BUS mounting tray is the ultimate in quick build time savings. The tray comes Pre-punched, and pre-assembled with rocker switches prewired to the PC board. All the builder needs to do is to cut a single rectangular hole in the panel, connect the battery, alternator, and all of the load wires to the proper terminals on the EXP BUS2 PC board mounted in the chassis. 14V DC systems (not recommended for 28V aircraft). Replaces all but one circuit breaker in most homebuilt aircraft, and includes the master switch, master relay, and the avionics master switch. The avionics output bus provides six protected circuits, and automatically shuts off when the starter is engaged. Three master bus outputs operate items such as panel lights, gyros and engine instruments. Switched outputs include the alternator field, Beacon/ Strobe output, nav light output, aux fuel pump output, two landing light outputs, and two spares. All outputs are overload protected, eliminating the need for fuses or circuit breakers, and saving the labor of installing and wiring them up. P/N 11-00430 ..... **$418.00**



EXP-2V
P/N 11-00431

EXP 2V - he Expbus II is a lifesaver when wiring up your homebuilt project. The EXPBUS II is a complete electrical system on a special high current, printed circuit board. 14V DC systems (not recommended for 28V aircraft) For a small additional charge, we can configure your board with any size (1 to 11 amps) breakers in any position. Size: 7.8" long by 3" deep by 1.9" tall. Weight 0.8 lbs. P/N 11-00431 ..... **$299.00**



IND-2
P/N 11-00432

IND 2 - Annunciators for each solid state breaker on the EXP BUS * Over and undervoltage warning lights * Ammeter display * Instrument light dimmer circuit * Single ribbon cable installation to EXP Bus The Indicator module is an accessory for the EXP BUS DC LOAD CENTER. This optional accessory provides several enhancements to the basic load center, all mounted in a small panel mount module, 4.6 inches long, and 2 inches wide. The module extends 2 inches in depth, behind the panel. The module provides an annunciator output for each fused output on the LOAD CENTER, which illuminates if the circuit is tripped. It also provides OVER and UNDER VOLTAGE annunciators, an AMP-METER indicator, and a light dimmer circuit for the instrument lights.

P/N 11-00432 ..... **$134.95**



BRKT 2 - Mounting brackets to simplify mounting the PC board in the aircraft. Put things where you want them to be. Free Shipping on this item.

P/N 11-00433 ..... **$21.95**

EXP 110 Tray unlit x/ Battery Back up . P/N 11-08430 ..... **$469.95**

B&C HIGH/LOW VOLTAGE WARNING INDICATOR



The BC207 is a solid-state high/low voltage sensor which mounts behind the instrument panel, and provides a visual indication of abnormal bus voltage via an included panel-mounted warning light. When flashing, this light indicates bus voltage greater than 15.5 volts D.C. (or 31.0 volts D.C.); when steady, it indicates bus voltage below 12.5 volts D.C. (or 25.0 volts D.C.). Weight: 4.5 oz. Select the appropriate sensor below according to battery voltage.

BC207-1 OV/LV Sensor (14 volt) ..... P/N 07-06830 ..... **$98.75**
BC207-2 OV/LV Sensor (28 volt) ..... P/N 07-03435 ..... **$84.95**

KEY WEST REGULATOR



Advanced regulator/rectifier circuit provides steady 13.8 volt output regardless of load. Maximum output 220 watts, 16 amps. Accepts AC input from 15 to 100 volts. Can be used with AC strobe. **Features**: * Extremely clean filtered DC output * Electronics designed to deliver 16 amps producing 220 watts * Efficiency: No "consumer" or "dummy" load required for proper operation * A beautiful and rugged lightweight package weighs just 16 ounces and is 3.5 x 2.5 x 1 inch * Protection from the environment: complete epoxy encapsulation to insure all-season operation * Ease of installation: crimp type ring terminals and wiring schematics provided with every unit

P/N 11-03168 ..... **$62.75**

USB PANEL POWER ADAPTER



CRAZEDpilot USB Panel Mount provides a simple and convenient mounting option for dual USB power adapter with easy access and integrated dust seal. Can be driven with 6-30v input power source, so works great in either 12v or 24v aircraft!

P/N 11-14866 ..... **$19.85**

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LONESTAR PRODUCTS

LONE STAR DC-AC INVERTER KITS



Lone Star Aviation is proud to announce it's new PORTABLE INVERTER Kit to provide airborne or military vehicles with an (ac outlet) to operate low power devices on 115 or 220 AC voltages. The inverter kit includes an FAA -TSO Approved Power Adapter for 24vdc and a MIL C-5015 connector for 12 vdc systems, a 36 inch harness and pelican case for transporting to and from your base of operation. The Inverter Kit meets FAA TSO, MIL STD C-5015 qualified for panel power and UL safety requirements for the inverter's GFCI AC receptacle for operator safety.

Model No.	Input	Output	Part No.	Price
LS03-06302	12Vdc	115VAC 60Hz Pure Sine Wave	11-12998	**$725.00**
LS03-06304	24Vdc	115VAC 60Hz Pure Sine Wave	11-13001	**$725.00**

LONESTAR POWER ADAPTER TSO WITH USB



Power Adapter USB Socket. Just Plug in your USB socket into your Cigarette Lighter Power Adapter and get 5 volt USB power out. Perfect for charging cell phones, iPads, iPods, GPS, PDA, Laptop and many consumer electronic devices. This is a kit that comes with a FAA-TSO Approved Cigarette lighter power adapter and plug-in USB 5V converter.

12V .....P/N 11-13345 ..... **$169.85**
28V .....P/N 11-13346 ..... **$169.85**

LONE STAR USB CHARGER MULTI-PORT



Lone Star's USB Multi-Port can be ordered with 1, 2, or 3 USB ports. The USB circuit is designed to work with apple products, as well as android, and most other USB devices.
The USB Multi-Port Charger is compatible with both 12V and 24V aircraft and rotorcraft.

Description	Part No.	Price
Lonestar Usb Charger With 1 Port	11-12988	**$148.50**
Lonestar Usb Charger With 2 Ports	11-12989	**$245.95**
Lonestar Usb Charger With 3 Ports	11-12991	**$345.95**



LONE STAR DC BULK-HEAD FILTER

DC Bulk-Head Filter. DO-160D Testing Pending. Full feed thru design. .....P/N 11-08617 ..... **$159.95**



LONESTAR CONNECTOR KIT DC STEP DOWN CONVERTER

Connector Kit DC Step Down Converter with Cigarette Lighter Receptacle allows you to connect directly to one of the Down Converters (LS03-05003). Cable length is 36 inches. Lone Star Aviation's FAA-TSO approved • Charging Cell-SAT Phones • Portable radios • GPS, Back-up •And More!

P/N 11-08637 ..... **$128.75**

LONE STAR 90 DEGREE ADAPTER



Lone Star Aviation's new 90 degree adapter is made precisely from a tough and durable plastic and is designed to help in Avionics Cooling Fan installations in confined areas under the panel. This Item is made to fit our new 5/8" tubing.P/N 11-08623 ..... **$13.50**

LONE STAR STEP DOWN 24V TO 12V CONVERTER



With this TSO-C71 DC to DC Converter you can operate 12 Volt Radios, GPS's, and Electronic Devices in a 24 Volt Aircraft. Size: 6.0"W x 5.0"D x 1.75"H. Weight: 1.5 lbs. Color: Gold Anodized . Material: Aluminum Extrusion.

P/N 11-03309 ..... **$289.95**

FAST CHARGE DUAL USB CHARGER



Having a dedicated USB outlet is easier than using an adapter or the device's charger with an AC outlet. Install the charger in the nav-station or within a Contura switch panel. Microprocessors recognize the needs of your device and charges it as necessary. An integrated cover protects the outlets from dust and moisture while not in use. Make better use of the space at your helm by installing a practical USB charger.

P/N 11-16258 ..... **$43.70**

LONE STAR ALTITUDE SWITCHES



Altitude Switch is designed to turn on a circuit for various fixed wing and rotorcraft applications.
P/N 11-12996: • 12,000ft Set Point • actuates: 12,000 +/-500ft • deactuates: 10,000ft
P/N 11-12997: • 9,500ft Set Point • actuates: 9,500 +/-500ft • deactuates: 7,500ft.

12,000 Ft. Set Point .....P/N 11-12996 ..... **$725.00**
9,500 Ft. Set Point .....P/N 11-12997 ..... **$725.00**

LONE STAR DC CONVERTER



DC Converter, Dual Output. Dual Output Converter 12V, 3.3V Camera Systems and other low current dual voltage requirements. 12-24V Aircraft/ Rotorcraft. Output 1: 12V, 1A. Output 2: 3.3V, 0.5A. 9 Pin D-Sub, 2" x 1.5" .935"

P/N 11-12994 ..... **$395.95**

LONESTAR NYLON Y ADAPTER



Nylon 5/8" Y adapter for splitting airflow from one avionics cooling fan to two units.

P/N 11-08622 ..... **$16.95**

LONESTAR FILTER 70 AMP



70 amp filter attenuates EMI-RFI noise generated from alternator, generator systems, gear motors, blowers for a/c systems and other higher current noise sources. Can be used to filter the aircraft's avionics buss to filter RF, NAV, GPS, as well as other navigational equipment. The filter is FAA- PMA for certificated aircraft as well as for experimental aircraft. P/N 11-04849 .....**$249.95**

LONESTAR FILTER 100 AMP



100 amp filter (FEED THRU) (Fail Safe Design) attenuates both low and high frequency, (10hz to 30 mhz) of EMI-RFI noise generated from the aircraft's alternator systems to the aircraft's dc buss. This filter, (100 amp Fail Safe design) is used by OEM aircraft manufacturers to attenuate 100% of the on board noise before it penetrates the aircraft's dc buss. The filter is FAA- PMA pending for certificated aircraft but can be used on experimental aircraft. P/N 11-04850 .....**$349.95**

LONESTAR THE ELIMINATOR



The Eliminator is a low pass double (LC) PI type filter designed to suppress both low and high frequency line noise. The filter may be connected at the source of the noise or on the input of the effected component.

P/N 11-08055 .....**$148.95**

LONESTAR USB POWER CONVERTOR PLUG



USB 2 Amp Power Converter Plug (LS03-05021) is the updated model of the LS03-05020. It's the same small size but with even more power for onboard charging of iPads, iPhone, iPods, cell phones and most things that use USB power to charge. . P/N 11-10454 .....**$89.95**

SCOSCHE REVOLT 12W + 12W CIGARETTE USB CHARGER



reVOLT is the world's smallest yet most powerful car charger for USB powered devices. Each of the 2 USB ports packs 12 Watts (2.4A) of power to charge two iPads at once. reVOLT is low-profile and lightweight - perfect for any vehicle's power socket. This car charger packs colossal power into a modest frame, naming it the best USB car charger on the market today. This car charger allows you to charge 2 devices at once - even 2 iPads simultaneously. Plug in any combination of iPads, iPhones or iPods with your existing charge/sync cables.

P/N 11-13313 ..... **$24.95**

AIRCRAFT SPRUCE USB CAR CHARGER



Dual USB ports. Input: 12v-24v. Output: 5V / 2.1 amps. 1 3/4" x 2 1/2". Border lights up when charging. Works with any automobile electrical outlet.

P/N 13-16030 ..... **$6.50**

EA DUAL USB PANEL MOUNT CHARGING JACK



5.0 Volt Output. 4.2 Amp Dual USB. Panel Mount Charging Jack. Suitable for Experimental aircraft, cars, boats, motorcycle, RV, anywhere you need a charging jack. Add a power jack for your tablet, phone, or music player! P/N 11-13502 .....**$24.95**
Inverter Cable Kit.....P/N 11-13503 .....**$4.85**

EL

Prices Subject to Change Without Notice



CIGARETTE LIGHTER RECEPTACLE

This 12V female cigarette lighter receptacle is made from stainless steel and is ideal or homebuilt panels. 292568

P/N 11-01294 .....**$10.50**



LONESTAR DC CIGARETTE LIGHTER RECEPTACLE

Perfect for portable GPS systems, cell phone chargers, laptop power supplies, or anything else you would plug into your car during a road trip. 12V Aircraft: If your aircraft runs on 12V you will not need any extra equipment to operate 12V equipment, and it comes with a a rubber cap marked with DC12V. 24V Aircraft: Please note, you will need a 28V to 12V convertor to power most 12 volt consumer electronic devices.

Non TSO'd.....P/N 11-04862 ..... **$59.85**
TSO'd .....P/N 11-09432 ..... **$89.95**
DC Converter 28-14VDC TSO .....P/N 11-03309 ..... **$289.95**
SD Converter 24-13.8VDC TSO .....P/N 11-04894 ..... **$497.00**



LONE STAR APPLE IPAD LIGHTNING CABLES

Available in 2 meter Straight Cord or 1 meter Coiled Cord. Ruggedized, reinforced rubber jacket . For iPhone 5 and newer. For iPad 4 and newer.

2m Straight ..... P/N 11-12992 .....**$99.95**
1m Coiled ..... P/M 11-12993.....**$99.75**



LONE STAR RUGGEDIZED IPAD-USB CORDS

The Ruggedized apple to USB Coil Cord stretches from 20" to 29", with an apple specific connector on one end, with USB on the other. This cable is a perfect match with both Lone Star Aviation's USB plugs for Power Adapters and MS-USB panel mount USB receptacle.

USB to iPad Coil Cord 20"-29" ..... P/N 11-10699 .....**$62.80**
USB to iPad Cord (2M).....P/N 11-10698 .....**$56.75**
USB to iPad Cors (1M)q..... P/N 11-10697 .....**$49.50**



LONE STAR IPAD / IPHONE USB CHARGER KIT

This Kit includes a 28V to 5V Down Converter and a panel mount USB plug with Lone Star's proprietary circuit for use with apple products. This Kit also includes our converter connector kit and locking connectors for easy installation behind aircraft panels. Charging an iPad in flight has never been simpler or more reliable..... P/N 11-10588 .....**$698.00**



LONE STAR LED PANEL INDICATOR (DUAL COLOR)

The Dual color LED illuminates green for normal and red for a problem. Use for any (stand alone annunciation). • LED Panel Indicator: .625, .468 or alternate mounting • Dual Color - (3) wire Red LED 660nm, Green LED 525nm = .20ma • Wide angle 180 degrees. Note: Price listed below is for the LED Panel Indicator ONLY. You will need to purchase the Cyclone 21 Blower and the Fan Failure Warning Unit separately to complete the system.

P/N 11-10592 .....**$75.95**



LONE STAR NOISE FILTER EVALUATION KIT (LOW CURRENT)

Not sure what filter you need? Order a Filter Evaluation Kit. Kit includes Lone Star's most popular and widely used Filters; the Magneto Filter, Atlternator Filter, and the Eliminator Filter. P/N 11-08620 .....**$325.00**



LONE STAR NOISE FILTER EVALUATION KIT (HIGH CURRENT)

Not sure what filter will best solve your noise problem? Check out Lone Star's new High current filter Evaluation kit. This kit comes with 1 100 Amp filter, 1 70 amp filter, and 1 10 amp eliminator filter in a beautiful pelican micro case.

P/N 11-08621 .....**$765.00**

BELITE USB CHARGING PORTS



These ports are designed to support charging requirements up to 2.4 amps and also feature soft backlighting, easy installation, and are also compatible with Battery Charging (1.2) standards. These USB charging ports are easy to install and look great too. A demonstrator aircraft has been setup with a USB port on each side of the panel, so that pilot and passenger can independently operate USB devices without tangling to a central outlet location. They are available in a horizontal (5V/2.4A) or a vertical (5V/1A) installation motif.

Horizontal 2.4A.....P/N 10-06561 ..... **$79.95**
Vertical 1A .....P/N 10-06562 ..... **$49.95**



LONESTAR LED PRESS TO TEST INDICATORS

Lone Star Aviation's line of LED panel indicators are available in a RED, Green, or Amber lenses. The indicators are TESTED by a PRESS to TEST function. The panel indicators are available in 14V and 28V, and non-dimmable and dimmable versions. Are installed into a (.468 mounting hole)in the aircraft's instrument panel.
The indicator is a MS 25041 aluminum body and standard T1-3/4 led. Indicators are also available in 28vdc with standard led bulb as well as an FAA T1-3/4 bulb at 28vdc

Description	Color	Volt	Part No.	Price	Volt	Part No.	Price
Non-Dim	Red	14V	11-08768	**$49.95**	28V	11-08676	**$49.95**
Non-Dim	Green	14V	11-08769	**$49.95**	28V	11-08677	**$49.95**
Non-Dim	Amber	14V	11-08770	**$49.95**	28V	11-08678	**$49.95**
Dim	Red	14V	11-08764	**$59.95**	28V	11-08673	**$59.95**
Dim	Green	14V	11-08766	**$59.95**	28V	11-08674	**$59.95**
Dim	Amber	14V	11-08767	**$59.95**	28V	11-08675	**$59.95**



LONE STAR DC-AC INVERTER

Lone Star Aviation's new inverter line boasts cutting edge DC/AC 60Hz technology in addition to innovative circuitry to operate most DC-AC applications within the following markets, i.e. commercial, industrial, solar, aviation and military. The DC/AC inverter is a high reliability model that is mission ready and TSO approved for airborne applications.

500 Watt Inverter.....P/N 11-08632 ..... **$3,171.00**
1000 Watt Inverte .....P/N 11-08634 ..... **$4,675.00**

Accessories

Plug MS3106E18-9P 9 (For 500W Inverter)
P/N 11-08633 ..... **$150.00**
Plug MS3106E24-12S(For 1000W Inverter)
P/N 11-08635 ..... **$250.00**



LONESTAR GROUND LOOP FILTER

Designed to ELIMINATE onboard ground loop noise problems in an easy to use module. Plugs in between your portable device and your aircrafts audio system. Was designed with a low frequency isolation audio transformers that isolates normal audio from unbalanced AC noise interference. Incorporates RCA, 2.5mm and 3.5mm connectors that ensures compatibility with numerous consumer devices currently used in modern aircraft. Easy Plug and Play Installation, Approval Types: Form 337, Portable Device 1 year Limited Warranty Ultra small footprint Custom configurations Portable device P/N 11-09493 .....**$89.95**



LONESTAR VOLTAGE CONVERTERS

Lone Star Aviation's new 12V STEP-UP Converter is the smallest (3" x5" x 2"), most efficient (93-95%) and the most versatile STEP-UP aircraft converter in our industry today. RTCA/DO 160D tested to operate 28V NAC/COM radio equipment such as KX 155, KX 165, KY 196A, KY 196B, and Motorola VHF transceivers on 12V aircraft. Additional 28V electronic devices are HSI, cameras, audio panels, battery backup systems, etc. FAA Approved Under TSO-C71 Now Approved LS03-05002B-MS * FAA TSO-C71 Approved (Pending)

Step-up 14V DC to 28V DC Converter .....P/N 11-02888 .....**$449.95**
Step-down 24VDC to 12VDC Converter.....P/N 11-03309 .....**$289.95**
Connector Kit 5 Pin DB Style .....P/N 11-06001 .....**$59.95**



LONE STAR DC TO DC CONVERTER

Output Voltage	Output Current	Model No.	Part No.	Price
5.0 VDC	7.0C/7.5PA	LS03-05003-005	11-10700	**$468.95**
9.0 VDC	7.0C/7.5PA	LS03-05003-009	11-10589	**$498.75**
13.8 VDC	7.0C/7.5PA	LS03-05003-138	11-04894	**$497.00**
16.0 VDC	4.0C/4.5PA	LS03-05003-160	11-04895	**$499.95**
19.0 VDC	4.0C/4.5PA	LS03-05003-190	11-04898	**$499.95**



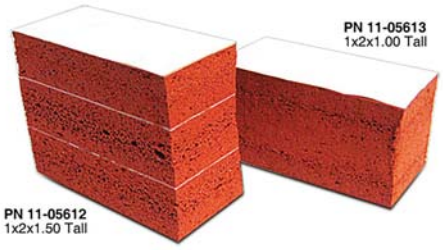
LONE STAR FAN FAILURE WARNING SYSTEM

The Fan Failure Warning system (FFW) was designed for Lone Star Aviation's Cyclone-21 (3) Port fan with a (3 wire) TTL 5v output. The FFW system will switch the dual color LED from green to red when a fan's RPM is reduced to less than 50% of the fans normal speed. The FFW, Fan Failure Warning system has an (optional circuit) designed to monitor the temperature of a remote electronics bay or entertainment equipment and will turn on a remote fan when the predetermined temperature has been reached.

12V Warning System.....P/N 11-13894 ..... **$385.95**
24V Warning System.....P/N 11-13895 ..... **$385.95**
Remote Temperature Switch.....P/N 11-13793 ..... **$99.95**
Remote Temperature Sensor.....P/N 11-13794 ..... **$99.95**

EL

BATTERY BOX BUMPER SEAL



Battery Box Bumper Seal. 1103M foam with sticky back. Mil Spec: AMS3195E
Bumper Seal 1" ..... P/N 11-05613..... **$4.95**

AIRCRAFT BATTERY HYDROMETER



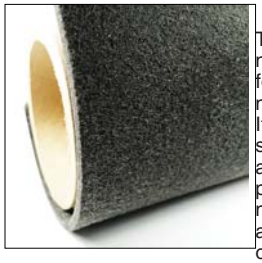
Special Tester designed for testing aircraft batteries. Requires only small amount of fluid & ideal for close quarters. Float calibrated from 1.100-1.300 Sp. Gr. in 5° intervals. ..... P/N 11-01674..... **$31.50**

AIRCRAFT BATTERY LOCK



Designed to disable the battery from the electrial system which cuts off all power to the aircraft unattended many pilots. However, many panel locks are easy to pick and pry open. The batter lock is constructed using a tough space age plastic polymer and a seven pin round ball bearing lock that is impossible to pick which in turn prevents aircaft theft and increases security.
P/N 11-02753 ..... **$336.00**

BATTERY MAT



The Battery Mat is the world's only acid neutralizing and absorbing mat designed for use beneath any lead-acid battery. Each mat is simple, efficient, and cost-effective. It's ideal for use with all aircraft, as well as standard and heavy duty equipment. The acid-neutralizing and absorbing fabric is patented and manufactured with recycle material in the U.S. Battery Mat absorbs and neutralizes battery acid that may leak or result from a "boil over", prevents corrosion, cushions vibration shock, is simple to use and install, and is safe to handle. Width: 12". Sold by linear ft. P/N 11-00170..... **$5.75 Ft**

GROUNDING BLOCK / TERMINAL BLOCK / BUSS BAR



Complete with a nickel-plated copper buss bar and stainless steel nuts with nylon lock washers, stainless steel flat and locking washes and 6 stainless steel screws (5 are 6/32 screws and one is 8/32 for the incoming ground/power). Each screw can accept up to four ring terminals by placing them back to back (see picture). Overall dimension is 4.25" long by .75 wide. P/N 11-13347 ..... **$36.75**

FPS PLUS - FLAP POSITIONING SYSTEM



The FPS-Plus is a full service, automatic, flap positioning system. This system operates similar to the "Cessna type flap systems" that many pilots were trained in. The pilot can easily go from one flap position to another with one quick press of the flap button. All flap stop positions (from 0 to 10, your choice) are easily, user programmable. This system is also fairly simple to retrofit it to your "already flying" aircraft.
The Plus feature of this system, allows you to program an elevator trim position for each flap position. Your elevator trim will be automatically adjusted, for every different flap setting that you choose. NO more manual tweaking of the elevator trim is needed for every different flight configuration.
The pilot can now pay more attention to the actual "flying the aircraft", rather than tweaking the correct amount of elevator trim for every different flight configuration. Flying is made much more enjoyable. If you desire to retract the flaps fully, all you have to do, is press the "flap up" button for more than 1 second. The flaps will be automatically retracted to their full up position. The elevator trim is also automatically adjusted to your cruise trim position.
Features: • Full Automatic Flap Positioning with or without "Automatic Elevator Trim Compensation" • Step and Proportional Modes • Designed for +12v and +24v Systems • Compatible with Most Motors and Indicators • Setup is Fully User Programmable • No Limit Switches to Install
Specifications: • The system will operate on +12Vdc or +24Vdc systems. • Maximum amperage for each motor, 10A. • Dimensions (overall) 3" x 5.75" x 1.25" • Footprint 3 x 5.75" • Mounting 2 holes in bottom flanges, 0.156" dia, 5.375" apart • Weight < 4oz.
FPS-Plus Reflex Operation -All features of this system are exactly the same as our FPS-Plus. The exception is, when you press the Flap Up Button for more than a second, it returns the flaps to the zero degree position, not "full up". This is an advantage when initiating a "go-around" and "touch and goes". It is also an advantage when your flaps are in any down position, and you want to return the flaps to the "take-off" position.
FPS-PLUS with Elev. Trim .....P/N 11-02980 ..... **$269.00**
FPS-PLUS without Elev. Trim .....P/N 11-02981 ..... **$189.00**
FPS - PLUS REFLEX.....P/N 11-06440 ..... **$284.00**

SEAL-ALL MINI FUSE / MICRO RELAY PANELS



Seal-All Mini Fuse Panel: • Holds 20 Mini Fuses (30A max output per contact) • Sealed cap cover and seals for wires to make it a weather tight unit • Compact size (4.44"H x 3.33"W) • Each row of 10 fuses is separately bused with #10-32 input studs (you can separate avionics and lighting circuits on separate busses and control power to them by relays) • Accepts wire size 22-12 gauge • Easy wiring (crimp terminal and push into hole on the backside) • Uses crimp terminals (sold separately based on wire size and accepts 22-12 ga wire) • Wire seals are included with the crimp terminals to make a weather tight seal • Available mounting bracket for easy mounting and wiring (sold separately) • Cavity plugs are available to seal any unused openings.
Seal-All Combination Mini Fuse and Micro Relay Panel: • Holds 10 Mini Fuses (30A max output per contact) and 5 Micro Relays (at 12V rated at 35A for SPST) • Sealed cap cover and seals for wires to make it a weather tight unit • Compact size (only 4.44"L x 3.33"W) • Row of fuses and relays are bused separately with #10-32 nickel plated brass input studs (you can separate essential and non-essential circuits and control power to them by relays) • Easy wiring (crimp terminal and push into hole on the backside) • Accepts wire size 22-12 gauge • Uses tangles terminals (sold separately based on wire size and includes seals) • Available mounting bracket for easy mounting and wiring (sold separately) • Wire seals available for every wire size (and cavity plugs for any unused openings).

Description	PN	Price
Rear Terminal Mini Fuse Panel	11-13348	$57.75
Rear Terminal Combo Mini Fuse & Micro Relay anel	11-13351	$54.75
Bracket Sold as Pair	11-13352	$19.85
Terminals 22-20ga with seals Red (10 terminals & 10 Seals)	11-13353	$9.50
Terminals 18-16ga with seals Purple (10 terminals & 10 Seals)	11-13354	$9.50
Terminals 16-14ga with seals Green (10 terminals & 10 Seals)	11-13355	$8.75
Terminals 14-12ga with seals Gray (10 terminals & 10 Seals)	11-13356	$9.50
Cavity Plug - 5 plugs	11-13357	$2.75
Terminal Removal Tool	11-13358	$16.85
Mini Fuse Gray 2 Amp Pack of 5 fuses	11-13359	$4.75
Mini Fuse Tan 5 Amp Pack of 5 fuses	11-13360	$4.75
Mini Fuse Brown 7.5 Amp Pack of 5 fuses	11-13361	$4.75
Mini Fuse Red 10 Amp Pack of 5 fuses	11-13362	$4.75
Mini Fuse Blue 15 Amp Pack of 5 fuses	11-13363	$4.75
Micro Relay 12 Volt AMP RATING NO-35/NC-- / SPST contact	11-13364	$7.50
AMP RATING NO-35/NC-25 / SPDT contact Micro Relay 12 Volt	11-13365	$7.50
Micro Relay 24 Volt AMP RATING NO-20/NC-15 / SPDT contact	11-13366	$7.50

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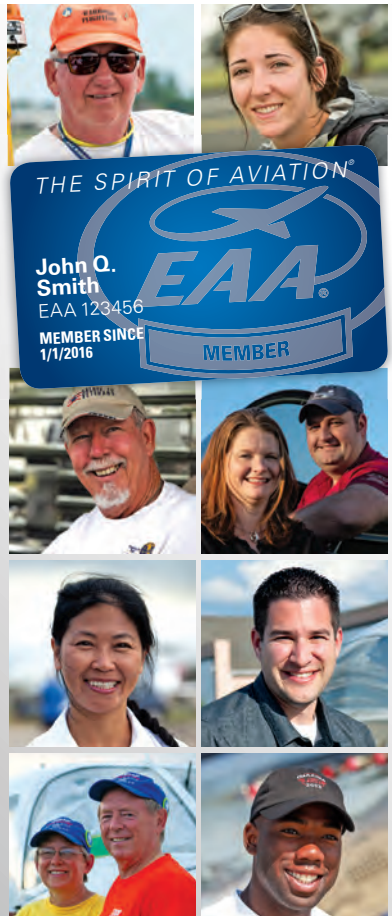
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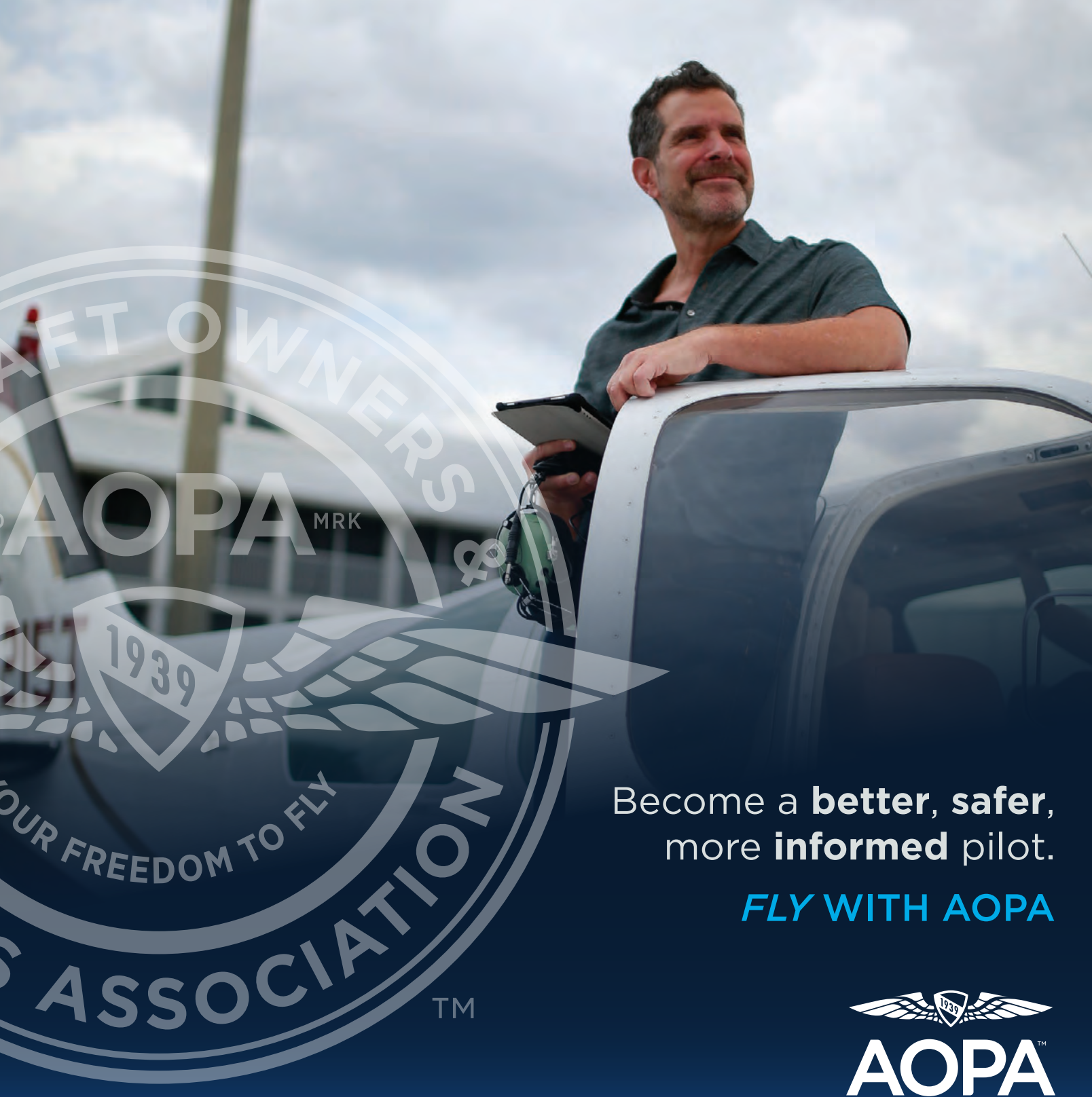
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Ultralight Adapters



PA-91

Bose X (6 Pin Lemo) to GA Adapter



PA-89B

GoPro HERO3/4/5 Audio Recorder Headset Adapter



PA-80S/HERO5

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POWER BUSS 2075



The Power Buss 2075 is an electronic device designed to control and monitor the electrical circuits in an aircraft. The device employs solid state PTC current limiting fuse devices that automatically remove power from a circuit if it becomes overloaded. Just like conventional circuit breakers, a tripped circuit can be reset by turning off the device for a few seconds, then turning it back on. If a circuit trips due to overload, the pilot will instantly hear a distinctive voice message in his headset, and through the built in speaker. The voice warning will continue until the pilot pushes the panel mounted switch, with built in light, stopping the voice and turning on the built in red light. This provides a visual indication of the tripped circuit. The red light remains illuminated as long as the fault exists. The power buss can be mounted anywhere behind the panel. the combination switch/light should be mounted in the panel, within the pilots normal scan. A separate buss is provided for the avionics. The Power Buss is designed for 12volt systems only. Maximum current on the board is 30 amps. Maximum current on any one circuit is 11 amps. The audio output is designed to connect to an unswitched input in an audio panel or a radio. **Note: This system is not FAA approved. It is intended for installation in Experimental category aircraft only.**

The Power Buss is available in two versions:

2075-A: Designed specifically for use in both fixed and retractable gear land aircrafts that are powered by Rotax engines. It incorporates PTC fuses and voice messages for the most common circuits used in these aircrafts. P/N 10-06264.....**$395.00**

2075-CL: Designed specifically for use in both fixed and retractable gear land aircrafts that are powered by either Lycoming or Continental aircraft engines. It incorporates PTC fuses and voice messages for the most common circuits used in these aircrafts.

P/N 11-10504.....**$395.00**

ELECTRONIC FLAP ACTUATOR / INDICATOR



The Electronic Flap Actuator (2071/2072) is an electronic module designed to automatically control an electrical flap actuator and provide visual readout of 3 or 4 flap positions. The device can be used with any electrical actuator providing the operating current is less than 8 amps at 12 volts. A 5K or 10K resistive sensor is required to provide a voltage readout of the actuator position. The control unit incorporates pushbutton switches with built in LED lights. The system can be easily calibrated to your flap system. Once calibrated, pushing any of the switches will activate the actuator and drive the flaps to the correct pre-defined position. When the flaps are at the correct position, the actuator will stop, and the LED in the correct switch will illuminate indicating that the flaps are in the correct position. Note: This system is not FAA approved. It is intended for installation in Experimental category aircraft only. The Electronic Flap Actuator is available with 3 flap position switches (full up, takeoff position, and full down) or 4 flap position switches (full up, 20 degrees, 40 degrees, and full down).

3 switch..... P/N 11-10502.....**$198.75**
4 switch..... P/N 11-07728.....**$185.00**

FLAP HANDLE



This flap handle is a well built, durable, and cost effective alternative to the plain round standard flap toggle switch that exists in most experimental aircraft. This unit is easily installed over the existing toggle switch with the included set screws. This unit is powder coated for a long lasting, durable finish.

Note: This is the Flap Handle OnlyFlap Handle Only

Flap Handle P/N 11-11337.....**$44.95**

Flap Handle and anti rotation plate that limits knob rotation and also provides a nice labeling of the flap handle..... P/N 11-11338.....**$89.95**

RELAY DECK



Two axis relay deck to be used for both elevator and aileron servos.

P/N 11-10512 .....**$106.75**

VINTAGE AN 8002 REPLICA RUBBER STICK GRIPS



Get a grip on authenticity! The “AN 8002” grip is back in 1” and 1-1/8” sizes. Used in Piper, Aeronca, Taylorcraft and many others from prewar to 1947 Correct grip for L– birds, looks great on homebuilts!

1 Inch..... P/N 11-12769.....**$57.75**
1-1/8 Inch..... P/N 11-12767.....**$57.75**

TOSTEN STICK GRIPS

Wired with 22 gauge wiring. 7/16 stainless steel shaft with custom machine bushings to fit any diameter shaft. Comfortable grip. Made with lightweight glass-filled Wellman nylon. Rotates easily to any position. Made in the USA. For use in Experimental Aircraft Only.

Model	Functions	Part No..	Price
 CS-2	Two function control stick Index trigger button Additional button underneath trigger Ambidextrous design	11-10508	**$109.00**
 CS-4	Four function control stick Two trigger buttons Two face buttons Ambidextrous design	11-10509	**$129.00**
 CS-6	Eight function control stick Four-way hat switch Trigger button and index button Ambidextrous design	11-10510	**$139.00**
 CS-8	Eight function control stick Four-way hat switch Two face buttons Trigger button and index button Ambidextrous design	11-10511	**$149.00**

INFINITY AEROSPACE LIGHTED RETRACT HANDLE WITH GEAR SWITCH



Canard and Non-Canard RED / GREEN lighted Retract Handle with DPDT Lever Lock Gear Switch (12 VDC / 7.5 amp, or 24 VDC / 4 amp)

Gear DN the handle LED light is GREEN; Gear in Transit or is Unsafe, or the Canard Retract Handle and Switch is in the Center OFF position, the LED light in the handle is RED; Gear UP the handle LED light is OFF, or BLUE (your choice).

The GREEN / RED LED light in the handle can be changed to different colors (such as GREEN / BLUE for amphibs), or GREEN / RED / BLUE, but GREEN / RED gear lights for retractable landing gear are standard colors in retractable planes. Pre-wired with 2 feet each of 22 gauge GREEN, RED, BLUE and BLACK wires.

Description	Part No.	Price
12 Volt Canard	11-12220	**$150.00**
12 Volt Non-Canard	11-12361	**$150.00**
24 Volt Canard	11-12221	**$150.00**
24 Volt Non-Canard Purple	11-12362	**$150.00**
Infinity Lighted Gear Switch With Solid State Black Box	11-12925	**$219.95**
Infinity Lighted Gear Switch With Solid State Black Box	11-12926	**$219.95**

PISTOL GRIP COVER



These Grip Covers are made of soft, durable red neoprene and feature a high quality zipper to wrap snugly around most stick grips. These covers help prevent UV damage to your stick grip. In addition to protecting against dirt and other foreign object damage, these covers also prevent switch damage when entering cockpits or when working under instrument panels.

P/N 11-13088 .....**$15.50**

STICK GRIPS

INFINITY MILITARY STICK GRIPS



P/N 11-00031

Infinity Aerospace designed these grips with safety, comfort, functionality, durability and aesthetics in mind. The ergonomic design is contoured to the shape of your fingers and includes a fatigue reducing hand rest at the base. The non-glare matte black finish is abrasion and impact resistant for long life, yet easily removable, maintainable & repairable. Matching customized right & left hand models available. All the major cockpit functions can be at your finger tips. Thousands have already been installed in over 50 models of aircraft. Features: • 6" long • fits stick OD's from 5/8" to 1-1/4" • Includes 3 ft of shielded cable w/17 conductors. Color coded pre-wiring & installation schematic • Made from lightweight high impact, durable high temp. tolerant flame retardant & flash resistant injected ABS material • Wt: 12 oz. • Easy removal for maintenance, customizing or repair.

Description	Part No.	Price
Military Stick Grip A/C with Flap/Brake (Right)	11-00031	**$199.95**
Military Stick Grip A/C with Flap/Brake (Left)	11-00032	**$199.95**
Military Stick Grip A/C without Flap/Brake (R)	11-00033	**$199.95**
Military Stick Grip A/C without Flap/Brake (L)	11-00034	**$199.95**
Military Stick Grip with Spoilers (Right)	11-00036	**$199.50**
Military Stick Grip with Spoilers (Left)	11-00667	**$199.75**
Replacement Switches for extra customizing:		
Momentary push-button switch	11-00218	**$13.95**
ON/OFF (8636) SPDT push-button	11-00219	**$13.95**
Toggle [spring loaded-to-center – ON/OFF/ON]	11-00220	**$13.95**
Toggle [ON/Center OFF/Momentary ON–ON/OFF/ON]	11-00221	**$13.95**
Spacers/Adapters:		
1˝ OD x 3/4˝ ID (i.e.-for Lancairs & canard tubes)	11-00222	**$26.70**
1˝ OD x 7/8˝ ID (i.e.-for Glasairs & RV co-pilot tubes)	11-00223	**$24.95**
Infinity Switch with China Hat (Right)	11-04757	**$23.65**

TEAKWOOD STANDARD PISTOL GRIPS



Teak wood is beautiful, absorbs sweat, preventing any sticky slime build-up. Grips come in standard, master and ultra styles in left and right hand. The standard grip comes with a push button on its top with a special dust proof cover. Normally is used for a push-to-talk button, is normally open switch and is good for 250,000 cycles minimum. The master grip has larger head to accom- modate a 4-way trim switch & push-to-talk button.

The trim switch is the same one used with M.A.C. systems. The ultra grip has a larger surface to accommodate the 4-way trim and a auto-pilot and/or air brake with the push-to-talk located near the tip of the index finger. The ultra can handle a total of four switches, when using the air brake, in its head. Configurations can also be custom designed. All grips come with buttons and a 3/4" or 1" standard bore. Larger bores available.

Right Hand 3/4 inch..... P/N 11-02910 ..... **$61.75**
Right Hand 1 inch..... P/N 11-02910-1 ..... **$61.75**
Left Hand 3/4 inch ..... P/N 11-02915 ..... **$61.75**
Left Hand 1 inch ..... P/N 11-02915-1 ..... **$61.75**

HOMEBUILT CONTROL STICKS

These homebuilt control grips are made of high-strength urethane plastic, finish painted in matte black and come complete with all necessary hardware (AN screw, nut, washers). Available unbored or bored to accept 7/8", 1", or 1-1/8" diameter tubing.



All of these grips (except unbored) are available w/PTT Switch at $129.75 Add -1 to end of part number for PTT.

Grip	Bore	Part No.	Price
Right	Unbored	11-01010	**$89.95**
Right	7/8" Bore	11-01015	**$95.95**
Right	1" Bore	11-01020	**$99.75**
Right	1-1/8" Bore	11-01025	**$95.75**
Left	Unbored	11-01010-L	**$95.75**
Left	7/8" Bore	11-01015-L	**$89.95**
Left	1" Bore	11-01020-L	**$91.75**
Left	1-1/8" Bore	11-01025-L	**$89.95**
Neutral	Unbored	11-02010	**$89.95**
Neutral	7/8" Bore	11-02015	**$94.90**
Neutral	1" Bore	11-02016	**$89.95**
Neutral	1-1/8" Bore	11-02017	**$94.75**

RAC STICK GRIPS



G101 G205 G207 G301

Ray Allen Company G1 and G2 series stick grips use modern, flush fitting push-button switches to control one or two axis electric trim. When one grip is used, these switches can be wired directly to RAC trim servos. This eliminates the need to wire relays in your trim system. However, if two grips are used, you will need either relays or a switch to transfer the control of trims from one grip to the other. The grip itself is made of semi-soft UV and oil resistant foam. The upper switch housing is made of nylon with a lightly textured finish.

The **G101** grip (4.75" height) features a momentary contact switch on top that can be used as a PTT button. (Old MAC Model G1). P/N 11-09930 $39.95

The **G205** grip (5.25" height) has 5 functions which include a PTT and a 4 SPDT,momentary contact switches. These switches are rated at 5 amps and can be used for other purposes. (Old MAC Model G5) P/N 11-09920.... **$124.75**

The **G207** grip (5.4"height) has to additional momentary contact push-button switches mounted on top that can be used for controlling functions on avionics, auto-pilot, etc. (Old MAC Model G7) P/N 11-09925.... **$169.00**

The **G301** stick grip feature four individual SPDT momentary contact switches to control one or two axis electric trim. The switches are triggered via a traditonal 4-way "hat" type activator. 6.5" (165 mm) tall. P/N 11-08644..... **$62.75**

The **G303** stick grip has two trim switches, a faceplate slotted vertically for 1-axis trim and a PTT switch. P/N 11-02538.... **$123.95**

The **G305** stick grip has 4 trim switches, a faceplate slotted vertically and horizontall for 2-axis trim and PTT switch. P/N 11-02539.... **$154.75**

The **G307** stick grip has 4 trim switches, a faceplate slotted vertically and horizontall for 2-axis trim and PTT switch. P/N 11-02540.... **$169.00**

The basic **G401** stick grip includes a momentary contact, 50 mA, SPST Push-To-Talk (PTT) switch located on the front side of the grip. Featuring the same comfortable foam grip as the G2 Series. P/N 11-16321..... **$59.00**

The **G403** stick grip features a momentary contact, 50 mA, SPST Push-To-Talk (PTT) switch located on the front side of the grip, and two Auxiliary pushbutton SPDT switches. The pushbutton switches can be replaced with four different style toggle switches. P/N 11-16322.... **$119.00**

The **G405** stick grip features a momentary contact, 50 mA, SPST Push-To-Talk (PTT) switch located on the front side of the grip, and four SPST switches. P/N 11-16323.... **$149.00**

The **G407** stick grip features a PTT switch, four SPST switches and two Auxiliary pushbutton SPDT switches. P/N 11-14708.... **$169.00**

The G407F stick grip features a momentary contact, 50 mA, SPST Push-To-Talk (PTT) switch located on the front side of the grip, a unique Four way switch and two Auxiliary pushbutton SPDT switches. P/N 11-16326.... **$169.00**

Ray Allen stick grips are designed to fit any stick size up to 1" in diameter with the use of spacers. Two nylon spacer are included with each grip enabling easy installation on 3/4", 7/8" and 1" sticks. All Ray Allen grips come as a complete kit and include pre-cut and stripped, Teflon insulated wire. A die-cut label sheet is also supplied in the G205, G207, G403, G405, G407 and G407F grips.

FLIGHT GRIPS



#2

The control stick grips from Flight Grip are modular in design to allow maximum flexibility when specifying switches to control the various electrical items on your aircraft and for ease of installation and assembly. Two "off-the-shelf" configurations are listed below. The Model #2 grip provides for control of two functions using the rocker trigger switch. The trigger switch features momentary contact either side of center, with spring return to center OFF action. The Model #4 grip is the same as the Model #2, but adds two push-button switches for thumb activation in the top cap of the grip. The switch mounted closest to the thumb rest is a latching type (push on – push off), and the remaining switch is a momentary type. Left hand grips are available with all the same switch options. Grips are designed to fit 1-1/8" OD control sticks and adapter bushings are available to adapt to 1", 7/8" and ¾" OD control sticks.

#2 (Right Hand-2 Functions) ..... P/N 11-02000 ..... **$128.75**
#4 (Right Hand-4 Functions) ..... P/N 11-02050 ..... **$149.95**
#2L (Left Hand-2 Functions) ..... P/N 11-06753 ..... **$136.75**
#4L (Left Hand-4 Functions) ..... P/N 11-06754 ..... **$169.95**
Adapter Bushing 1"..... P/N 11-06755 ..... **$18.65**
Adapter Bushing 7/8"..... P/N 11-06756 ..... **$18.65**
Adapter Bushing 3/4"..... P/N 11-06757 ..... **$18.65**



RUBBER STICK GRIPS

Rubberized urethane with granular like non-slip surface.

7/8" I.D. Stick Grip..... P/N 11-00100..... **$16.55 ea**
1" I.D. Stick Grip..... P/N 11-00101..... **$17.85 ea**
1-1/8" I.D. Stick Grip ..... P/N 11-00102..... **$16.85 ea**

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Prices Subject to Change Without Notice

RAC TRIM SYSTEMS

RAC ELECTRIC TRIM SERVOS

Ray Allen trim systems were designed specifically for experimental aircraft. The servos are small enough to fit in individual control surfaces, or can be used with lightweight springs acting directly on the control system. They operate on 12-14 VDC and use a jackshaft (T2 series) or a jackscrew (T3 series), locking in any position when electrical power is off. Complete trim systems include a servo, RS2 rocker switch, RP4 LED indicators, and a clevis/pushrod kit. The T4-5 servo does not have a compatible indicator. The B6 actuator series shares the same footprint as the T2 / T3 servo, and interfaces with the C2 series clevis via brass output shafts. Though weighing only 5.2 oz., their max operating thrust is 50 lbs.



T2-10A

T2/T3 SERVO SPECIFICATIONS

Operating Voltage	12-14 VDC
No Load Current	150 ma
Weight	4oz. (113 g)
Max Thrust	40 lbs. (18 kg)
Max Operating Thrust	20 lbs. (0.9 kg)



T4-5



BC-7C

T4-5 SERVO SPECIFICATIONS

Operating Voltage	12-14 VDC
No Load Current	75 ma
Weight	2.5 oz. (71 g)
Max Thrust	30 lbs. (13.5 kg)
Length	2.25" (57mm)
Width	2.25" (57mm)
Height	0.77" (20mm)

***T2-7A = exact replacement for MAC 4A servo.*T2-10A = exact replacement for MAC 6A servo. *T3-12A = exact replacement for MAC 8A servo. *T4-5 is exact replacement for the Mac S9 servo.**

RAC SERVO SYSTEMS

RAC Servo System	Part Number	Output Shaft		Price ea.
		Movement	Travel Time	
T2-7A	11-11505	0.7 in.	10 sec.	$294.95
T2-10A	11-11605	1.0 in.	16 sec.	$289.00
T3-12A	11-11615	1.2 in.	19 sec.	$306.00
T4-5	11-11620	0.5 in.	15 sec.	$278.95

SERVOS ONLY

RAC Servo System	Part Number	Output Shaft		Price ea.
		Movement	Travel Time	
T2-7A	11-02048	0.7 in.	10 sec.	$153.75
T2-10A	11-02058	1.0 in.	16 sec.	$153.75
T3-12A	11-02065	1.2 in.	19 sec.	$183.75
T4-5	11-02066	0.5 in.	15 sec.	$243.95

MINIATURE LINEAR ACTUATORS

RAC Servo System	Part Number	Output Shaft		Price ea.
		Movement	Travel Time	
B6-7C	11-16311	0.7 in.	12 sec.	$189.00
B6-7T	11-16312	0.7 in.	12 sec.	$189.00
B6-11C	11-16313	1.1 in.	19 sec.	$189.00
B6-11T	11-16314	1.1 in.	19 sec.	$189.00

***T2-7A = exact replacement for MAC 4A servo.** **T2-10A = exact replacement for MAC 6A servo.**
***T3-12A = exact replacement for MAC 8A servo.** **T4-5 is exact replacement for the Mac S9 servo.**

RAC SWITCHES



RS2 ROCKER SWITCH - Very positive snap action in 2 directions and returns to a center off position. It was designed specifically for Ray Allen trim systems. It is wired to connect both power leads to ground when the rocker is released. This eliminates motor coasting & allows very precise trimming. The RS2 switch is rated at 1amp. The faceplate measures 1.75" (44mm) x 1.0" (25mm) x 1.47" (37mm) deep. Included with trim systems or can be purchase separately. Self adhesive labels are not included. Sold separately. P/N 11-02035 ..... **$31.70**

ROS-4 FOUR-WAY SWITCH - This compact multi-action switch can be installed inside your control stick grip to activate both elevator and aileron trims. ROS-4 has a SPST action so it must be used in conjunction with a relay deck to operate Ray Allen servos. Rated at 1 amp. P/N 11-02075 ..... **$104.75**





RANS ELEVATOR TRIM SYSTEM

Rans Elevator Trim System features a trim tab actuated by a push-pull wire. By turning the trim wheel, the wire moves the trim tab. The system has the look and feel of a standard aircraft trim wheel. The trim tab is constructed of sheet aluminum and can be adapted to the trailing edge of many homebuilts and ultralights. The trim tab is sized for both low & high speed aircraft and since it is mechanical, requires no battery or power source other than the pilot's hands.

Trim Sys. less Tab (no panel or flap lever mount) .. P/N 11-09955 ... **$250.95**
Trim Sys. with Lower Panel ..... P/N 11-09960 ... **$308.00**
Trim Sys. Flap Mount ..... P/N 11-09965 ... **$326.00**
Trim Sys. without Wheel ..... P/N 11-09970 ... **$179.75**

RAC INDICATORS/SENSORS/ACCESSORIES



RP4 LED POSITION INDICATOR – The RP4 LED position indicator is designed to be installed in the cockpit and give an indication of the servo output shaft position. The 10 LEDs are the brightest available for superior visibility in sunlight, but can be dimmed for night flight. It can be installed horizontally or vertically.
P/N 11-16285 ..... **$109.85**



POSITION INDICATOR/ROCKER SWITCH LABELS Finish off your panel with these high quality labels. Rocker switches and needle indicators require a LARGE label, LED indicators use a SMALL label. Elev 1 shows trim down at top of label.

Rudder - Large	P/N 11-01819	**$0.55**
Rudder - Small	P/N 11-01820	**$0.55**
Aileron - Large	P/N 11-01816	**$0.55**
Aileron - Small	P/N 11-01815	**$0.65**
Elev 1 - Large	P/N 11-01822	**$0.55**
Elev 1 - Small	P/N 11-01821	**$0.55**
Wing Flap - Large	P/N 11-01818	**$0.55**
Wing Flap - Small	P/N 11-01817	**$0.55**
Cowl Flap - Large	P/N 11-01576	**$0.55**
Cowl Flap - Small	P/N 11-01814	**$0.55**



POS-12 POSITION SENSOR – When combined with a Ray Allen indicator, this sensor can be used to measure the position of wing flaps, cowl flaps, or many other mechanisms.Small enough to be installed anywhere, size: 2.7"l x 0.8"w x 0.5"h. (note: T2 & T3 servos have their own built-in sensors) 1.2" travel.
P/N 11-01321 ..... **$34.50**

POS-5 POSITION SENSOR - Same as POS-12 Sensor. Measuring only 2.7"(69 mm) x .5"(13 mm) x .8"(20 mm) , it's small enough to be installed almost anywhere. 5"(13 mm) travel. P/N 11-08092 ..... **$37.90**



REL-2 SERVO RELAY DECK – This device converts the momentary contact action of the ROS-4 4-way switch, or any SPST pushbutton switch, into a DPDT action that is necessary to operate Ray Allen servos. You will need one of these relay decks for each servo in your installation. Measures 1.6" (40 mm) x 1.8" (49 mm) x 1.1" (28 mm).
P/N 11-05312 ..... **$52.75**



SPD-1 SERVO SPEED CONTROL – Enables you to slow the speed of your trim servo to suit your individual installation. Size: 2"x 0.5"x 0.8". P/N 11-02078 ..... **$53.75**



REG-1 12V REGULATOR – Enable you to operate servos and indicators in aircraft having 28V electrical systems. Converts all input voltages up to 35V to 12V. Capable of supplying 1 amp of current allowing you to operate 2 trim systems simultaneously. Size: 2"x 0.5"x 0.8".
P/N 11-02036 ..... **$53.80**



RAY ALLEN BEZEL ONLY WITH HARDWARE- -They make an excellent addition to any instrument panel. The bezel was designed to integrate a professional appearing label near the switch.The bezel measures 1.25" (32 mm) x 1.35" (34 mm).
P/N 11-08642 **$13.50**



RAC CLEVIS / PUSHROD KITS – Contains two threaded clevis forks, one 7" stainless steel pushrod and clevis pin hardware. The Ray Allen clevis/pushrod kit is included with Ray Allen trim systems, or can be purchased separately.

RAC PN	Part Number	Compatible Unit	Thread	Price
RC8-7	11-02040	T2/T3 Servos	8/32"	$31.70
RC8-7T4	11-02042	T4 Servo	8/32"	$17.95
RC8	11-02041	T2/T3 Servos	8/32"	$17.50
RC10	11-08643	T2/T3 Servos	10/32"	$16.50
C2-8	11-16318	B6 Actuator	8/32"	$15.00
C2-10	11-16319	B6 Actuator	10/32"	$15.00



WC2 5-WIRE TEFLON® INSTALLATION CABLE – This durable, flexible wire cable is highly recommended for Ray Allen installations. 5 separate color coded, 26-gage, 19-strand, silver-plated, FEP Teflon® insulated wires inside a tough, all Teflon® sheathing.

20 ft. roll ..... P/N 11-01577 ..... **$29.85**
25 ft. roll ..... P/N 11-01578 ..... **$37.50**
50 ft. roll ..... P/N 11-01579 ..... **$74.65**

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RAC BEZEL SWITCHES – STICK GRIPS

RAC - RBS SERIES BEZEL SWITCHES

An excellent addition to any instrument panel. The bezel measures 1.25"w x 1.35"h. A die-cut label sheet is purchased separately. The switches are SPST. They have screw terminals and are rated at 15 amps. Specify Toggle (RBS-T11) or Pushbutton (RBS-P11) when ordering. The Ray Allen Gear Bezel Switch (RBS-GS) is the same custom bezel as above combined with SPDT retract gear toggle switch. The switch is rated at 15 amps and has a pull to unlock feature preventing accidental engagement. The Gear Bezel Switch comes with the labels pre-installed.

RAC Part No.	Description	Part No.	Price
RBS-T11	Bezel Switch - Toggle	11-01364	**$22.50**
RBS-P11	Bezel Switch - Push Button	11-01365	**$21.85**
RBS-GS	Bezel Gear Switch	11-01366	**$87.90**
RBS-L1	Bezel Switch label sheet	11-01367	**$4.99**





LANDING LIGHT	CABIN LIGHTS	BATTERY MASTER	ALTERNATE AIR	OFF
NAV LIGHTS	PANEL LIGHTS	AVIONICS MASTER	INVERTER	OFF
ROTATING BEACON	PULSE LIGHT	ALTERNATOR	CARB HEAT	OFF
STROBE LIGHTS	TAXI LIGHT	AUTOPILOT	ON	OFF
STARTER	DIMMER	PITOT HEAT	ON	OFF
ENGAGE	IGNITION No. 1	HYDRAULIC PUMP	OFF	OFF
FLAPS UP	IGNITION No. 2	LOW BOOST	ON	OFF
FLAPS DN	FUEL PUMP	HIGH BOOST	ON	OFF
CABIN FAN	AVIONICS MASTER A	BOOST PUMP	ON	OFF
CABIN AIR COLD	AVIONICS MASTER B	STANDBY ALTERNATOR	ON	OFF
CABIN AIR HOT	LEFT MAGNETO	TRIM MASTER	OFF	OFF
OXYGEN	RIGHT MAGNETO	PARKING BRAKE	OFF	OFF

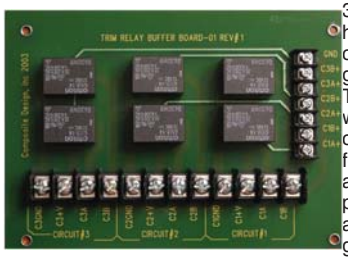
SINGLE AXIS TRIM RELAY BOARD



These Trim Relay Boards allow control of an aircraft's trim motors from the typical switches found in most stick grips. As the switches in the grips are too small to handle the motor loads and usually do not have the required number of poles, the 'TRB' offers a simple, elegant solution that is easy to wire and understand. The boards have a per axis rating of 10A at 12 volts. 4.00"L x 2.50"W x 1.00"H.

12V .....P/N 11-09849 .....**$54.95**
24V .....P/N 11-13714 .....**$54.95**

3 AXIS TRIM RELAY BOARD



3 Axis trim relay and buffer board has been designed to allow easy control of trim motors from small grip mounted or remote switches. Three Axis control is possible with each of the circuits being configured in a double throw format. "Off" circuit conditions apply ground to both motor wires providing an effective braking actions. Board will work with single or winding DC motors. Other remote controls are possible such as auto pilot disconnect or recognition lights and more. Relays are continuous DC rated at 10 Amps. Dimensions are 5.6"L x 4"W x 1.0"H

P/N 11-02043 .....**$134.95**



TRIM SWITCHES

TRIM SWITCH CA100-1 - The CA100-1 switch is used on a certified aircraft. It uses MIL-SPEC switches (SPST) and precision machined from aircraft aluminum and will not crack or break like cheap plastic switches. It has a nice tactile click action.

P/N 11-07355.....**$249.00**

TRIM SPEED CONTROLS



A trim motor that moves too fast can be distracting and dangerous in a high performance aircraft. The Trim Speed Control module lets you adjust the speed of a motor in trim sensitive applications. It has also been used in many 24 volt aircraft that are equipped with 12 volt trim motors. The module installs in-line in an existing trim system with only four connections and requires no external power supply. Trim speed is easily set on the module as required. This unit does not generate any noise during operation and draws zero current when not in use.

Example part selection - 24 volt aircraft with a small 12 volt trim motor would need a TSC24-LC.

There are four options available:

TSC12-LC 12/14 volt operation 3A continuous - 7A surge
P/N 11-11561 .....**$69.95**
TSC24-LC 24/28 volt operation 3A continuous - 7A surge
P/N 11-11562 .....**$75.95**
TSC12-HC 12/14 volt operation 5A continuous - 7A surge
P/N 11-11563 .....**$102.95**
TSC24-HC 24/28 volt operation 5A continuous - 7A surge
P/N 11-11564 .....**$107.95**

CUSTOM TEAK WOOD AIRCRAFT GRIPS



Teak wood is beautiful, absorbs sweat, preventing any sticky slime build-up. Grips come in standard, master and ultra styles in left and right hand. The standard grip comes with a push button on its top with a special dust proof cover. Normally is used for a push-to-talk button, is normally open switch and is good for 250,000 cycles minimum. The master grip has larger head to accommodate a 4-way trim switch & push-to-talk button. The trim switch is the same one used with M.A.C. systems. The ultra grip has a larger surface to accommodate the 4-way trim and a auto-pilot and/or air brake with the push-to-talk located near the tip of the index finger. The ultra can handle a total of four switches, when using the air brake, in its head. Configurations can also be custom designed. All grips come with buttons and a 3/4", 7/8", 1" or 1-1/8" standard bore. Larger bores available.

Comes with Push-to-Talk, Cooley Hat, Flap, Autopilot and Radio Flip Flop.

VISIT WWW.AIRCRATSPRUCE.COM FOR COMPLETE LISTING OF GRIPS AND PRICING.

PIONEER WOODEN CONTROL GRIP WITH PTT



Hand made with beautiful black walnut wood harvested in the Northwest. These deluxe quality wooden control grips are shaped and sanded by hand to a baby smooth finish. The finish is a super hard polyurethand gloss finish that revals the finest luxury cars.

Large advantage of this design is it's FLEXIBILITY as the switch face is adaptable to nearly all avionics packages and it is serviceable , with removable switch plate for repair. Each grip comes completely pre-wired with up to 4 switches installed as shown; including the "COOLIE HAT" trim, PTT, TCAD Mute, and the A/P Disconnect switch. (The switch designation may be your choice.) The grips shown are designed to fit all aircraft with your choice of control stick shaft sizes which are 1" , 7/8" , & 3/4".

Description	Orientation	Part No.	Price
Pioneer Wooden Control Grip - 4 Button - Pre-Wired	Right Hand	11-12175	**$289.95**
Pioneer Wooden Control Grip - 4 Button - Pre-Wired	Left Hand	11-12226	**$289.95**
Pioneer Wooden Control Grip - PTT Only - Pre-Wired	Right Hand	11-12176	**$219.00**
Pioneer Wooden Control Grip - PTT Only - Pre-Wired	Left Hand	11-12225	**$219.00**
Pioneer Deluxe Walnut Grip with PTT Engraving and 4 Switches	---	11-12332	**$327.75**

EL

Prices Subject to Change Without Notice

SMARTSTART MODULE



An electronic control module that controls the operation of the engine starter system. Improves the safety and security of push-button or key-switch starting systems by providing an interlocked and time limited operation of the engine starter. SmartStart controls standard aviation starter contactors and provides simple integration of control stick switch or panel mounted start switches. SmartStart includes inputs for interlock and arming switches and provides a 1 minute timer for activating the starter contactor and includes an armed LED that indicates when the engine may be started. Helps avoid unintentional activation of the engine starting system. Available with an optional airspeed switch that ensures in flight restarting of the engine may be accomplished at anytime without the need to press the arming button. Hidden arming switch provides improved anti-theft protection. Door/canopy interlock provides improved safety. Compatible with standard keyed mag/starter switch.

Description	Part No.	Price
Smartstart Module	11-08499	**$67.50**
SmartStart Module Kit - Includes: module, wiring harness, and airspeed switch	11-08502	**$148.50**
Accessories		
Description	**Part No.**	**Price**
Smartstart Wiring Harness	11-08501	**$40.50**
Airspeed Switch 40 Knot for 2 speed function	11-08665	**$47.50**

INTELLIGENT POWER STABILIZER



Provides aircraft bus voltage surge and sag protection for the connected electrical equipment. The IPS system allows electronic equipment such as engine monitors, EFIS and GPS's to be operational before and during engine starting. Used with aircraft engine monitors it ensures the pilot can monitor critical engine operating parameters such as oil pressure during the engine starting process. Ensures the connected electronic equipment is provided with a stabilized source of power even when the aircraft battery voltage drops significantly. Additionally provides surge protection by actively clamping the regulated output voltage. Features a panel mounted low voltage warning light which may be used to provide a pilot warning when the aircraft bus voltage falls below 12 volts.

4 amp ..... P/N 11-08495 ..... **$265.50**
8 amp ..... P/N 11-08496 ..... **$328.50**

INTELLIGENT POWER STABILIZER 24 VOLTS, 5 AMP



The Intelligent Power Stabilizer, IPS, is an electronic power converter for critical electrical equipment found in general aviation aircraft. The IPS system provides aircraft bus voltage surge and sag protection for the connected electrical equipment. The IPS system will operate over an input voltage range from 10 volts to 30 volts and provides a regulated output voltage of 24 volts. The IPS system allows electronic equipment such as engine monitors, EFIS and GPS's and radios to be operational before and during engine starting. This important feature allows the pilot to load flight plan data into the aircraft GPS prior to starting the engine, thereby saving fuel and operating expense. When used with aircraft engine monitors it ensures the pilot can monitor critical engine operating parameters such as oil pressure during the engine starting process. P/N 11-09712 ..... **$296.00**

INTELLIGENT LIGHTING CONTROLLER



Designed specifically to operate the lighting circuits used in homebuilt aircraft. Provides control of up to 4 lighting circuits plus dimmable control of up to 3 channels of instrument and cabin lights. The 4 lighting circuits may be used to control landing lights, taxi lights, strobe lights and navigation lights. Each channel is independently powered and controlled. Provides a wig-wag function between two of the lighting circuits. Each dimmable channel may include incandescent or LED lighting up to 1 amp. **Specifications**: • Input Voltage: 10-30 volts DC • Output Voltage: 4- Switched circuit rated at 10 amps each, 3 - Dimmed circuits rated 1 amp each • Dimmers: True DC:DC converter with full power filtering and regulated 2-12 volt outputs • Inputs: All switch inputs are low current closures to +voltage • Wig-Wag: 150 cycles/minute between channel 1&2; 1 minute warm-up time • Wiring: Standard 15-pin D-sub connector (male on controller) for connection to switching panel. • Enclosure: Overall dimensions 4.7" x 3.7" x 1.2"; Cast aluminum • Weight: 1.0 lb P/N 11-08497 ..... **$346.50**

UNIVERSAL SWITCH-SPDT AIRSPEED KIT



Universal switch airspeed kit (USW-1) includes an ASW-1 airspeed switch and a Universal Switch-SPDT controller. This combination of components allows for the switching of electrical loads up to 10 amps and up to 30 volts based on aircraft speed. The airspeed set point is factory calibrated to 100 knots, however, it may be field adjusted to switch at any speed between 55 and140 knots. Provides both a normally open and a normally closed contact for controlling any electrical load up to 10 amps. The system works with aircraft power systems from 10-30 volts. P/N 11-08498 ..... **$85.50**

TCW SAFETY-TRIM SERVO CONTROLLER



An electronic speed control system for standard electric trim servos found on many homebuilt aircraft. It replaces other speed controllers and relay modules with an electronic solution that resolves issues such as run-away trim and failure to operate conditions. **Features**: Very simple wiring, no extra parts needed for pilot and co-pilot trim switches • Designed for standard electric trim servos, such as the Ray Allen T2 & T3 series • Short circuit proof, reverse polarity protected • 1 axis, 2 axis models available • For Experimental aircraft only NOT TSO'd • Made in USA -- patented **Specifications**: • Input voltage: 10-30 volts DC • Output voltage: User adjustable 6-12 volts DC 1 amp maximum • Enclosure: Overall dimensions 5.7" x 2.5" x 1.5" • Weight: 6oz.

Description	Part No.	Price
Safety-Trim Single Axis Servo Controller	11-08506	**$166.50**
Safety-Trim Single Axis, 2 Speed Servo Controller	11-08529	**$220.50**
Safety-Trim Dual Axis Servo Controller	11-08530	**$256.50**
Safety-Trim Dual Axis, 2 Speed Servo Controller	11-08531	**$310.50**
Accessories		
Description	**Part No.**	**Price**
Safety-trim 8 ft wiring harness for single axis controller	11-08532	**$61.99**
Safety-trim 8 ft wiring harness for dual axis controller	11-08533	**$76.50**
Airspeed Switch 100 Knot for triggering 2 speed function	11-08534	**$44.10**



TCW CONTROL VALVE SERVO KIT

Fully proportional linear actuator servo for valves and dampers: Ideal for: Heater flapper doors, Oil cooler control, Alternate air door, Ventilation dampers

P/N 11-11298 ..... **$210.95**



TCW CONTROL VALVE SERVO BUTTERFLY VALVE

Butterfly Valve for oil coolers works with the TCW Control Valve Servo Kit.

P/N 11-11299 ..... **$69.75**



TCW INTEGRATED BACK UP BATTERY SYSTEM

The Integrated Back-up Battery System provides back-up power to critical electronics such as EFIS, GPS, Navigators, Radios, Autopilots and Engine monitors. The IBBS is an fully automatic system that combines a Li-FE-PO4 battery pack, a smart charger and switching logic in one convenient package. The IBBS provides an engineered solution to enable an endurance bus for critical electrical loads found in today's aircraft. It simplifies wiring and installation of a source of back-up power by integrating all the key elements into a single enclosure. The IBBS system is an FAA approved article produced exclusively by TCW Technologies, LLC under TSO-C179(a). Compliant with DO-311 & DO-160.

3AH ..... P/N 11-15479 ..... **$575.00**
6AH ..... P/N 11-15480 ..... **$875.00**

TCW INTELLIGENT FLAP CONTROL



Intelligent Flap Controller (IFC) is an electronic controller designed specifically to operate DC motor actuators, particularly the Van's Aircraft series of Flap Actuators used in RV type homebuilt aircraft. IFC connects to the standard up-off-(down) switches commonly used to control flap operation and directly drives a Van's flap actuator. IFC provides Vfe protection by sensing airspeed and preventing flap deployment above a set airspeed. IFC allows for Pilot and Co-pilot flap switches and resolves the possible conflicts if the switches are operated in opposite directions. IFC requires NO flap position sensor and is fully compatible with Safety-Trim servo controllers. Features: • Protects against flap deployment above Vfem • Dual Inputs: Allows for Pilot and Co-Pilot side flap switches • Uses the standard Up-off-Down flap switch or the Infinity stick grip • Controls the standard Van's flap actuator • Eliminates the need for a flap positioning sensor • Eliminates flap motor run-on associated with traditional relay system • Very easy to use, UP switch drives flaps UP, Down switch drives flaps Down. Great for tandem aircraft ! P/N 11-13462 ..... **$214.95**



ELECTROLYTIC CAPACITOR

Electrolytic Capacitor - 22, 000 uF 25V and absolute requirement to prevent regulator spikes on Rotax, Jabiru and other engines, the manufacturer recommend installing the electrolytic capacitor in nearly every installation to help protect your radio and other avionics from over-voltage.

P/N 11-07992 ..... **$56.85**

IGNITION SWITCHES – LABEL PRINTER



11-03169



11-03170

ACS KEYED IGNITION SWITCHES

MFG BY ACS PRODUCTS CO.

These fine quality switches are being used in many aircraft. The switch housing is now machined from billet aluminum which makes this switch 25% lighter. They provide "ON" and "OFF" electrical control of broth magnetos on single engine aircraft. The key-operated switches mount from the rear of the panel in a 7/8" dia. hole. Available with or without starter position.
Experimental aircraft only or 337 Form required for Production aircraft. Made in the U.S.A.

A-510-5 Experimental, without Starter Position., Supplied with switch plate and two keys. (diode not required)
P/N 11-03169 ..... **$130.80**

A-510-2 FAA/PMA with Starter Position., Supplied with switch plate two keys. (diode included)
P/N 11-03170 ..... **$144.75**



ACS IGNITION SWITCH AND LOCK SETS

MODEL NO. A-510-5K, Includes ignition switch without starter position, two aircraft locks (one door and one baggage lock)* and two keys mated to ignition switch and locks. (Diode not required)
P/N 11-03171 ..... **$155.75**

MODEL NO. A-510-2K, Includes ignition switch with starter position, two aircraft locks (one door and one baggage lock)* two keys mated to ignition switch and locks . (diode included)
P/N 11-03172 ..... **$174.95**

* Baggage lock may be modified to second door lock if preferred.



Part No. 11-03668



Part No. 11-03667

ACS IGNITION SWITCH PLATES

Plate without start - A-2255-A1 ..... P/N 11-03668 ..... **$1.75**
Plate With start - A-2255-A ..... P/N 11-03667 ..... **$1.75**



P/N 11-01600

ACS DOOR AND BAGGAGE LOCK SETS

The door and baggage locks furnished with the ignition switches above are also available separately. Set of two locks (one door and one baggage lock) furnished with one key mated to both locks. The baggage lock may be used as second door lock if preferred. P/N 11-01600 ..... **$39.50**
ACS Double Sided Blank Key uncut with black boot
P/N 05-03666 ..... **$5.50**
ACS Cut Key with boot (specify key #) ..... P/N 05-04103 ..... **$7.95**



ACS LEVER TYPE IGNITION SWITCH

A-510-1 Lever Type - Twist-Knob Without Starter Position. (diode not required)
P/N 11-03176 ..... **$153.75**

ACS STARTER SOLENOID DIODE ASSEMBLY

This is required for all new A-510-2 and A-510-2K ignition switches for compliance with ACS Service Bulletin SB92-01.
Diode Assembly for Starter Solenoid with one or Two Coil Contacts
P/N 16050-2 ..... **$8.50**

ACS IGNITION SWITCH SERVICE KIT

Consists of replacement internal switch contacts, lubricant, diode assembly, and terminal board as required for compliance with ACS Ignition Switch Service Bulletin SB92-01. Kit A-3650-2 contains diode assembly for starter solenoids with one or two coil contacts.
Kit No. A-3650-2 ..... **$16.85**



BENDIX IGNITION SWITCHES

MODEL NO. 10-357290-1, Without Starter Position. Includes two keys. Furnished with Switch Plate **$387.50**
MODEL NO. 10-357200-1, With Starter Position. Includes two keys. Furnished with Switch Plate **$463.00**
MODEL NO. 10-357210-1, With push to start feature. Includes two keys. Furnished with Switch Plate.. **$542.00**



10-126676 **10-51127**

BENDIX SWITCH PLATES -

Without Starter Position..... Switch Plate No. 10-51127 ..... **$4.55**
With Starter Position..... Switch Plate No .10-126676 ..... **$5.28**



LABELWORKS LABEL PRINTER

The LW-PX350 is a low-cost, portable wire marking, barcode and general identification label printer up to 3/4" (18 mm) wide. Identify wires and equipment, organize tool cribs, identify storage bins, make safety labels, tag assets and more. With special-function hot keys and automatic cutter, this easy-to-use label maker offers extraordinary flexibility and power at an affordable price.
With the LW-PX350, you can print on variety of materials such as; magnetic tape, heat shrink tube, and super strong adhesive tapes. Best of all, the LW-PX350 is backed by the LABELWORKS PX lifetime warranty.
P/N 11-15517 ..... **$187.95**

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ELECTRONIC IGNITION COMMANDER



The Electronic Ignition Commander provides information and control solutions for experimental aircraft powered by Lycoming and Continental aircraft engines WHICH UTILIZE THE P-MAG ELECTRONIC IGNITION. 2 1/4" Standard Instrument Display.

Features: • Continuous verification of timing mark synchronization and a Preflight screen that reports the timing synchronization and condition of the ignition harnesses and spark plugs. • Monitor E/P-mag operation. • Three user definable timing map shifts in addition to the default A & B curves. • Useful for running at high altitudes, auto fuel, or when it is desirable to use a different than standard timing curve. • Dimmable screen for night flight. • Sunlight readable Organic LED display with no viewing angle restrictions. • Configurable tachometer with Hobbs meter function. • Pilot adjustable RED line with multiple YELLOW RPM Ranges. • Configurable LED warning light when running in YELLOW restricted ranges. • Standard tachometer display with optional Manifold Pressure. • Remote update capability allows you to update you EICommander from any computer.

2-1/4" Standard Instrument..... P/N 11-10041.....**$600.00**



BENDIX STARTING VIBRATORS

Part Number	Description	Used with Ignition System	Price
10-176487-121	12V DC	S-200, S-600, S-700	**$529.00**
10-357487-241	24V DC	S-200, S-600, S-700	**$819.00**
10-176487-122	12V DC	S-1200	**$529.85**
10-357487-242	24V DC	S-1200	**$816.00**
10-176485-121	12V DC W/ Relay	S-200, S-600, S-700	**$1,694.34**
10-176485-241	24V DC W/ Relay	S-200, S-600, S-700	**$2,066.23**
10-176485-242	24V DC W/ Relay	S-1200	**$2,065.00**

CARLING SWITCHES AND COVERS



Carling' sealed V-Series Contura switches are well known for their cutting edge design, high quality, maximum performance and unmatched reliability. These switches are a staple in the marine and transportation industries and have passed a range of environmental, corrosion, temperature, vibration, shock and sealing tests including MIL Std 202F, MIL Std 510.1, UL 1500, ISO 8846, IEC 60529 and BS 5490 among others, making them one of the most rugged and reliable switches ever manufactured. **Features**: • Certified to IP66/68 with dual seals around lamps and rocker stem. • Silver plated butt contact mechanism provides reliability up to and beyond 100K electrical cycles • Greaseless construction withstands temperature extremes down to -40 C • The switch accommodates up to 10 terminals and endless illumination and circuit options. • The switch connector allows the user to preload FQC terminals for ease of assembly. • Numerous choices of removable rockers allow for style change without having to retest or re-qualify the switch base.



Steps	Model No.	Description	Contact	Part No.	Price
1. Pick Your Switches	V1D1-S00B	On-Off No Light	SPST	11-15079	**$7.95**
	VLD1-S00B	(On)-Off-(On) No Light	DPDT	11-15080	**$16.00**
	V8D1S00B	(On)-Off-(On) No Light	SPDT	11-15081	**$9.86**
	VJD1-S00B	On-Off-On No Light	DPDT	11-15082	**$13.00**
	V6D1-D66B	On-Off-On No Light	SPDT	11-15083	**$13.50**
	V1D1-B60B	On-Off White Light	SPST	11-15084	**$9.50**
	V2D1-S00B	(On)-Off White Light	SPST	11-15085	**$9.84**
	VJD1-D66B	On-Off-On White Light	DPDT	11-15086	**$21.50**
	VLD1-A60B	(On)-Off-(On) White Light	DPDT	11-15087	**$21.90**
	V1D1-G66B	On-Off White Light	SPST	11-15088	**$14.95**
	V2D1-A60B	(On)-Off White Light	SPST	11-15089	**$11.20**
	V4D1-A60B	On-On White Light	SPDT	11-15090	**$23.34**
	V7D1-A60B	On-Off-(On) White Light	SPDT	11-15091	**$23.40**
	VJD2-U66B	On-Off-On White Light	DPDT	11-15092	**$29.03**
	V1D1-GCCB	On-Off Red Light	SPST	11-15093	**$20.50**
	V2D1-ACOB	(On)-Off Red Light	SPST	11-15094	**$22.69**
	VJD2-ACOB	On-Off-On Red Light		11-15095	**$36.45**
	VLD1-ACOB	(On)-Off-(On) Red Light	DPDT	11-15096	**$30.21**
	V1D1-GXXB	On-Off Blue Light	SPST	11-15097	**$29.50**
	V2D1-AXOB	(On)-Off Blue Light	SPST	11-15098	**$22.90**
	VJD2-UXXB	On-Off-On Blue Light	DPDT	11-15099	**$39.87**
	VLD1-AXOB	(On)-Off-(On) Blue Light	DPDT	11-15100	**$31.36**
2. Pick Your Covers	--	Oxygen	--	11-15101	**$15.00**
	--	Alternator	--	11-15103	**$17.50**
	--	Autopilot	--	11-15105	**$17.50**
	--	Avionics	--	11-15107	**$17.50**
	--	Battery Master Avionics	--	11-15109	**$17.50**
	--	Red Blank	--	11-15111	**$17.50**
	--	Black Blank	--	11-15113	**$17.50**
	--	Trim	--	11-15115	**$15.00**
	--	Generator	--	11-15117	**$17.50**
	--	Landing	--	11-15119	**$17.50**
	--	Nav	--	11-15121	**$17.50**
	--	Pitot Heat	--	11-15123	**$17.50**
	--	Nav/Pos	--	11-15127	**$17.50**
	--	Strobe	--	11-15129	**$17.50**
	--	Taxi Custom Switch	--	11-15131	**$17.50**
	--	Glass Panel Avionics	--	11-15151	**$17.50**
	--	Fan	--	11-15153	**$15.00**
	--	Light	--	11-15155	**$17.50**
	--	Up/Down	--	11-15157	**$17.50**
	--	Defrost	--	11-15159	**$17.50**
	--	Air Conditioning	--	11-15161	**$17.50**
	--	Boost Pump	--	11-15163	**$17.50**
	--	Cabin Light	--	11-15165	**$17.50**
	--	Camera	--	11-15167	**$17.50**
3. Pick Your Brackets	--	End	--	11-15139	**$3.80**
	--	Middle	--	11-15141	**$3.80**
	--	Single	--	11-15143	**$3.90**
4. Pick Your Mounts	44385	VHP Mounting Panel Plug	--	11-15449	**$1.65**

KLIXON 7270-5 CIRCUIT BREAKERS



Klixon 7270 series circuit breakers were designed to utilize less space behind the panel while protecting wire and cable in aircraft and ground support equipment on 120 VAC, 400 Hz or 30 VDC systems. Inherently resistant to shock and vibration, the Klixon disc element is capable of calibration within close tolerances throughout the service life of the breaker. **Features**: Trip–free operation, Snap–acting thermal element, Small size, Light weight, MIL-C-5809 qualified, High interrupting capacity, Typical use: Aircraft and ground support equipment. **Specifications**: Vibration: 10G minimum, 50–500 Hz (other vibration levels available). Mechanical Shock: 30G. Acceleration: 10G. Weight: 39 grams maximum (7270-1 and 7271-8). Interrupt Current: 4,000 amps at 30 VDC;3,500 amps at 120 VAC, 400 Hz. Endurance: 5,000 cycles: 120 VAC. 400 Hz, inductive;5,000 cycles: 120 VAC 400 Hz, resistive;5,000 cycles: 30 VDC, inductive;2,500 cycles: 30 VDC, resistive;5,000 cycles: Mechanical, no load.

Description	Current Rating	Part No.	Price
7270-5-3	3 amps	11-08344	**$207.85**
7270-5-5	5 amps	11-08345	**$207.85**
7270-5-7.5	7.5 amps	11-08346	**$207.85**
7270-5-10	10 amps	11-08347	**$189.75**
7270-5-15	15 amps	11-08348	**$207.85**
7270-5-20	20 amps	11-08349	**$207.85**
7270-5-25	25 amps	11-08350	**$205.95**
7270-5-30	30 amps	11-08351	**$206.95**
7270-5-35	35 amps	11-08352	**$233.95**

KLIXON 7274-2 CIRCUIT BREAKERS



Klixon 7274 series are small, lightweight, low amperage devices that are specifically designed to protect aircraft/aerospace cable and components in airborne vehicles and equipment. The commercial grade version is the Klixon 7277 series. The 7274 features a trip–free, indicating reset button and is available in standard ratings from ½ to 20 amps. A "wiping action" contact design assures low voltage drop, faster trip time and high reliability in low voltage applications. They are available in standard ratings from ½ to 20 amps. A water resistant panel seal designed to fit over the push button actuator is available for applications that require this type of protection. **Features:** Uses minimum space, Light weight, Trip–free, MIL-C-5809 qualified, Low amp, High vibration resistance, Typical use: Military airborne vehicle and equipment protection. **Specifications:** MS#: MS26574-1.5. Vibration: 10G minimum, 50–500 Hz (other vibration levels available). Mechanical Shock: 35G. Acceleration: 10G. Weight: 7274-2 (MS 26574): 28 grams maximum; 7274-4 (MS 26574 A): 28 grams maximum; 7274-11 (MS 22073): 33 grams maximum; 7274-69 (MS 22073V): 33 grams; 7274-70 (MS 26474L): 33 grams. Interrupt Current: 0.50–5 amps: unlimited at 28 VDC; 7.50–15 amps: 2,000 amps at 28 VDC; 0.50–1.50 amps: unlimited at 120 VAC, 400 Hz; 2–5 amps: 800 amps at 120 VAC, 400 Hz; 7.50–20 amps: 500 amps at 120 VAC, 400 Hz. Endurance: 2,500 cycles: 120 VAC, 400 Hz inductive; 5,000 cycles: 120 VAC, 400 Hz resistive; 2,500 cycles: 30 VDC inductive; 5,000 cycles: 30 VDC resistive; 10,000 cycles: Mechanical, no load

Description	Current Rating	Part No.	Price
7274-1	1.0 amps	7274-2-1	**$19.95**
7274-2-1.5	1.5 amps	11-08353	**$19.95**
7274-2-2	2 amps	11-08354	**$19.95**
7274-2-2.5	2.5 amps	11-08355	**$19.90**
7274-2-3	3 amps	11-08356	**$19.95**
7274-2-4	4 amps	11-08357	**$19.95**
7274-2-5	5 amps	11-08358	**$19.95**
7274-2-7.5	7.5 amps	11-08359	**$19.95**
7274-2-10	10 amps	11-08360	**$19.90**
7274-2-15	15 amps	11-08361	**$19.95**
7274-2-20	20 amps	11-08362	**$19.95**

KLIXON 3TC7 CIRCUIT BREAKER



A lightweight, high performance, non–ambient temperature compensated circuit breaker. The series features a trip–free design that prevents the circuit breaker from being closed manually on overload. **Features**: Miniature size, Light weight, Trip–free design, Current rating: 5 amps, AS58091 qualified (MS25244), High vibration resistance, Typical use: Aircraft, avionics and electrical systems. **Specifications**: MS25244-5. Voltage Drop: 0.25. Vibration: 10G. Mechanical Shock: 30G at peak. Acceleration: 10G. Weight: 38.9g. Operating Altitude: 65,000 ft

Description	Current Rating	Part No.	Price
3TC7-5	5 amps	11-08374	**$56.75**
3TC7-7.5	7.5 amps	11-08375	**$56.75**
3TC7-10	10 amps	11-08376	**$57.75**
3TC7-15	15 amps	11-08377	**$57.75**
3TC7-20	20 amps	11-08378	**$56.75**
3TC7-25	25 amps	11-08379	**$60.75**
3TC7-30	30 amps	11-08380	**$53.75**
3TC7-35	35 amps	11-08381	**$57.75**

KLIXON 2TC2 CIRCUIT BREAKER



Their light weight and small size make them especially well suited for aircraft, avionics and electronic systems. The Klixon trademark has set the standard for aerospace circuit breakers and the TC series offers the endurance and reliability required by exacting military specifications. The 2TC series breaker ratings are coordinated so any rating will trip before another rating twice its capacity in the event of a fault. of up to 6,000 amps let–thru current. This results in improved overall equipment performance since only the smallest faulted circuit is interrupted, while larger circuits remain operational. Ambient compensated circuit breakers let designers specify smaller gauge wire where the circuit breaker and wiring are exposed to different ambient temperatures. They are especially suited for application where ambient temperature exceeds the 160°F (71°C) maximum of non–ambient compensated thermal circuit breakers. The TC series may be applied where operating temperatures are as high as 250°F (121°C) with no derating of the circuit breaker. This eliminates the need for cooling air and allows substantial weight, space, and cost savings. The complete line of TC series circuit breakers is trip–free. The circuit breaker cannot be maintained closed during an overload even with the actuator button held closed. For its miniature size, the 2TC series offers unusually high current interrupting capacity. Overloads can be safely interrupted without affecting calibration or operating performance in the standard 2TC series for: • Overloads up to 6,000 amps at 28 VDC • Overloads of 2,000–3,500 amps at 120 VAC, 400 Hz. **Features**: Miniature size, Light weight, Trip–free design, High vibration resistance, High interrupting capacity, Coordinated ratings, AS58091 qualified (Also: Military Approvals, FAA PMA), Typical end use: Aircraft power distribution systems **Specifications**: Vibration 10G minimum, 50–500 Hz (other vibration levels available) Mechanical Shock 50G. Acceleration 10G

Description	Current Rating	Part No.	Price
2TC2-1	1 amps	11-08382	**$19.95**
2TC2-2	2 amps	11-08383	**$19.95**
2TC2-2-1/2	2.5 amps	11-08384	**$19.95**
2TC2-3	3 amps	11-08385	**$19.95**
2TC2-4	4 amps	11-08386	**$19.95**
2TC2-5	5 amps	11-08387	**$19.95**
2TC2-7.5	7.5 amps	11-08388	**$19.95**
2TC2-10	10 amps	11-08390	**$19.95**
2TC2-15	15 amps	11-08394	**$19.95**
2TC2-20	20 amps	11-08395	**$19.95**
2TC2-25	25 amps	11-08396	**$19.95**

KLIXON 6752100-100 CIRCUIT BREAKERS



Klixon 6752-100 series thermal–magnetic circuit breakers are designed and manufactured to meet stringent military standards with the reliability of the 6752 design. The 6752-100 is similar to the 6752-12 in size, and includes current ratings ranging from 50 to 100 amps.

The higher interrupting capacity, vibration resistance and longer cycling life of the 6752-100 series exceed previous military standards. In addition, the 6752-100 series provide ambient compensation, fault coordination of all ratings an option for auxiliary circuits. The 6752-100 series circuit breakers maintain their performance capabilities by means of a thermal compensator in the temperature range of -40°C to 70°C.

A deionizing grid and magnetic assist enable the 6752-100 series to successfully interrupt four fault currents of 6,000 amperes — two at sea level and two at 60,000 feet — on either a 120 VAC, 400 Hz system or a 30 VDC system.

Features: Proven reliability and performance of the 6752 series circuit breaker, Trip–free design, Circuit protection unaffected by temperature fluctuations MIL-C-5809 qualified, Ambient compensated, High vibration resistance, High interrupting capacity: 6,000 amps, Typical use: Military, **Specifications:** Vibration: 10G, 50–2,000 Hz (other vibration levels available). Mechanical Shock: 30G. Acceleration: 10G. Weight: 113.6 gram (0.25 pound) maximum. Interrupt Current: 120VAC, 400 Hz: 3,500 amps; 28 VDC: 6,000 amps. Endurance: 5,000 cycles: 120 VAC, 400 Hz inductive;5,000 cycles: 120 VAC, 400 Hz resistive; 2,500 cycles: 28 VDC, 400 Hz inductive; 5,000 cycles: 28 VDC, 400 Hz resistive; 5,000 cycles: Mechanical, no load

Description	Current Rating	Part No.	Price
6752100-50	50 amps	11-08397	**$196.85**
6752100-60	60 amps	11-08398	**$196.85**
2752100-70	70 amps	11-08399	**$196.85**
6752100-75	75 amps	11-08400	**$196.85**
6752100-80	80 amps	11-08401	**$196.85**
6752100-90	90 amps	11-08402	**$196.85**
6752100-100	100 amps	11-08403	**$196.85**

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Prices Subject to Change Without Notice

KLIXON 7270 & 7271 CIRCUIT BREAKERS



The Klixon 7270/7271 series circuit breakers were designed to utilize less behind panel space while protecting wire and cable in aircraft and ground support equipment on either 120 VAC, 400 Hz or 30 VDC systems. The units are available with neck mounting (7270-1 and 7271-8) or standard cover plate (7270-7 and 7271-3). In each of these Klixon circuit breakers, the bi-metallic element assures uniform current distribution throughout its responsive area. This design reduces current density at the critical areas, resulting in an element having a much higher interrupting capability than conventional design. Inherently resistant to shock and vibration, the Klixon disc element is capable of precise calibration settings and will retain the initial calibration within close tolerances throughout the service life of the breaker. Both circuit breakers have conventional actuator action; i.e., the toggle actuator on the 7270 moves to the OFF position for trip indication and the button the 7271 pops out. A standard black button with a white collar is used.

FEATURES: • Trip-free • Snap-acting Thermal Element • Simplicity of Design • Lightweight • High Rupture Capacity - 3500 Amps, 120 VAC, 400 Hz 4000 Amps, 30 VDC • Small Size

Part No.	Price
7270-1-3	$154.75
7270-1-5	$154.75
7270-1-7.5	$156.85
7270-1-10	$154.75
7270-1-15	$154.75
7270-1-20	$154.75
7270-1-25	$154.75
7270-1-30	$154.75
7270-1-35	$154.75
7270-7-3	$210.95
7270-7-5	$207.95
7270-7-7.5	$229.95

Part No.	Price
7270-7-10	$206.95
7270-7-15	$206.95
7270-7-20	$206.95
7270-7-30	$206.95
7270-7-35	$206.95
7271-3-3	$152.75
7271-3-5	$155.85
7271-3-7.5	$152.90
7271-3-10	$206.95
7271-3-15	$155.75
7271-3-20	$155.75

Part No.	Price
7271-3-25	$155.75
7271-3-35	$168.75
7271-8-3	$162.75
7271-8-5	$141.75
7271-8-71/2	$144.99
7271-8-10	$139.85
7271-8-15	$141.75
7271-8-20	$141.75
7271-8-25	$139.85
7271-8-30	$139.85
7271-8-35	$139.85

The last dash no. in the Part Number is the Amperage rating

KLIXON 7277 CIRCUIT BREAKERS



The 7277 series circuit breakers is physically and electrically identical to the 7274-2 style circuit breaker, with the exception that the 7277 series has wider calibration limits. Originally developed as an alternative to slow blow fuses, the trip free 7277 is used extensively as primary electrical circuit protection on general aviation aircraft. The wider calibration limits of the 7277 has also resulted in applications including protection for data processing and telecommunications equipment, computers, flight simulators, construction, material handling and other industrial electronic equipment.

FEATURES: The 7277 series is designed for applications that do not require the tighter performance characteristics and approvals of our military circuit breakers. • Small size • Light Weight • Inexpensive Auxiliary switch 7277-1 Only Longer Push Buttons 7277-5 Only

Temp.	Min Ult	Max Ult	Trip Time - Seconds		
°C	Traip	Trip	200%	500%	1000%
+25	110%	150%	2-35	.15-1.75	.028-.8

**** Performance characteristics and dimensions are equivalent to 7274 Calibration: 1/2 - 20 amps****

Part No.	Price
7277-5-1	$33.50
7277-5-2	$33.50
7277-5-3	$32.75
7277-5-4	$33.50
7277-5-5	$33.50
7277-5-7.5	$33.50
7277-5-10	$33.50
7277-5-15	$33.50
7277-1-1	$34.50

7277-1-2	$34.85
Part No.	**Price**
7277-1-3	$34.85
7277-1-4	$35.50
7277-1-7.5	$34.85
7277-1-10	$34.85
7277-1-15	$34.50
7277-2-1/2	$104.95
7277-2-3/4	$19.95
7277-2-1	$19.95
7277-2-1.5	$19.95

7277-2-2	$19.95
Part No.	**Price**
7277-2-2.5	$19.95
7277-2-3	$19.95
7277-2-4	$19.95
7277-2-5	$19.95
7277-2-7.5	$19.95
7277-2-10	$19.95
7277-2-15	$19.95
7277-2-20	$19.95

ELECTRICAL PLUG CONNECTORS



Make your panel a "plug and play" panel with these heavy-duty electrical connectors. The connectors are designed for either panel mount or free hanging. Connectors are available in 4, 6, 9, 12, 18, 24, and 36 pin configurations. Choose the pins and sockets based on wire size. The pins and sockets are top quality and are gold/nickel plated. The plugs are sold in pairs and include both the plug and the connector.

Connectors	Part No.	Configuration	Price
SPT015/16	11-02147	4 pin	$8.95
SPT152/153	11-02148	6 pin	$10.85
SPT039/40	11-07356	9 pin	$11.75
SPT017/18	11-02149	12 pin	$11.85
SPT442/43	11-02150	18 pin	$12.95
SPT019/20	11-07357	36 pin	$15.90
Pins	**Part No.**	**Wire Gauge Size**	**Price**
SPT103-1	11-02153	24/20	$1.10
SPT099-1	11-02154	18/16	$1.20
Sockets	**Part No.**	**Wire Gauge Size**	**Price**
SPT105-1	11-02155	24/20	$1.45
SPT101-4	11-02156	18/16	$1.45

SEAL-ALL CRIMP TOOL - Crimp tool works with all Seal-All Terminals and seals. Its compact, low-cost parallel jaw design eliminates terminal rocking. P/N 11-06592..... **$37.95**

ALL-ELECTRONIC CIRCUIT BREAKERS



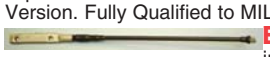
This circuit breaker has no mechanical parts, except for the reset switch. The power switching and control components are completely solid state. It has the added benefit of over- voltage and under-voltage protection. It will turn off if the input voltage foes too high, protecting valuable avionics or other equipment. ***NOT FAA APPROVED. For experimental aircraft only.***

Model No.	Amps	Volt	Part No.	Price
ECB-28-01	1	28	11-01156	$76.50
ECB-28-02	2	28	11-01157	$76.50
ECB-28-05	5	28	11-08703	$76.50

STATIC DISCHARGERS



ESD-1 STATIC WICK - Length: (including mounting base) 7.65 inches. (discharger element) 4.75 inches. Weight: Less than 4.5 grams. Airspeed: To 150 knots. Altitude: To 20,000 feet msl. Temperature: +85°C to -55°C, MIL-STD0202C, Method 102A, Condition D. Solvents: No physical changes after one hour immersion in aviation gasoline, jet fuel or hydraulic fluids. Equivalent to Cessna P/N C592001-0201. Note: This is Non-Certified Version. Fully Qualified to MIL-D-9129D P/N 11-10574..... **$22.95**



EDS-3 STATIC WICK - Non-Certified. 7.65 inches. Weight: Less than 5.5 grams. Airspeed 300 knots +85°C to -55°C, MIL-STD-202C, Method 102A, Condition D. Tension: 50 pound pull longitudinal from plastic end to metal shank. No physical changes after one hour immersion in aviation gasoline, jet fuel or hydraulic fluids. P/N 11-10681..... **$23.50**



STATIC WICK

Comes with 2 holes to rivet to trainline edge and plain wire extension. Eligible For Installation: Beech Baron 58, Cessna 402, Eurocopter: BK117, BK117 C-2 P/N 11-04154 .... **$69.75**



NULL FIELD TRAILING DISCHARGER

For general aviation & business class aircraft. FAA/PMA, MIL-9129D. Mounting: (2) #8-32 flat head screws. Length: 10-9/32". Wt: .78 oz. P/N 11-16320..... **$95.75**

MICROPOINT TRAILING DISCHARGER

For general aviation aircraft (speeds below 300 mph). Mounting: (2) #4-40 screws, 100% countersunk. Length:8.75" Weight: 0.17 oz. P/N 11-16630..... **$65.75**



MICROPOINT TRAILING DISCHARGER (FLEXIBLE)



For general aviation & business class aircraft. FAA/PMA, MIL-9129D. Mounting: 15401, 15488, 15660-1, or 16195 screw retainer. Length: 7-5/8" Wt: 0.53 oz. P/N 11-16606..... **$67.75**

NULL FIELD TIP DISCHARGER



For general aviation & business class aircraft. FAA/PMA, MIL-9129D. Mounting: (2) #8-32 flat head screws. Length: 7-15/32". Wt: 0.53 oz. P/N 11-16325..... **$91.90**

STATIC WICK WITH CARBON POINT



17770 Trailing Discharger: Mounting: Fits Chelton Retainer or DG p/n 540095. For Commercial & Business Class Aircraft. FAA PMA, MIL-9129D. Noise Quieting: 40+ db. Length: 7-7/8" Weight: 0.15 oz. P/N 11-11504 ..... **$83.75**

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CIRCUIT BREAKERS

TYCO CIRCUIT BREAKERS

These bi-metallic single pole breakers weigh less than 2oz. and especially suitable for homebuilt aircraft. Used as original equipment in Beech, Cessna and Piper aircraft. Max. operating voltages: 32 VDC & 250 VAC (to 400 Hz).

W23 SERIES



White band around body of reset button becomes visible if breaker trips. Has heater wire for fast tripping. 8-32 screw terminals.

W31 SERIES



These are combination single pole switches and circuit breakers. Has a plain steel toggle w/ rating inscribed on tip. 8-32 screw terminals.

W58 SERIES



Recessed reset button has red band around it for visible trip indication. 6-32 screw terminals.

P&B P/N	AMP Rating	Aircraft Application			Prices Ea.
		Beech	Cessna	Piper	
W23X1A1G1	1			111-201-105	**$38.60**
W23X1A1G2	2			111-202-105	**$38.60**
W23X1A1G3	3			111-203-105	**$38.60**
W23X1A1G4	4			111-204-105	**$61.95**
W23X1A1G5	5	CB-2305A	S-1232-5	454656	**$22.50**
W23X1A1G7.5	7.5	CB-2307A			**$22.50**
W23X1A1G10	10	CB-2310A		454657	**$22.50**
W23X1A1G15	15	CB-2315A		454658	**$22.50**
W23X1A1G20	20	CB-2320A		454659	**$22.50**
W23X1A1G25	25	CB-2325A		454660	**$22.50**
W23X1A1G30	30	CB-2330A		454661	**$25.50**
W23X1A1G35	35	CB-2335A		454663	**$25.50**
W23X1A1G40	40	CB-2340A		454665	**$25.50**
W23X1A1G50	50	CB-2350A		454662	**$22.50**
W31X2M1G5	5				**$24.85**
W31X2M1G10	10				**$31.85**
W31X2M1G15	15				**$31.85**
W31X2M1G20	20				**$31.85**
W31X2M1G25	25				**$31.65**
W31X2M1G30	30				**$31.85**
W31X2M1G35	35				**$31.85**
W31X2M1G40	40				**$31.85**
W31X2M1G50	50				**$31.85**
W58XC4C12A1	1	431-201-101	S-1360-1A,-1L		**$8.55**
W58XC4C12A2	2	431-202-101	S-1360-2A,-2L		**$9.50**
W58XC4C12A3	3	431-203-101	S-1360-3A,-3L		**$8.60**
W58XC4C12A4	4	431-204-101	S-1360-4A,-4L		**$11.80**
W58XC4C12A5	5	435-205-101	S-1360-5,-5L	454668	**$6.90**
W58XC4C12A7	7	435-207-101	S-1360-7,-7L		**$6.75**
W58XC4C12A10	10	435-210-101	S-1360-10,-10L	454669	**$6.90**
W58XC4C12A15	15	435-215-101	S-1360-15,-15L	454670	**$6.85**
W58XC4C12A20	20	435-220-101	S-1360-20,-202		**$6.85**
W58XC4C12A30	30	435-230-101	S-1360-30,-302		**$6.75**



TYCO ROCKER TYPE CIRCUIT BREAKER

W33S2N1Q series breakers are 2 pole rocker actuated. Pole 1 is switch only, pole 2 is series trip overload sensing. These breakers are non-lighted with white rocker. W33S4B1Q series breakers are also 2-pole rocker actuated. Pole 1 is switch only, pole 2 is series trip overload sensing. These breakers feature 20 amp max. switch & amber plastic rockers.

Item / Description	Amps	Part No.	Price
W33S4B1Q-5 – Amber 24VDC	5	11-01887	**$35.95**
W33S4B1Q-10 – Amber 120VAC	10	11-01888	**$41.90**
W33S4B1Q-15 – Amber 120VAC	15	11-01889	**$31.95**
W33S4B1Q-20 – Amber 120VAC	20	11-01976	**$33.25**
W33S1N1Q-5 – Black	5	11-01977	**$28.90**
W33S1N1Q-10 – Black	10	11-01978	**$30.50**
W33S1N1Q-15 – Black	15	11-01979	**$28.90**
W33S1N1Q-20 – Black	20	11-01980	**$32.95**
W33S2N1Q-5 – White	5	11-01981	**$43.70**
W33S2N1Q-10 – White	10	11-01890	**$29.90**
W33S2N1Q-20 – White	20	11-01983	**$32.75**



FUSE HOLDERS

These fuseholders are non-indicating, plate mounted. The body is molded black phenolic. Knob grips fuse and pulls it from holder when knob is removed. Spring provides contact pressure on ends of fuse. For use with fuse size 1/4" x 1-1/4". Type HKP. P/N 11-13400..... **$1.87**



Nylon Twist-Lock in-line fuseholder. Supplied with 8" loop of 14-gauge wire and 1 spring to accommodate AGC fuses. Simple "twist-lock" allows easy fuse removal & replacement. P/N 11-04010..... **$2.55**



Bayonet knob in-line fuseholder. Supplied with 8" loop of 14-gauge wire and 1 spring to accommodate AGC fuses. Simple "twist-lock" allows easy fuse removal and replacement. P/N 11-01359..... **$5.90**

KLIXON 7274-11.75 CIRCUIT BREAKER



Klixon 7274 series are small, lightweight, low amperage devices that are specifically designed to protect aircraft/aerospace cable and components in airborne vehicles and equipment. The commercial grade version of this circuit breaker is the Klixon 7277 series. The 7274 features a trip–free, indicating reset button and is available in standard ratings from ½ to 20 amps. They are available in standard ratings from ½ to 20 amps.

Description	Amps	Part No.	Price	Description	Amps	Part No.	Price
7274-11-1	1	11-08364	**$19.95**	7274-11-5	5	11-08369	**$19.95**
7274-11-2	2	11-08365	**$19.95**	7274-11-7.5	7.5	11-08370	**$19.95**
7274-11-2.5	2.5	11-08366	**$20.50**	7274-11-10	10	11-08371	**$19.95**
7274-11-3	3	11-08367	**$19.95**	7274-11-15	15	11-08372	**$19.95**
7274-11-4	4	11-08368	**$19.95**	7274-11-20	20	11-08373	**$19.95**



KLIXON CIRCUIT BREAKERS

Feature a bi-metallic snap-acting disc as the sensing element. Widely used in production and military aircraft. The most popular models are illustrated. Models PSM and PSM-N are available in the following ampere ratings: 2, 3, 5, 10, 15, 20, 25, 35. When ordering specify if neck-mounting style is wanted by placing "N" after ampere rating. Example: PSM-10N (P/N 11-04244).....**$158.75 Ea.** For weatherproof circuit breakers in ratings from 50 to 150 amperes, order Model PDLM. Example: PDLM-50 (P/N 11-04241) .. **$160.75 ea.**



60 AMP CIRCUIT BREAKERS FOR ALTERNATORS

These heavy duty circuit breakers are ideal for use with aircraft alternators and other applications using high amperage. 10-32 screw terminals. Size: 1-3/8"d x 1-3/8"h x 1/2"w. 60 Amp P/N 11-02191..... **$18.50**



70 AMP CIRCUIT BREAKERS FOR ALTERNATORS

These heavy duty 70 AMP circuit breakers are ideal for use with aircraft alternators and other applications using high amperage. 10-32 screw terminals. 1 3/8" D x 1 3/8" H x 1/2" W. P/N 11-05652..... **$19.50**

ELECTRONIC CIRCUIT BREAKERS



These circuit breakers have no mechanical parts, except for the reset switch. The power switching and control components are completely solid state. They have added benefit of overvoltage and undervoltage protection. Will turn off if the input voltage goes too high, protecting valuable avionics or other equipment. The circuit breakers operate differently than conventional ones in the following ways: If the circuit breaker 'trips', the switch will remain in the up or on position, but a red LED will illuminate indicating the condition. To reset the circuit breaker, the switch is set to off, then back to on. Removing power from the circuit breaker via a master switch and then restoring power will perform the same function. If a short or overcurrent condition exists at the output, the circuit breaker will continue to trip off after a reset. The electronic circuit breaker is a 3-terminal device. In addition to the usual 2 terminals, a ground reference is required for the electronics to operate and as a reference for the overvoltage & undervoltage protection. The 14V circuit breakers will shutdown with an overvoltage of 16V & undervoltage of 10V. The 28V will shutdown with an overvoltage of 33V & undervoltage of 20V. Available in 14V & 28V versions, with the following current levels: 1A, 2A, 5A, 10A. Not FAA Approved. For experimental aircraft only.

Model No.	Amps	Volts	Part No.	Price
ECB-28-01	1	28	11-01156	**$76.50**
ECB-28-02	2	28	11-01157	**$76.50**
ECB-28-10	10	28	11-01159	**$76.50**
ECB-28-05	5	28	11-08703	**$76.50**



FUSES

AGC-type fuses are glass-enclosed with a single fuse element. Fast acting to protect sensitive instruments and radios. Fuse dimensions 1/4" dia. x 1-1/4" long.

Part No.	Amp Rating	Price Each	Part No.	Ampere Rating	Price Each
11-03743	1	**$0.30**	11-03745	15	**$0.24**
11-03746	2	**$0.24**	11-03747	20	**$0.48**
11-03749	3	**$0.30**	11-03748	25	**$0.48**
11-03753	5	**$0.38**	11-03750	30	**$0.48**
11-03754	7	**$0.23**	11-03751	35	**$0.48**
11-03744	10	**$0.38**			

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ULTRA-MINIATURE TOGGLE SWITCHES

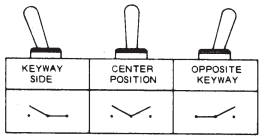


Ultra-miniature switches are rated at 6 amps at 125V AC and 4 amps at 28V DC. Solid silver contacts. Terminals are gold flashed to inhibit oxidation and to provide easier soldering. Case material is green diallyl phthalate resin. Bushing thread size: 1/4-40, usable in panel thickness up to 1/4". Micro Switch Co. have discontinued the manufacture of the 8A and 8H type switches, so switches by alternate manufacturers will be furnished. In most instances, Alco switches will be supplied. Switches furnished complete with locking ring and attaching hardware.

Alco Sw. Part No.	Micro Sw. Part No.	Contact	Toggle Circuit*	Price Each
MTA-106D	8A1011	SPST	01	**$10.90**
MTA-106E	8A1021	SPDT	02	**$13.50**
MTA-106G	8A1041	SPDT	04	**$19.65**
MTA-206N	8A2011	DPST	01	**$14.85**
MTA-206P	8A2021	DPDT	02	**$15.50**
MTA-206S	8A2041	DPDT	04	**$22.25**
JMT-226	8A2061	DPST	06	**$24.50**
MTA-306D	8A3011	3PDT	01	**$26.70**
MTA-406N	8A4011	4PDT	01	**$26.50**

**** See Toggle Circuit Table***

LEVER/CIRCUIT RELATIONSHIP



TOGGLE CIRCUIT TABLE

Toggle Circuit	Circuitry*		
	One Side	Center	Other Side
01	On	None	On
02	On	Off	On
04	(On)	Off	(On)
05	On	Off	(On)
06	On	None	(On)

****Use the "01" circuitry for On-Off switch. In hook-up, use center terminal & one side terminal. Leave other side terminal blank.***

The operating sequence above is repeated in multipole devices. Each pole has double-throw circuitry and consists of three terminals which exit at the bottom of the switch case. The keyway is a helpful reference when you are applying a switch with the momentary (ON) circuit at one of the extreme lever positions.

TWIN CESSNA SWITCH COVERS



Are your switch covers faded by the sun or just looking grimy? These replacement switch covers fit on nearly every typical switch in Cessna Twins. Switch cover sets are available for 300 series twins (4 red, 3 black, and 18 white switches) and 400 series twins (4 red, 3 black, & 23 white switches). Also available are sets of 30 mini-switch covers for audio panels, prop sync, fuel transfer pumps, DME, etc.

300 Series ..... P/N 11-22210 ..... **$29.95**
400 Series ..... P/N 11-22220 ..... **$29.95**
Mini Switch Package ..... P/N 11-22230 ..... **$21.50**

TOGGLE SWITCH COVERS



Dress up the appearance of your panel and color code your toggle switches with high quality vinyl covers that do not have a nipple at the end of the cover. Available in various colors.

Standard Size

Red.....11-00815.....**$1.35** Green .....11-00817 ..... **$1.35**
White .....11-00816.....**$1.35** Blue.....11-00819 ..... **$1.35**
Yellow.....11-01698.....**$1.35** Black .....11-02823 ..... **$1.35**

Mini Size

Red..... 11-00820.....**$1.35** White.....11-00821 ..... **$1.35**

SUBMINIATURE PUSHBUTTON SWITCH



This sub-miniature push button switch, with one-piece bushing and case construction, and hex nut. It has a relatively high current carrying capacity (3 amps at 125V AC) and a life expectancy of 10,000 operations at rated current. Momentary type SPDT switch, ideal for use as a mike switch on control wheel. Furnished with . 205" dia. black push button. Body is .354" dia. x .650" long. Mounts in 1/4" dia. hole. P/N 11-03909 .... **$17.65**

CIRCUIT BREAKER SAFETY LOCKS



Skylox™ is a unique product that will provide safety to your aircraft ground service crews. The circuit breaker safety lock is easy to use and is an innovative safety solution, all at a very low price. Simple to use. Just squeeze and place over an open circuit breaker to prevent accidental closing of breaker circuits being serviced.

Regular round Skylox™ for standard size breakers and Skylox™ L for larger sizes. Hexagonal shape easily differentiates between the two sizes. Add Skytags™ for added safety. Red with white letters and all white backs for adding notes or special instructions. NOTICE! Skylox™ are designed for use by ground maintenance crews during ground maintenance procedures only! Skylox™ are NOT to be used during flight operations.

Danger..... P/N 11-07737.....**$3.35** Warning....P/N 11-07738 .....**$3.50**
Large ..... P/N 11-07734.....**$5.35** Standard ..P/N 11-07736 .....**$5.35**

MS25224 SWITCHGUARDS



Prevents inadvertent operation of the switch. Switch can be operated only when the spring-loaded guard is lifted up. Returning guard to the down position forces the switch lever to the off position. Single-hole type for neck-mount switches such as AN3021 and AN3027. 3-hole type for panel-mounted switches such as AN3023. Color: Red.

MS25224-1 (one hole) ..... **$13.60 Ea.**
MS25224-2 (3 holes)..... **$19.95 Ea.**

KLIXON SWITCH GUARDS



Spring Loaded Switch Guards. Klixon switch guards can be used with 2 or 3 position switches. Covers are molded out of Thermoset molding materials. Guard covers are spring loaded to close.

Description	Pos.	Color	Code	Part No.	Price
Phenolic	2	Red	2	11-04228	**$19.95**
Metal	2	Green	4	11-06222	**$36.50**
Phenolic	3	Red	9	11-06223	**$19.50**
Phenolic	2	Red	10	11-03917	**$13.60**
Phenolic	2	Red	11	11-06225	**$21.75**

CESSNA SPLIT MASTER SWITCH



This versatile split red master switch has been used in virtually all single engine Cessna models since 1970 and can be used in most light aircraft with single alternator systems. Left rocker normally used for alternator and right half for battery. Order mount separately.

Red Switch.....P/N 11-15900 .....**$41.55**
Beige Switch.....P/N 11-05733.....**$48.50**
Mount.....P/N 11-15910.....**$1.93**

TOGGLE SWITCHES



Toggle switches are available with 2 or 3 operating positions, one or three hole mounting and a variety of circuitry and electrical ratings. Contacts are made of solid silver. Wide usage is found in aircraft, mobile, marine, electronic and industrial applications. Available in full "AN" standard size and Ultra Miniature 1/2" size. The leading manufacturers of toggle switches are Micro Switch, Alcoswitch, Cutler Hammer, and JBT (now Cutler Hammer). Orders will be filled with switches of manufacturer whose product is available in local stock.

AN No.	MS No.	Mfgrs. P/N	Size	Contact	Toggle Circuit *	Price
AN3021-1	MS35058-21	JBT - MS No.	1/2 Miniature	SPDT	1*	**$16.85**
AN3021-2	MS35058-22	JBT - MS No.	1/2 Miniature	SPST	2*	**$12.50**
AN3021-3	MS35058-23	JBT - MS No.	1/2 Miniature	SPDT	3*	**$16.50**
AN3027-1	MS35059-21	JBT - MS No.	Full Standard	DPDT	1*	**$34.99**
AN3027-2	MS35059-22	JBT - MS No.	Full Standard	DPST	2*	**$17.70**
AN3027-3	MS35059-23	JBT - MS No.	Full Standard	DPDT	3*	**$38.55**
AN3027-7	MS35059-27	JSBT-MS No.	Full Standard	DPDT	5*	**$26.55**
AN3027-4	MS35059-24	JBT - MS No.	Full Standard	DPST	7	**$29.99**

**** See Toggle Circuit Table***

TOGGLE CIRCUIT TABLE

****Available toggle lever positions & circuits***

TOGGLE CIRCUIT CODE (*)	Circuitry with Toggle at: UP	CENTER	DOWN
1	On	Off	On
2	On	None	Off
3	On	None	On
4	On	Off	On**
5	On*	Off	On**
6	Off	None	On*
7	On	Off	None

PUSH BUTTON SWITCH



A quality momentary SPST switch, perfect as a starter button, Comes with a special boot that keeps out dust and weather.

P/N SPB01.....**$5.40**

MINIATURE MOMENTARY PUSHBUTTON SWITCH



Normally open. Found in many Piper aircraft. Color: Black.

#8631ZBD2 ..... P/N 11-01899 .....**$6.65**

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OTTO SWITCHES & PISTOL GRIPS



T7 COMMERCIAL TOGGLE SWITCHES

T7 commercial toggle switch, waterproof bushing seal switches up to 16 amps 15/32-32 thread mount. Includes mounting hardware.

SPECIFICATIONS

Electrical: (at 28VDC or 115VAC, 60/400 Hz.)		
Load	**Amperes**	**Life (Nominal)**
Resistive	16	25,000
Inductive	10	25,000
Motor	1/2 HP	25,000

No. of Poles	OTTO No.	Circuit	Our P/N	Price ea.
1	T7-131A1	on-off	11-00755	**$15.65**
1	T7-131B1	on-on	11-00756	**$15.65**
1	T7-131C1	mom-off	11-00757	**$15.65**
1	T7-131D1	mom-on	11-00758	**$15.65**
1	T7-131E1	mom-off-mom	11-00759	**$15.65**
1	T7-131F1	on-off-on	11-00760	**$15.65**
1	T7-131G1	mom-off-on	11-00761	**$15.65**
2	T7-231A1	on-off	11-00762	**$17.95**
2	T7-231B1	on-on	11-00763	**$16.50**
2	T7-231C1	mom-off	11-00764	**$16.65**
2	T7-231D1	mom-on	11-00765	**$15.85**
2	T7-231E1	mom-off-mom	11-00766	**$18.85**
2	T7-231F1	on-off-on	11-00767	**$16.75**
2	T7-231G1	mom-off-on	11-00768	**$16.50**

Note: MOM designates Momentary On.



T3 MINIATURE TOGGLE SWITCHES

Military MS27718 qualified. High reliability, rugged. Solder turret for wire attachment. 303 stainless toggle, 15/32" bushing version has a waterproof seal. Specifications Electrical: (at 28VDC or 115VAC, 60/400 Hz.)

Load	Amps	Life (full load)
Resistive	5	30,000
Inductive/Motor	2	30,000

Load	Amps	Life (full load)
Lamp	1	30,000
Mechanical Life	n/a	100,000

No. of Poles	MIL No.	OTTO No.	Circuit	Our P/N	Price ea.
1	MS27718-21-1	T3-11111	on-off-on	11-00772	**$24.95**
1	MS27718-22-1	T3-11121	off-on	11-00773	**$28.70**
1	MS27718-23-1	T3-11131	on-on	11-00774	**$29.50**
1	MS27718-26-1	T3-11141	mom-on	11-00775	**$26.55**
1	MS27718-27-1	T3-11151	mom-off-mom	11-00776	**$27.60**
1	MS27718-31-1	T3-11161	mom-off-on	11-00777	**$25.50**
2	MS27719-22-1	T3-11221	off-on	11-00779	**$26.50**
2	MS27719-23-1	T3-11231	on-on	11-00780	**$26.50**
2	MS27719-27-1	T3-11251	mom-off-mom	11-00782	**$28.65**
2	MS27719-31-1	T3-11261	mom-off-on	11-00783	**$35.50**

Note: MOM designates Momentary On.

P5 ON-OFF ALTERNATE ACTION SWITCH



Push and the P5 series switch holds "on" push again and the P5 switch turns "off". Positive tactile feedback is featured so the operator is clearly aware the switch mode has been executed. The button returns to the original position after each actuation.

To guard against front panel splash and dirt, the P5 series is sealed at the button with OTTO's patented rolling sleeve principle.The terminals are sealed with epoxy, providing a seal against flux during wiring and behind panel dirt and moisture. The combination of sealing provides smooth operation over a wide temperature range. Watertight sealing to 1meter (IP68) pressure is also available.

Load	Amps	Life (full load)
Resistive	10	25,000
Inductive	5	25,000

Load	Amps	Life (full load)
Motor	3	25,000
Lamp	1	25,000

Switch	Part No.	Price
Press Fit-red	11-00796	**$15.75**
Press Fit-black	11-00797	**$15.50**
Press Fit-white	11-00798	**$16.50**

Switch	Part No.	Price
Thread Mount Red	11-00769	**$15.50**
Thread Mount Black	11-00770	**$14.85**
Thread Mount White	11-00771	**$15.75**

OTTO PISTOL GRIPS





Otto Controls has been making the switches used in a majority of military and commercial flight grips manufactured for the last 40 years. Otto has evolved from a switch supplier into a major gri supplier with flight grips in numerous military and commercial aircraft. These rugged grips are the same as our military qualified grips but without the expensive threaded connector. Grips have a 1.15"ID which can be adapted to a 3/4" or 7/8" joystick with separate sleeves sold below.

Grip Kit	Otto Part No.	2-position Trigger	4-Way Trim Switch	Push-Button Switch	Our Part No.	Price Each
B8	G2-0048	1	1	3	11-00751	**$599.00**
Cobra	G2-0049	1	1	4	11-00752	**$665.00**
T4-0204 4-WAY SWITCH FOR B8 - Four way trim with a large hat style button. Fits into the trim position of the G2-0048 and G2-0049 flight grip kits. Can handle up to a 1 amp inductive load at 28VDC.					11-07956	**$169.75**

Grip/Joystick Sleeve			
Joystick O.D.	**Part No.**	**Our Part No.**	**Price**
3/4" shaft	302379	11-00753	**$49.65**
7/8" shaft	302380	11-00754	**$88.75**

P1 MOMENTARY SWITCHES

MIL qualified. Dustproof, snap action, solder terminals, rugged reliable construction.

SPECIFICATIONS

Electrical: (at 28VDC or 115VAC, 60/400 Hz.)		
Load	**Amperes**	**Life (Nominal)**
Resistive	10	25,000 cycles
Inductive/Motor	5	25,000 cycles
Lamp	3	25,000 cycles



PRESS FIT				
MIL No.	**Otto No.**	**Button Color**	**Our Part No.**	**Price**
MS25089-1AL	P1-12121	Red	11-00745	**$14.50**
MS25089-1A	P1-12122	Black	11-00746	**$14.50**
MS25089-1AW	P1-12129	White	11-00747	**$13.50**

THREADED BEZEL				
MIL No.	**Otto No.**	**Button Color**	**Our Part No.**	**Price**
MS25089-1CR	P1-32121	Red	11-00748	**$13.50**
MS25089-1C	P1-32122	Black	11-00749	**$13.90**
MS25089-1CW	P1-32129	White	11-00750	**$14.50**



T3 1/4-40 UNSEALED BUSHING TOGGLE SWITCHES

No. of Poles	MIL No.	OTTO No.	Circuit	Our Part Number	Price each
1	MS27716-21-1	T3-21111	on-off-on	11-00784	**$17.60**
1	MS27716-22-1	T3-21121	off-on	11-00785	**$17.50**
1	MS27716-23-1	T3-21131	on-on	11-00786	**$18.50**
1	MS27716-26-1	T3-21141	mom-on	11-00787	**$18.65**
1	MS27716-27-1	T3-21151	mom-off-mom	11-00788	**$19.95**
1	MS27716-31-1	T3-21161	mom-off-on	11-00789	**$21.50**
2	MS27717-21-1	T3-21211	on-off-on	11-00790	**$17.95**
2	MS27717-22-1	T3-21221	off-on	11-00791	**$16.65**
2	MS27717-23-1	T3-21231	on-on	11-00792	**$18.60**
2	MS27717-26-1	T3-21241	mom-on	11-00793	**$18.95**
2	MS27717-27-1	T3-21251	mom-off-mom	11-00794	**$19.85**
2	MS27717-31-1	T3-21261	mom-off-on	11-00795	**$22.50**

Note: MOM designates Momentary On.

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WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

• SILVER SWITCH CONTACTS (MOST)

SWITCHES & INDICATOR LIGHTS

• .25" TAB TERMINAL (UNLESS SHOWN)

Commercial 12 VDC Illuminated & Non-Illuminated Toggle, Rocker, Push-Button, Pull Switches...
Incandecent & L.E.D. Indicator Lights...Switch Guards...Lever Covers



LEVER SWITCHES
20 AMP SILVER CONTACTS

Non-Illuminated	Single Pole	Price
On-Off	11-103	$4.90
On-On	11-107	$4.80
On-Off-On	11-123	$5.35

Illuminated	Red	Green	Amber	Blue	Clear
11/16" Lever ON–OFF	11-115	11-116	11-117	- - -	- - -
$8.50 Ea.					

DASH LIGHTS



Red	Green	Amber	Blue	MTG. HOLE	Price
Replaceable Lamp					
17-410	17-411	17-412	17-413	1/2"	$5.95
Replacement bulb.....P/N BA7-12.....					$1.00
Jumbo					
17-420	17-421	17-432	17-423	3/4"nut	$8.50
17-440	17-441	17-442	17-443	1"nut	$25.50
*Non-Replaceable Lamp - *4" Wire Leads*					
*17-165	*17-466	*17-467	--	1/2"	*$5.60
17-210	17-211	17-212	--	9/32"	$9.50



LEGEND LIGHTS

Illuminated words.
Dimensions: 7/8" x 11/16" x 1-3/8"
Mounting Hole: .629" Diameter (16 mm)

Color	Part No.	Price	Color	Part No.	Price
Red	11-06000	$19.50	Orange	11-06050	$19.70
Green	11-06060	$17.50	Yellow	11-06055	$22.50
Blue	11-06065	$21.50	Clear	11-06070	$19.85

REPLACEMENT BULBS

12 Volt .....P/N 31-963.1 ..... $2.85
24 Volt .....P/N 31-963.2 ..... $5.95

NOTE: Order labeling (words) separately from list below.

LEGEND LIGHT LABELS

Description	Part No.	Price	Description	Part No.	Price
Alarm	17-538	$0.55	Hi Oil Pressure	17-625	$0.55
Auto-Pilot	17-710	$0.55	Hi Oil Temp	17-518	$0.45
AUX Lights	17-501	$0.55	Interior Lights	17-679	$0.55
AUX Rank	17-606	$0.55	Lock	17-711	$0.40
Battery	17-536	$0.55	Loran	17-716	$0.35
Carb Heat	17-712	$0.45	Low Fuel	17-512	$0.55
Caution	17-714	$0.55	Mags	17-715	$0.35
Danger	17-540	$0.55	Aux Brake Light	17-507	$0.40
De-ice	17-713	$0.35	Oil Filter	17-609	$0.55
Flaps Up	17-730	$0.55	Pitot Heat	17-709	$0.55
Flashing Lights	17-560	$0.50	Radio	17-717	$0.55
Fuel Pumps	17-587	$0.55	Strobe Lights	17-631	$0.55
Gear Down	17-718	$0.50	Wing Lights	17-614	$0.50

MS25041 PRESS-TO-TEST INDICATOR



Miniature press-to-test indicator with built-in bulb testing device. Adjustable dimmer. Uses #330 (12V) or #327 (24V) bulb. Bulbs NOT included, order separately.

Clear..... 11-04226 .....$41.50
Green..... 11-03911 .....$41.50
Blue ..... 11-04227 .....$41.50
Red.....11-03910 .....$41.50
Amber.....11-03912 .....$41.50

ROCKER SWITCHES
SILVER CONTACTS



Non-Illuminated	Single Pole	Price	Double Pole	Price
On-Off	14-100	$1.75	14-200	$5.90
Off-(On)	14-101	$5.60		
On-On	14-102	$6.75	14-210	$6.50
On-Off-On			14-220	$9.95
(On)-Off-(On)	14-104	$5.85	14-225	$9.75



Illuminated Single Pole (20 AMP, OnOff-OFF)				
Red	Green	Amber	Blue	Price
14-305	14-306	14-307	14-308	$7.50

DUAL IGNITION TETHERED KILL SWITCH



Kills both ignition systems at once. Extra strong, coiled, self-retracting lanyard. Black matte finish for attractive appearance. Mounts in a 1-1/2" diameter hole. Overall dimensions of switch housing are 2-3/4 " x 2" and requires 1-1/2" behind panel. Dual ignition switch provides two completely isolated circuits to prevent feedback from one ignition to the other.

P/N 08-07633.....$38.00

PUSH BUTTON



Off-(On), 5 AMP
Mounting Hole: 1/2"
Aluminum Guard.....P/N 15-112 ..... $10.50



Push On-Push Off, 16 AMP
Mounting Hole: 1"
Red Button .....P/N 15-132 ..... $8.60
Black Button.....P/N 15-133 ..... $7.50



Off-(On), 40 AMP, Sealed
Mounting Hole: 5/8"
Screw Terminal .....P/N 15-100 ..... $7.95

PULL SWITCHES



Pull On/Push Off, 75 AMP
Chromed ..... P/N 16-140.....$10.95 ea.

METAL LEVER TOGGLE SWITCHES



25" TAB TERMINAL. 21 AMP at 12VDC 9 AMP at 24VDC 15 AMP at 125VAC 1/2" panel hole size.

Operation	Single Pole	Price	Double Pole	Price
Off-On	*12-100	$4.85	12-200	$7.50
Off-(On)	*12-101	$6.50	12-201	$7.50
On-On	*12-102	$6.95	12-202	$6.60
On-Off-On	12-103	$4.95	12-203	- - -
(On)-Off-(On)	12-104	$8.50	12-204	$12.50
( )=Momentary				

SWITCH LEVER COVERS



Fits most metal switches with 15/32" bushing

Black Neoprene - Hex Nut
P/N 19-516 .....$2.50

BUSS BARS

These MS25226 series buss bars are used as replacement bars for MS27212 board assemblies.



Part No.	Hole Size	# of Holes	Length	Our Part No.	Price
MS25226-10-4	3/16	4	2 5/8"	11-04676	$26.50
MS25226-10-8	3/16	8	5 5/8"	03-00133	$23.50
MS25226-10-16	3/16	16	11 5/8"	03-00131	$19.90
MS25226-4-8	1/4	8	5 3/4"	03-00134	$13.65

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SKYLOX® CIRCUIT BREAKER LOCKS



Skylox® is a unique product that will provide safety to your aircraft ground service crews. The circuit breaker safety lock is easy to use and is an innovative safety solution, all at a very low price. Simple to use. Just squeeze and place over an open circuit breaker to prevent accidental closing of breaker circuits being serviced. Regular round Skylox® for standard size breakers and Skylox® L for larger sizes. Hexagonal shape easily differentiates between the two sizes. Add Skytags® for added safety. Red with white letters and all white backs for adding notes or special instructions. Use whiteboard markers for reusability, or permanent markers for repeating conditions. NOTICE! Skylox® are designed for use by ground maintenance crews during ground maintenance procedures only! Skylox® are NOT to be used during flight operations.

Description	Part Number	Price
Skylox Large - Orange	11-14282	**$5.80**
Skylox Standard - Orange	11-07736	**$5.35**
Skylox Large - Yellow	11-07734	**$5.35**
Skylox Standard - Yellow	11-10572	**$4.95**

ISOLOX® FOR CIRCUIT BREAKERS



The patented isolox® is a larger version of the popular Skylox® product that has been specifically designed to accommodate large breakers and those with color coding collars attached. isolox® will complete your toolbox of Circuit Breaker Lockout tools fitting the widest variety of breakers currently in use. isolox® are also compatible with Skyclip® and Skytags® and can be packaged in configurations of the Skykit® tool accountability kit.

Orange ..... P/N 11-13569 ..... **$5.35**
Yellow ..... P/N 11-13570 ..... **$4.95**



SKYTAGS®

Skytags® are durable plastic tags for use with Skylox® and isolox™ do designate Danger, Warning or simply Maintenance. The yellow Maintenance tag is double sided while the Danger and Warning tags feature a glossy white back suited for grease pencil, dry erase markers or permanent markers for instructions, technician's name or other desired information. Size: 3-1/2" length x 1" width

Warning..... P/N 11-07738 ..... **$3.50**
Danger ..... P/N 11-07737 ..... **$3.35**
Maintenance ..... P/N 11-13571 ..... **$3.50**

SKYLOX® SKYCLIP®



Skyclip® is a stainless steel spring clip for attaching Skytags® to isolox™ and Skylox®.

P/N 11-13572 ..... **$3.35**

SKYLOX® SKYKIT® 1



Kit Includes • 10 Standard Skylox • 2 Large Skylox • 2 Skyvault Sleeves • 12 Warning Or Danger Tags And Clips In A Sturdy Poly Case. NOT to be used in flight.

P/N 11-13573 ..... **$208.95**

SKYLOX® SKYKIT® 2



Kit Includes • 18 Standard Skylox • 18 Warning Or Danger Tags • 18 Skyclips In A Sturdy Poly Case. NOT to be used in flight. P/N 11-13574 ..... **$208.95**

SKYLOX® SKYKIT® CASES WITH FOAM ONLY



Have Skylox® but don't have a case to store then in, then try this Skykit®Poly Case - a sturdy poly case with foam. Available for 12pc kit or 18 pc kit. Secure your loose Skylox today. Skylox are not included.

12 pc. Case..... P/N 11-13575 ..... **$74.95**
18 pc. Case..... P/N 11-13576 ..... **$74.95**

CUSTOM BLUE HEAT SHRINK LABELS



Fully customizable heat shrink labels. Up to 15 characters (including spaces) can be used on each label. For long leads it is recommend using a label on each end to streamline troubleshooting. Simply place the label face up on the wire and apply heat from a heat gun. Fits all wires from 18-24 gauge.

Single ..... P/N 11-12541 ..... **$0.75**
10 Pack..... P/N 11-14015 ..... **$6.95**
15 Pack..... P/N 11-14016 ..... **$10.50**

THIN WALL HEAT-SHRINKABLE TUBING



This is a general purpose heat shrinkable tubing with a wide scope of applications including harnessing, wire bundling, strain reliefs or any application where components or cables must be insulated or packaged. Material is an irradiated, thermally stabilized, modified polyolefin which is vastly superior to thermoplastic type materials. Flexible & flame retardant. Shrinkable by any hot air source such as an electric hair dryer or any heating device delivering at least 250°F. One person can complete installation in seconds. No need for special skills. Meets spec. MIL-I-23053B. Standard length - 4 ft. Min. purchase 4 ft. per size. Sold only in full 4 ft. lengths.

Expanded Size	Expanded I.D.	Recovered I.D.	Nominal Wall	Part No.	Price / 4 ft. Piece
1/16"	.063	.031	.017	11-00700	**$0.70**
3/32"	.093	.046	.020	11-00800	**$0.80**
1/8"	.125	.062	.020	11-00900	**$0.90**
3/16"	.187	.093	.020	11-01000	**$1.10**
1/4"	.250	.125	.025	11-01100	**$1.35**
3/8"	.375	.187	.025	11-01200	**$1.55**
1/2"	.500	.250	.025	11-01300	**$1.75**
3/4"	.750	.375	.030	11-01400	**$1.75**
1"	1.000	.500	.035	11-01500	**$3.65**
White					
1/16	.063	.031	.017	11-09443	**$1.65**
1/8"	.125	.062	.020	11-04029	**$2.95**
1/4"	.250	.125	025	11-04028	**$2.35**
3/8"	.375	.187	.028	11-04030	**$2.80**
1/2"	.500	.250	.025	11-04027	**$3.55**

Discount: 25% Discount on 12 or more 4' Lengths (Per Size)

Always order the largest size which will fit snugly over the component being covered. Wall thickness will be less if recovery is restricted during shrinking.

ADHESIVE LINED HEAT-SHRINKABLE TUBING



Adhesive Lined Shrink Tubing is made of flame retardant, cross-linked, black, polyolefin with an inner coating of hot-melt adhesive and an outer layer. It has excellent physical, chemical, and electrical properties and provides electrical and mechanical protection.

Features: • Shrink Ratio: 3:1 • Operating Temperature: -55° C to +110° C • Shrink temperature: 120° C • Inner layer glue melting temperature: 70° C -90° C • Waterproof • Meets: Mil-23053/4 Class 3, UL224 • UL Recognized • RoHS Complian3:1 ADHESIVE LINED.

Tube Size (In.)	Expanded I.D.	Recovered I.D.	Part No.	Price Per 4ft. Piece
1/8	.118"	.039"	11-11536	**$1.95**
3/16	0187"	.059"	11-11537	**$2.55**
1/4	.236"	.078"	11-11538	**$2.65**
3/8	.254"	.118"	11-11539	**$3.90**
1/2	.472"	.157"	11-11540	**$3.95**
3/4	.708"	.236"	11-11541	**$5.40**
1	.945"	.315"	11-11542	**$8.95**

IGNITION SHIELDING BRAID



Tinned copper tubular braid. Very flexible multi-strand braid. Excellent way to shield spark plug wires to reduce radio frequency interference (RFI). Fits over standard spark plug wire. Use 1/2" heat shrink to secure the ends.

Shielding Braid per foot ..... P/N 11-02463 ..... **$0.77**
Heat Shrink Tubing, 1/2", 4 ft. length ... P/N 11-01300 ..... **$1.75**

TINNED COPPER BRAID

Used for static shielding on short lengths of wire or cable and for flexible bonding connections and ground straps. Made of extra flexible tinned copper wire. Rolled flat for spooling.



P/N	Nominal Flat Width	Current *Capacity Amps.	Wt./100 Ft. Lbs.	Price Per Ft.	Price 100 Ft.
858	1/8"	16	0.7	**$0.39**	**$33.15**
863	1/4"	32	1.5	**$0.53**	**$45.05**
864	3/8"	46	2.5	**$0.94**	**$79.90**
868	1/2"	53	3.3	**$0.99**	**$84.15**
865	5/8"	53	3.4	**$0.99**	**$84.15**

EXPANDABLE ICO-FLEX™ XPF SLEEVING



ICO-FLEX™ XPF is flame retardant & light weight, self-fitting, monofilament sleevings designed to encapsulate and protect cable bundles and wire assemblies. These expandable sleevings adjust to irregular surfaces and contours, providing abrasion resistance and protection with a minimum of bulk and weight. Black.

Nominal ID In/mm	Bundle Size Range Minimum - Maximum In/mm	Part No.	Price/ Ft.
.125 / 3.18	.094 - 0.125 / 2.38 - 3.18	11-12352	**$0.19**
.250 / 6.35	.125-.0375 / 3.18-9.53	11-04275	**$0.35**
.375 / 9.53	.250 - 0.625 / 6.35 - 15.88	11-03899	**$0.45**
.500 / 12.70	.250-0.750 / 6.35-19.05	11-04274	**$0.65**
.750 / 19.05	.500-1.250 / 12.70-31.75	11-12353	**$0.98**
1.250 / 31.75	.750-1.500 / 19.05-38.10	11-12354	**$1.32**
1.750 / 44.45	1.25-2.500 / 31.75-63.50	11-12356	**$1.94**
2.000 / 50.80	1.500-3.000 / 38.10-76.20	11-12357	**$2.67**

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AIRCRAFT WIRE



UNSHIELDED WIRE MIL-W-22759

Standard tin-plated copper conductor and is insulated with extruded Tefzel (ethylene/tetrafluorbethylene) which has a maximum temperature rating of 150°C. This wire is rated for 600 volts. A cutom laser wire marking service is available for your white unshielded cable. Contact sales, or visit www.aircraftspruce.com for pricing.

Part No.	Mil-Spec	Wire Gauge	Color	Price per ft.	Price (100ft)	Price (1,000ft)
11-14524	M22759/16-24-9	24	White	$0.19	$16.15	$114.00
11-06254	M22759/16-24-0	24	Black	$0.19	$16.15	$114.00
11-07790	M22759/16-24-6	24	Blue	$0.19	$16.15	$114.00
11-07795	M22759/16-24-5	24	Green	$0.19	$16.15	$114.00
11-06253	M22759/16-24-2	24	Red	$0.19	$16.15	$114.00
11-06252	M22759/16-24-4	24	Yellow	$0.19	$16.15	$114.00
11-14522	M22759/16-22-9	22	White	$0.21	$17.85	$126.00
11-06257	M22759/16-22-0	22	Black	$0.22	$18.70	$132.00
11-07791	M22759/16-22-6	22	Blue	$0.22	$18.70	$132.00
11-07796	M22759/16-22-5	22	Green	$0.22	$18.70	$132.00
11-06256	M22759/16-22-2	22	Red	$0.22	$18.70	$132.00
11-06255	M22759/16-22-4	22	Yellow	$0.22	$18.70	$132.00
11-11982	M22759/16-22-90	22	White w/ Black Stripe	$0.23	$19.55	$138.00
11-11985	M22759/16-22-96	22	White w/ Blue Stripe	$0.23	$19.55	$138.00
11-11981	M22759/16-22-95	22	White w/ Green Stripe	$0.23	$19.55	$138.00
11-11983	M22759/16-22-92	22	White w/ Red Stripe	$0.23	$19.55	$138.00
11-11984	M22759/16-22-94	22	White w/ Yellow Stripe	$0.23	$19.55	$138.00
11-14520	M22759/16-20-9	20	White	$0.25	$21.25	$150.00
11-06260	M22759/16-20-0	20	Black	$0.28	$23.80	$168.00
11-07792	M22759/16-20-6	20	Blue	$0.29	$24.65	$174.00
11-07797	M22759/16-20-5	20	Green	$0.29	$24.65	$174.00
11-06259	M22759/16-20-2	20	Red	$0.28	$23.80	$168.00
11-06258	M22759/16-20-4	20	Yellow	$0.28	$23.80	$168.00
11-14518	M22759/16-18-9	18	White	$0.39	$33.15	$234.00
11-01596	M22759/16-18-0	18	Black	$0.39	$33.15	$234.00
11-01599	M22759/16-18-6	18	Blue	$0.39	$33.15	$234.00
11-07798	M22759/16-18-5	18	Green	$0.39	$33.15	$234.00
11-01597	M22759/16-18-2	18	Red	$0.39	$33.15	$234.00
11-06261	M22759/16-18-4	18	Yellow	$0.39	$33.15	$234.00
11-15601	M22759/16-18-90	18	White w/ Black Stripe	$0.49	$41.65	$294.00
11-15607	M22759/16-18-92	18	White w/ Red Stripe	$0.49	$41.65	$294.00
11-14516	M22759/16-16-9	16	White	$0.43	$36.55	$258.00
11-01601	M22759/16-16-0	16	Black	$0.43	$36.55	$258.00
11-01604	M22759/16-16-6	16	Blue	$0.43	$36.55	$258.00
11-07799	M22759/16-16-5	16	Green	$0.43	$36.55	$258.00
11-01602	M22759/16-16-2	16	Red	$0.43	$36.55	$258.00
11-01603	M22759/16-16-4	16	Yellow	$0.43	$36.55	$258.00
11-15501	M22759/16-16-90	16	White w/ Black Stripe	$0.49	$41.65	$294.00
11-19522	M22759/16-16-95	16	White w/ Green Stripe	$0.49	$41.65	$294.00
11-15507	M22759/16-16-92	16	White w/ Red Stripe	$0.49	$41.65	$294.00
11-14514	M22759/16-14-9	14	White	$0.65	$55.25	$390.00
11-07788	M22759/16-14-0	14	Black	$0.65	$55.25	$390.00
11-07793	M22759/16-14-6	14	Blue	$0.65	$55.25	$390.00
11-07801	M22759/16-14-5	14	Green	$0.65	$55.25	$390.00
11-07806	M22759/16-14-2	14	Red	$0.65	$55.25	$390.00
11-07804	M22759/16-14-4	14	Yellow	$0.65	$55.25	$390.00
11-14512	M22759/16-12-9	12	White	$0.95	$80.75	$570.00
11-07789	M22759/16-12-0	12	Black	$0.95	$80.75	$570.00
11-07802	M22759/16-12-5	12	Green	$0.95	$80.75	$570.00
11-07807	M22759/16-12-2	12	Red	$0.95	$80.75	$570.00
11-07805	M22759/16-12-4	12	Yellow	$0.95	$80.75	$570.00
11-14510	M22759/16-10-9	10	White	$1.35	$114.75	$810.00
11-14508	M22759/16-8-9	8	White	$1.95	$165.75	$1,170.00
11-14506	M22759/16-6-9	6	White	$2.90	$246.50	$1,740.00
11-14504	M22759/16-4-9	4	White	$3.99	$339.15	$2,394.00
11-14502	M22759/16-2-9	2	White	$4.90	$416.50	$2,940.00
11-14501	M22759/16-01-9	0	White	$11.85	$1,007.25	$7,110.00
11-14500	M22759/16-02-9	00	White	$13.85	$1,177.25	$8,310.00



SHIELDED WIRE MIL-C-27500

This shielded and jacketed aircraft wire conforms to MIL-C-27500 and replaces MIL-C-7078/3. It incorporates MIL-W-22759/18 basic wire and features a Tefzel insulation, a shield of tin-plated copper braid and a jacket of Tefzel. It is temperature rated to 150°C & voltage rated at 600V. Top quality wire to military specifications.

Part No.	Mil-Spec	Wire Gauge	Number of Conductors	Price per ft.	Price (100ft)	Price (1,000ft)
11-04476	M27500-24TG1T14	24	1	$0.43	$36.55	$258.00
11-04477	M27500-24TG2T14	24	2	$0.76	$64.60	$456.00
11-04478	M27500-24TG3T14	24	3	$0.95	$80.75	$570.00
11-14422	M27500-22TG1T14	22	1	$0.65	$55.25	$390.00
11-05650	M27500-22TG2T14	22	2	$0.90	$76.50	$540.00
11-05651	M27500-22TG3T14	22	3	$0.95	$80.75	$570.00
11-07773	M27500-22TG4T14	22	4	$1.39	$118.15	$834.00
11-06580	M27500-22TG5T14	22	5	$2.42	$205.70	$1,452.00
11-07774	M27500-22TG6T14	22	6	$2.49	$211.65	$1,494.00
11-09782	M27500-22TG8T14	22	8	$2.90	$246.50	$1,740.00
11-12535	M27500-22TG9T14	22	9	$3.50	$297.50	$2,100.00
11-14420	M27500-20TG1T14	20	1	$0.72	$61.20	$432.00
11-14585	M27500-20TG3T14	20	3	$0.69	$58.65	$414.00
11-04474	M27500-18TG2T14	18	2	$1.49	$126.65	$894.00
11-04475	M27500-18TG3T14	18	3	$1.79	$152.15	$1,074.00
11-14418	M27500-18TG1T14	18	1	$0.85	$72.25	$510.00
11-04473	M27500-16TG2T14	16	2	$1.59	$135.15	$954.00
11-14416	M27500-16TG1T14	16	1	$0.95	$80.75	$570.00
11-14414	M27500-14TG1T14	14	1	$1.25	$106.25	$750.00
11-14412	M27500-12TG1T14	12	1	$1.85	$157.25	$1,110.00
11-14410	M27500-10TG1T14	10	1	$2.25	$191.25	$1,350.00
11-14408	M27500-8TE1T14	8	1	$3.60	$306.00	$2,700.00

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WIRE SPOOLS



Tube 2"L x 3"ID, End 7"OD x 3/4" Drive Hole
P/N 11-11507 ..... **$1.85**
Tube 6"L x 3"ID, End 7"OD x 3/4" Drive Hole
P/N 11-11508 ..... **$1.95**

MALE SUB-D CRIMP PIN



20/24G Crimp Pin. Pins/Sockets.
P/N 11-00139 ..... **$0.49**

FEMALE SUB-D CRIMP SOCKET



Subminiature D Pins/Sockets for MIL-C-24308 and MIL-C-39029.
P/N 11-11877 ..... **$0.70**

SINGLE CONDUCTOR INCH SOLDER SLEEVES WITH PIGTAIL



Perfect for single conductor shielded cable and great for terminating "P Leads".
1/8" .....P/N 11-12363 ..... **$0.95**
1/4" .....P/N 11-14743 ..... **$1.30**

BATTERY CABLE



6-gauge multi-strand copper core cable. Meets SAE Spec J1127-SGT. Price is per foot.
Black .....P/N 11-03942 ..... **$1.43**
Red .....P/N 11-03943 ..... **$1.37**
Lug (6 Gauge).....P/N 11-05110 ..... **$0.52**

GPL RED BATTERY CABLE



Description	Part No.	Price
GPL Battery Cable 4 Ga / 5 ft Red	15-08030	**$19.08**
GPL Battery Cable 4 Ga / 26 Inch Red	15-08035	**$17.55**

4 CONDUCTOR UNSHIELDED WIRE 18 AWG



The cable can be cut to length, jacket removed and conductors stripped to custom specifications. Awg Size: 18 Thickness: .016" Nominal O.D: .032" Suitable for EIA RS-232 applications P/N 11-08280 ..... **$1.74 /ft.**

SOLDERING SLEEVES

One-step, heat-shrinkable wire and cable interconnection device. Create strong, soldered connections. Consist of a heat-shrinkable sleeve and a premeasured, fluxed solder band. When heated, the tubing shrinks and the solder melts, making reliable, insulated terminations.



.125"SM .....P/N 11-04480 ..... **$0.90**
.200"MD .....P/N 11-04481 ..... **$0.79**
.300"LG.....P/N 11-04482 ..... **$1.42**

SOLDERING SLEEVES

Termination sleeves consist of a heat-shrinkable, transparent, polyvinylidene fluoride sleeve with an inner, pre-fluxed, solder preform and two thermoplastic sealing inserts. When heat is applied, the solder melts and flows to provide a superior connection between the ground lead and the shield. At the same time, the two thermoplastic sealing inserts melt and the outer sleeve shrinks to provide an environmentally protected termination.



.125 .....P/N 11-07902 ..... **$0.67**
1/4" .....P/N 11-07903 ..... **$0.55**
.300 .....P/N 11-07905 ..... **$1.10**

MU-METAL MAGNETIC SHIELDING



Provides shielding when placed around electronic equipment proir to instalation. 4"x4 mil. Sold by the inch.
P/N 11-04483 . **$3.85/inch**

MOMENTARY PUSH-BUTTON SWITCHES



P/N 11-04466



P/N 11-04467



P/N 11-04468



P/N 11-04469



P/N 11-04470



P/N 11-04471

Switch, Micromini, Pushbutton, SPST, Off-Moment, PC Terminal

SPST, Normally Open, Black .....P/N 11-04467 ..... **$19.80**
SPDT, Momentary, Black .....P/N 11-04468 ..... **$16.50**
1/4" Threads, Normally Open, Red .....P/N 11-04469 ..... **$3.65**
1/4" Threads, Normally Open, Black .....P/N 11-04470 ..... **$2.95**
SPDT, Momentary, Black .....P/N 11-04471 ..... **$5.50**

HEAT-SHRINK BUTT SPLICES



Heat-Shrinkable crimp butt splices completely insulate and protect electrical connections from water, condensation, salt and corrosion. Provides strain relief and protects against wire pull-out and vibration in the most rugged environments. Qualified to MIL-S-81824/1.

Decription	AWG	Part No.	Price
Raychem Butt Splice Blue Tin-Plated (Pk of 10)	20-16	11-04427-10	**$16.50**
Raychem Butt Splice Blue Nickel-Plated (Pk of 10)	20-16	11-04428-10	**$42.50**
Raychem Butt Splice Blue Tin-Plated (Pk of 25)	20-16	11-04427-25	**$36.80**
Raychem Butt Splice Blue Nickel-Plated (Pk of 25)	20-16	11-04428-25	**$112.75**
Raychem Butt Splice Red Tin-Plated (Pk of 10)	26-20	11-04425-10	**$15.50**
Raychem Butt Splice Red Nickel-Plated (Pk of 10)	26-20	11-04426-10	**$38.75**
Raychem Butt Splice Red Tin-Plated (Pk of 25)	26-20	11-04425-25	**$29.95**
Raychem Butt Splice Red Nickel-Plated (Pk of 25)	26-20	11-04426-25	**$90.75**
Raychem Butt Splice Yellow Tin-Plated (Pk of 10)	16-12	11-04429-10	**$19.50**
Raychem Butt Splice Yellow Nickel-Plated (Pk of 10)	16-12	11-04430-10	**$56.85**
Raychem Butt Splice Yellow Tin-Plated (Pk of 25)	16-12	11-04429-25	**$41.95**
Raychem Butt Splice Yellow Nickel-Plated (Pk of 25)	16-12	11-04430-25	**$147.75**

COLOR CODED CIRCUIT BREAKER CAPS



These color coded caps can easily be installed and removed from Klixon and similar type circuit breakers. Colored caps are used to "flag" designated circuit breakers for flight check and other purposes. In addition, they greatly improve grip. Won't shake loose and rattle like others can.

White .....P/N 11-04455 ..... **$2.35**
Red .....P/N 11-04457 ..... **$2.35**
Yellow .....P/N 11-04459 ..... **$2.35**
Gray .....P/N 11-04461 ..... **$2.35**
Orange ....P/N 11-04456 ..... **$2.35**
Blue .....P/N 11-04458 ..... **$2.35**
Black .....P/N 11-04460 ..... **$2.35**
Green .....P/N 11-04462 ..... **$2.35**

Discount: 10% Discount on 6 or more of the same Part number.

CIRCUIT BREAKER LOCKS



Circuit Breaker Safety Locks - With & Without Tags. Prevents the inadvertent closing of circuit breakers connected to equipment that is under repair or removed from the aircraft. Easily installed and removed from Klixon and similar type circuit breakers. Safety locks come both with and without tags. All locks are red, tags are red with white lettering. Tags measure 2"x3/4".

Description	Tag	Ring Color / Tag Color	PN	Price
Circuit Breaker Lockout Ring S4933959-501	--	Red / --	11-04463	**$2.50**
Circuit Breaker Lockout Ring S4933959-503	--	Yellow / --	11-14695	**$2.35**
Circuit Breaker Lockout Ring S4933959-505	--	Blue / --	11-14696	**$2.35**
Circuit Breaker Lockout Ring S4933959-507	--	Black / --	11-14697	**$2.50**
Circuit Breaker Lockout S4933959-521	Remove Before Flight	Red / Red	11-04464	**$5.80**
Circuit Breaker Lockout S4933959-523	Remove Before Flight	Yellow / Red	11-14698	**$5.85**
Circuit Breaker Lockout S4933959-525	Remove Before Flight	Blue / Red	11-14699	**$11.75**
Circuit Breaker Lockout S4933959-527	Remove Before Flight	Black / Red	11-14700	**$11.95**
Circuit Breaker Lockout S4933959-531	Inoperative Do Not Operate	Red / Red	11-04465	**$5.85**
Circuit Breaker Lockout S4933959-533	Inoperative Do Not Operate	Yellow / Red	11-14701	**$5.35**
Circuit Breaker Lockout S4933959-535	Inoperative Do Not Operate	Blue / Red	11-14702	**$12.50**
Circuit Breaker Lockout S4933959-537	Inoperative Do Not Operate	Black / Red	11-14703	**$12.50**

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Prices Subject to Change Without Notice



COAXIAL CABLE

RG 400 - Standard cable for radio installations. Double shielded stranded conductor, MIL-DTL-17 spec. Approved for certified aircraft.
P/N 11-09202 ..... **$2.85**

RG 142 - Double shielded solid conductor, MIL-C-17 spec. Approved for certified aircraft. PN 11-00043 ..... **$1.95**

RG 58A/U - Standard cable for experimental avionics installations. Single shielded stranded conductor, jacket type – PVC. For experimental aircraft only.
PN 11-03920 ..... **$0.63**

RG 58C/U - Standard cable for experimental avionics installations. Single shielded stranded conductor, jacket type – Non-PVC. For experimental aircraft only.
PN 11-04258 ..... **$0.74**



BNC COAXIAL ANTENNA CONNECTORS

Male.....P/N 11-03992 ..... **$2.85**
Female .....P/N 11-03993 ..... **$3.50**



SMA COAX CONNECTOR

SMA straight PCB Jack, through hole, 50 Ohm, reverse polarized. For use with Coax Cable RG400.
P/N 11-14064 ..... **$3.35**



TNC FEMALE CRIMP RG142

TNC Female Crimp RG142
P/N 11-08641 ..... **$12.60**

BNC CONNECTOR RIGHT ANGLE BNC MALE TO FEMALE



Male to Female .....P/N 11-04454..... **$5.95**



BNC CONNECTOR RG58

Male, Right angle, dual crimp.
P/N 11-04444 ..... **$57.75**



MALE BNC TO SMA FEMALE ADAPTER

Male BNC/SMA Female adapter. Configuration: Straight Connector 1: BNC Male. Connector 2: SMA Female.
P/N 11-10463 ..... **$13.90**

BNC FEMALE BULKHEAD DUAL CRIMP

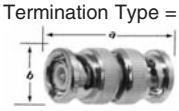


RG58 .....P/N 11-04445..... **$15.85**



BNC RF MALE CONNECTOR - RIGHT ANGLE

• Connector - RF • Plug • Housing Gender = Plug
• Terminate To Coaxial Cable • Coaxial Cable Termination Type = Crimp P/N 11-08415 ..... **$45.50**



BNC STRAIGHT ADAPTERS - PLUG/PLUG 50 OHMS

RF/Coaxial Adapter. Dimensions: a 1.25"; b .562". Connector Type: Intra-Series Coaxial. Convert From: BNC Plug. Convert To: BNC Plug P/N 11-08416..... **$5.50**



BNC STRAIGHT ADAPTERS - JACK/JACK 50 OHM

RF/Coaxial Adapter. Connector Type: Intra-Series Coaxial. Convert From: BNC Jack. Convert To: BNC Jack
P/N 11-08417..... **$6.85**



TNC CONNECTOR AMP MALE, DUAL CRIMP RG58

P/N 11-04446..... **$39.65**

TNC CONNECTOR AMP MALE, DUAL CRIMP RG142-400



P/N 11-04447 ..... **$22.50**



TNC CONNECTOR AMP RIGHT ANGLE, MALE, DUAL CRIMP RG58

P/N 11-04449 ..... **$76.75**



TNC CONNECTOR AMP RIGHT ANGLE, MALE, DUAL CRIMP RG142-400

P/N 11-04450 ..... **$52.75**

AMP RIGHT ANGLE DUAL CRIMP TOOL



P/N 11-10006 ..... **$129.95**



TNC CONNECTOR RIGHT ANGLE SOLDER/ SCREW RG58

P/N 11-04452..... **$89.90**

TNC CONNECTOR FEMALE, DUAL CRIMP RG58



P/N 11-04453 ..... **$65.75**

CPC CONNECTOR KITS



P/N 11-14011

The Sealed CPC using UL F1-rated resin is ideal for UV resistance in outdoor applications. The UL F1 rating meets industry standards for long-term UV exposure, making the housings suitable for outside applications where parts are subject to frequent or extended periods of exposure to sun light. The CPC is sealed to IP67 with no additional enclosure needed to protect the mated connector from water exposure, making it easier to install and lowering the cost of installation. The circular configuration requires less space than a rectangular-style connector with an equal number of contacts for an efficient use of space on your equipment.

Receptacle and plug housings accept Type III+ signal contacts and/ or AMP POWERBAND (size 8) contacts. The housings come in three series designed to handle standard signal, power with current up to 50A per contact and combinations of signal and power in the same housing. All housing variations include sealing to IP67. Mounting options include panel mount and free-hanging.

Description	Part No.	Price
8 Pin CPC Free Hang Male Base	11-14010	**$32.50**
8 Pin CPC Free Hang Female Base	11-14011	**$33.25**
8 Pin CPC Bulk Head Male Base	11-13999	**$32.50**
8 Pin CPC Bulk Head Female Base	11-14001	**$32.25**
9 Pin CPC Free Hang Male Base	11-14005	**$33.50**
9 Pin CPC Bulk Head Male Base	11-14003	**$35.50**
28 Pin CPC Free Hang Male Base	11-14006	**$59.50**
28 Pin CPC Free Hang Female Base	11-14007	**$60.00**
28 Pin CPC Bulk Head Male Base	11-14008	**$57.00**
28 Pin CPC Bulk Head Female Base	11-14009	**$57.25**

SPT FIREWALL CABLE GROMMET MOUNTS



Superior Panel Technology's Firewall Penetration Kit (Cable Grommet Mount) allows you to make a rectangular opening large enough to pass a plug measuring 1.25" x 2.9" (which will accept the largest sized plug used for installing the Garmin G3X - GEA24 engine sensors LRU plugs). The opening is then sealed with the 1/8" thick, center-stepped, stainless-steel cover plates.

Description	ID	OD	Panel Hole	Part No.	Price
SPT Firewall Cable Grommet Mount	--	--	--	11-13458	**$48.95**
SPT Grommet Id Size 3/16"	3/16"	7/16"	5/16"	11-13459	**$2.75**
SPT Grommet Id Size 5/16"	5/16"	13/16"	9/16"	11-13460	**$3.25**
SPT Grommet Id Size 3/8"	3/8"	7/8"	5/8"	11-13461	**$3.85**



PROTECT-FAST BRAIDED EXPANDABLE WRAP

Protect-Fast™ AERO Braided PFA-PFW Sleeving is an efficient 'slip-over' solution allowing for easy installation of wires or bundles of cables' entire run . Flame spread is a vital safety consideration in applications such as home built aircraft wiring and or retrofitting new avionics. Self-extinguishing Protect-Fast PFA-PFW material is FAR25 approved, fully complies with UL standard VW-1. The addition of an organic flame inhibitor to our triaxially braided PFW split sleeving provides the perfect solution to a wide range of cable management needs. Protect-Fast is a tough, lightweight method used to contain and protect cable assemblies, hoses and wire harnesses from abrasion and cutting. Solvent resistant with a temperature rating from -75ºC to 125ºC (-103ºF to 257ºF). Provides 150% Expansion Sleeve with 25% Overlap Wrap.

Nominal (Inch)	Feet (per Roll)	Part No	Price	Feet (per Roll)	Part No	Price
1/8	100	05-12884	**$72.75**	400	05-12892	**$0.65**
1/4	100	05-12885	**$105.65**	200	05-12893	**$0.95**
1/2	75	05-12886	**$108.95**	150	05-12894	**$1.55**
3/4	50	05-12887	**$112.91**	100	05-12895	**$1.95**
1	50	05-12888	**$120.20**	100	05-12896	**$2.45**
1-1/4	75	05-12889	**$226.54**	75	05-15257	**$3.75**
1-1/2	25	05-12890	**$118.62**	75	05-12898	**$4.70**
2	25	05-12891	**$157.50**	50	05-12899	**$6.65**

PROTECT-FAST INSTALLATION TOOLS

Sleve (Inch)	Part No.	Price
1/4	05-12900	**$7.50**
1/2	05-12901	**$7.85**
3/4	05-12902	**$11.80**
1	05-12903	**$9.85**
1-1/2	05-12904	**$14.50**

EL

ELECTRICAL TERMINALS

KOROSEAL LACING



Excellent lacing material. Permanently flexible. Resists oxidation, impervious to petroleum products. Holds tension on knots indefinitely. Perfect for holding wire bundles, tubing, etc. Rectangular cross-section 3/32"x 5/32". P/N 11-12200.....**$0.49/Ft.**

KORO SEAL LACING



The T-1223 is a 5/32" x 3/32" oval vinyl cord that is used in tying and bundling of electrical wires and cables throughout the aircraft. No sharp edges in the finished product. It comes packaged on a 100 foot spool. P/N 05-11195.....**$50.50**

KSL-1 KOROSEAL LACING

Koroseal Lacing used as a tie-off for hose & aeroduct tubing. Perfect for a nose strut seal kit and many other applications, FAA/PMA, 3/32" x 5/32" x 100' roll.
P/N 04-03465.....**$46.50**

BREYDEN POLYESTER LACING TAPES

Flat braided tape manufactured from 100% high tenacity, continuous filament polyester fiber. This product conforms to the requirements of A-A-52081-C-3 MIL-T-43435B; Type II, Size 3, Finish C. The tape is uniformly impregnated with a synthetic elastomer coating to improve knot holding and tying characteristics. Ideal for spot tying. 500 yd. rolls. Width: .085" (±10%); Thickness: .014" (±.003"); Tensile Strength: 50 Lb. (min.); Elongation: 40% (max.)

Natural.....P/N 11-02012.....**$20.50**
Black.....P/N 11-02013.....**$22.90**

BREYDEN NYLON LACING TAPES

Flat braided tape manufactured from 100% high tenacity, continuous filament nylon yarn. This tape is impregnated with a specially formulated microcrystalline, fungicidal wax. Conforms to the requirements of A-A-52080-B-3. Recommended for continuous lacing. 500 yd. rolls. Width: .077" (min.) / .094" (max.); Thickness: .011" (min.) / .017" (max.); Tensile Strength: 50 Lb. (min.); Wax Content: 15-32%; Elongation: 40% (max.)

Natural.....P/N 11-12170.....**$23.50**
Black.....P/N 11-12160.....**$23.50**

MS25181 NYLON SPLICES



Butt-type, self insulated.

Part No.	Wire Range	Price
320559	22-18	$0.71
320562	16-14	$0.76
320570	12-10	$1.45

AMP® BATTERY TERMINALS



Terminals may be crimped or soldered.

P/N	AWG Size	Amps	Stud Size	Price ea
33461	8	35	1/4"	$0.64
33466	6	50	5/16"	$0.88
33470	4	70	5/16"	$1.65
321600	2	90	3/8"	$1.97
321867	1/0	125	5/16"	$4.35
321868	1/0	125	3/8"	$2.85

COPPER EYELET BATTERY LUG



6 GA Copper Eyelets 1/4" Stud. P/N 11-05110 ..... **$0.52**

RING AND SPADE TONGUE TERMINALS



Specifications: Wire Range (mm [AWG]): 0.30-1.40² [22-16], Wire/Cable Size (CMA): 509 – 3,260 Tongue Material Thickness (mm [in]): 0.84 [0.033], Voltage (VAC): 300

Ring Tongue Term 320572 5/16..... P/N 11-09313.....**$0.62**
Ring Tongue Term 320573 3/8..... P/N 11-09314.....**$0.70**
Ring Tongue Term 328975 1/2"..... P/N 11-09315.....**$1.38**

MS25171 ELECTRICAL TERMINAL NIPPLES

Right angle nipples made of silicone rubber (MIL-R-5847, Class II, Grade 50).



Part No.	Dimension								Dash No.	Price Each
	A	B	C	D	E	F	G	H		
11-03913	1.38	.56	.06	.40	.63	.16	.41	.76	-1S Red	$1.22
11-04837	1.38	.56	.06	.40	.63	.16	.41	.76	-1S Black	$1.22
11-14260	1.38	.56	.06	.40	.63	.16	.41	.76	-1S White	$1.15
11-14261	2.50	1.00	.06	.56	.82	.31	.56	.95	-2S Red	$1.65
11-03914	2.50	1.00	.06	.56	.82	.31	.56	.95	-2S White	$1.18
11-08287	2.50	1.00	.06	.56	.82	.31	.56	.95	-2S Black	$1.70
11-14262	2.50	1.00	.06	.56	.82	.43	.68	.95	-3S Red	$1.65
11-14263	2.50	1.00	.06	.56	.82	.43	.68	.95	-3S Black	$1.70
11-03915	2.50	1.00	.06	.56	.82	.43	.68	.95	-3S White	$1.22
11-14265	2.50	1.00	.06	.56	.82	.56	.82	.95	-4S Red	$1.64
11-14266	2.50	1.00	.06	.56	.82	.56	.82	.95	-4S Black	$1.78
11-03916	2.50	1.00	.06	.56	.82	.56	.82	.95	-4S White	$1.42

AMP® SOLDERLESS TERMINALS & SPLICES

AMP's solderless electrical terminals and splices meet and exceed today's requirements for reliable terminals in applications ranging from control circuits to heavy duty power wiring. A limited number of sizes and types of terminals and tools are featured in this catalog. Information and pricing on unlisted items furnished on request.

RING TONGUE, NON-INSULATED TERMINALS

The barrel and tongue of these terminals are fabricated of the finest electrolytic copper and electro-tinned for optimum performance. The seam is brazed for uniform metal strength around the entire barrel area.



Part No.	AWG Size	Stud Size	Price
34104	22-16	4	$0.41
34105	22-16	6	$0.21
34108	22-16	8	$0.31
34109	22-16	10	$0.33
34113	22-16	1/4	$0.27
321684	16-14	6	$0.29
34122	16-14	8	$0.26
34123	16-14	10	$1.46
34124	16-14	1/4	$0.28
32994	12-10	8	$0.32
33457	12-10	10	$0.19
33469	4	1/4	$1.70
35772	12-10	1/4	$0.26
35135	12-10	1/2	$0.62

RING TONGUE, NYLON INSULATED TERMINALS

Each insulated PIDG terminal consists of a tin plated copper body, a tin plated copper wire support sleeve and a color-coded insulation sleeve.



Part No.	AWG Size	Stud Size	Price
31880	22-16 Red	4	$0.40
31885	22-16	6	$0.25
31890	22-16	8	$0.29
36154	22-16	10	$0.29
31894	22-16	1/4	$0.43
32442	16-14 Blue	6	$0.29
31902	16-14	8	$0.25
31903	16-14	10	$0.27
31906	16-14	1/4	$0.32
35149	12-10 Yellow	6	$0.65
35108	12-10	8	$0.38
35109	12-10	10	$0.40
35110	12-10	1/4	$0.49
35112	12-10	3/8	$0.74

KNIFE DISCONNECTS



Nylon InsulatedTwo Required Per Assembly.

32446..... 22-16 .....Red.....**$0.62 ea.**
32448..... 16-14 .....Blue.....**$0.63 ea.**
35762..... 12-10 .....Yellow.....**$1.75 ea.**

BUTT TYPE SPLICES



PLASTI-GRIP

34070..... 22-16..... Red.....**$0.33 ea.**
34071..... 16-14..... Blue.....**$0.27 ea.**
34072..... 12-10..... Yellow.....**$0.45 ea.**
2RB14..... 16-14..... Blue.....**$0.72 ea.**

AMP TERMINAL KITS

Terminal & Splice Kit.....P/N 11-50000 .....**$108.95**
Above w/15 Drawer Cabinet .....P/N 11-50005 .....**$154.95**
Above w/Cabinet and 604252-1 tool.....P/N 11-50010 .....**$174.95**

FOR KIT COMPONENTS VISIT WWW.AIRCRAFTSPRUCE.COM OR CALL OUR SALES TEAM AT: 1-877-4-SPRUCE

PIDG FASTON RECEPTACLES BY AMP



***Style A:** No dimple w/wire stop.
****Style B:** Dimple w/wire stop. Less 20% on 100 pcs. (per P/N)

Part #	Tab Width	AWG	Tab Thk.	Price
640903-1**	0.250"	22-18	.032	$0.31
640905-1**		16-14	.032	$0.37
42844-1**		14-12	.032	$0.53
11-00808**		12-10	.032	$0.57
640909-1**	0.205"	22-18	.020	$0.34
640911-1**		22-18	.032	$0.37
640913-1**		16-14	.020	$0.30
640915-1**		16-14	.032	$0.36
640917-1**	0.187"	22-18	.020	$0.37
640919-1**		16-14	.020	$0.29
61048-1**	.110"	22-18	.016	$0.58
61060-1**		22-18	.020	$0.30
60894-1**		22-18	.032	$0.37
640923-1*		22-18	.020	$0.37
640925-1*		22-18	.032	$0.42
640929-1*		16-14	.020	$0.37

WIRE PIDG CAPS

16-14G closed barrel end splice.

Color	Part No.	Price
Blue	11-11842	$0.55
Yellow	11-11843	$0.62
Red	11-11841	$0.32

LIQUID ELECTRICAL TAPE



Protects connections with applicator brush protects electrical connections and terminals against corrosion. 4oz. Bottle
P/N 09-42565.....**$14.50**

EL

Prices Subject to Change Without Notice

SEAL-ALL CONNECTORS

Seal-All Connectors are an environmentally sealed connection system developed to withstand exposure to extreme temperatures, moisture and harsh engine compartment fluids and chemicals with unfaltering performance. It consists of mating heat stabilized polyamide housings, male and female "pin and socket" terminals and self-lubricating silicone connector and cable seals. Seal-All connector configurations are available for one to six wires. -40 C to 125 C temperature range. Now you can have the same superior Plug/Connector that is used in vehicle OEM manufacturing.

Below are sold as the shell only. Terminal connector kits are not included. Order seperately.

SEAL-ALL CONNECTORS
(MALE AND FEMALE SHELLS ONLY)



SINGLE CONDUCTOR KIT
MANF P/N - WHT1C
P/N 11-06581.....**$3.85**



DOUBLE CONDUCTOR KIT
MANF P/N - WHT2C
P/N 11-06582 .....**$4.65**



TRIPLE CONDUCTOR KIT
MANF P/N - WHT3C
P/N 11-06583.....**$4.75**



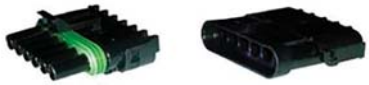
4 CONDUCTOR KIT
MANF P/N - WHT4C
P/N 11-06584.....**$5.90**



4 CONDUCTOR KIT
MANF P/N WHT4CSQ
P/N 11-06585 .....**$5.95**



5 CONDUCTOR KIT
MANF P/N - WHT5C
P/N 11-06586 .....**$11.75**



6 CONDUCTOR KIT
MANF P/N - WHT6C
P/N 11-06587 .....**$7.85**



VINYL TUBING

Clear PVC tubing for cable protection. Commonly called "spaghetti". Meets Spec. MIL-I-63ID.

AWG Size	I.D.	Wire Wall	Size	Part No.	Price/Ft.	100 Ft.
9	.118	.020	20-22	11-02200	**$0.18**	**$14.40**
7	.148	.020	16-18	11-02300	**$0.28**	**$22.40**
5	.186	.020	12-14	11-02400	**$0.19**	**$15.20**
2	.263	.020	8-10	11-02500	**$0.24**	**$19.20**
5/16	.312	.025	6	11-02600	**$0.39**	**$31.20**
3/8	.375	.025	4	11-02700	**$0.38**	**$30.40**

PREMIUM VINYL TUBING

This premium vinyl tubing is recommended for use in extremely cold temperatures where tubing can be prone to becoming stiff and brittle. Manufactured to Spec. MIL-I-7444B, this tubing can be coiled and bent easily and will retain some flexibility even in extreme temperatures. Sold in 50 ft. and 100 ft. coils in the sizes listed below.

AWG Size	Wire Size	I.D. (In.)	Wall (In.)	50 Ft. Coil		100 Ft. Coil	
				Part No.	**Price**	Part No.	**Price**
9	20-22	.118	.020	11-16195	**$15.75**	11-16190	**$31.50**
7	16-18	.148	.020	11-16175	**$14.75**	11-16170	**$29.90**
5	12-14	.186	.020	11-16155	**$20.85**	11-16150	**$39.95**
2	8-10	.263	.020	11-16125	**$23.00**	11-16120	**$46.55**
5/16	6	.312	.025	11-16165	**$28.45**	11-16160	**$56.90**

METALIZED PLASTIC D-SUB HOUSINGS



Straight / Top entry. 4-40 Thumbscrews supplied with backshell. Perimeter sealing lips for secure sealing. Available in metalized plastic and plastic. Metalized plastic provides up to 60 dB shielding.

Description	Part No.	Price
9 Pin	11-13014	**$6.50**
15 Pin	11-13015	**$7.50**
25 Pin	11-13016	**$10.50**
37 Pin	11-13017	**$9.85**

TERMINAL CONNECTOR KITS FOR SEAL-ALL CONNECTORS



Terminal Kits (includes 6 each-male, female terminals and 12 seals). Will work with all Seal-All Shells. Note-the male terminal pin goes into the female shell.

24-22 Ga Wire MANF P/N - WHT2422..... P/N 11-06588 .....**$11.95**
20-18 Ga Wire MANF P/N - WHT2018..... P/N 11-06589 .....**$8.95**
16-14 Ga Wire MANF P/N WHT1614..... P/N 11-06590 .....**$8.95**

SEAL-ALL HEAVY DUTY CONNECTOR



Heavy Duty Connector-42 amps continuous maximum current rating. For 12-10 gauge wire. Complete 2 conductor kit
P/N 11-06591.....**$17.65**

SEAL-ALL CRIMP TOOL



Crimp tool works with all Seal-All terminals and seals. Its compact, low-cost parallel jaw design eliminates terminal rocking.

Seal-All Crimp Tool..... P/N 11-06592 .....**$37.95**

PROFESSIONAL SEAL-ALL CRIMPER





Crimps Seal-All terminals and seals in one cycle. Features two double Cavities, an orientation block and a ratchet mechanism to ensure that each crimp cycle is completed. Factory calibrated to be used only with Seal-All terminals and seals. Wire range 20-14.
Pro Seal-All Crimper
P/N 11-06593 .....**$136.85**

SEAL-ALL TERMINAL RELEASE TOOL



A must have tool for working with Seal-All shells and terminals. Designed to depress Seal-All rentention barbs to allow terminal removal from shells. Seal-All Tool
P/N 11-06594 .....**$8.60**

AVIONICS CONNECTORS

Descriptions	Part No.	Price
9 Pin Female D Connector / Crimp	11-12149	**$1.10**
9 Pin Silver Female Sub-D Crimp Connector.	10-05731	**$0.75**
15 Pin Silver Female Sub-D Connector Crimp Style.	11-13296	**$0.97**
25 Pin Silver Female Sub-D Connector Crimp Style.	11-13297	**$0.97**
37 Pin Silver Female Sub-D Connector Crimp Style.	11-13298	**$1.75**
9 Pin Male D Connector / Crimp	11-12150	**$0.90**
37 Pin Female D Connector / Crimp	11-12151	**$1.75**
37 Pin Male D Connector / Crimp	11-12152	**$2.35**
25 Pin Female D Connector / Crimp	11-12153	**$1.10**
9 Pin D Connector Cable Clamp	11-12154	**$1.85**
37 Pin D Connector Clamp Cable	11-12155	**$2.79**
15 Pin Male Crimp Sub-d Connector	11-11892	**$1.20**
25 Pin Male Crimp Sub-d Connector	11-11893	**$1.15**
25 Pin D Connector Cable Clamp	11-11894	**$1.85**
SMA Male Crimp RG58	11-12173	**$32.50**
Dual SMA Male Crimp RG142-400	11-12172	**$28.75**
15 Pin Female Crimp Style-d Connect	11-11878	**$1.15**
15 Pin Sub-d Cable Clamp Housing	11-11879	**$3.35**
34 Pin Grounding Block	11-01297	**$61.75**
Female Sub-d Pin 20-24 Gauge Crimp Socket	11-11877	**$0.70**
Female Screw Lock For Sub-d Connector	11-11896	**$1.42**
Molex 19417 Connector AWG Crip Contact Female	10-05932	**$0.29**
Molex 19417 Connector AWG Crip Contact Male	10-06266	**$0.10**
Male High Density Sub-D Pin 24 to 22 Gauge Crimp Pin - Garmin	11-12111	**$0.49**
34 Pin Receptacle	10-05895	**$11.70**

CRIMP SOCKETS FOR GROUNDING BLOCKS



Crimp Sockets. For use with grounding blocks and CPC Series 1 Connectors.

Model	Description	Part No.	Price
66105-1	24-20 AWG, Gold/Nickel finish	10-05891	**$1.45**
66105-4	24-20 AWG, Selenium/Gold/Nickel finish	10-05892	**$0.95**
66101-1	18-16 AWG, Gold/Nickel finish	10-05893	**$1.60**
66101-4	18-16 AWG, Selenium/Gold/Nickel finish	10-05894	**$0.95**

EL

CRIMPING TOOLS

LITTLE BLUE CRIMPER



The Daniels AFM8 is designed for most of the miniature and sub-miniature connector types that are so widely used in all types of electronic systems. Originally developed for the Air Force, the AFM8 meets the need for a miniature tool accommodating wire sizes 20 thru 32 AWG. The cycle controlled precision ratchet assures consistently accurate crimps every time. The tool has a built-in eight step selector knob for ease in dialing the correct crimp depth setting for the wire being used. P/N 11-04443 ..... **$379.00**

K13-1 Low Density Pin Positioner For Little Blue Crimper
P/N 11-12211 ..... **$63.75**

K42 High Density Pin Positioner For Little Blue Crimper
P/N 11-12212 ..... **$64.90**

DMC Crimp Tool Turret Head Assembly
P/N 11-12197 ..... **$131.75**

DMC Crimp Tool Universal Head Assembly
P/N 11-12198 ..... **$96.75**

BIG BLUE CRIMPER



The Daniels AF8 has virtually limitless application within the specified wire range of 12 thru 26 AWG. Over 1,000 turret heads or positioners are available to adapt the tool frame to your specific military or proprietary contact/wire combination. The eight impression crimp, which is standard in the AF8, assures absolute maximum tensile strength with almost every closed barrel contact. The precision ratchet controls cycling on the tool in both directions of handle movement. This assures the same, accurate crimp every time. It's like having a quality control inspector at every work station. P/N 11-04442 ..... **$380.00**

HAND INSERTION TOOL



This inexpensive, manual tool is lightweight and easy to use in the placement and/or removal of a terminal in a housing.
P/N 11-04439..... **$69.75**

MATE-N-LOK INSERTION PIN & SOCKET TOOL



Insertion tool for grounding blocks and locking connectors. The AMP insertion tool for MATE-N-LOK pins. Contact sizes 20-24 AWG. P/N 11-04437 ..... **$46.50**

MATE-N-LOK EXTRACTION PIN & SOCKET TOOL



Insertion tool for grounding blocks and locking connectors. The AMP insertion tool for MATE-N-LOK pins. Contact sizes 20-24 AWG.
P/N 11-04438..... **$19.95**

PIN & SOCKET TOOL W/ INTERCHANGEABLE TIPS



This insertion & extraction tool consists of a handle, a cap, six insertion/extraction tips, a plug, and a .050-in. hex wrench. The handle of the tool provides storage for the tips, plug and hex wrench. Each tip is color coded according to specific type and wire size.
P/N 11-04436..... **$33.90**

AMPHENOL RF TNC CONNECTORS



Amphenol RF TNC Threaded Connector Series are miniature, threaded weatherproof units with a constant 50Ω impedance that operate from 0-11GHz. There are two types of TNC connectors: Standard and Reverse Polarity. Reverse polarity is a keying system accomplished with a reverse interface, and ensures that reverse polarity interface connectors do not mate with standard interface connectors.Many TNC connectors are recognized under the component program of Underwriter's Laboratories and have undergone stringent testing from an independent laboratory.

TNC 400 Right Angle Male..... P/N 11-15368.....**$6.35**
TNC 400 Straignt Plug..... P/N 11-15369.....**$2.25**
TNC 12108 Straight Plug..... P/N 11-15370.....**$2.50**
TNC 122430 Right Angle Male... P/N 11-15371.....**$5.90**

QUICK DISCONNECT FEMALE PANEL MOUNT COUPLING



1 / 4 Hose Barb Valved Panel Mount Coupling Body.
P/N 11-04068..... **$15.60**

QUICK DISCONNECT FEMALE - IN LINE



1 / 4 Hose Barb Non - Valved In - Line Coupling Body
P/N 11-04066..... **$6.50**

QUICK DISCONNECT INSERT



For 1/4" ID tubing. Used with 11-04066 Quick Disconnect In-line or 05-01984 Quick Disconnect Panel Mount.
P/N 11-04067..... **$2.25**

HAND CRIMP TOOL CENTER CRIMP TERMINAL 18-30 AWG



Hand Crimp Tool for 3.96mm Centers Crimp Terminals, intended for use when tooling.
P/N 10-05929..... **$342.00**

HAND CRIMP TOOL - LOOSE PIECE TERMINALS 14-22 AWG



Hand Crimp Tool for 2.mm Loose Crimp Terminals, intended for use when tooling.
P/N 10-05928 ..... **$399.00**

CRIMPER FOR BATTERY LUGS 8-1 GA



Tool For Crimpable Battery Lugs. Light duty crimping tool. Crimps battery lugs from 8-1 ga.
P/N 12-03718..... **$208.95**

CRIMPER HAMMER TOOL FOR 8GA 4/0 BATTERY LUGS



Economically priced. Used with a hammer for a quick crimp in maintenance and repair situations. Handles terminals from 8-4/0 ga.
P/N 12-03719..... **$15.95**

BENCH MOUNT TOOL HEX CRIMP BATTERY LUGS 8 GA TO 250 MCM



Bench mountable verison of stock #460. Crimps 8-4/0 ga lugs. P/N 12-03721..... **$337.00**

CRIMPER FOR COPPER BATTERY EYELET LUGS 8-4/0 GA



Crimps eyelet style copper lug terminals 8-4/0 ga. Includes 3 separate dies. P/N 12-03722..... **$97.75**

QUICK DISCONNECT FEMALE BULK



For 1/4" ID tubing. Used with 05-01984 Quick Disconnect Panel Mount or 11-04066 Quick Disconnect In-line.
P/N 05-01984..... **$16.50**

PIN INSERTION & EXTRACTION TOOL



The insertion of contacts during assembly or replacement during repair is quick and easy with the appropriate tools. The tools have to fit the contacts and the connectors if assembly and repair are to be carried out correctly. This tool is also absolutely necessary to use for extracting a proken pin for replacement or moving a misplaced pin for relocation. Insert and extract all your connector pins & sockets with this premium tool. It will work with both standard and high-density pins. ***For Garmin high density pins, please use part 22-28 AWG, part # 11-04435.***

16 AWG Blue/White ..... P/N 11-04431.....**$15.95**
20 AWG Red/White..... P/N 11-04432.....**$19.95**
24-20AWG Red/White..... P/N 11-04433.....**$12.75**
22 AWG Green/White..... P/N 11-04434.....**$14.95**
22-28AWG Green/White ..... P/N 11-04435.....**$3.95**

EXTRACTION HAND TOOL



Use With Part(s): Loose Piece Terminals.
P/N 11-14948..... **$26.75**

REMOVAL TWEEZERS #20



Removal tweezer designed for size 20 contacts installed in ITT-Cannon "D*C and D*U" Series, rear release D-subminiature connectors. Contact numbers: 030-1952-000, 030-1953-000, 030-1954-000, 030-1955-000.

Removal Tweezer #20 ..... P/N 11-14936 ..... **$95.75**
Removal Tweezer #20 Long Probe ..... P/N 11-14937 ..... **$88.75**

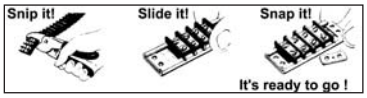
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Prices Subject to Change Without Notice

CABLE TIES – SPIRAL WRAP

AMP® FLEXI-BLOCK MODULAR TERMINAL BLOCK SYSTEM



Assemble terminal blocks to custom requirements in seconds:
1. Pull out the number of block assemblies required from dispenser box. 2. Cut the track with hacksaw or cutting tool two spaces longer than unit. Slip the block assembly into the track 3. Insert end stops and assembly is complete.

USER'S KIT - Consists of 25 pcs Flexi-Block terminal block, 12 end stops and (2) 12" pcs. of track. Complete kit. P/N 601883-1 **$151.95**

PROFESSIONAL KIT - No. 6 kit consists of 100 ea. P/N 604101-1 block assemblies, 25 ea. of P/N 604111-1 end stops & 2 ea. P/N 601805-1 track 3 ft. long. Complete kit. P/N 601804-8 ..... **$582.00**

COPPER BUS BAR - 0.125" x .5" Wide P/N 03-40890 ..... **$3.80/ft**

AMP® SPIRAP SPIRAL PLASTIC TUBING

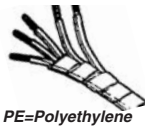


Spiral plastic tubing is a fast and economical way to bundle wires and harnesses. It is designed to protect wire insulation for the life of the circuit even under severe vibration. Spirap tubing obtains its gripping ability from the memory of the plastic. When 1/4" diameter Spirap is wrapped around a 3/4" diameter wire bundle, the Spirap tubing tries to return to is original 1/4" diameter size, effectively gripping the wire bundle. Flame retardant polyethylene. Color—white. Bundle diameter range: 3/16" to 2". Discount: 20% less on orders of 100 feet

White .....P/N 500004-1 ..... **$1.95/ft.**
Black.....P/N 11-08320 ..... **$1.75/ft.**

SPIRAL WRAP WIRE PROTECTORS

Permits flexible routing of cable harness while forming a neat, protective bundle. It twists on easily and quickly and allows lead-outs at any point. When installed, it may be gapped for greater economy and flexibility or it may be butted tightly for maximum abrasion resistance, insulation protection and greater rigidity. Nylon type-for use in wider temperature ranges with high resistance to abrasion and good solvent resistance.



PE=Polyethylene
NY=Nylon

Part No.	Size	Max. Dia.	Price/ft.
11-12318 (PE)	1/8"	1/2"	$0.68
11-12316 (PE)	3/16"	1-1/2"	$0.74
11-12314 (NY)	1/4"	2"	$1.15
11-12338 (NY)	3/8"	3"	$1.95
11-12312 (NY)	1/2"	4"	$2.85
11-12334 (PE)	3/4"	6"	$2.15
11-12311 (PE)	1"	8"	$2.50

NYLON BULKHEAD SEALS



Nylon Bulkhead seals are used when electrical harnesses or tubing is passed through bulkheads in pressurized and non-pressurized aircraft.

Bulkhead Seal, Square, 1-1/8" Hole.....P/N 11-04059 ..... **$14.50**
Bulkhead Seal, Elliptical, 3/4" Hole .....P/N 11-04061 ..... **$14.95**
Bulkhead Seal, Elliptical, 1/2" Hole .....P/N 11-04060 ..... **$11.75**
Bulkhead Seal, Square, 1-3/8" Hole.....P/N 11-04062 ..... **$24.75**

STA-KON ELECTRICAL TERMINALS

Color-coded MS25036 nylon ring w/self-insulated grip. 20% Discount on 100

Wire Range: 22-18		
P/N	Bolt Hole	Price
11-03864	4	$0.78
11-03865	6	$0.78
11-03866	8	$0.98
11-03862	10	$0.78
11-03863	1/4	$1.20
Wire Range: 16-14		
11-04093	4	$0.55
11-03869	6	$0.92

Wire Range: 16-14 Cont.		
P/N	Bolt Hole	Price
RB14-8	8	$0.84
RB14-10	10	$0.87
RB14-14	1/4	$0.83
Wire Range: 12-10		
RC10-6	6	$0.92
RC10-8	8	$0.88
RC10-10	10	$0.98
RC10-14	1/4	$1.12
RC10-38	3/8	$1.20

COBRA® RUBBER MOUNTS

Part No.	Size	Color	Qty.	Price
11-02470	3/4"	Black	100	$15.50
11-02472	3/4"	Natural	100	$14.85
11-02474	1"	Black	100	$21.70
11-02476	1"	Natural	100	$21.50

COBRA® ACRYLIC MOUNTS

Part No.	Size	Color	Qty.	Price
11-02478	3/4"	Black	100ct	$15.60
11-02479	3/4"	Natural	100ct	$14.65
11-02482	1"	Black	100ct	$24.85
11-02484	1"	Natural	100ct	$23.95

STANDARD CINCH AND TRIM GUN



C-200 Wraps ties from 18 to 50 lbs with auto tension setting & a rugged die cast aluminum body. Applies traditional ties as well as low profile ties.

P/N 11-02468 ..... **$44.50**

CABLE TIES



This all nylon cable tie is designed to hold cables securely. Bundling strength military requirements. Installs in just seconds.

Cat. #	L"	Tensile Strength	Max Dia.	Part No.	Price
MS3367-4-9	4"	18 lb	0.63"	11-04230	$0.03
MS3367-5-9	5"	30 lb	1.13"	11-04039	$0.04
MS3367-1-9	7"	50 lb	1.75"	11-04229	$0.04
--	8"	18 lb	2"	11-12866	$0.02
MS3367-7-9	11"	50 lb	3"	11-12865	$0.08
MS3367-2-9	14"	50 lb	4"	11-04058	$0.10
MS3367-3-9	14"	120 lb	4"	11-13475	$0.16

35% discount on 500 per part no. 40% Discount on 1000 per part no.

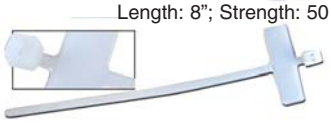
CABLE TIE ASSORTMENT PACK

Includes: MS3367-5-9 Cable Ties 5"(15), Cable Ties MS3367-4-9(15), Cable Ties MS3367-1-9(20), Cable TiesMS3367-29(5)

P/N 11-03768.....**$2.35**

TYTON HORIZONTAL IDENTIFICATION CABLE TIES

Length: 8"; Strength: 50 lbs..... P/N 11-12360 ..... **$0.77**



TYTON VERTICAL IDENTIFICATION CABLE TIES

Length: 4"; Strength: 18 lbs.
P/N 11-12365 ..... **$0.44**

TYTON MOUNTING CABLE TIES



Length: 4"; Strength: 18 lbs.....P/N 11-12350 ..... **$0.58**
Length: 8"; Strength: 50 lbs.....P/N 11-12355 ..... **$0.50**

ADHESIVE AND SCREW CABLE TIE MOUNTS



Part No.	Strength	Mounting	Price/50
11-01017	18 to 30 lbs.	#4 Screw	$41.70
11-03854	18 to 50 lbs.	#8 Screw	$48.65
11-03855	18 to 150 lbs.	#8 Screw	$47.75

CRADLE CABLE TIE MOUNTS



Part No.	Strength	Mounting	Price/50
11-03987	18 lbs.	#6 Screw	$22.85
11-03988	18 lbs	#8 Screw	$21.75
11-03989	18 to 50 lbs.	#8 Screw	$28.50
11-03990	18 to 50 lbs.	#10 Screw	$29.50
11-03991	18 to 120 lbs.	1.4" Screw	$68.75

TY-RAP™ CABLE TIES WITH SS LOCK



Stainless steel locking device in the head secures tie with longer-lasting, corrosion-resistant "grip of steel". Oval, low profile head prevents snagging while pulling through bulkheads. No sharp edges to be the source of installation injuries or to damage the wire insulation. 1000 per pack.

Mfg. No.	Length	Max Dia.	Tensile Strength	Part No.	Price 100 Pack	Price 1000 Pack
TY23M	4"	0.63"	18 lb	04-02628	$5.01	$45.50
TY24M	5.5"	1.13"	40 lb	04-02630	$6.75	$61.75
TY25M	7"	0.63"	18 lb	04-02631	$11.99	$108.95
TY26M	11"	1.13"	40 lb	04-02633	$45.85	$207.95
TY27M	13"	1.75"	50 lb	04-02635	$59.95	$589.00
TY28M	14"	3"	30 lb	04-02632	$28.82	$261.95

COBRA® CABLE TIES



With a contoured locking head, the Cobra configuration is safer, more flexible and stronger than existing cable ties. Safer because the (often barbed) stub is now deflected into a pocket at the rear of the head. More flexible because the flat lock section curves to the bundle contour and stronger because the Cobra uses an inline geometry, eliminating the stress points of traditional cable ties. Bundles down to 3/8" diameter and meets new AS 3361 specs. Features pick-proof underside lock & all rounded edges.

Color	Qty.	Tensil	Length/Width	Part No.	Price
UV Black	100	50 Lbs.	7.5" x .178"	11-01883	$5.45
UV Black	1000	50 Lbs.	7.5" x .178"	11-01884	$43.50
Natural	100	50 Lbs.	7.5" x .178"	11-01885	$4.35
Natural	1000	50 Lbs.	7.5" x .178"	11-01886	$41.75
UV Black	100	50 Lbs.	11"	11-08033	$9.50
UV Black	100	50 Lbs.	14"	11-08034	$9.90
Black	-	120 Lbs.	14" x .178"	11-02416	$17.50
Natural	-	120 Lbs.	14" x .178"	11-02417	$15.95
Black	-	18 Lbs.	4" x .178"	11-02464	$1.95
Natural	-	18 Lbs.	4" x .178"	11-02466	$1.85
Natural	-	18 Lbs.	4" x .178"	11-02467	$14.75

COBRA® CABLE TIE KITS

STANDARD - Kit includes: 100 low profile blk Cobra® ties , the rugged Cinch&Trim application gun and an instruction manual. Gun applies traditional as well as low profile ties.

Black 7.5" Ties P/N 11-06319..... **$44.75**
Natural 7.5" TiesP/N 11-06320..... **$49.50**

COBRA® FLEXROUTE TIES



A universal, durable, and simple cable management solution that secures and protects both the frame and cable. Utilizes the lowest profile nylon cable tie on the market.

P/N 11-16303 ..... **$6.70**

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BOGERT CABLES



BOGERT'S LOW LOSS COPPER CABLE KITS

Benefits:
- Starting performance improved, both hot & cold
- Eliminates nearly all voltage drop between battery & starter
- Starter current draw reduced
- Faster cranking, crank longer on the same battery
- Prolonged battery and starter life
- Less stress on battery & starter system
- Helps assure confidence in passengers
- Reduces the personal frustration and irritation factor
- Exceeds Piper Service Bulletins SB836 and SB836a

Contents:
- STC & AML Copy
- Sample log book entry
- Sample 337 sample entries
- Formula for figuring weight & balance, & C.G. Change
- Easy to follow instructions
- Schematic listing part numbers for all cables in the kit
- Flexible 1 gauge M22759, cut to length & assembled
- Cut to the correct length
- Assembled with 'slim-head' style terminals
- Insulated with shrink tubing

Aircraft Application		Part No.	Our Price	Aircraft Application		Part No.	Our Price
PA-12		11-00247	**$347.00**	PA-28-235	Cherokee	11-15150	**$468.00**
PA-16		11-00248	**$257.95**	PA-28-236	Dakota	11-15152	**$465.00**
PA-18	Super Cub	11-15102	**$346.00**	PA-30	Twin Comanche	11-15154	**$724.00**
PA-20	Pacer	11-15104	**$247.95**	PA-31-300	Navajo	11-15156	**$736.00**
PA-22	Tripacer/Colt	11-15106	**$247.95**	PA-31-310	Navajo	11-15158	**$736.00**
PA-23-150/160	Apache	11-15108	**$769.00**	PA31-325	Navajo	11-15160	**$736.00**
PA-23-250	Aztec (4&6 place)	11-15110	**$741.00**	PA-31-350	Navajo	11-15162	**$772.00**
PA-24-180/250	Comanche (Battery AFT)	11-15112	**$462.00**	PA-31P	Navajo	11-15164	**$772.00**
PA-24-260	Comanche (battery fwd of firewall)	11-15114	**$360.00**	PA-31T1	Cheyenne I	11-15168	**$1,513.00**
PA-31T	Cheyenne	11-15166	**$1,510.00**	PA-32R-301T	----------	11-15184	**$343.00**
PA-24-260	Comanche (AFT)	11-15116	**$428.95**	PA-32-260/300	Cherokee Six	11-15170	**$386.00**
PA-24-400	Comanche	11-15118	**$305.95**	PA-32R-300	Lance	11-15172	**$367.00**
PA-25-235/260	Pawnee	11-15120	**$430.00**	PA-32RT-300	Lance	11-15174	**$357.00**
PA-25-235/260	Pawnee (SN25-7556153 & up)	11-15122	**$430.00**	PA-32RT-300T	Lance	11-15176	**$357.00**
PA-28-140	Cherokee	11-15124	**$408.00**	PA-32-301	----------	11-15178	**$387.00**
PA-28-150/160	Cherokee	11-15126	**$466.00**	PA-32R-301	----------	11-15180	**$296.95**
PA-28-151	Warrier	11-15128	**$419.00**	PA-32-301T	Turbo Saratoga	11-15182	**$585.00**
PA-28-161	Warrier II	11-15130	**$424.00**	PA-34-200	Seneca I	11-15186	**$881.00**
PA-28-180	Cherokee	11-15132	**$465.00**	PA-34-200T	Seneca II	11-15188	**$814.00**
PA-28R-180	Arrow	11-15134	**$466.00**	PA-34-220T	Seneca III	11-15190	**$814.00**
PA-28-181	Archer II	11-15136	**$467.00**	PA-36-285		11-00250	**$379.00**
PA-28R-200	Arrow II	11-15138	**$465.00**	PA-36-300		11-00251	**$379.00**
PA-28R-201	Arrow III	11-15140	**$468.00**	PA-36-375		11-00252	**$508.00**
PA-28R-201T	Turbo Arrow III	11-15142	**$457.00**	PA-38-112	Tomahawk	11-15192	**$266.95**
PA-28RT-201	Arrow IV	11-15144	**$378.00**	PA-39 C/R		11-00253	**$700.00**
PA-28RT-201T	Turbo Arrow IV	11-15146	**$457.00**	PA-44-180	Seminole	11-15194	**$998.00**
PA-28-201T	Turbo Dakota	11-15148	**$457.00**	PA-44-180T	Turbo Seminole	11-15196	**$998.00**

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CESSNA – BEECHCRAFT – BELLANCA – GRUMMAN – LUSCOMBE – MOONEY – STINSON – COMMANDER – SWIFT

Aircraft Application	Part No.	Our Price
Cessna 150 A, B, C	11-00273	**$288.95**
Cessna 150 D, E, F, G, H`	11-00274	**$198.75**
Cessna 150 J, K, L, M	11-00275	**$228.95**
Cessna 152 no APU	11-00276	**$308.00**
Cessna 152 with APU	11-00277	**$370.00**
Cessna 170 A	11-00278	**$266.95**
Cessna 170 B	11-00279	**$221.95**
Cessna 172 A	11-00280	**$306.00**
Cessna 172 B, C	11-00281	**$346.00**
Cessna 172 D, E (rear), F	11-00282	**$258.95**
Cessna 172 G, H	11-00283	**$256.95**
Cessna 172 I, K, L, M	11-00284	**$337.00**
Cessna 172N	11-00285	**$346.00**
Cessna 172P	11-00286	**$337.00**
Cessna 175 A, B, C	11-00287	**$356.00**
Cessna 177 B	11-00288	**$479.00**
Cessna 177 RG	11-00289	**$483.00**
Cessna 180	11-00290	**$369.00**
Cessna 180 A, B, C, D, E	11-00291	**$408.00**
Cessna 180 J	11-00292	**$408.00**
Cessna 180 K	11-00293	**$369.00**
Cessna 182 1956 model	11-00294	**$426.00**
Cessna 182 A	11-00295	**$456.00**
Cessna 182 J	11-00296	**$418.00**
Cessna 182 E, F, G, H, J, K, L, M, N, P, Q	11-00297	**$517.00**
Cessna 185 E & A185E	11-00298	**$458.00**
Cessna A185F 12 VOLT	11-00299	**$456.00**
Cessna A185F 24 VOLT	11-02211	**$477.00**

Aircraft Application	Part No.	Our Price
Cessna U206 C-G	11-00301	**$316.00**
Cessna 210 D	11-00302	**$214.95**
Cessna 210 E	11-00303	**$279.95**
Cessna T210 F	11-00304	**$297.95**
Cessna 210 K, T210K	11-00307	**$356.00**
Cessna 210 N, T210N	11-00306	**$327.00**
Beechcraft BE-35-C33	11-00254	**$328.00**
Beechcraft BE-V35	11-00255	**$316.00**
Beechcraft BE-C35	11-00256	**$316.00**
Beechcraft BE-S35	11-00257	**$316.00**
Bellanca BL-14-19-2	11-00258	**$427.00**
Bellanca BL-14-19-3	11-00259	**$418.00**
Bellanca BL-17-30	11-00260	**$418.00**
Bellanca BL-17-30A	11-00261	**$417.00**
Bellanca/Champion 7GCBA, 7ECA	11-00262	**$408.00**
Bellanca/Champion 7GCAA, 7KCAB	11-00263	**$407.00**
Bellanca/Champion 8KCAB	11-00264	**$407.00**
Bellanca/Champion 7GCB	11-00265	**$299.95**
Bellanca/Champion 7GCBC	11-00266	**$408.00**
Grumman GRUM-AA5, 5A, 5B	11-00267	**$228.95**
Grumman GRUM-AA-1A, 1B, 1C	11-00268	**$228.95**
Luscombe LU-8E	11-00269	**$310.00**
Mooney MO-M20C	11-00270	**$295.95**
Mooney MO-M20F	11-00271	**$359.00**
Stinson STI-108 1, 2, 3	11-00272	**$256.95**
Rockwell Commander RW-112	11-00308	**$624.00**
Rockwell Commander RW-114	11-00309	**$670.00**
Swift GC-1A, 1B	11-00311	**$277.95**

PLEASE VISIT OUR WEBSITE FOR MORE DETAILED INFORMATION ON BOGERT AVIATION CABLES.

LANDING STRIP LIGHT KITS






P/N 11-07953 *P/N 11-07954* *P/N 11-07952* *P/N 11-07955*

An "airfield in a suitcase" solution. A fast-deployed, 40 light kit of our Landing Strip Light. Used for expeditionary, improvised or temporary airfields. Suitable for a 4,000' runway, if placed at typical 200' intervals (max.). Order multiple kits for longer runways. Operators Liability- The system has been designed to be operated under normal visual meteorological conditions for night flying by a pilot with normal vision. The system is utilized at the operator's discretion and risk. The suppliers accept no liability whatsoever whether implied or explicit for any incidents/ accidents that may incur. The operator must ensure that trained personnel operate the system and are made fully aware of aviation safety and that the runway remains clear of animals, pedestrians and obstructions at all times during landings and takeoffs. Only competent and currently night rated pilots may use this system. Use by student pilots training for night rating is prohibited.

Landing Strip Light Kit - 40 light basic kit, packed in a Pelican 1660 wheeled equipment case for ease of storage, handling, and set up. 180 lb. (82 kg) per kit.

Description	Part No.	Price
Landing Strip Light Kit with 40 Lights	11-07953	**$4,248.00**
Landing Strip Light Kit Jr. with 10 Lights	11-07954	**$850.00**
Landing Strip/Runway Light - Not available for sale to European Union at this time, not RoHS compliant.	11-07952	**$112.00**
Multifunction Strobe - Flashing or Steady! Use steady mode as a backup light or area light. Turn on the light. If it is not in the mode you want, quickly turn it off/on to change modes.	11-07955	**$649.00**

RUNWAY LIGHT KITS



2200FT STRIP KIT- Runway Light, 2200 FT. Strip kit, includes: 10 white lamps and 4 green, threshold lamps. The shield has a baked on finish equipped with high illuminating lens. Includes 6" attach pigtail. Operates on standard 115V and uses standard 14 gauge wire.
P/N 05-05199..... **$798.00**

3200FT STRIP KIT - 3200 Ft. Runway Strip Kit, includes 18 White lamps and 4 Green lamps 10 Watts, Operates on standard 115V, Equipped with long life outdoor bulb, Uses No. 8 or No. 10 standard underground cable(Check w/State & Local building codes), Uses standard 1" wood or steel stake, Maker cone has high luster baked-on finish, High illuminated optical lens, Equipped with 6" pigtail, Constructed of lifetime aluminum components, Preassembled-Strip kits ready for hookup. P/N 05-05198.... **$1,252.00**

THRESHOLD KIT - Threshold dual red/green assembly. Designed for threshold installations requiring this type of configuration. Includes 6 red/green lamps and 6" attach pigtail. The shield has a baked on finish equipped with high illuminating lens. Operates on standard 115V and uses standard 14 gauge wire. P/N 05-05201..... **$327.00**

SEE WWW.AIRCRAFTSPRUCE.COM FOR REPLACEMENT LAMPS & PARTS

SOLAR WINDSOCK LIGHTING KIT



Avlite's Solar Windsock Light Kit provides users with a complete, reliable and low maintenance solution to windsock illumination. The AV09-4WL suits existing windsock assemblies and can be installed immediately requiring no costly underground wiring. Windsocks are not included.

Complete stand-alone unit ready for immediate installation. Incorporates four (4) AV-09 lights mounted onto 12mm powder-coated square tubing arms, a 140watt multicrystalline solar module and mounting bracket. Each AV-09 light incorporates a 3watt ultra-high intensity LED as a light source offering up to 100,000 hours of service - no need to change any globes. Integrated solar/battery system. 140watt solar module (standard). 2 x 55Ah SLA batteries (standard).

P/N 11-13410..... **$3,617.00**

SOLAR POWERED AVIATION LIGHTS



The solar powered AV-70 aviation light offers enormous benefits over traditional battery and hard-wired aviation lights including low maintenance and no underground wiring. Mounts are not included. Integrated solar/ battery system. Dual internal high-performance solar modules angled to maximize solar collection. Fast & easy to deploy – no programming IP68 waterproof rating User-replaceable battery Ultra-high intensity LEDs (no changing globes ever).

Description	Part No.	Price
Solar Runway Edge Light (White)	11-13399	**$390.00**
Solar Taxiway Edge Light (Blue)	11-13402	**$389.00**
Solar Runway Threshold Light (Red/Green)	11-13403	**$403.00**
Solar Warning/Barricade Light (Red)	11-13404	**$389.00**
Solar Tactical Light (Infrared)	11-13405	**$389.00**

MOUNTS

Mounts are are made out of 7-stage powder-coated heavy duty aluminum and are available in yellow.

Description	Part No.	Price
Frangible stakemount set complete for AV-70. • Including light mounting plate, frangible coupling, ground stake, fasteners (excluding light fixture bolt set) • In ground insertion: 28cm / 11 inches	11-13408	**$95.00**
Frangible concrete mount solution complete for AV-70. • Includes: light mounting plate, base plate, coupling, anchor bolts (4), fasteners (excluding light fixture bolt set)	11-13409	**$95.00**

AIRPORT CONE MARKERS



Markers are available in two sizes - Large Cone AV-LC - Ø750mm and Mini Cone AV-MC - Ø400mm. Rotationally-moulded polyethylene with a 20 year life expectancy - unmatched by any other product on the market. Less servicing than fibreglass models. Can be easily secured UV-stabilised Molded in color - no need for painting. 100% recyclable.

Size	Part No.	Price
Mini	11-13407	**$35.00**
Large	11-13406	**$65.00**

EMS HELIPAD LIGHTING KIT



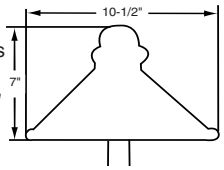
Avlite's EMS Helipad Kit is ideal for medevac and other emergency situations where a temporary lit landing area is needed and can be easily configured and deployed to suit local requirements during natural disasters, humanitarian operations, emergency rescue missions or any other emergency situation. Minimum range of 2 miles (4km). Autonomy >750 hours Easy to configure & deploy. Long-life, user-replaceable battery Ultra-high intensity LEDs Magnetic bases hold the lights securely in place. Easy-to-handle case. Robust, high impact & lightweight construction. IP67 waterproof rating ON/OFF switch for easy activation. Flashing white light with integrated IR (infrared) provides NVG signature.

P/N 11-13411..... **$2,750.00**

RUNWAY LIGHTS / TAXI LIGHTS



- 10 Watts
- Operates on standard 115V
- Equipped with long-life outdoor bulb
- Uses No. 8 or No. 10 standard underground cable. Check w/State & local building codes
- Uses standard 1" wood or steel stake
- Marker cone has high luster baked-on finish
- High illuminated optical lens
- Equipped with 6" attached pigtail
- Constructed of lifetime aluminum components
- Preassembled - Strip kits ready for hookup.



Excellent Quality • Economical Pricing • High Optical Output • Immediate Delivery • Lowest Operating Cost •Minimum Installation & Maintenance Cost

RUNWAY LIGHT KITS

These realistically priced lights are inexpensive to install, require little maintenance, and are economical to operate. The shield has a baked on finish equipped with high illuminating lens. Also includes 6" attach pigtail. Operates on standard 115V. Code 7

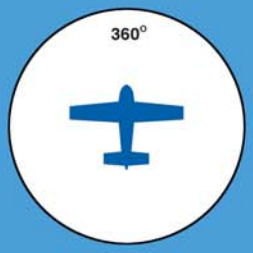
3200 FT. STRIP KIT
Includes: 18 white lamps and 4 green threshold lamps.
P/N 05-05198..... **$1,252.00**

2200 FT. STRIP KIT
Includes: 10 white lamps and 4 green threshold lamps.
P/N 05-05199..... **$798.00**

THRESHOLD DUAL RED/GREEN ASSEMBLY
Designed for threshold installations requiring this type of configuration. Includes 6 red/green lamps. Set of 6.
P/N 05-05201..... **$327.00**

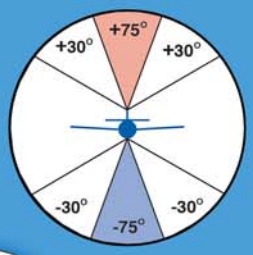
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POSITION LIGHTS AND ANTI-COLLISION LIGHT DISTRIBUTION PATTERNS REQUIREMENTS



An approved anti-collision strobe light system must project light 360° around the aircraft's vertical axis. One or more strobe lights can be used.

An approved anti-collision strobe light system must project light + or - 30° above and below the horizontal plane of the aircraft. One or more strobe lights can be used. The + or - 75° projected light is required since July 18, 1977.





LOCATIONS ON THE AIRCRAFT FOR ANTI-COLLISION STROBE LIGHTS, TO COMPLY TO THE LIGHT PATTERN REQUIREMENTS





VERTICAL FIN
One anti-collision strobe light mounted on the vertical fin will meet the minimum requirements on most aircraft. A half red and half white lens is recommended.

WING TIP
Two wing tip strobe lights that protrude beyond the wing tip.





ENCLOSED WING TIP
Enclosed wing tip anti-collision strobe lights, require a third strobe light on the tail or vertical fin, to fill in the required light envelope. This is an approved anti-collision system.

FUSELAGE
In a fuselage mounted anti-collision strobe light system, a minimum of two strobe lights are necessary to get the required vertical coverage. This is an approved anti-collision system.

ANTI-COLLISION AND POSITION LIGHT REQUIREMENTS, LOCATIONS, & DISTRIBUTION PATTERNS

All aircraft must have an approved anti-collision light and position light system for nighttime operations. The position lights consist of an Aviation Red on the left side, an Aviation Green on the right and an Aviation White taillight (REF. FAR 23.1389).

The anti-collision lighting system is required under FAR PART 91.205(c). There are different requirements affecting different aircraft. These aircraft are categorized by the date of application for type certificate. Home built aircraft are determined by the date of issuance of the Experimental Operating Limitations. The different categories are as follows:

Aircraft for which type certificate was applied for after April 1, 1957 to August 10, 1971:

These anti-collision systems must produce a minimum of 100 effective candela in Aviation Red or White (REF. FAR 23.1397), 360º around the aircraft's vertical axis, 30º above and below the horizontal plane (REF. FAR 23.1401).

Aircraft for which type certificate was applied for after August 11, 1971 to July 18, 1977:

These anti-collision systems must produce a minimum of 400 effective candela in Aviation Red or White (REF. FAR 23.1397), 360º around the aircraft's vertical axis, 30º above and below the horizontal plane (REF. FAR 23.1401).

Aircraft for which type certificate was applied for after July 18, 1977:

These anti-collision systems must produce a minimum of 400 effective candela in Aviation Red or White (REF. FAR 23.1397), 360º around the aircraft's vertical axis, 75º above and below the horizontal plane (REF. FAR 23.1401).

Note: The position lights must be wired independently of anti-collision lights.

INSTALLATION LOCATIONS

WING TIP:
The major difference in systems is the location of the strobe power supplies which can be mounted locally, one in each wing tip, or a single power supply can be mounted in the fuselage. Installation time can be greatly reduced if done in conjunction with an annual or one hundred-hour inspection. Properly installed power supplies and cabling are necessary for the safe operation of Whelen or any light systems.

FUSELAGE:
Fuselage mounted units can be either self-contained with the power supply and lighthead as one unit, or remote lightheads run off a separate power supply. To meet the field of coverage, one must be on the top of the fuselage and one on the bottom.

VERTICAL FIN:
Finally, if applicable, a single anti-collision light can be mounted on the vertical stabilizer. It can be either a self-contained or remote lighthead depending on the aircraft.

HOME BUILT & KIT AIRCRAFT

For Aircraft with Standard Wing Tips – The most widely used system on the market, this provides all of the components for anti-collision and position lights without the need for a taillight. The power supply is mounted in the fuselage and shielded cable is run to the strobe lights. The following is recommended:

Quantity	Model #	Part #	Description
1 each	HDACF	01-0770028-05	Power supply
1 each	A600PG14	01-0790006-00	Wing tip strobe/position/taillight, 14 VDC
1 each	A600PR14	01-0790006-02	Wing tip strobe/position/taillight, 14 VDC
Note: Model 9034001 and 9034002 can replace Model A600 for a LED solution			
1 each	HD60	01-0750206-00	Installation package

For Aircraft with Enclosed Wing Tip Fairings – If the position and strobe lights are mounted under a clear fairing, a third tail strobe is required. The following is recommended:

Quantity	Model #	Part #	Description
1 each	HDACF	01-0770028-05	Power supply
1 each	A650PG14	01-0770054-00	Wing tip strobe/position light, 14 VDC
1 each	A650PR14	01-0770054-02	Wing tip strobe/position light, 14 VDC
Note: Model 7111001 and 7111002 can replace Model A650 for a LED solution			
1 each	A500AV14	01-0770024-00	Tail position/strobe light assembly
1 each	HDT390	01-0750205-00	Installation package

For Aircraft with Enclosed Wing Tip Fairings & Wing Tip Mounted Power Supplies – If position and strobe lights are mounted under a clear fairing, the need for a third tail strobe is required. The following is recommended:

Quantity	Model #	Part #	Description
2 each	A490ATSC	01-0770062-03	Power supply
1 each	A650PG14	01-0770054-00	Wing tip strobe/position/taillight, 14 VDC
1 each	A650PR14	01-0770054-02	Wing tip strobe/position/taillight, 14 VDC
Note: Model 7111001 and 7111002 can replace Model A650 for a LED solution			
1 each	A500AV14	01-0770024-00	Tail position/strobe light assembly, 14 VDC
3 each	HS5	01-0750215-00	Installation package

For strobe system recommendations for certified aircraft and for Whelen/ Aeroflash/ Grimes/ Cessna cross reference lists please visit our website WWW.AIRCRAFTSPRUCE.COM

WHELEN AVIATION LIGHTING

WHELEN ORION 600 SERIES WINGTIP POSITION / ANTI-COLLISION LED LIGHTS



ORION600 Series of FAA/TSO approved LED aviation lighting. Incorporating the latest state of the art LED Technology available in an all-inclusive package, the ORION600 series eliminates the need for external flasher boxes. Flush mountable for a wide variety of applications with minimal integration and easily retrofitable to the Whelen legacy strobe products. The ORION600 series is quite simply the brightest form of LED Anti-collision and Position lighting available.
Model ORION600 Position/Anti-Collision Lighthead All LED self-contained wingtip mounted Position/Anti-Collision system. Eliminates the need for external power supplies and reduces current draw and provides thousands of hours of operation. FAA TSO-C96c Class II / TSO-C30c Type II & III.

Whelen #	Model #	Color	Voltage	Part #	Price
01-0771733-01	OR6001G	Green	12V	11-11365	**$510.00**
01-0771733-02	OR6001R	Red	12V	11-11366	**$556.00**
01-0771733-11	OR6002G	Green	24V	11-11367	**$511.00**
01-0771733-12	OR6002R	Red	24V	11-11368	**$510.00**

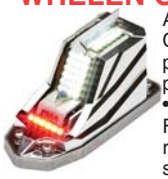
WHELEN ORION™650 SERIES LIGHTING



Whelen Engineering is proud to introduce the ORION650 Series of FAA/TSO approved LED aviation lighting. Incorporating the latest state-of-the-art LED Technology available in an all-inclusive package, the ORION650 series eliminates the need for external flasher boxes. Flush mountable for a wide variety of applications with minimal integration and easily retrofitable to the Whelen legacy strobe products. The ORION650 series is quite simply the brightest form of LED Anti-collision and Position lighting available. Features: • All LED self-contained wingtip mounted Position/Anti-Collision system. • Fully FAA/TSO-C96a & TSO-C30c Approved • FAR SPEC Certified • Replaceable hard coated polycarbonate lens to maintain maximum light output • Aerodynamic design without sacrificing light output • Exceeds FAA minimum intensity requirements for maximum visibility and increased safety of flight • Environmentally tested and certified to RTCA/D0-160G standards. FAA TSO-C96a Class III/TSO-C30c Type II. STC SA800EA.

Model No..	Description	Part No.	Price
OR6501G	Wingtip PTA Green, 12V	11-11966	**$449.00**
OR6501R	Wingtip PTA Red, 12V	11-11967	**$449.00**
OR6502G	Wingtip PTA Green, 28V	11-11968	**$449.00**
OR6502R	Wingtip PTA Red, 28V	11-11969	**$449.00**

WHELEN ORION™ 650E SERIES LIGHTING



All LED self-contained wingtip mounted Position/Anti-Collision system. Eliminates the need for external power supplies and reduces current draw and provides thousands of hours of operation.
• Fully FAA/TSO-C96a & TSO-C30c Approved FAR SPEC Certified • Exceeds FAA minimum intensity requirements for maximum visibility and increased safety of flight • Environmentally tested and certified to RTCA/D0-160G standards. STC SA800EA.

Model No..	Description	Part No.	Price
OR6501GE	Embedded PTA Green, 12V	**11-11971**	**$449.00**
OR6501RE	Embedded PTA Red, 12V	**11-11972**	**$495.00**
OR6502GE	Embedded PTA Green, 28V	**11-11973**	**$449.00**
OR6502RE	Embedded PTA Red, 28V	**11-11974**	**$495.00**

WHELEN ORION™ 500 SERIES LIGHTING



All LED self-contained wingtip mounted Position/Anti-Collision system. Eliminates the need for external power supplies and reduces current draw and provides thousands of hours of operation.
• Fully FAA/TSO-C96a & TSO-C30c Approved • FAR SPEC Certified • Replaceable hard coated polycarbonate lens to maintain maximum light output • Aerodynamic design without saacrificing light output • Exceeds FAA minimum intensity requirements for maximum visibility and increased safety of flight • Environmentally tested and certified to RTCA/D0-160G standards. STC SA800EA.

Model No..	Description	Part No.	Price
OR5001V	Tail PTA Light White, 12V	**11-11975**	**$385.00**
OR5002V	Tail PTA Light White 28 V	**11-11977**	**$385.00**

WHELEN PARMETHEUS PLUS REPLACEMENT LANDING LIGHTS



Parmetheus Plus PAR36/46 LED lights are a drop-in replacement for outdated Halogen PMA pending. Lightweight, low-current and moisture resistant, they provide stable light output for thousands of operating hours. These PAR 36 LED lights are 40% brighter output than the original Parmetheus Series assemblies, and the PAR 46 are 80% brighter. LED lighting is the ideal technology for aviation applications. Whelen LED lights are time and field-tested for reliability and long-life performance under the tough conditions required by Fire, Emergency, DOT and Law Enforcement professionals around the world. STC-PMA Pending.

Description	Part No.	Price
PAR 36 14V Landing	11-12976	**$227.95**
PAR 36 14V Taxi	11-12977	**$227.95**
PAR 36 28V Landing	11-12978	**$227.95**
PAR 36 28V Taxi	11-12979	**$227.95**
PAR 46 14V Landing	11-12980	**$288.95**
PAR 46 28V Landing	11-12981	**$288.95**

WHELEN 90352 PAR46 LANDING LIGHTS

Model 90352 Series is a self-contained all LED Landing Light Assembly. The design is intended to provide a solution to the needs for a Taxi & Landing Light on a wide variety of aircraft. All current source and electronic circuitry is contained within the housing. Unit is available in several mounting configurations to retrofit existing typical PAR-46 lighting. Unit is designed to be mounted internally behind existing lens.

Model #	Description	Part No.	Price
9035201	LED Landing/Taxing Light Internal Mount (Black Finish)	11-06180	**$1,422.00**

MICROBURST SERIES LIGHTING FROM WHELEN



LED Wingtip and Tail Lighting for Experimental and Light Sport Aircraft. **MB3(Red or Green)** .21 lbs., .45 amp (avg). Forward facing Wingtip Nav, with CometFlash 180° LED-Strobe and rear facing white Nav. **MB2(Red or Green)** .20 lbs., .40 amp (avg). Forward facing Wingtip Nav with MB2G Green CometFlash 180° LED-Strobe. **MB1WT** White, .15 lbs, .35 amp (avg). Nav taillight with CometFlash 180° LED-Strobe. Utilizes same mounting as all (A500/A555 Style).

Description	Part No.	Price
MicroBurst I MB1WT Single Taillight	11-08472	**$199.00**
MicroBurst III Kit MB3K 1 MB3R (R) and 1 MB3G (G)	11-08473	**$399.00**
MicroBurst II Kit MB2K 1 MB2R (R) and 1 MB2G (G)	11-08474	**$299.00**
MicroBurst II with Taillight Kit MB2KWT 1 MB2R (R) and 1 MB2G (G) plus 1 MB1WT Taillight	11-08475	**$498.00**

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MODEL 71080 SERIES LED BEACON FOR ROTORCRAFT, (150 EFF. CD) (14 VDC & 28 VDC)



7108051

71080 series LED beacons are FAA TSO compliant self-contained LED anti-collision lights (Ref. Class I - 150 effective candlepower). They are designed to replace a range of products. Refer to models and descriptions below. **ELECTRICAL**: Models ending: 8001, 8004, 8005, 8014, 8015, 8020, 8051, 8055: 12" Flying Leads. Models ending: 8007, 8017, 8008, 8018: MS3102R10SL-3P Connector

MECHANICAL: Models: 8004, 8014, 8008, 8018are designed to replace existing beacons utilizing a 5-Hole mounting pattern on a 4.656 diameter bolt circle (Whelen 70285 series/7090501 series or 70900 with A440 adapter).

Models: 8005, 8015, 8007, 8017are 3 ¾" opening designed to fit inside an A440 mounting adapter, mounting holes to fit in place of rotating beacons, Whelen Model HRCFA, or 7090004, -05 series LED beacons

SPECIFICATIONS: • Current: 0.87 amps average, 3.0 amps peak • Weight: 0.65 lbs. (295gm) (8001 & 8051) • Lens: Clear polycarbonate • Dimensions: 2.6" (66mm) diameter, exposed height, 3.74" (95mm) (8001 & 8051)

Model #	Approvals	Description	Part #	Price
7108001	FAA TSO-C96a Class I (150 ecp)	LED red, 28 VDC Rotocraft (no adapter)	11-06173	**$547.00**
7108001		LED red, 28 VDC & Mt.	11-06174	**$529.00**
7108051		LED red, 14 VDC & Mt.	11-07656	**$996.00**
7108004		LED red, 28 VDC & 5-Hole mount	11-07687	**$643.00**
7108014		Same as 8004, lower Mt	11-07688	**$643.00**
7108055		LED Red, 14 VDC, 3.75" adapter	11-09909	**$575.00**
7108005		LED red, 28 VDC, 3.75" adapter	11-07689	**$637.00**
7108015		same as 8005, lower Mt	11-07690	**$665.00**
7108007		LED red, 28 VDC, 3.75" adapter	11-07691	**$665.00**
7108017		same as 8007, lower Mt.	11-07692	**$665.00**
7108008		LED red, 28 VDC & 5 hole mount	11-07693	**$629.00**
7108018		same as 8008, lower Mt.	11-07694	**$618.00**

MODEL 90520 SERIES LED FLASHING BEACON (RED & WHITE LEDS)



9052051

90520 series LED beacons are FAA TSO compliant self-contained LED anti-collision lights (Ref. Class I - 100 effective candlepower). They are designed to replace strobe lightheads as small as the A470A with available models to replace HR self-contained beacons (HRCFA) or our legacy 70900 LED beacon. Mounting plate included with assembly. Refer to models and descriptions below.

ELECTRICAL: Models ending: 2001, 2004, 2005, 2014, 2015, 2051, 2055: 12" Flying Leads. Models ending: 2007, 2017, 2008, 2018: MS3102R10SL-3P Connector

MECHANICAL: Models: 2004, 2014, 2008, 2018 are designed to replace existing beacons utilizing a 5 Hole mounting pattern on 4.656 diameter bolt circle (Whelen 70285 series / 7090501 series or 70900 with A440 adapter). Models: 2005, 2015, 2007, 2017 are 3 ¾" opening designed to fit inside an A440 mounting adapter, mounting holes to fit in place of rotating beacons, Whelen model HRCFA, or 7090004, -05 series LED beacons

SPECIFICATIONS: • Current: 0.67 amps Average, 3.0 amps Peak • Weight: 0.65 lbs. (295gm) (-01 & -51) • Lens: Clear polycarbonate • Dimensions: 2.6" (66mm) Diameter, Exposed Height, 3.74" (95mm) (-01 & 51)

Model #	Approvals Pend.	Description	Part No.	Price
9052001	FAA TSO-C96a Class I	LED red/white, 28 VDC & mount	11-07615	**$529.00**
9052051		LED red/white, 14 VDC & mount	11-07616	**$529.00**
9052004		LED red/white, 28 VDC & 5 hole mount	11-07617	**$593.00**
9052014		LED red/white, 28 VDC & 5 lower mount	11-07618	**$598.00**
9052005		LED red/white, 28 VDC, 3.75" adapter	11-07619	**$604.00**
9052055		LED Red/White, 14 VDC 3.75" adapter	11-09908	**$579.00**
9052015		same as 9052005, lower mount	11-07620	**$637.00**
9052007		LED red/white, 28 VDC, 3.75" adapter	11-07621	**$663.00**
9052017		same as 9052007, lower mount	11-07622	**$708.00**
9052008		LED red/white, 28 VDC & 5 hole mount	11-07623	**$633.00**
9052018		LED red/white, 28 VDC & 5 lower mount	11-07624	**$588.00**

MODEL 71055 SERIES LED BEACON



71055 series beacons are FAA TSO compliant self-contained LED anti-collision lights. They are designed to replace existing quartz halogen flasher beacons installed as original equipment on single engine Cessna's from 1967 and later (contact factory for details). They can also replace remote mounted strobe lights (ref. Whelen A470 series) allowing for removal of the strobe power supply. Internal mounting plate provided with choice of mounting holes to retrofit most existing mounting patterns. STC SA615EA approved. **SPECIFICATIONS**: • Power Consumption: 01-0771055-00 - 1.2 amps Avg. / 11-04542 - 0.6 amps Avg. • LED Color: Aviation RED • Lens: Clear Polycarbonate • Weight: 0.52 lbs. (236gm) • Exposed Height: 3.09" (78mm) • Exposed Diameter: 2.60" (66mm) FAA TSO-C96a Class III

Model #	Description	Part #	Price
7105500	LED beacon 14 VDC, red	11-04541	**$499.00**
7105501	LED beacon 28 VDC, red	11-04542	**$499.00**
38-0250885-00	Replacemnt Lens Gasket	11-10407	**$9.95**

NOTE: All non-FAA approved Whelen parts are signified by a (—) in the approval column. Parts without FAA approval may still be purchased, however, installation of these parts on U. S. Type Certificated products may require additional FAA approvals.

MODEL 70509 SERIES



70509 series self-contained halogen flashing anti-collision light with the same mounting pattern as the factory installed beacon on single engine Cessna's 1967 & later. Available in three different lens colors, Aviation red, aviation white and split aviation red/white. When used in conjunction with the model 50519 mounting adapter, it can replace rotating beacons with the 3-3/4" (95mm) dia. mounting hole. Note: Not recommended for installation on helicopters or twin engine aircraft. **SPECIFICATIONS**: • Weight: 0.27 lbs. (122gm) • Height: 3.75" (95mm) • Diameter: 2.65" (67mm) • Power Consumption: 2.7 amps @ 14 VDC, 1.3 amps @ 28 VDC

Model #	Approvals	Description	Part #	Price
7050900	FAA TSO-C96a	14V, red lens	11-03235	**$178.75**
7050901	FAA TSO-C96a	14V, white lens	11-03268	**$174.75**
7050902	FAA TSO-C96a	14V, red/white lens	11-03231	**$178.75**
7050903	FAA TSO-C96a	28V, red lens	11-03276	**$159.95**
7050904	FAA TSO-C96a	28V, white lens	11-05108	**$173.75**
7050905	FAA TSO-C96a	28V, red/white lens	11-03292	**$174.75**
7050907	FAA TSO-C96a	28V, red lens w/ mask, Cessna single engine	11-07628	**$182.75**
50519001	—	option mounting adptr	11-03238	**$85.00**



WHELEN 90028 SERIES LIGHTHEADS

90028 series wing tip strobe light used on Beech aircraft with commonality wing tip 1974 & later. It is a direct replacement for 30-0467-( ), 30-1331-( ) and the 30-1467-( ) series.

NOTE: Do not use with Cannon plug. Light assembly, 45° mounting bracket. Weight: 0.4 lbs. (181gm)• Exposed Height: 1.87" (48mm)• Length: 4.37" (111mm)• Depth: 2.25" (57mm)

P/N 11-00712 ..... **$221.95**

MODEL HRCFA SERIES



HRCFA series is a self-contained CometFlash® strobe anti-collision light. The unique polycarbonate optic lens and reflector design re-directs stray light rays into the horizontal plane to provide maximum 360º of uniform light coverage. Available in three different lens colors, aviation red, aviation white and split aviation red/white and in radio-shielded configurations. FAA approved as a direct replacement for any rotating beacon that uses a 3-3/4" (95mm) dia. mounting hole. Can be installed in the vertical fin or the fuselage. Fuselage installation requires the A440 mounting adapter. Operates between 10 to 30 VDC. **SPECIFICATIONS**: • Weight: 1.5 lbs. (680gm) • Height: 7.25" (184mm) • Diameter: 3.7" (94mm) • Power Consumption: 3.2 amps @ 14 VDC, 1.6 amps @ 28 VDC

Model #	Approvals	Description	Part #	Price
HRCFAR	FAA/PMA	Std. assy, red lens	11-16214	**$566.00**
HRCFAW	FAA/PMA	Std. assy, white lens	11-16212	**$568.00**
HRCFAS	FAA/PMA	Std assy, split red/white	11-16216	**$567.00**
HRCFADR	FAA/PMA	Radio-shielded, red lens	11-07625	**$664.00**
HRCFADS	FAA/PMA	Radio-shielded, split red/white	11-07627	**$664.00**

EL

WHELEN MODEL 90044 SERIES



5-Hole

90044 series self-contained, 150 watt, quartz halogen flashing anti-collision light. Factory installed on Lear 31, Falcon 900 and Cessna Citation X. It is also a direct replacement for oscillating beacons on most corporate aircraft.

SPECIFICATIONS: • Weight: 1.6 lbs. (726gm) to 2.5 lbs. (1134gm) • Height: 5.5" (140mm) • Power Consumption: 3.25 amps @ 28 VDC • Replaces: G9950-( ), 40-0100-( ), 30-2140-( ), 40-0117-( ), 40-0127-( ), 30-2647-( )

To determine model required for replacement, the following information is needed: Lens color (red or white), upper or lower mounting location, number of mounting holes (5, 8, or 9), weight and position installed. Beacons installed on the rudder.Top replacement on GII and GIII require 9004401 or 9004402 in conjunction with the 16 hole mounting plate, P/N 06-170618-00.

Model #	Approvals	Remarks	Lens	Mount	Base	Part #	Price
9004401	FAA TSO-C96a	Std. Assy	red	upper	5 hole	11-03293	**$888.00**
9004402	FAA TSO-C96a	Std. Assy	white	upper	5 hole	90044-02	**$1,178.00**
9004403	FAA TSO-C96a	Std. Assy	red	lower	5 hole	90044-03	**$1,154.00**
9004404	FAA TSO-C96a	Std. Assy	white	lower	5 hole	90044-04	**$910.00**
9004417	FAA TSO-C96a	Std. Assy	red	upper	8 hole	90064-17	**$1,154.00**
9004418	FAA TSO-C96a	Std. Assy	white	upper	8 hole	90044-18	**$910.00**
9004419	FAA TSO-C96a	Std. Assy	red	lower	8 hole	90044-19	**$1,154.00**
9004420	FAA TSO-C96a	Std. Assy	white	lower	8 hole	90044-20	**$910.00**
9004453	FAA TSO-C96a	Masked	white	lower	8 hole	11-07647	**$950.00**
9004435	FAA TSO-C96a	2.50 lbs. (Westwind)	red	upper	8 hole	90044-35	**$1,231.00**
9004433	FAA TSO-C96a	Rudder Mount	red	upper	5 hole	11-07641	**$1,125.00**
9004457	FAA TSO-C96a	2.25 lbs., cable pigtail (Beech Barons)	red	upper	5 hole	11-01968	**$895.00**

MODEL 90033 SERIES SELF-CONTAINED LIGHT ASSEMBLIES



2-Hole

90033 series self-contained, 150 watt, quartz halogen flashing anti-collision light which is factory installed on Beechcraft. It is also a direct replacement for oscillating beacons on most corporate aircraft.

SPECIFICATIONS: • Weight: 0.6 lbs.(272gm) to 0.9 lbs. (408gm) • Height: 4.4" (112mm) • Power Consumption: 5.5 amps @ 28 VDC

Model #	Approvals	Remarks	Lens	Mount	Base	Part #	Price
900331	FAA TSO-C96a	18" cable, no connector	red	lower	2 hole	90033-1	**$1,028.00**
900332	FAA TSO-C96a	18" cable, no connector	white	lower	2 hole	90033-2	**$794.00**

FOR ADDITIONAL 90044 AND 90033 SERIES LIGHTS PLEASE CALL OR VISIT OUR WEBSITE AT WWW.AIRCRAFT SPRUCE.COM



MODEL SACF SERIES - SACF series self-contained CometFlash strobe anti-collision light which utilizes the same power supply & housing as the model HRCFA. It uses an aviation white glass lens only, ideal for agricultural applications where chemicals are used. Because the lens has no optics built-in, it produces 300 effective candlepower. It uses a 3-3/4" dia. mounting hole. Fuselage installation requires the A440 mounting adapter. Operates between 10 to 30 VDC. **SPECIFICATIONS**: • Weight: 1.5 lbs. (680gm) • Height: 5.50" (140mm) • Diameter: 3.7" (94mm) • Power Consumption: 3.2 amps @ 14 VDC, 1.6 amps @ 28 VDC

Model #	Approvals	Description	Part #	Price
SACF	FAA/PMA	Aviation white lens	11-03262	**$729.00**



MODEL A440 MOUNTING ADAPTER - A440 mounting adapter is for fuselage installations for the HRCFA series and the SACF series.

Model #	Approvals	Description	Part #	Price
A440	FAA/PMA	Mounting adapter	11-03699	**$39.75**



MODEL A470A SERIES - A470A series remote strobe light assembly is compatible with all Whelen power supplies. It can be installed on the fuselage or the vertical fin. The unique polycarbonate optic lens and reflector design, re-directs stray light rays into the horizontal plane to provide the maximum 360º of uniform light coverage possible. Available in three different lens colors, aviation red, aviation white and split aviation red/white. Available in radio-shielded configurations. All assemblies require either the model H102 or H103 mounting adapter. **SPECIFICATIONS**: • Weight: 0.3 lbs. (136gm) • Exposed Height: 3.75" (95mm) • Diameter: 2.5" (64mm)

Model #	Approvals	Description	Part No.	Price
A470AR	FAA/PMA	Standard assembly, red lens	11-03273	**$184.99**
A470AW	FAA/PMA	Standard assembly, white lens	11-03277	**$191.99**
A470AS	FAA/PMA	Std assy, split red/white lens	11-03259	**$184.95**
A470ADR	FAA/PMA	Radio-shielded asy, red lens	11-03714	**$249.00**
A470ADW	FAA/PMA	Radio-shielded assy, white lens	11-03291	**$266.95**
A470ADS	FAA/PMA	Radio-shielded assy, split red/white lens	11-04976	**$244.95**



H102

H103

MODELS H102 & H103 - Designed for the model A470A or model A450 series remote strobe lighthead assemblies. The model H102 allows flush mounting of the lighthead to the skin of the fuselage or the vertical stabilizer on later model Cessna Single engines. The H103 is designed for strobe assemblies to be installed in the standard 3-3/4" (95mm) dia. rotating beacon mounting hole.

Model #	Approvals	Description	Part No.	Price
H102	FAA/PMA	Flush mount adapter	11-03243	**$14.80**
H103	—	Rotating beacon mount adapter	11-03284	**$103.75**



MODEL A450 SERIES - A450 series remote strobe light assembly is compatible with all Whelen power supplies. It can be installed on the fuselage or the vertical fin. The Pyrex® Glass lens (clear only) makes the assembly suitable for use in severe vibration, chemical and moisture conditions (i.e. agricultural aircraft). Requires either the model H102 or model H103 mounting adapter. **SPECIFICATIONS**: • Weight: 0.3 lbs. (136gm) • Exposed Height: 2.25" (57mm) • Diameter: 2.5" (64mm)

Model #	Approvals	Description	Part No.	Prices
A450	FAA/PMA	Standard assembly, clear lens	11-03280	**$330.00**
SA418-1		Gasket for A450	11-03690	**$11.70**



MODEL A650 SERIES - Converts W1285 position lights into a position/anti-collision system by removing the existing retainer & replacing it with the A650 assembly. Radio-shielded version available. **SPECIFICATIONS**: • Weight: 0.2 lbs. (91gm) • Exposed Height: 2.4" (61mm)

Model #	Approvals	Description	Part No.	Price
A650	FAA/PMA	Standard unit	11-03215	**$199.95**
A650D	FAA/PMA	Radio-shielded	11-07604	**$285.95**



MODEL A625 SERIES - Many different applications. It can be used for aircraft with tip-tanks with enclosed position lights (under a fairing), or as an add-on strobe on the wing or the tail. Available in a radio-shielded version. **SPECIFICATIONS**: • Weight: 0.2 lbs. (91gm) • Exposed Height: 1.7" (43mm)

Model #	Approvals	Description	Part No.	Price
A625	FAA/PMA	Standard unit, clear lens	11-03228	**$244.95**
A625D	FAA/PMA	Radio-shielded, clear lens	11-03659	**$269.95**
A625DR	—	Radio-shielded, red lens	11-07607	**$600.00**

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MODEL 90340 SERIES STROBE ANTI-COLLISION/LED POSITION LIGHT ASSEMBLY (FOR COMPOSITE WINGTIP STRUCTURE) -



Same as 90340 series with addition of 3 feet of braided bonded protection. **SPECIFICATIONS**: • LED Navigation Light Power Consumption: 0.5 amps @ 14 VDC, 0.25 amps @ 28 VDC • Weight: 0.60 lbs. (272gm) 14 VDC, 0.65 lbs. (295gm) 28 VDC • Exposed Height: 2.70" (69mm) • LED Colors: Aviation Red, Aviation Green & Aviation White 1.1 lbs. (499gm) • Lens: Clear RFI coated glass: strobe, Clear Polycarbonate: Navigation Lights

Model #	Approvals	Description	Part No.	Price
9034001	FAA TSO-C96a/TSO-C30c Typ II & III	Pos Grn, 14V	11-05625	**$495.00**
9034002	FAA TSO-C96a/TSO-C30c Typ I & III	Pos red, 14V	11-05626	**$508.00**
9034003	FAA TSO-C96a/TSO-C30c Typ II & III	Pos Grn, 28V	11-05627	**$466.00**
9034004	FAA TSO-C96a/TSO-C30c Typ I & III	Pos red, 28V	11-05628	**$466.00**
9037501	FAA TSO-C96a/TSO-C30c Typ II & III	Pos Grn, 28V	11-06598	**$743.00**
9037502	FAA TSO-C96a/TSO-C30c Typ I & III	Pos red, 28V	11-06599	**$781.00**
19-170049-010	Retainer, A600 Lens Complete		11-13903	**$119.75**



MODEL 71110 SERIES STROBE ANTI-COLLISION/ LED POSITION LIGHT ASSEMBLY -

71110 series is a wing tip mounted strobe anti-collision/position light assembly utilizing LED's for the forward position lights. The LED's provide a significant reduction in current draw over conventional position light bulbs. The strobe light lens assembly is radio shielded for maximum EMI/RFI protection. Direct replacement (exact footprint) for the Whelen Model A650PG/PR series without replacing the current strobe power supply. Navigation light portion is wired with flying leads. **SPECIFICATIONS**: • LED Colors: Aviation Red, Aviation Green • LED Navigation Light Power Consumption: 0.25 amps @ 14 VDC or 28 VDC • Weight: 0.45 lbs. (204gm) 14 VDC, 0.50 lbs. (227gm) 28 VDC • Exposed Height: 2.70" (69mm) • Lens: Clear RFI coated glass: strobe, Clear Polycarbonate: Navigation Lights

Model #	Approvals	Description	Part #	Price
7111001	FAA TSO-C96a / TSO-C30c Type II	Pos Grn, 14 V	11-05630	**$383.00**
7111002	FAA TSO-C96a / TSO-C30c Type I	Pos red, 14 V	11-05633	**$383.00**
7111003	FAA TSO-C96a / TSO-C30c Type II	Pos Grn, 28 V	11-05635	**$376.00**
7111004	FAA TSO-C96a / TSO-C30c Type I	Pos red, 28 V	11-05636	**$384.00**



MODEL A500A SERIES -

A500A series combination strobe/ tail navigation light used when the wing tip anti-collision lights are mounted in an enclosure and can't provide 360º of strobe coverage. It is a direct replacement for the standard tail position light. Available in a radio-shielded version. Voltage (14 or 28) and mounting (horizontal or vertical) must be specified when ordering. **SPECIFICATIONS**: • Weight: 0.3 lbs. (136gm) • Exposed Height: 1.7" (43mm) • Diameter: 1.5" (38mm) FAA/PMA, FAA TSO-C30b

Model #	Description	Part No.	Price
A500AV14	Vert mnt, 14V	11-03223	**$307.00**
A500AV28	Vert mnt, 28V	11-03255	**$319.00**
A500AH14	Horz. mnt, 14V	11-03249	**$316.00**
A500AH28	Horz. mnt, 28V	11-03264	**$325.00**
A500AVD2	Vert mnt, 28V, radio-shielded	11-06407	**$399.00**
A500AHD1	Horz. mnt, 14V, radio-shielded	11-03717	**$255.95**
A500AHD2	Horz. mnt., 28V, radio shielded	11-04281	**$398.00**
A500ASP2	Vert mnt, 28V, 50" cables, no Connectors	11-03720	**$420.00**
A500ABV1	Beech Special 14V, MS connector	11-03715	**$660.00**
A500ABV2	Beech Special 24V, MS connector	11-03716	**$663.00**



MODEL 71105 SERIES LED POSITION LIGHT ASSEMBLY -

71105 series are fully FAA TSO compliant forward position lights. LED's provide a significant reduction in electrical current draw over conventional light bulbs. The 71105 is our latest design and lowest priced forward position light. Direct replacement for Whelen Model W1285 series (Version STC'd on Learjet Aircraft). **SPECIFICATIONS**: • LED Navigation Light Power Consumption: 0.25 amps @ 14 VDC or 28 VDC • LED Colors: Aviation Red, Aviation Green • Weight: 0.20 lbs. (91gm) 14 VDC, 0.25 lbs. (113gm) 28 VDC • Exposed Height: 2.70" (69mm) • Lens: Clear Polycarbonate

Model	Description	Volt	Color	Leads	PN	Price
7110501	LED Forward Position Light FAA/TSO-C30c Type II	14	Green	Std - Red/ Black	11-05629	**$194.75**
7110502	LED Forward Position Light FAA/TSO-C30c Type I	14	Red	Std - Red/ Black	11-05631	**$197.85**
7110503	LED Forward Position Light FAA/TSO-C30c Type II	28	Green	Std - Red/ Black	11-05632	**$199.85**
7110504	LED Forward Position Light FAA/TSO-C30c Type I	28	Red	Std - Red/ Black	11-05634	**$199.85**
7110511	LED Forward Position Light FAA/TSO-C30c Type II	28	Green	With Shield Cable	11-13982	**$227.95**
7110512	LED Forward Position Light FAA/TSO-C30c Type I	28	Red	With Shield Cable	11-13983	**$227.95**



WHELEN LED TAIL POSITION LIGHTS 71554 SERIES

Whelen 71554 Series LED Tail Position Lights are an exact footprint for Whelen Models A555A and 71011 Tail Lights.

Description	Approvals (Pending)	Part No.	Price
7155401 Horizontal Mount, 28 VDC	FAA TSO-C30c Type III	11-10682	$219.95
7155402 Vertical Mount, 28 VDC	FAA TSO-C30c Type III	11-10683	$219.95
7155403 Vertical Mount (Cessna), 28 VDC	FAA TSO-C30c Type III	11-10684	$219.95
7155411 Horizontal Mount, 14 VDC	---	11-10568	$219.95
7155412 Vertical Mount (Cessna), 14 VDC	---	11-10686	$219.95



MODEL A555A SERIES -

A555A series tail mounted position light which uses a 25 watt halogen lamp. The suffix "V" or "H" in the part number designates the aircraft mounting screw locations in respect to the light shield. "V" designates vertical mounting and "H" indicates horizontal mounting on the aircraft. Supplied with a 2 position "AMP" connector. Specify 14 VDC or 28 VDC. Replaces the brand "G" A2064 series. **SPECIFICATIONS**: • Exposed Height: 1.4" (36mm) • Mounting Diameter: 1.06" (27mm) • Power Consumption: 2 amps @ 14 VDC, 1 amp @ 28 VDC • Weight: 0.1 lbs. (45gm)

Model #	Approvals	Description	Part #	Price
A555AV14	FAA TSO-C30b Type III	Vert, 14 VDC	11-03256	**$203.95**
A555AV28	FAA TSO-C30b Type III	Vert, 28 VDC	11-03267	**$207.95**
A555AH14	FAA TSO-C30b Type III	Horz. , 14 VDC	11-03270	**$217.95**
A555AH28	FAA TSO-C30b Type III	Horz. , 28 VDC	11-03275	**$203.95**



MODEL 50626 SERIES STROBE TUBE ASSEMBLY -

50626 series strobe tube assemblies are used with the following model numbers listed in chart below:

Model #	Description	Used on	Part No.	Price
5062600	6"	Model 9011102	11-07681	**$99.95**
5062601	6" w/Grom	Model 9034000 - 07, 20, 21 Model 7111001 - 04	11-07682	**$99.75**
5062602	12.5" w/Grom	Model 9034008, 09	11-07683	**$129.75**
5062603	2" w/Grom	Model 9037501, 02	11-07685	**$99.75**



A610



A612

MODELS A610 & A612 -

A610 flash tube and A612 glass lens are used for installing wing tip strobes in single engine Cessna's 1972 and later. The existing position light retainer is modified to accommodate the lens, and the flash tube is mounted directly behind. The unique magnifying design of the A612 lens increases the light intensity by two to three times in the horizontal plane. These items may be used for custom installations or as spare parts for existing light assemblies. The A612 lens is available in Aviation Red and an RFI coated version. Lenses meet material requirements of MIL-C-7989B Class B.

SPECIFICATIONS: • Drawing Number A612: 90005 • A610 Flash Tube Weight: 0.09 lbs. (41gm) • A612 Lens Weight: 0.08 lbs. (36gm)

Model #	Approvals	Description	Part No.	Price
A610	FAA/PMA	Standard unit, 6" leads	11-03213	**$92.75**
A610M	FAA/PMA	Molex connector, 6" leads	11-03734	**$99.95**
5027601	FAA/PMA	14" leads	11-07611	**$102.75**
5027602	FAA/PMA	12.5" leads	11-07612	**$102.75**
A612	FAA/PMA	Standard clear lens	11-03222	**$46.50**
A612D	—	Radio-shielded, clear lens	11-03735	**$168.99**
A612DR	—	Radio-shielded, red lens	11-07614	**$473.00**

EL

HOW TO CHOOSE A POWER SUPPLY AND ABOUT COMETFLASH®

The power supply needed depends on the application, and the mounting location. Model HDACF Series is a fuselage mounted power supply that will power two or three lights. Model A490ATSC Series is designed for installation adjacent to the strobe lighthead and will power one light assy. Model A490TCF Series is the most economical power supply when adding only one light. It mounts adjacent to the strobe lighthead assembly (not legal for light output with red strobe light). Most other Whelen power supplies are application specific, call for details. Unless otherwise noted, all power supplies are CometFlash®. A major advancement in the field of safety lighting. By pulsing the flash tube four times in rapid succession, the effective "on-time" of the strobe is increased from 2/1000 of a second to 4/10 of a second. This increases your airplane's visibility.



MODEL HDACF SERIES - HDACF series provides simultaneous flashing, alternate flashing or both. It will operate one, two or three strobe lightheads. Operating the wing tip strobes in the alternating mode will provide an accumulated 42 joules of power to each light. When in the simultaneous mode, the accumulated power to each light is 21 joules. In the three light mode, the wing tips will flash simultaneous at an accumulated 21 joules each, they alternate with a third light operating at an accumulated 42 joules. On the trigger selector outlet, a switch mounted in place of the jumper will allow wing tip outlets 2 & 3 to be turned off, while the tail outlet 1 will remain on. This power supply will operate from 10 to 30 VDC. **SPECIFICATIONS**: • Power Consumption: 7.0 amps @ 14 VDC; 3.5 amps @ 28 VDC • Weight: 2.1 lbs. (953gm) • Length: 5.50" (140mm) • Width: 5.0" (127mm) • Height: 2.37" (60mm)

Model #	Approvals	Part No.	Price
HDACF	FAA/PMA	11-16218	**$519.00**



MODEL A490ATSC SERIES - Operates one strobe lighthead. It produces an accumulated 34 joules of power and can be equipped to flash simultaneously with up to 5 other like units by connecting an 18 gauge wire between outlet 3 on the input power connector. This power supply will operate from 10 to 30 VDC. **SPECIFICATIONS**: • Power Consumption: 4.0 amps @ 14 VDC; 2.0 amps @ 28 VDC • Weight: 1.7 lbs. (771gm) • Length: 5.0" (127mm) • Width: 3.12" (79mm) • Height: 3.06" (78mm)

Model #	Approvals	Part No.	Price
A490ATSC	FAA/PMA	11-02666	**$535.00**



MODEL A490TCF SERIES - Operates one strobe lighthead. It produces an accumulated 19 joules of power. It will only meet 400 CP when used with the A470A-W. This unit cannot be synchronized. Operates from 10 to 30 VDC (not approved for use with red strobe light). **SPECIFICATIONS**: • Power Consumption: 1.7 amps @ 14 VDC; 0.85 amps @ 28 VDC • Weight: 1.2 lbs. (544gm) • Length: 5.0" (127mm) • Width: 3.12" (79mm) • Height: 2.38" (60mm)

Model #	Approvals	Description	Part No.	Price
A490TCF	FAA/PMA	20" leads, amp connectors	11-14714	**$353.00**
A490TCFM	—	20" leads, Molex connectors	11-06406	**$389.00**
7000615	—	20" leads, no connectors	11-07600	**$355.00**



MODEL A490TCCF SERIES - Same as the A490TCF but has a mounting plate with additional holes that directly replaces factory installed systems on single engine Cessna's, Aero Commanders, and Grumman Americans.

Model #	Approvals	Description	Part No.	Price
A490TCCF	FAA/PMA	20" leads, amp connectors	11-02661	**$339.00**
7000617	—	3" output, 7" input & 4 pos. amp conn (Cessna) (182,206)	11-04494	**$359.00**



MODEL HDS SERIES - Produces 20 joules of energy, SingleFlash, alternating between two light assemblies. The SingleFlash allows for a low current draw. This power supply will operate from 10 to 30 VDC. **SPECIFICATIONS**: • Power Consumption: 4.0 amps @ 14 VDC; 2 amps @ 28 VDC • Weight: 2.0 lbs. (907gm) • Length: 5.50" (140mm) • Width: 5.0" (127mm) • Height: 2.37" (60mm)

Model #	Approvals	Part No.	Price
HDS1428	—	11-03279	**$514.00**

MODEL 01-0770062-05 (CIRRUS) - Operates one (1) strobe light head at 36 joules in CometFlash. It is equipped to flash simultaneously with up to 5 other like units by connecting an 18 gauge wire between outlet 3 on the input connector. **SPECIFICATIONS**: • Power Consumption: 1.6 amps avg. • Input Voltage: 28 VDC Nominal • Weight 1.3lbs • Length: 5.00" • Width: 3.12" • Height: 3.00"



P/N 11-08306 .....**$506.00**



READING LIGHT - The Model A325 ML reading light will replace original equipment on 14 volt Piper aircraft. It is designed for passenger convenience and is equipped with an on/off slide switch. Specify voltage (14V or 28V).

14V.....P/N 11-03294 .....**$474.00**
28V.....P/N 11-03682 .....**$460.00**



OVERHEAD CABIN LIGHT - The Model A360 is designed for recessed overhead lighting. Aluminum housing & Pyrex lens. Weight: 0.25 Lb.

14V.....P/N 11-03685 .....**$237.95**
28V.....P/N 11-03686 .....**$254.95**
Dome light assy. with switch 14V .....P/N 11-03629 .....**$256.95**
Dome light assy. with switch 28V .....P/N 11-12924 .....**$243.95**



MODEL 71144 'GOOSENECK' LED LIGHT ASSEMBLY - Whelen LED Gooseneck Light Assembly. Features a positive off position & rheostat controlled light intensity. Available in 28VDC only. Power Consumption: 0.06 amps @ 28 VDC. LED Colors: Aviation White, Red, Blue. Weight: 0.46 lbs. (209gm). Black Nylon Hood: fixed in position.

Model #	Approvals	Description	Part #	Price
7114416	—	16" adj map light, 28V - Wht	11-07701	**$261.75**



A350 WHELEN POST LIGHTS - A350 and A350CN series instrument post light assemblies are designed to illuminate the instrument panel and function as instrument mounting bolts. The A350 is identical to the A350CN, but without the connector nut. SPECIFICATIONS: • Drawing Number A350: 70116 • Drawing Number A350CN: 70119 • Exposed Height: .875" (22mm) without spacer, 1.00" (25mm) with spacer • Power Consumption: 0.2 amps @6 VDC, 0.08 amps @14 VDC, & 0.04 amps • @ 28 VDC • Weight: 0.037 lbs. (17gm)

Post Light Assembly w/ nut black post
P/N 11-08133..... **$60.95**
Post Light Assembly w/ nut grey post 14V
P/N 11-01171..... **$58.75**
Post Light Assembly w/ nut grey post 28V
P/N 11-13673..... **$59.75**

Mfg Model#	Description	Part No.	Price
A350CN09	White, 14 VDC	11-03205	$63.75
A350CN10	Red, 14 VDC	11-03214	$51.75
A350CN15	White, 28 VDC	11-03210	$62.95
A350CN16	Red, 28 VDC	11-03653	$63.75



INSTALLATION CABLE KITS - Cable kits include all required connectors for hooking up the strobe light to the power supply only. Warning placards included. All cable is 16 gauge 3/C shielded. The cable diameter is .275" (7mm). Weight is .050 lbs. per linear foot. (Kits do not include switches or breakers)

Model #	Approvals	Description	Part #	Price
HS5	—	5' Cable kit	11-04204	**$49.95**
HT10	—	10' Cable kit	11-08173	**$59.75**
HS30	—	30' Cable kit	11-03285	**$99.95**
HD60	—	60' Cable kit	11-02667	**$163.75**
HDT390	—	90' Cable kit	11-02668	**$231.95**
HT	—	Install kit only	11-02669	**$23.95**

REPLACEMENT CONNECTORS - Replacement connector kits and assemblies for cables.

Model #	Approvals	Description	Part #	Price
A441	—	3 Position male with pins kit	11-03211	**$6.60**
A442	—	3 Position male with sockets kit	11-03212	**$6.50**
A444	—	2 Position male with pins ass'y	11-03700	**$6.50**
A446	—	2 Position female with sockets ass'y	11-03702	**$6.50**
A447	—	4 Position male with pins	11-07706	**$7.45**
A448	—	4 Position female with sockets	11-07707	**$6.60**

CRIMP TOOL - Pin and socket crimping tool.

Model #	Approvals	Description	Part #	Price
CRIMPAV	—	Pin/socket crimping tool, MILBAR #25E	11-07708	**$244.95**

NOTE: All non-FAA approved Whelens parts are signified by a (—) in the approval column. Parts without FAA approval may still be purchased, however, installation of these parts on U. S. Type Certificated products may require additional FAA approvals.

WHELEN AVIATION LIGHTING



MODEL 71125 SERIES LED RECOGNITION LIGHT - 71125 series LED recognition light is designed to provide supplemental lighting for a wide variety of aircraft applications. Provides all of the advantages of LED's as a light source, no EMI/RFI, low current draw, low heat, long life. Perfect for vibration prone areas. Item ships with flying leads. Several different beam spreads available. Designed to replace the Whelen A775 series. Version containing integrated MS connector also available. Can be used in conjunction with 71115 Flasher control assembly. Contact your OEM for installation eligibility on your aircraft. **SPECIFICATIONS**: • Power Consumption: 0.9 amps @ 14 Volts, 0.45 amps @ 28 Volts • Lens: Clear polycarbonate • LED Color: Aviation White • Weight: 0.3 lbs. (136gm) • Overall Width: 3.25" (83mm) • Overall Depth: 1.25" (32mm) • Overall Height: 1.95" (50mm)

Model #	Approvals	Description	Part #	Price
7112510	—	10 degree beam pattern, 14V	11-06164	**$264.95**
7112511	—	20 degree beam pattern, 14V	11-06165	**$287.95**
7112512	—	90 degree beam pattern, 14V	11-06166	**$298.95**
7112520	—	10 degree beam pattern, 28V	11-06167	**$272.95**
7112521	—	20 degree beam pattern, 28V	11-06168	**$264.95**
7112522	—	90 degree beam pattern, 28V	11-06169	**$264.95**
7112523	—	30 degree beam pattern, 28V	11-07703	**$279.95**



MODEL A775 SERIES - A775 series recognition light assembly which produces up to 22,000 beam candlepower using only a 35 watt lamp. **SPECIFICATIONS**: • Drawing Number: 70110 • Weight: 0.14 lbs. (64gm) • Width: 3.25" (83mm) • Height: 1.75" (44mm) • Depth: 2.25" (57mm) • Power Consumption: 2.5 amps @ 14 VDC, 1.25 amps @ 28 VDC

Model #	Approvals	Description	Part #	Price
7011001	FAA/PMA	Molex connector (Piper), 14V	11-07704	**$65.85**
7011002	FAA/PMA	Molex connector (Piper), 28V	11-07705	**$65.75**
A77514	—	12" leads, 14 VDC	11-03741	**$72.95**
A77528	—	12" leads, 28 VDC	11-03742	**$78.95**



A715-1 LANDING LIGHT

The Model A715-1 landing light is standard equipment on new Beechcraft, and will retrofit into older aircraft, as well. Accommodates PAR 36 sealed beam lamp. Order lamp separately (#4509 - 100W, 12V; #4594 or #4613 100W, 24V; Wt. 1/2 lb. Size: 4-3/4" dia. x 6-1/2" long x 2-1/8" deep.

P/N 11-03281 ..... **$289.95**



71685 RECOGNITION/ LANDING LIGHT

71685 Series LED Recognition/Landing light assembly. Dimensions H x W x D: 2.07" (53mm) x 3.64" (93mm) x Depth: 0.979" (25mm)

14V.....P/N 11-11189 .....**$124.75**
28V.....P/N 11-11190 .....**$119.95**

WHELEN VERTEX™ SUPER-LED® LIGHT



Only 7/8 in height, this small hemispheric LED lighthead is perfect for most applications where size and intensity are critically important. Self-contained unit using an in-line combination lamp driver/flasher. This self-contained LED Hideaway requires only a one inch hole in any composite style head light, cornering light or tail light assembly to deliver true wide angle warning to the front, side and rear of your vehicle... without interference to your vehicle computer and warning equipment! Less than 1 tall, it may also be surface mounted to outside surfaces anywhere on the vehicle!

Mfg Model	Description	Dimensions	Part No.	Price
VTX609R	Red Anti-Collision	1"H x 1.625" Dia.	11-12527	**$107.00**
VTX609C	Clear Anti-Collision	1"H x 1.625" Dia.	11-12475	**$134.99**
VTX3609R	360° Side Emitter Lighthead	1.49" Dia.	11-15417	**$130.00**
VTXFC11	Chrome Flange Kit	2.25"L x 1.7"W x 0.4"W	11-15423	**$16.50**
VTXFB11	Black Flange Kit	2.25"L x 1.7"W x 0.4"W	11-15424	**$8.70**



WHELEN LED RECOGNITION LIGHT ASSEMBLY

LED Form / Fit / Function replacement to A775 & A775EXP series.

14V.....P/N 11-14105 .....**$275.95**
28V.....P/N 11-14106 .....**$275.95**



WHELEN 71434 LED POST LIGHT

Product (Aviation) - The 71434 Series LED (Light Emitting Diode) instrument post light assemblies are designed to illuminate the instrument panel and function as instrument mounting bolts. They are a high quality, long lasting modern alternatives to standard incandescent post lights.

Model 71434 is identical to the 71450 without the connector nut. Both are available in Black and Grey. 14V version available with White LED, 28V version with White or Red. Made to replace existing A350 and A350CN assemblies.

Description	Part No	Price
White Long Black 14V	11-13607	**$65.75**
White Long Black 28V	11-13610	**$65.75**
White Short Black 14V	11-13608	**$65.75**
White Short Black 28V	11-13612	**$65.75**
White Long Grey 14V	11-13613	**$76.85**
White Long Grey 28V	11-13616	**$77.75**
White Short Grey 14V	11-13614	**$77.75**
White Short Grey 28V	11-13618	**$76.85**



WHELEN 71440 LED POST LIGHT

Product (Aviation) - The 71440 Series LED (Light Emitting Diode) instrument post light assemblies are designed to illuminate the instrument panel and function as instrument mounting bolts. They are a high quality, long lasting modern alternatives to standard incandescent post lights. Model 71440 has a #10-32 mounting thread.

Description	Part No.	Price
28V W/spacer 01-0771440-00	11-13619	**$89.75**
28v White 01-0771440-01	11-13620	**$66.75**
28v Red 01-0771440-02	11-13621	**$89.75**



WHELEN 71450 LED POST LIGHT

Product (Aviation) - The 71450 Series LED (Light Emitting Diode) instrument post light assemblies are designed to illuminate the instrument panel and function as instrument mounting bolts. They are a high quality, long lasting modern alternatives to standard incandescent post lights. Model 71434 is identical to the 71450 without the connector nut. Both are available in Black and Grey. 14V version available with White LED, 28V version with White or Red. Made to replace existing A350 and A350CN assemblies.

Description	Part No	Price
White Long Black 14V	11-13622	**$78.75**
White Long Black 28V	11-13625	**$77.75**
White Short Black 14V	11-13623	**$77.75**
White Short Black 28V	11-13627	**$76.85**
White Long Grey 14V	11-13628	**$76.85**
White Long Grey 28V	11-13631	**$76.85**
White Short Grey 14V	11-13629	**$76.85**
White Short Grey 28V	11-13633	**$77.75**



WHELEN STROBE LIGHT ASSEMBLY

Whelen Strobe Light Assembly. 01-0770818-00. Dimensions: 3.465"W x 5.276"L x 3.386"H.

P/N 11-13691 ..... **$279.95**

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WHELEN AVIATION LIGHTING



MODEL 70285 SERIES - 70285 series self-contained CometFlash® strobe anti-collision light. It utilizes the same lens/reflector and strobe tube as the model HRCFA, however, its vibration resistant, heavy-duty construction is specially designed for helicopter applications. It has a fixed mounting adapter and an MS input connector. Available in three different lens colors, Aviation red, aviation white, and split aviation red/white and in radio-shielded configurations. FAA approved as a direct replacement for any rotating beacon that uses a 3-3/4" dia. mounting hole. Unit will operate between 10 to 30 VDC. **SPECIFICATIONS**: • Weight: 1.5 lbs. (680gm) • Height: 8.0" (203mm) • Diameter: 3.7" (94mm) • Power Consumption: 3.2 amps @ 14 VDC, 1.6 amps @ 28 VDC

Model #	Approvals	Description	Part #	Price
7028521	—	Shielded, red lens	70285-1	**$1,194.00**
7028523	—	White lens	70285-3	**$1,194.00**
7028524	—	Split red/white lens	70285-24	**$528.00**
7028525	—	Red lens	70285-5	**$895.00**
7028526	—	Shielded, red lens with .29 mask	70285-6	**$1,194.00**
7028527	—	White lens, with lock wire	11-07698	**$1,200.00**

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WHELEN 90777 SERIES BEECH LED WINGTIP LIGHTING



LED All-inclusive Anti-Collision/position/recognition light assembly. Used on Beech Barons, King Airs and Super King Airs.
Form / Fit / Functional replacement to the 90029 series, but with LED. Position / Anti-collision assembly with or without recognition light.
Non-PMA/STC. TSO-C30C / TSO-C96A

Description	Color	PN	Price
90777L1 Position/Anit-Collision without Recognition	Red	11-14318	**$2,302.00**

WHELEN CHROMA™ POSITION LED LAMPS



Direct replacements for W129028 / 129028 / A7512-24 / W628 / 628 incandescent bulbs. Unique reflector design allows for full FAR coverage compliance. Robust machined base provides vibration resistance tested in accordance with RTCA/DO160 CAT U2, Curves F, F1 for rotorcraft. All electronic logic conformal coated for weather resistance. Nickel Plated hard contact eliminates premature wear. Keeps original lens configuration to maintain FAA approvals of light assembly. LED bulbs have a 10,000 hour operating life, while incandescent bulbs have a fragile filament and a 300 hour average life. 85% reduced current draw. Five year warranty.

Color	Volts	Part No.	Price
Red	14	11-15017	**$114.95**
Red	28	11-15012	**$114.95**
Green	14	11-15019	**$114.95**
Green	28	11-15013	**$115.00**



MODEL A600 PG/PR SERIES - A600 PG/PR series wing tip anti-collision, forward position and tail position lights, all in one compact unit. Tail position light eliminates the need for a tail mounted position light. Available in 14 or 28 VDC and in a radio-shielded version. The forward position lamp is 26 watts and the taillight lamp is 25 watts. **SPECIFICATIONS**: • Weight: 0.8 lbs. (363gm) • Position Lamps Power Consumption: 4 amps @ 14 VDC; 2 amps @ 28 VDC • Exposed Height: 2.4" (61mm) • Length: 5.63" (143mm) • Width: 1.7" (43mm)

Model #	Approvals	Description	Part No.	Price
9000612	FAA TSO-C30b used on Cirrus	Pos green, 28V, radio-shielded,	11-07602	**$644.00**
9000613	FAA TSO-C30b used on Cirrus	Pos red, 28V, radio-shielded,	11-07603	**$586.00**



MODEL A650 PG/PR SERIES - Wing tip with anti-collision & forward position lights can be used to convert non-Whelen position lights into a position/anti-collision light system. The small size allows for mounting into a wing tip enclosure. Available in 14 or 28V and in a radio-shielded version. The forward position lamp is 26 watts. **SPECIFICATIONS**: • Weight: 0.6 lbs. (272gm) • Position Lamp Power Consumption: 2 amps @ 14V; 1 Amp @ 28V • Exposed Height: 2.4" (61mm) • Length: 4.0" (102mm) • Width: 1.7" (43mm)

Model #	Approvals	Description	Part No.	Price
A650PG14	FAA/PMA	Pos Grn, 14V	11-03217	**$564.00**
A650PG28	FAA/PMA	Pos Grn, 28V	11-03239	**$532.00**
A650PR14	FAA/PMA	Pos red, 14V	11-03218	**$558.00**
A650PR28	FAA/PMA	Pos red, 28V	11-03247	**$559.00**
A650PGD1	FAA/PMA	Pos Grn, 14V, radio-shielded	11-03639	**$540.00**
A650PGD2	FAA/PMA	Pos Grn, 28V, radio-shielded	11-06336	**$538.00**
A650PRD1	FAA/PMA	Pos red, 14V, radio-shielded	11-03642	**$528.00**
A650PRD2	FAA/PMA	Pos red, 28V, radio-shielded	11-06337	**$538.00**



MODEL W1285 SERIES - W1285 series wing tip position light which uses a 26-watt incandescent lamp. It is a direct replacement for the brand "G" A1285 series. Specify 14 or 28 VDC.
SPECIFICATIONS: • Weight: 0.2 lbs. (91gm) • Height: 1.25" (32mm) • Length: 4" (102mm) • Power Consumption: 2 amps @ 14 VDC, 1 amp @ 28 VDC

Model #	Approvals	Description	Part #	Price
W1285PG1	FAA TSO-C30b Type II	14V, position grn	11-03226	**$471.00**
W1285PR1	FAA TSO-C30b Type I	14V, position red	11-03224	**$469.00**
W1285PG2	FAA TSO-C30b Type II	28V, position grn	11-03891	**$471.00**
W1285PR2	FAA TSO-C30b Type I	28V, position red	11-03283	**$471.00**



ODEL W1250 SERIES - W1250 series wing tip position light is designed for use under a wing tip fairing. It uses a 26 watt incandescent lamp and is a direct replacement for the brand "G" A1815A Series. Specify 14 or 28 VDC.
SPECIFICATIONS: • Weight: 0.3 lbs. (136gm) • Height: 1.25" (32mm)
• Length: 2.75" (70mm) • Power Consumption: 2 amps @ 14 VDC, 1 amp @ 28 VDC

Model #	Approvals	Description	Part #	Price
W1250PR1	FAA TSO-C30b Type I	Position red, 14 V	11-04264	**$189.75**
W1250PR2	FAA TSO-C30b Type I	Position red, 28 V	11-03282	**$252.95**
W1250PG2	FAA TSO-C30b Type II	Position grn, 28 V	11-03278	**$252.95**

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WHELEN STROBES

STROBE SYSTEM PARTS

Model #	Description	Part No.	Price
A402R	Red Optic Lens	11-03254	**$51.75**
A402W	White Optic Lens	11-03271	**$43.60**
A402R/W	Split Red/White Optic Lens	11-03248	**$49.65**
A406	Flash Tube Assembly	11-03687	**$113.85**
A409	Clamp Ring Assembly	11-03688	**$15.65**
A414A, HDH, CF	HDH,CF Power Supply	11-03632	**$678.00**
A417-1	Interconnecting Cable	11-03658	**$2.10**
A421-1	Warning Decal	11-03691	**$5.80**
A425	Tail Strobe Lens Retainer	11-03692	**$24.80**
A426	Wingtip Strobe Lens Retainer	11-03233	**$119.75**
A427	Flash Tube Assembly	11-03219	**$94.00**
A427-M	Flash Tube Assembly with Molex Connector	11-03272	**$102.75**
A427-4	Rubber Pad Spacer	11-03693	**$10.50**
A428	Wingtip Strobe Lens	11-03236	**$126.80**
A428-C	Wingtip Strobe Radio Shielded Lens	11-03694	**$105.00**
A428-D	Wingtip Strobe Radio Shielded Lens plus A426 Retainer assy.	11-03290	**$222.95**
A469A	Strobe Tube Assembly	11-03242	**$114.75**
A430	Tail Strobe Head Assembly	11-03696	**$195.80**
A435	Flash Tube Assembly	11-03697	**$111.75**
A440	WRM-65 Mounting Adapter, forHR,DF & SA,DF	11-03699	**$39.75**
A441	AMP Connector and 3 Pins	11-03211	**$6.60**
A442	AMP Connector and 3 Sockets	11-03212	**$6.50**
M441	Molex Connector and 3 Pins for Piper Installation	11-04215	**$9.90**
M442	Molex Connector and 3 Sockets for Piper Installation	11-04216	**$9.90**
A444	AMP Connector and 2 Pins	11-03700	**$6.50**
M444	Molex Connector and 2 Pins for Piper Installation	11-04217	**$9.99**
A445	Switch Label	11-03701	**$4.50**
A446	AMP Connector and 2 Sockets	11-03702	**$6.50**
A450	Strobe Head Assembly	11-03280	**$330.00**
A455	Gasket	11-03703	**$9.85**
A457A	Tail Light Lens for A500 and A555	11-03227	**$41.95**
A457A-D	Radio Shielded Tail Light Lens Assembly for A500	11-03704	**$146.75**
A466A-1	Radio Shielded Lens	11-03708	**$211.95**
A467	Gasket for A470	11-03709	**$10.50**
A469B	Flash Tube Assembly	11-03225	**$106.00**
A469D-K	Radio Shielded Kit for A469A	11-03711	**$201.95**

Model #	Description	Part No.	Price
A470-D	Radio Shielded Remote Strobe Head Assembly, Specify Color	11-03291	**$266.95**
A470-A-D-S	Strobe Head Assembly, Shielded Red/White	11-04976	**$244.95**
A470-D-R-SU	Radio Shielded Remote Strobe	11-03714	**$249.00**
A490 TC CF	14V Power Supply	11-02661	**$339.00**
A490 TC CF	28V Power Supply	11-06406	**$389.00**
A500-V-D-28	28V Radio Shielded Tail Position Strobe Light Head Assy. Vertical Mount	11-06407	**$399.00**
A500-H-D-14	Radio Shielded Tail Position & Strobe Light Head Assembly Horizontal Mount	11-03717	**$255.95**
A500-V-D-M-14	Radio Shielded Tail Position & Strobe Light Head Assembly Vertical Mount with Molex Connector	11-03722	**$402.00**
A500B-V-14	Tail Position & Strobe Light Head Assembly (Beech)	11-03715	**$660.00**
A500B-V-28	Tail Position & Strobe Light Head Assembly (Beech)	11-03716	**$663.00**
A500SP-28	Tail Pos. & Strobe Assy. (Beech)	11-03720	**$420.00**
A502	Flash Tube & Socket Assembly	11-03723	**$330.00**
A506	Flash Tube & Socket Assembly	11-03274	**$208.95**
A506-B	Flash Tube & Socket Assembly	11-03724	**$407.00**
A506-M	Flash Tube & Socket Assembly	11-03725	**$208.95**
A506-SP	Flash Tube & Socket Assembly	11-03726	**$331.00**
A507	Lamp Socket Assembly for A555	11-03240	**$44.50**
A508-14	Halogen Lamp for A500,A555, A600	11-03216	**$23.65**
A508-28	Halogen Lamp for A500,A555, A600	11-03208	**$28.90**
A509	Lamp Shield for A500 and A555	11-03727	**$13.50**
A510-14	Lamp Assembly for A500 & A555	11-03728	**$47.50**
A510-28	Lamp Assembly for A500 & A555	11-03266	**$47.70**
A50828	Lamp for A500, A555, & A600	11-03208	**$28.90**
A512-V-28	Tail Position & Strobe Light Head Assembly (Gulfstream Commander)	11-03729	**$272.95**
A540	Long Mounting Adapter	11-03730	**$106.75**
A605	Base Plate Assembly	11-03733	**$144.99**
A606	Retainer	11-03260	**$54.75**
A610	Flash Tube Assembly	11-03213	**$92.75**
A610-M	Flash Tube Assembly	11-03734	**$99.95**
A612	Magnifying Lens	11-03222	**$46.50**
A612-D	Radio Shielded Lens Retainer Assembly	11-03735	**$168.99**
A615	Lens for A600 Tail Light	11-03230	**$99.85**
A616	Gasket for A600 Tail Light	11-03261	**$11.50**
A625	Tail Strobe Head	11-03228	**$244.95**
A625-D	Radio Shielded Tail Strobe Head Assembly	11-03659	**$269.95**
A626	Retainer Lens	11-03229	**$53.75**
A626-D	Radio Shielded Lens Retainer Assy.	11-03736	**$187.75**
A627	Flash Tube Assembly	11-03263	**$138.75**
A628	Retainer Lens	11-03737	**$47.65**
A629	Gasket	11-03660	**$11.50**
A650	Wingtip Strobe Head Assembly	11-03215	**$199.95**

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WHELEN STROBES

Model #	Description	Part No.	Price
A650-PG-D-14	Wingtip Position & Strobe (Radio Shielded) Head assy.	11-03639	**$540.00**
A650-PG-D-28	Wingtip Position & Strobe (Radio Shielded) Head assy.	11-06336	**$538.00**
A650-PR-D-14	Wingtip Position & Strobe (Radio Shielded) Head assy.	11-03642	**$528.00**
A650-PR-D-28	Wingtip Position & Strobe (Radio Shielded) Head assy.	11-06337	**$538.00**
A650-PG-D-M-28	Radio Shielded Wingtip Strobe & Position Light Head Assemble w/ Molex Connector .	11-06338	**$421.00**
A730	Tail Flood Light Assembly	11-03740	**$507.00**
A1610-14	Power Supply	11-03666	**$774.00**
C-70178-1	Power Supply (Single Flash)	11-04132	**$561.00**
C-70188-1	Power Supply	11-04133	**$706.00**
70285-1	Self Contained Strobe RadioShielded Red	70285-1	**$1,194.00**
70285-3	Self Contained Strobe White	70285-3	**$1,194.00**
70285-5	Self Contained Strobe Red	70285-5	**$895.00**
70285-6	Self Contained Strobe Radio Shield Red with Mask	70285-6	**$1,194.00**
70294-1	Power Supply	70294-1	**$739.00**
H102	"B" Mounting Adapter	11-03243	**$14.80**
H103	"A" Mounting Adapter 3-3/4"	11-03284	**$103.75**
HR-CF200-14	14V Power supply for HR or SA	11-03838	**$456.00**
SA402	Lens Assembly for SA & A450	11-04259	**$241.95**
SA406	Flash Tube Assembly for SA & A450	11-03250	**$95.75**
W1282	Forward Position Light Lens Retainer	11-03232	**$45.50**
W1283	Forward Position Light Gasket	11-03209	**$11.55**
W1284-G	Forward Position Light Lens (Green)	11-03206	**$49.65**
W1284-R	Forward Position Light Lens (Red)	11-03207	**$46.75**
W1285-2	Forward Position Light Base	11-03244	**$127.75**
W1284C	Lens, Clear	11-04117	**$207.95**
W1290-14	14 Volt Position Light Bulb	11-02602	**$49.75**
W1290-28	28 Volt Position Light Bulb	11-02604	**$59.85**
90029-1	Combination Wing-tip Light Assy.	90029-1	**$2,414.00**
90029-2	Combination Wing-tip Light Assy.	90029-2	**$2,414.00**
90029-3	Combination Wing-tip Light Assy.	90029-3	**$2,398.00**
90029-4	Combination Wing-tip Light Assy.	90029-4	**$2,398.00**
90033-1	Anti Collision Beacon Assy. Red	90033-1	**$1,028.00**
90033-2	Anti Collision Beacon Assy. White	90033-2	**$794.00**
34-0226010-91	Lamp Quartz 150 Watt	11-05091	**$55.85**

INTERIOR LIGHTING

Model #	Description	Part No.	Price
A300-14	14V Map Light Assembly	11-03673	**$303.00**
A300-28	28V Map Light Assembly	11-03674	**$294.95**
A315HIR2	28V Cockpit Utility Light - Red	11-03678	**$127.75**
A315-LO-B-14	14V Cockpit Utility Light	11-03679	**$48.50**
A325-ML-14	14V Reading Light Assembly	11-03294	**$474.00**
A325-ML-28	28V Reading Light Assembly	11-03682	**$460.00**
*A350-14	14V Post Light Assembly	11-03205	**$63.75**
*A350-28	28V Post Light Assembly	11-03210	**$62.95**
A360-14	14V Dome Light Assembly Overhead	11-03685	**$237.95**
A360-28	28V Dome Light Assembly Overhead	11-03686	**$254.95**
A360SW	Dome Light Assembly w/Switch	11-03629	**$256.95**
70339-1	Floodlight Assembly (14V)	70339-1	**$203.95**
70339-02	Floodlight Assembly (28V)	70339-02	**$202.95**
70339-03	Floodlight Assembly (14V Switch)	70339-03	**$224.95**
70339-04	Floodlight Assembly (28V Switch)	70339-04	**$235.95**
70348-00	Post Light (28V 10-32Thread) (IW)	70339-00	**$99.80**
70348-01	Post Light (28V 10-32Thread) (RD)	70339-01	**$102.75**

PARTS FOR POST LIGHTS

Model #	Description	Part No.	Price
A343	Connector Assembly	11-03252	**$18.50**
*A354	Head Assembly	CALL	**$27.50**
*A358	Base Assembly	CALL	**$34.00**
A359	Spacer	11-03684	**$13.50**

**** Requires dash numbers for lens color and finish. Please contact factory.***
‡ For complete information contact factory.

RECOGNITION LIGHT & LANDING LIGHT

Model#	Description	Part No.	Price
A715-1	14V Fixed Landing Light (PAR 36)	11-03281	**$289.95**
A775-14	14V Recognition Light 35 Watt	11-03741	**$72.95**
A775-28	28V Recognition Light 35 Watt	11-03742	**$78.95**
A777	Lens for A775-EXP	11-03649	**$17.99**
70346-00	Recognition Light (14V No Lens)	70346-00	**$54.75**
70346-01	Recognition Light (28V No Lens)	70346-01	**$53.75**
70346-02	Recognition Light (14V Clear Lens)	70346-02	**$71.75**
70346-03	Recognition Light (28V Clear Lens)	70346-03	**$71.75**
70346-04	Recognition Light (14V Optic Lens)	70346-04	**$71.75**
70346-05	Recognition Light (28V Optic Lens)	70346-05	**$71.80**
01-0790095-02	Fixed Landing Light (PAR 46)	01-070095-02	**$343.00**
38-0240063-00	Sealed Beam Gasket (PAR 46)	11-05103	**$20.70**
38-0240197-01	Sealed Beam Gasket (PAR 36)	38-0240197-01	**$20.70**
19-270407-000	Clamp Ring (PAR 46)	19-270407-000	**$71.75**
19-250147-000	Clamp Ring (PAR 36)	19-250147-00	**$73.80**

SURFACE ILLUMINATING LIGHTS

Model #	Description	Part No.	Price
A708-28	28V Halogen Lamp (50 Watt)	11-00023	**$42.55**
A750	Flasher Assembly	11-00024	**$158.75**

PARTS FOR ROTATING BEACON

Rotating Beacon Replacement- The round mechanical rotating beacon was used on the vertical fin of all Barons from 1961 thru 1969. Models using this light are 95-55 (1961), A55 (1968-1969). Note: The B55 Baron continued to use this beacon until production stopped in 1982.

Model#	Description	Part No.	Price
WRM-10	Lexan Dome	11-03257	**$34.55**
WRM-25	Clamp Ring	11-04272	**$33.99**
WRM-30	Gasket	11-04273	**$25.60**

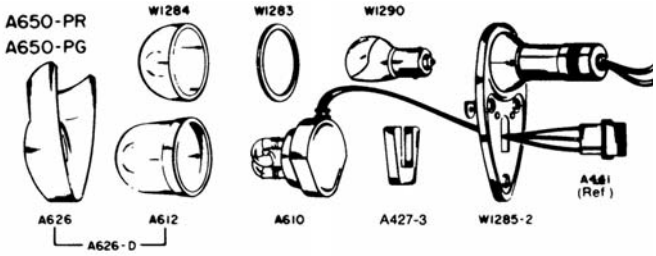
MISCELLANEOUS HARDWARE

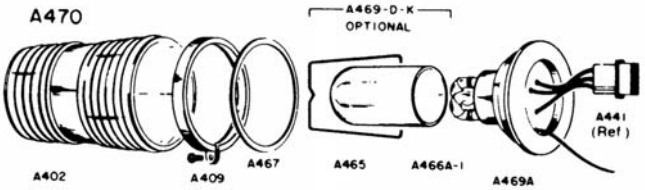
Model#	Description	Part No.	Price
GLJ-106	Lamp Retainer	11-03811	**$39.50**
GLJ-111	Lamp Assembly	11-03812	**$167.95**
GLJ-126	Lens Retainer Assembly	11-03813	**$155.95**

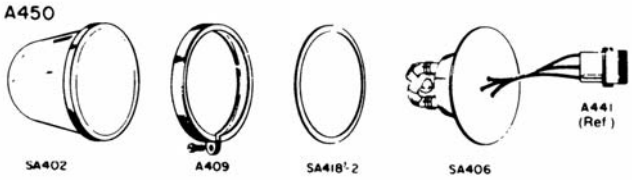
ALL PRICES ON THIS PAGE REFLECT AT LEAST 30% DISCOUNT OFF WHELEN FACTORY LIST PRICES.

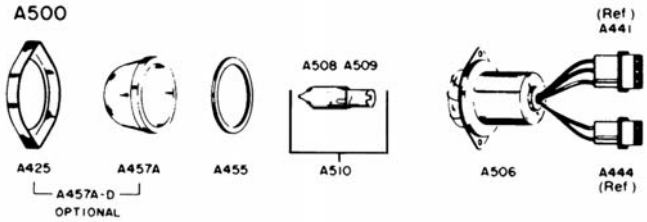
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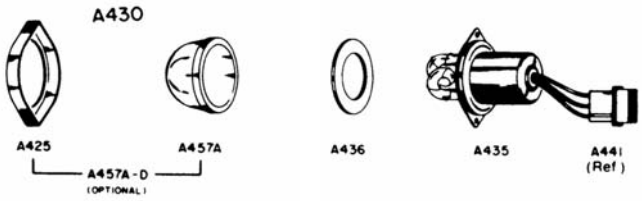
WHELEN STROBE LIGHTS

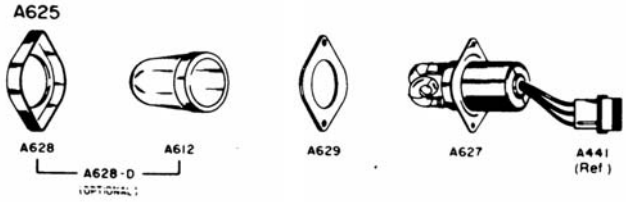


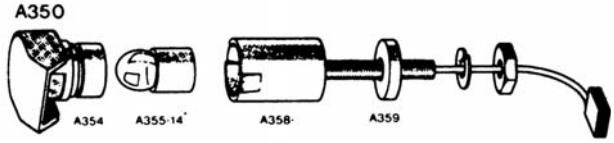


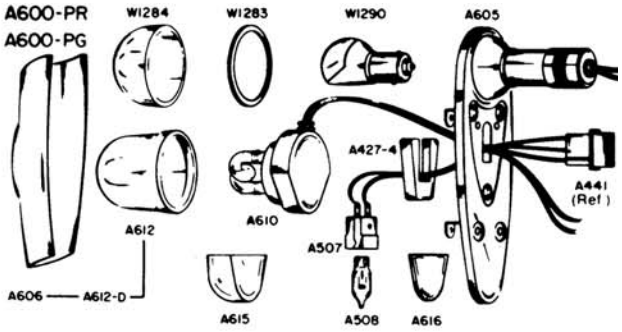


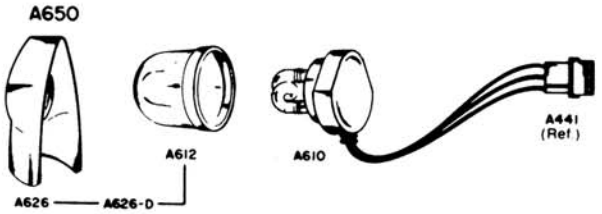


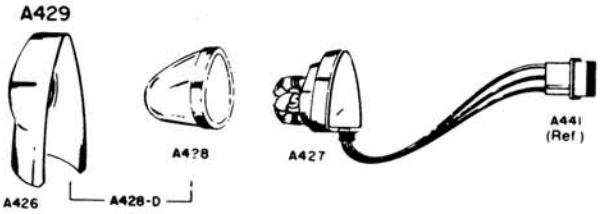


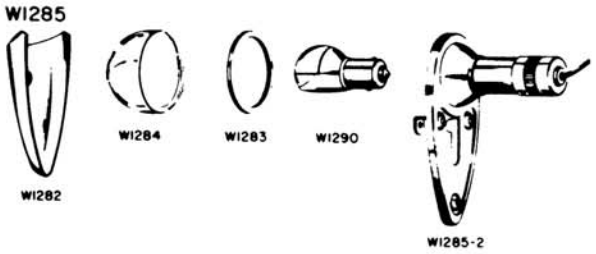


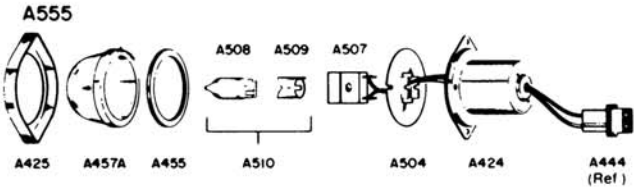


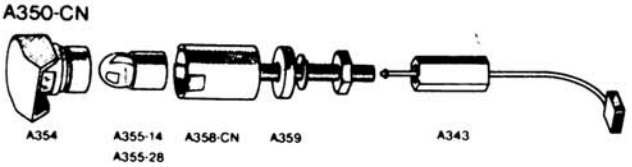












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Prices Subject to Change Without Notice

VOLT AND VAC ALERT



*Provides an instantly recognizable voice warning directly in your headset if low vacuum (or pressure) or low voltage develops. * Includes a red warning light mounted close to the gyro instruments. Many aircraft are equipped with backup vacuum systems, however you must first know that your instrument power system has failed before any of these backup systems are engaged. You must "know you have a problem before you have a problem". Volt & Vac Alert consists of a small electronic unit that can be mounted anywhere in the aircraft. It connects to aircraft voltage, instrument power (vacuum or pressure), and the aircraft audio system. If the voltage falls below 12v or 24v the voice message "CHECK VOLTAGE CHECK VOLTAGE" will be heard. Should the gyro power fail, the pilot will hear the voice message "CHECK GYROS, CHECK GYROS" directly in his headset. The voice message will sound once, and then the red warning light will illuminate until the problem is fixed. The unit can be used in 12v or 24v aircraft with either vacuum or pressure gyro power systems. It can be installed in pressurized or un-pressurized aircraft. Sold as a complete assembly with everything necessary for the installation except a 1 amp fuse or circuit breaker. STC'd for most general aviation aircraft

P/N 10-00393 .....**$495.00**

VOICE ALERT



Whenever the existing stall horn sounds, the pilot will hear the instantly recognizable voice message "STALL, STALL" from the built in speaker, and directly in his headset. If the gear warning horn sounds, the pilot will hear the voice message "CHECK LANDING GEAR, CHECK LANDING GEAR" alerting of the problem. No more confusion over which horn is sounding. These voice messages are in addition to the original horn sounds. The Voice Alert consists of a small electronic unit about 2-1/2" by 3-1/2" in size that can be mounted almost anywhere in the cockpit. Installed weight is less than 1 lb. Supplied as a complete kit consisting of the electronic unit, a pre-wired cable assembly, and all the connecters and mounting hardware. Requires is a 1 amp fuse or circuit breaker. Installation can be performed by an A&P mechanic or an avionics shop. The system is approved for both fixed and retractable gear aircraft.

Description	Part No.	Price
VOICE ALERT 2040-1-1 produces voice messages for gear and stall warnings, and can be programmed with up to 8 additional warning voices such as altitude, vacuum, fuel, pressures, etc. Supplemental system only.	10-03713	**$675.00**
VOICE ALERT 2040-1-2 produces stall and gear voice messages in the pilot's headset. Supplemental system only.	10-00394	**$595.00**
VOICE ALERT 2040-1-1P similar to the 2040-1-1 except approved for installation as primary replacement for existing warning units like Cessna Electronic Dual Warning units	10-03714	**$875.00**
VOICE ALERT 2040-1-2P similar to the 2040-1-2 except approved for installation as primary replacement for existing warning units like Cessna Electronic Dual Warning units	10-03715	**$795.00**
VOICE ALERT 2040-1-1 Custom Voice settings produces voice messages for gear and stall warnings, and can be programmed with up to 8 additional warning voices such as altitude, vacuum, fuel pressures, etc. Suppleamental system only.	10-04964	**$882.00**

GEAR WARNING SYSTEM (2048)



* Provides both voice and visual warning if the landing gear is not in the correct position for either a runway landing or a water landing. * Airspeed activated, activation speed is easily set from 45 to 90 mph. * Works with aircraft having 2, 4, or 8 gear indicating lights. Consists of a small electronic module (2.5 inch by 3.25 inch weighing less than 1 lb), and a panel mounted switch with light. Activation speed can be easily set using a screwdriver. Time delay is built in to prevent false triggering due to speed fluctuations. Pilot can perform a self test of the system. Can place in a disengage mode which temporarily disengages the system for slow flight. If the aircraft has flaps, a flap switch can be added to cause the landing sequence to be initiated whenever the flaps are fully extended. The unit also includes an airspeed activated switch which closes whenever the airspeed is above 45 mph. This can be used to activate a transponder, Hobbs meter etc. Expermental aircraft.

P/N 11-02258 .....**$585.00**

AMPHIBIAN GEAR WARNING SYSTEM



Designed to provide an additional margin of safety for amphibian pilots by providing a backup electronic means of verifying landing gear position for both water and runway landings. Consists of a small electronic box (about 2.5 inch by 3.25 inch weighing less than 1 lb) that can be mounted anywhere in the aircraft, and 2 panel mounted switches with lights. The system is activated by airspeed. The activation speed can be set by a simple screwdriver adjustment. On takeoff, as the airspeed exceeds the activation speed, the system becomes active. There is a time delay built in to prevent false triggering. When the system becomes active, the lights in the panel switches will illuminate for 6 sec, to alert the pilot that the system is active. The pilot can perform a self test. Can be temporarily disengaged for slow flight. As the aircraft slows below the activation speed for a landing, the landing sequence is initiated. Panel switches are marked "L" for land, and "W" for water. If the gear is in the correct position, the voice message "GEAR O.K." will be heard. If the gear is not in the proper position, the voice message "CHECK LANDING GEAR, CHECK LANDING GEAR" will be heard. This message will continue until the speed is increased above the activation speed, or the gear is placed in the proper position. When installed in aircraft having multiple gear indicating lights, the system will respond with the "CHECK LANDING GEAR" voice warning if it determines that any of the wheels are in the wrong position. Also responds with the warning if the gear indicating lights loose power. Also incorporates an airspeed activated electronic switch which closes whenever the airspeed is above 45 mph. This can be used to activate a transponder, Hobbs meter etc. Supplied as a complete kit consisting of the electronic module, a pre-wired, color coded cable, switches, connecters, mounting hardware etc. The only other item required is a 1 amp fuse or breaker. STC'd for many amphibian aircraft and aircraft on amphibian floats

P/N 11-07537.....**$899.00**

GEAR ALERT SYSTEM 2050

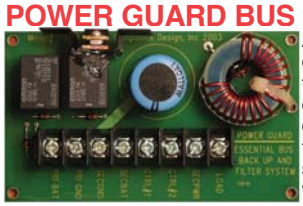
NOTE: This system is not FAA approved. It is intended for installation in Experimental category aircraft only.



For Experimental amphibian aircraft consists of a small electronic module (2.5 inch by 3.25 inch weighing less than 1 lb), and a panel mounted switch with light. The system is airspeed activated. The activation speed can be easily set using a screwdriver. On takeoff, once the speed has exceeded the activation speed, the system activates. A time delay is built in to prevent false triggering due to speed fluctuations. The light in the switch illuminates when the system is activated. The pilot can perform a self test of the system.Disengage mode which temporarily disengages the system for slow flight. During this period, the light in the switch flashes indicating the system is disengaged. Pushing the switch again re-engages the system. As the aircraft slows for landing, the system enters the landing mode. The light turns off, and the electronics then checks the gear position lights to determine the gear position. If the aircraft has flaps, a flap switch can be added to cause the landing sequence to be initiated whenever the flaps are fully extended. A switch can be added to the throttle so that closing the throttle with the gear up will cause the warning voice message to be heard. The unit also includes an airspeed activated switch which closes whenever the airspeed is above 45 mph. This can be used to activate a transponder, Hobbs meter etc. The unit is sold as a complete system including the electronic unit, a pre-made cable assembly, a pre-wired switch, connecters, mounting hardware etc.

P/N 11-07538.....**$585.00**

POWER GUARD BUS MANAGEMENT SYSTEM



An essential bus management circuit designed to protect power sensitive and critical electronics. Starting currents are usually high enough to cause battery voltage to drop below tolerable limits for many electronics systems. The result could leave you without engine instrumentation until EFIS "reboots" (up to 30 seconds). Protection includes low voltage drop out and essential backup in the event of primary power loss. Filtration on the secondary supply and secondary battery charging are also an integral parts of the circuit. A secondary battery is required for the Power Guage we recommend a 5-12 Amp battery for emergency supply. Several control modes are possible with the system allowing for installation and operational flexibility. Load Ratings: 7A continuous, 10A 10% duty. Dims: 4.75"l x 2.75"w x 1.2"h

P/N 11-02044 .....**$135.95**

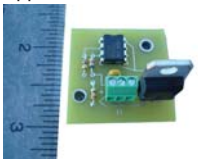
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INTERCOM GEAR WARNING DEVICE



A small electronic device that can be connected to either the landing gear throttle warning switch or the Flap UP Light or Switch and the Landing Gear Down Light or Switch. The pilots headphones are connected to the audio circuit in the IGWD II and should an unsafe condition occur, a loud pulsing tone is heard in the pilots headphones. In the single input mode, Throttle gear safety switch, if the throttle is reduced and the gear is Up, the IGWD II will sound. The two input mode with the flap UP light and the landing gear down light connected to the sensing inputs, provide added safety by ensuring that the landing gear is down before the flaps are lowered. Should the flap UP light go out before the landing gear Down light is on, the warning tone will be enabled. In addition to the warning tone, a warning light output is available for a panel mounted light as well as a Test Switch input. Small size: 3.2"L x 2.3"W x 1.0"H •Adjustable Tone Level •Input triggering for Throttle switch or Landing Gear and Flap Lights or Switches •Remote Test Switch Option •Remote Warning Light •DC voltage range 12 to 28 VDC •Weight, 10 oz •Two Year Warranty •Not Approved for Certified Aircraft. P/N 11-01943 ..... **$219.00**

GRETZ AERO AUDIO WARNING TONE GENERATOR



The Gretz Aero GA-TB2 is a very small audio tone generator used to make an audio tone annoucement through your headset advising of a user selected warning function. This warning tone can be used to get your attention for one of a variety of events.

P/N 11-06491 ..... **$52.00**

GRETZ AERO AUDIO MIXER



The Gretz Aero GA-AM Audio Mixer is a must have economical item if you have two or more audio sources in your aircraft. If you do not want to install a very costly and panel-space-hungry audio panel, the GA-AM is for you. The GA-AM is light, small and mighty for what it does. It can be mounted out of sight behind the panel in any convenient location with no clumsy modules to have to tie up into your wire harness. Up to nine audio sources can be fed into this device. All of the audio sources are wide range adustable for balance to your system. There is even a wide range output level adjust to make the GA-AM compatable with all intercoms without having to tinker with matching resistors. P/N 11-06490 ..... **$152.75**

DIGITAL VOLTAGE MONITOR



Helps pilots monitor critical electrical system. STC approved. Features a Multi Color LED display, which is easily viewable from a wide angle. In the event of an alternator/generator failure, the LED display indicates the reserve battery capacity. The display automatically adjusts to the ambient light for IFR or night operation and also serves as a reminder to turn off the electrical system after flight. Comes in either 12V or 24V models and includes all necessary hardware and FAA Documents. The display must be set to Dot mode for FAA approved installations.

12 Volt Digital Voltmeter ..... P/N 10-00752 ..... **$149.95**
24 Volt Digital Voltmeter ..... P/N 10-00753 ..... **$149.95**

LOW VOLTAGE WARNING SYSTEMS



An amber light will come on at the moment of low voltage condition which will inform the pilot of attention needed to the alternator, generator, or voltage regulator. Any of these conditions allowed to continue will result in a weak or completely discharged battery condition and loss of radio and electrical equipment. Indicator light features a built in dimmer and press to test with amber lens. Lights will trigger at 13 volts for 14V systems and 25 volts for 28V system. Accuracy, plus or minus 0.2 volts. Size: 1/2" Dia. 3" Depth required behind panel. Weight: .2 lbs., Power: less than 1/10 amp. Fuse supplied with kit.

Model No.	Description	Part No.	Price
33-2013A	14 Volt, Red Lens Low Voltage Warning System	10-02572	$179.75
33-2013	14 Volt, Amber Lens with Dimmer Low Voltage Warning System	33-2013	$179.75
33-2025A	28 Volt, Red Lens Low Voltage Warning System	10-02573	$179.75
33-2025	28 Volt, Amber Lens with Dimmer Low Voltage Warning System	33-2025	$179.75

SKYSPORTS BRIGHT STAR STROBE



Measuring only 4" high by 2 3/4" diameter, it weighs less than 5 ounces! Special dual xenon flashtube arrangement provides ultra-bright flash visible for over 3000' in daylight, much more at dusk and dawn. No separate power pack is required, all electronics are fully contained in the strobe itself. Lens is available in clear, red or green. Each strobe draws less than 300ma. Mounting bracket included. Buy two for wing-tip installation. Must be run from 12 volt battery. Dimensions: 4"x 2.75"(dia) Weight: 4.5 ounces. Features: • Operates on 12VDC (12' lead is hardwired to unit) • Completely self-contained • Water-resistant • Ultra-compact • Meets FAR 103 • Bright 8 joule flash 40 flashes/minute

Strobe 12VDC Clear ..... P/N 11-07769 ..... **$47.95**

ACCESSORIES

Strobe Lens Clear ..... P/N 11-07772 ..... **$4.75**
Strobe Lens Red ..... P/N 11-07770 ..... **$4.75**
Strobe Lens Green ..... P/N 11-07771 ..... **$4.75**

MINIATURE AEROFLASH ANTI-COLLISION SYSTEM



Mounted on vertical fin of many Cessna and other production aircraft models. Fully FAA-PMA approved. Only 2.5" dia., 2.5" high. Weighs 6 oz. Unit available with red or clear Fresnel dome. Has 125W quartz bulb. Draws 10 amps nominal at 12V. Use 12 or 14 Ga. wire for hookup. Kit consists of light assembly and 12V/24V power supply. Specify bulb voltage and red or clear dome.

12V Kit (Clear Lens)157-0001C ..... P/N 11-05906 ..... **$152.75**
12V Kit (Red Lens) ..... P/N 157-0001R **$149.85**
24V Kit (Clear Lens)157-0002C ..... P/N 11-05907 ..... **$152.75**
24V Kit (Red Lens) ..... P/N 157-0002R **$152.75**

Description	Ref No.	Part No.	Price
Flasher	A	150-0015	$94.75
Red Lens	B	111-0001	$17.50
Clear Lens	C	111-0004	$17.50
Quartz Lamp 24 Volt/150W	D	040-0003	$21.85
Quartz Lamp 12 Volt/125W	D	040-0028	$46.50
Gasket	E	080-0001	$7.90
Clamp Ring	F	073-0002	$22.50
Socket & Plate Assembly	G	073-0021	$33.90
Mounting Plate Assembly	H	073-0055	$33.50
Aeroflash Resistor 100 W	-	012-7426	$47.55

MINIATURE AEROFLASH SINGLE LIGHT STROBE



A high-intensity anti-collision strobe system producing 10 joules. FAA-PMA approved. Mount on top or belly of fuselage or on vertical fin. The Xenon lamp is designed to produce symmetrical illumination pattern of light 360° around the aircraft and 70° above and below the horizon. Less than 3" dia., 2-1/2" high. Mounts in 7/8" dia. hole and is secured by two screws. Draws 2 amps nominal at 12V. Kit includes light, remote power supply and 15 ft. cable. Light has clear Fresnel lens and strobe tube. Wts: Light 6 oz., Power Supply 20 oz. Hardware NOT included.

12V Kit ..... P/N 156-0007 ..... **$188.85**
24V Complete Kit ..... P/N 156-0002 ..... **$188.85**
12V Power Supply ..... P/N 152-0007 ..... **$125.75**
24V Power Supply ..... P/N 152-0010 ..... **$124.75**
Flash Tube Only ..... P/N 073-0141 ..... **$41.70**
Flash Tube Ass'y ..... P/N 153-0001 ..... **$103.75**

AEROFLASH TWO-LIGHT STROBE KIT



Solid State Power Supply for each wing tip. Complete with two power supplies, two strobe tubes, lenses and retainer. Specify 12-14V or 24-28V. FAA approved . Used on Grumman aircraft.

Kits consist of:	Part No.	Price
(2)-152-007, 12V Power Supply, (2)-153-008, Light Assy.	156-0010	$398.00
(2)-152-0010, 24V Power Supply, (2)-153-0008, Light Assy.	156-0011	$427.00
(2)-152-0021, 24V Pwr Supply Explosion Proof, (2)-153-0008, Light Assy.	156-0011EX	$447.00

AEROFLASH NAV/ STROBE LIGHT KITS



These non-PMA'd remote nav/strobe light kits are excellent for ultralights and homebuilts. Kit includes one red light assembly, one green light assembly and two power supplies.

Single flash, 12V kit ..... P/N 156-0039-12V ... **$453.00**
Single flash, 28V kit ..... P/N 156-0039-28V ... **$389.00**
Double flash, 12V kit ..... P/N 11-04762 ..... **$480.00**

AEROFLASH NAV/STROBE/POS. LIGHT KITS



These non-PMA'd remote nav / strobe /position light kits are excellent for ultralights and homebuilts. Kit includes one red light assembly, one green light assembly and two power supplies. The nav lights include clear position lights on rear of assemblies.

Single flash, 12V kit Draw 1.8 Amps ..... P/N 156-0049-12V. **$539.00**
Single flash, 28V kit Draw 1.5 Amps ..... P/N 156-0049-28V. **$517.00**
Double flash, 12V kit Draw 2.7 Amps ..... P/N 11-04763 ..... **$562.00**

AEROFLASH STROBES

AEROFLASH FAA/PMA AIRCRAFT APPROVAL LIST

Aeroflash Original P/N	Current P/N	Manufacture P/N	Description	Aircraft Installation Eligibility	Price
40-6	040-0003	G.A.A.C P/N	24V/150W QUARTZ LAMP	AA1B, AA5A, AA5B	$21.85
40-0010	040-0028		12V/125W Bulb		$46.50
150-0002	Same		14V Single or Dual Flasher	AA1B, AA5A, AA5B	$133.75
151-0001	Same		14V Light Assembly, Red Lens	AA1B, AA5A, AA5B	$77.90
152-0004	152-0007		14V Power Supply	AA1B, AA5A, AA5B	$125.75
153-0008	Same		Strobe Assembly	AA1B, AA5A, AA5B	$133.00
073-0270	Same	Varga P/N	U-Type Flash Tube Assembly	2150A	$47.50
152-0004	152-0007		14V Power Supply	2105A	$125.75
152-0008	152-0007		12V Power Supply Single Flash		$125.75
150-0015	Same	Rockwell P/N DVA-2	14V or 28V, Single, or Dual Flasher, DVA-2	112, 112B, 112TC, 112TCA, 114	$94.75
151-0001	Same		14V Light Assembly Red Lens	112, 112B, 112TC, 112TCA, 114	$77.90
150-0015	Same	Great Lakes P/N DVA-2	12V,-14V, or 24V,- 28V, Sgle or Dual Flsr ,DVA-2	2T-1A-1,-2	$94.75
151-0001	Same		14V Light Assembly Red Lens	2T-1A-1, -2	$77.90
40-6	040-0028	C17312-3	12V/125W Bulb	150, 172, 177, 177RG, 180,	$46.50
40-0010	040-0028		12V/125W Bulb	182, 185, 188, 206, 207	$46.50
40-14	040-0003	C17312-1	24V/150W QUARTZ LAMP	210, 337, 28 Volt Version of	$21.85
40-0027				185, 188, 206, 207	
73-0165	073-0270	C622006-0108	U-Type Flash Tube	150, 172, 177, 177RG, 180	$47.50
111-0016	Same	C622006-0103	Wing Tip Clear Dome	150, 172, 177, 177RG, 180, 182, 185, 188, 206, 207, 210	$27.50
150-0008	Same	C594501-0204	28 Volt Single or Dual Flasher A2E	337	$136.75
150-0010	150-0015	C594502-0102	14V or 28V, Single/	150, 172, 177, 177RG, 180,	$94.75
			Dual Flasher DVA-2	185, 188, 296, 207, 120	
151-0002	151-0001	C621001-0106	14V Lamp Assembly	150, 172, 177, 177RG, 180,	$77.90
			Red Lens X1E-6	182, 185, 188, 206, 207	
151-0006	151-0005	C621001-0102	28V Lamp Assembly	210, 337, 28 Volt Version of	$136.75
			Red Lens X2E	206, 207, 185, 188	
152-0004	152-0007	C622008-0101	14V Power Supply	150, 172, 177, 177RG, 180, 182, 185, 188, 206, 207, R172, 210	$125.75
152-0010	152-0010	C622008-0102	28V Power Supply	210, 28 Volt Version of 185, 188, 206, 207, R182, 150, 172, 177, 177RG, 180, R172	$124.75
153-0006	153-0009	C622006-0107	Wing Tip Strobe Assembly	150, 172, 177, 177RG, 180, 182, 185, 206, 207, 210	$119.75
151-0008	11-02103	Not FAA Approved	24-28V Red Tear Drop Lt Assy	Helicopter	$296.95



AEROFLASH TAIL STROBE/ POSITION LIGHT KIT

This non-PMA'd kit for experimental aircraft only includes (1) 12V clear lens assy. & (1) 12V single flash remote power supply. output 10 joules.

Model 156-0029SF Kit..... P/N 11-00979..... **$279.00**
Replacement Clear Dome..... P/N 11-0018..... **$39.50**
Replacement Gasket..... P/N 11-00981..... **$7.50**
Replace. Flashtube w/pos. lamp..... P/N 11-00982..... **$141.75**

AEROFLASH FUSELAGE MOUNT SYSTEM



P/N 156-0017 consists of: **$189.95**
One-152-0007 12 Volt Power Supply
One-163-0001 Light Assembly
One-073-0217 Cable Assembly



P/N 156-0018 consists of: **$188.90**
One-152-0010 24 Volt Power Supply
One-163-0001 Light Assembly
One-073-0217 Cable Assembly

P/N 156-0018EX consists of: **$203.95**
One-152-0021 24 Volt Power Supply Explosion Proof
One-163-0001 Light Assembly
One-073-0217 Cable Assembly

Spare Parts for Light Assemblies:

Ref #	P/N	Description	Price
A	152-0007	12V Power Supply Clear Anodized	$125.75
	152-0010	24V Power Supply Gold Anodized	$124.75
	152-0021	24V Power Supply Explosion Proof Blue Anodize	$140.75
B	073-0271	Cable Assembly	$7.50
C	073-0055	Mounting Plate Assembly	$33.50
D	101-0020	Hold Down Ring	$8.55
E	080-0008	Gasket	$10.50
F	073-0141	Strobe Flashtube	$41.70
G	111-0001	Red Lens	$17.50
	111-0004	Clear Lens	$17.50
H	080-0001	Gasket	$7.90

AEROFLASH NAVIGATION/STROBE COMBINATION SYSTEM







Red..... P/N 156-0019R.....**$598.00**
Green..... P/N 156-0019G.....**$598.00**

Spare Parts:

Ref #	P-N	Description	Price ea.
A	152-0024	24V Power Supply	$393.00
B	111-0068	Clear Dome	$44.50
C	040-0043	Strobe Flashtube	$82.95
D	101-0238A	Hold Down Bracket	$16.75
E	111-0066	Red Navigation Dome	$26.55
	111-0067	Green Navigation Dome	$26.75
F	040-0046	24V Navigation Lamp	$71.75
	040-0048	12V Navigation Lamp	$48.50
	*080-0046	O-Ring Gasket	$10.50
	*080-0042	Flange Gasket	$13.50

***Not Shown**

AERO FLASH PIGGYBACK WING TIP STROBES

Original equipment on many Cessnas. Kit includes two strobe units with wiring which mount on Grimes Model "E" wing position lights (not furnished), two power supplies which mount on wing tip ribs, and two lens retainers. Strobes simply plug into power supplies - no interconnecting cables. Draw just 2.5 amps mominal at 12 volts.



P/N 156-0003 consists of: **$349.00**
Two-152-0007 12 Volt Power Supply
Two-153-0009 Light Assembly

P/N 156-0004 consists of: **$346.00**
Two-152-0010 24 Volt Power Supply
Two-153-0009 Light Assembly

P/N 156-004EX consists of: **$344.00**
Two-152-002124 24V Power Supply Explosion Proof Ideal for wet-wing aircraft
Two-153-0009 Light Assembly

Ref #	P/N	Description	Price ea.
A	152-0007	12 Volt Power Supply Clear Anodized	$125.75
	152-0010	24 Volt Power Supply Gold Anodized	$124.75
	152-0011	12 Volt Double Flash Power Supplies (each draws 2.7 amps and weighs 1.33 lbs.)	$133.75
	152-0021	24V Power Supply Explosion Proof Blue Anodize	$140.75
B	073-0270	Strobe Flashtube	$47.50
C	101-0084	Lens Retainer	$16.75
D	080-0018	Gasket	$14.65
E	111-0016	Clear Dome	$27.50

AEROFLASH REPLACEMENT FLASHERS



P/N 150-0002 consists of: **$133.75**
12 Volt Single and/or Dual Flasher
Replaces Old Style Flashers in Cessna Aircraft

P/N 150-0003 consists of: **$132.80**
24 Volt Alternating Flasher Replacement for Helicopters

Aeroflash flashing lights have been used on Cessna aircfaft since 1964. The strobes have been original equipment since 1977 on Cessna, Varga and Aero Commander.

P/N 150-0008 consists of: **$136.75**
24 Volt Single and/or Dual Flasher
Replaces Old Style Flashers in Cessna Aircraft

P/N 150-0013 consists of: **$136.75**
24 Volt Single Flasher



AEROFLASH 12V NAV/STROBES

Model 073-0530R(G) Light Assemblies. 4 oz.
Red..... P/N 11-00143..... **$181.75**
Green..... P/N 11-00144..... **$181.75**

EL

ILLUSION AIRCRAFT STROBE



Powered by the lighting coil of Rotax and other two-cycle engines, this is the most efficient strobe light on the market because it uses only the power normally wasted by the voltage regulator in a battery charging system. It has no effect on the charging system, so you can still connect other equipment to the lighting coil. The two strobe lights flash alternately an average of 55 times per second. Lesser strobe systems fire their lights simultaneously, resulting in a much longer firing cycle because the lighting coil can only develop so much power in a given time. The illusion Strobe use a specialized prismatic Fresnel lens. This lens increase the strobe's effective light intensity up to 8 times. The illusion Strobe works with the new Rotax 170W dual-ignition lighting coils and the standard 125W single-ignition type. It meets Part 103 requirements to add to an extra hour of legal flying time each day. The illusion Strobe comes with 2 lights rated at 25 joules; driver, wire, hardware, instructions, and a two-year manufacturer's warranty.

Dual Wingtip Strobe Sys. ..... P/N 10-00819 ..... **$245.00**

FLIGHT STROBE FS 4400



This precision compact unit mounts easily on top or below fuselage, and directly replaces rotating beacons. It features a high-intensity Xenon arc lamp, a high-efficiency push pull inverter circuit for stable flash voltage and a flame-resistant military circuit board assembly. The lamp is readily replaceable without removing the unit from the aircraft, and the unit weighs only 1 lb. 4 oz. The Flight Strobe FS-4400 is visible for over 50 miles at night, in haze, smog or bright sunlight and is manufactured using the highest quality components for maximum reliability and service life. Amp draw 3 Amp. (14V) & 1.5 Amp (28V). STC'D for Cessna 180. FAA form 337 for field approval is required for installation of other certified aircraft. Order adapter separately.

14V (FS-4400-14V) ..... P/N 11-01018 ..... **$217.95**
28V (FS-4400-28V) ..... P/N 11-01019 ..... **$236.95**
FS-4400 Adapter ..... P/N 11-06500 ..... **$17.95**
FS-227 Repl. Bulb 14V/28V ..... P/N 11-06510 ..... **$39.95**
FS-210C Clear Lens ..... P/N 11-01024 ..... **$23.50**
FS-210C/R2 (1/2 Clear-1/2 Red) ..... P/N 11-01026 ..... **$43.50**
FS-210R Red Lens ..... P/N 11-01021 ..... **$27.50**
Fuse for FS-4400 ..... P/N 11-02027 ..... **$2.75**

LED BASED LIGHTS



8000 SERIES (LED) ANTI-COLLISION BEACON - LED based self-contained, High Impact Polycarbonate Optical Lens. Lighter, Brither, Cooler Longer Life (up-to 50,000 hrs.) and draws less than 1 amp. (.13 amps) @ 12vdc. Weighing in at 3.5oz. it stands 3" high and 2.5" in diameter.

P/N 11-07241 (Red) **$79.85**
P/N 11-07246 (Clear) **$79.65**



MODEL 918TL (LED) TAIL LIGHT TL918 TAIL LIGHT - LED based Tail Light that weighs only 1.5oz. High Impact Polycarbonate Optical Lens. Up-to (50,000 hrs.) life. Draws .13 amps @12vdc. It measures approximately 1.6" high and 1.4" diameter. P/N 11-07242 ..... **$89.85**



MODEL 927ACB (LED) ANTI-COLLISION BEACON - Completely Self-Contained LED Based Anti-Collision Beacon 927ACB - RED High impact polycarbonate optical lens. Up-to (50,000 hr.) life. Draws .14 amps@12vdc. It measures approximately 1.6" high and 1.4" diameter. That's right, it is in the same package as the Tail Light! Lighter, Brighter and Cooler, and weighs only 1.6 oz. Flasher included.

P/N 11-07243 (Red)12V **$109.00**
P/N 11-07244 (Clear)12V **$109.00**
P/N 11-14889 (Red) 24V **$109.00**
P/N 11-14890 (Clear)24V **$109.00**

REPLACEMENT LAMPS FOR NAVIGATION LIGHTS



Upgrade your Indicating, Position, or Recognition lights to LED's. These lamps fit standard S.C. Bayonet Indexed Base Sockets (Bay15S). Converts common Incandescent Lamps to LED Lighting without modifications. (Use a new clear plastic lens for maximum brightness) and you are ready to go. They last longer, run cooler, and draw less than .15amps. Non-PMA.

Description	Part No.	Price
LED75 12V Red Lamp	11-07744	**$34.65**
LED75 12V Green Lamp	11-07745	**$34.65**
LED75 24V Red Lamp	11-07746	**$34.65**
LED75 24V Green Lamp	11-07747	**$34.65**
LED75 TPL-12 Tail Position Lamp	11-07748	**$34.65**
LED75 TPL-24V Tail Position Lamp	11-07749	**$34.85**
Combination Tail and Beacon Lamp 12V	11-12042	**$129.85**
Combination Tail and Beacon Lamp 24V	11-12043	**$126.90**
Replacement Lamp Only 12V	11-12040	**$79.95**
Replacement Lamp Only 24V	11-12041	**$79.95**

WHELEN WING LIGHTS



W1285

W1285 series are the same design as Grimes Model E. Available with red or green lens and 12V or 24V bulb. W1250 PG/PR are FAA approved position lights and are designed to fit underneath the wing tip fairings.



W1250

W1285		
14V Green W1285 Assembly	11-03226	**$471.00**
28V Green W1285 Assembly	11-03891	**$471.00**
14V Red W1285 Assembly	11-03224	**$469.00**
28V Red W1285 Assembly	11-03283	**$471.00**
W1250		
28V Green W1250 Assembly	11-03278	**$252.95**
14V Red W1250 Assembly	11-04264	**$189.75**
28V Red W1250 Assembly	11-03282	**$252.95**
Replacement Bulbs		
14V W1290 Bulbs	11-02602	**$49.75**
28V W1290 Bulbs	11-02604	**$59.85**

GRIMES MODEL B - Early type wing light with flat mounting pad. Mounts on tip of wing. Wt. 7oz Order by part number.



Model B wing

SINGLE CONTACT -
w/#93 Bulb New Surplus..... **$195.75**
Green, 14V ..... P/N A-2430-1-G
Red, 14V ..... P/N A-2430-1-R





STEEL FORMED NAVIGATION LIGHT PLATES

Wing tip light plate is welded or screwed to wing tip bows to attach teardrop type position lights. Tail light plate is welded to rudder to attach Model S tail light.
Model E Wing Light Plate.. P/N 11-06900. **$32.60 ea**
Model S Tail Light Plate.... P/N 11-07000. **$29.50 ea**

"C-LITE" WING TIP NAV LIGHT INDICATORS



These indicators identify your wingtips when taxiing at night, and assure your nav lights are working. Installs in minutes with just a screwdriver, and you don't disconnect the lights to do it. Works with high-or-low-wing aircraft, thick wing too. Designed for use with Grimes #A-1285 & #B-6345 nac lights, which means practically all aircraft.

P/N 5122..... **$15.85**

GRIMES TAIL LIGHTS

GRIMES MODEL S - For tailcone or rudder installation. Wt. 3 oz. Single contact. 15 Candlepower. For 12V use, order #93 bulb
PN 11-04199 ..... P/N 11-03652 ..... **$168.75**

GRIMES EARLY MODEL C - Mounts on trailing edge of rudder. Wt. 5 oz. Double contact. 15 Candlepower. For 12V use, order #94 bulb
PN 11-04200
Model B-1943-4 (New Surplus) ..... P/N 11-07200 ..... **$285.95**

REPLACEMENT PARTS FOR POSITION LIGHTS

Lenses for Grimes A, B, C Wing or Tail Lights
Clear ..... P/N 11-03662 ..... **$53.85** Red ..... P/N 11-03655 ..... **$47.50**
Green ..... P/N 11-03663 ..... **$58.75**

Lenses for Grimes Model E or Whelen Wing Tip Lights
Red ..... P/N 11-02754 ..... **$27.50** Green .... P/N 11-02755 ..... **$25.75**
Lens for Model S Tail Light (Clear) ..... P/N 11-07400 ..... **$51.80**
Bale Wire - Grimes ..... P/N 11-03664 ..... **$17.65**

LED REPLACEMENT NAV LIGHT BULBS



LED retro-fit for older Grimes navigation lights. Glass-covered, protected dome. Models: 1156, 1157 and 1076.

Model No.	Volts Amps/ Watts	Description	Part No.	Price
1156 (BA15S)	10 to 30VDC	3 Watt - Super Bright	13-15810	**$16.95**
1157 (BAY15D)	12-14VDC	3 Watt - Super Bright One Lighting. Mode for Indicator Light. Dual Lighting Mode for Brake Light	13-17741	**$16.95**
1076 (BA15D)	10 to 30VDC	3 Watt - Super Bright	13-17742	**$16.75**

T1284PC CLEAR LENS



T1284PC-Clear, polycarbonate lens high impact polycarbonate optical lens, for use with new LED lights. Direct replacement for your standard red, green and clear glass navigation lens. Use with standard 1283 nav lens gasket.

P/N 11-09299..... **$15.65**

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Prices Subject to Change Without Notice

AVEO VANS ZIPTIP



Paradigm-shifting Conforma™ lighting technology is now being used by so many of the world's famous aircraft manufacturers. The sleekest, brightest, safest aircraft in the sky while decreasing drag at the same time. Replace your factory wingtips with the coolest wingtips on the planet, if not the galaxy. Aveos' ZipTips Premiere™ for the VANS RV-4, 6, 7, 8, 9, 10 and the F-1/Harmon Rockets. You can also control your ZipTips™ functions with the optional NiteLite™ modules with the Aveo StarFob™ remote control system. This means you can turn on your position lights from 50 meters away or turn on nose cowl ground illumination or wing leading edge illumination too for safety and convenience. Perfect for when the daylight has faded away and you want to load your plane, preflight or tow it to the hangar. The ZipTips Premiere™ provide Navigation, Position, Strobe, Landing, Taxi and WigWag functions.
The Aveo NiteLite™ fuselage/cowl mounted module was designed for ground illumination by your nose section and leading edge illumination of your wings for a total system!!! The ZipTips™ system comes in two packages, and is easily installed by the kit builder with just basic skills. Couple these with the Aveo StarFob™ remote and Base Station and you have complete remote control of your lighting on the ground.
Without Rear Position Light ..... P/N 11-14584 ..... **$2,640.00**
With Rear Position Light ..... P/N 11-14583 ..... **$2,990.00**

AVEO NITELITE



Compatible with the Aveo StarFob™ remote control system, this light provides dual functions, a blue light for illumination of the ground around your aircraft nose and a white light for the wing leading edge illumination, which also double as an ice light.

The conditions and tests required for TSO approval of this article are minimum performance standards. Those installing this article either on or within a specific type or class of aircraft must determine that the aircraft installation conditions are within TSO Standards which include any accepted integrated non-TSO function standards. TSO articles and any accepted integrated non-TSO function(s) must have separate approval for installation on an aircraft. The article may be installed only according to 14 CFR Part 43 or the applicable airworthiness requirements.
14 Volt Left ..... P/N 11-14674 ..... **$369.00**
28 Volt Left ..... P/N 11-12855 ..... **$369.00**
14 Volt Right ..... P/N 11-14675 ..... **$369.00**
28 Volt Right ..... P/N 11-12856 ..... **$369.00**

AVEO ULTRA EMBEDDED DAYLITE™ WINGTIP 2-IN-1 LED LIGHTS NAVIGATION / STROBE



The Ultra Embedded Daylite™ is only 34 millimeters in height (1.34 inches), but does not sacrifice performance or standards. With exclusive advanced optics and chrome reflector system, unmatched power and led management circuity, and the lowest-drag profile in the industry. The Ultra Embedded Daylite™ gives unmatched power and features, while being lower, narrower, shorter, and lighter than the competition. For Experimental Use Only. P/N 11-15068 ..... **$778.00**

POSISTROBE CP WHITE POSITION / STROBE LIGHT



PosiStrobe CP™ is a rudder white position and strobe light. It fits almost all the standard rudder mounts of aircraft and also features an optional aluminum adapter mount plate pictured in the installation page. An extremely lightweight, aerodynamic and low-profile design make this the light of choice for any certified aircraft requiring a rear coverage light due to wingtip light coverage zone limits. Exclusive circuitry, advanced optics and reflectors and candela performance.
P/N 11-14301 ..... **$575.00**

AVEO POWERBURST DAYLIGHT SET



At only 26 millimeters in height (1.024 inch) the PowerBurst™ DayLite is a value wingtip 3-in-1 LED light – Navigation / Position / Strobe that does not sacrifice anything in performance or standards as other economy-priced lights. The exclusive and highly advanced optics and chrome reflector system, unmatched power and LED management circuitry, and Aveo's famous lowest-drag profile in the industry are all combined into a product that gives you unmatched POWER and FEATURES. Lower, narrower and shorter PLUS much lighter than industry lights in this category! For Experimental Use Only. Not approved for installation on certified aircraft. This is not a TSO certified light. Features: •3-in-1 Nav/Position/Strobe •Extremely lightweight •Unmatched circuit technology •Waterproof •Vibration-proof •Shock-proof •Dust-proof •Limited 3yr Warranty - Product must be registered within 30 days of purchase
P/N 05-04877 ..... **$479.00**

AVEO ULTRA DAYLITE™ 3-IN-1 NAVIGATION / POSITION / STROBE LED LIGHTS



The Ultra Daylite™ is only 34 millimeters in height (1.34 inches), but does not sacrifice performance or standards. With exclusive advanced optics and chrome reflector system, unmatched power and led management circuity, and the lowest-drag profile in the industry. The Ultra Daylite™ gives unmatched power and features, while being lower, narrower, shorter, and lighter than the competition. For Experimental Use Only.
P/N 11-15067 ..... **$778.00**

AVEO POSISTROBE XP™ TAIL / RUDDER LED LIGHT



• 2-in-1 Position & Strobe light ideal for tail, rudder or rear facing mounts • Optics designed for FAA/ICAO/EASA requirements • 9-32 volt input range • No external power supply or strobe unit, an Aveo world first • Light synchronization feature • Minimum drag profile • Unbreakable Diamidium™ encapsulation • Exclusive limited aircraft Lifetime Warranty • Unmatched circuit technology • Advanced computer and goniophotometer engineered optics.
Red - 9-32V ..... P/N 11-08127 ..... **$467.00**
White - 9-32V ..... P/N 11-08134 ..... **$467.00**

AVEO POSISTROBE DAYLITE™ TAIL / RUDDER LED LIGHT



At only 30 millimeters in height (1.180 inch) the PosiStrobe DayLite TM is a value light that does not sacrifice anything in performance or standards as other economy - priced lights offered by the competition. The exclusive and highly advanced optics and chrome reflector system, our unmatched power and led management circuitry and our famous lowest - drag profile in the industry are all combined into a product that gives you unmatched POWER and FEATURES. Lower, narrower and shorter PLUS much lighter than industry lights in this category!
P/N 11-15386 ..... **$346.00**

AVEO PICOMAX DRONE BEACON STROBES



This is Aveo's ultimate small drone strobe light, PicoMax, a cousin of its highly successful MicroMaxTM defense industry strobe for UAVs. Battery operated with DC adapter recharging, the PicoMax will strobe for longer than your drone flies on its charge. Exceeding the 2 nautical mile standard, the PicoMax actually surpasses 3 nm, and due to its proprietary Aveo firmware and circuitry it offers the brightest and fully airworthy tested features for the serious drone operator. PicoMax comes in either red or white strobe color.
White ..... P/N 11-15171 ..... **$138.99**
Red ..... P/N 11-15169 ..... **$138.99**

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AVEOFLASH LIGHTING

AVEO RED BARON MINI LED LIGHT



The RedBaron Mini™ is a cousin to the RedBaronXP™, the world's smallest and brightest total coverage LED anticollision light. The new RedBaron Mini™ resulted from requests by high-performance racing aircraft, super lightweight UAVs in the defense industry, and aircraft/helicopter manufacturers who wanted an upper and lower anti-collision light due to mounting area constraints. The answer came in this incredible new light, only 27 mm high and only 110 grams in weight. Exceeding all TSO intensity requirements and all DO-160F environmental requirements, the RedBaron Mini™ is now the world's smallest anti-collision light.

White ..... P/N 11-10534 ....**$489.00**



REDBARONXP™

Incorporates 36 of the brightest LEDs available in the world today.

White.....P/N 11-08423 .....**$576.00**



AVEO REDBARON ADAPTER

If you are replacing a Whelen anticollision light, this adapter by Aveo is designed to match up perfectly with your existing mounting site.

Adapter works for following Whelen models:

• A450 • A470A • 7108001 • 7108006 • 7108051 • 7105500 • 7105501 • 9052001 • 9052051

Specifications: Universal holes (4x1.75" x 4x1.625", 4x1.25"). Color: Silver.....P/N 11-10631 .....**$73.75**



AVEO REDBARON MAXIMINI RECOGNITION LED LIGHT

Introducing the Aveo MaxiMini™ - the ultimate recognition light. Spawned from the incredible technology of the incredible and unmatched RedBaron™ AntiCollision series, the new MaxiMini™ is the world's brightest and smallest recognition light, at only 27 mm high and weighing only 85 grams. The MaxiMini™ only comes in aviation white led color, since it is 43% brighter than red leds, which means you will BE SEEN, NOT SORRY for sure! And of course, the EXCLUSIVE AVEO LIFETIME WARRANTY means your investment is protected. The MaxiMini™, when only the best and the brightest will do. Features include: Exclusive Lifetime Warranty, Unbreakable Diamidium™ encapsulation, 9-32 Volt Input Range, Vibration Proof, Waterproof, Lowest Drag Profile recognition light, Anodized aluminum finish, Extremely light weight. ..... P/N 05-04934 ....**$599.00**



AVEO MAXX HERCULES LED LANDING / TAXI / WIGWAG LIGHT

Designed for those of you that want your plane to look like a jumbo jet in the pattern, we went to our skunk works and using our AveoMaxiChip™ technology, we built you the ultimate landing light. The Hercules™ is nonpareil in the industry as verified by test pilots at major aircraft manufacturers in night runway tests against all our competitors' lights. Again, featuring the landing, taxi, and wigwag functions, the Hercules™ is also available with TCAS activation for recognition mode.

Voltage input 9 to 32 VDC, please remove legacy strobe boxes first!

30(Brightest) With Bracket.....P/N 05-06492 .....**$975.00**
30(Brightest) Without Bracket.....P/N 11-10639 .....**$975.00**
20 With Bracket .....P/N 05-06493 .....**$825.00**
20 Without Bracket .....P/N 11-10643 .....**$825.00**



AVEO MAXX ATLAS LED LANDING / TAXI / WIGWAG LIGHT

Aveo's most compact 3-mode light featuring landing, taxi, and wigwag recognition functions, the Atlas™ is 2x to 5x brighter than the rest of its industry competitors. With a variety of mounting options that are part of the rear heat sink variations themselves, the Atlas™ also has optional built-in TCAS signal activation to act as an automatic recognition light.

Voltage input 9 to 32 VDC, please remove legacy strobe boxes first!

15(brightest) With Bracket.....P/N 05-06495 .....**$725.00**
15(Brightest) Without Bracket.....P/N 11-10647 .....**$725.00**



AVEO BORG MINI™ CARGO STEP LIGHT

Aveo Borg Mini™ Cargo Step Light. Cargo / Wheel Well / Step LED light **For Experimental Use Only.**

P/N P/N 11-15179 .....**$229.00**

AVEO ULTRA EMBEDDED GALACTICA



Popular choice for certified and general aviation aircraft of any size, due to their compact design and easy installation. With full optical testing for brightness and chromacity, the Ultra also completed the rigorous DO-160F testing regime exceeding all requirements. The leading winglight solution for numerous military and law enforcement/surveillance UAVs around the world and is very popular with aircraft manufacturers. Ultra wing lights are virtually unbreakable. Aircraft lifetime warranty. Packed with 27 ultra high brightness LEDs that are the industry state-of-the-art in performance and output lumens, the Ultras still feature the same tiny footprint the popular Aveo e-series wing lights have become so well-known for in the aviation world.

These aircraft lights meet both TSO C30c and C96a design specifications and EXCEED the requirements of TSO C30c, C96a, SAE AS 8037 and AS8017A, plus DO-160. P/N 05-08364 .....**$1,195.00**

TRIKEPAK AVEO TRIKE MOUNT SYSTEM



The Aveo Trike Mount Systerm is an extremely lightweight adapter to mount your Aveo lights to your trike or ultralight frame. Mount system versions include adapters for holding the Aveo Wing, Posistrobe, and Powerburst lights.

Features: Aluminum construction with stainless bolts. Extremely lightweight. Hinged at two points to permit quick angular mount adjustment to meet lighting requirements. Aveo Lifetime Warranty. 9-32 volts Aveo lights operation. Attaches to a 2" round tube.

For Wing Light .....P/N 11-09976 .....**$88.99**
For Posistrobe .....P/N 11-09977 .....**$88.99**

AVEO EYEBEAM MINI



Aveo's incredible capacitive-sensing technology from its highly popular EyeBeam Touch™ products has now been engineered into an even smaller footprint, providing a one-color LED cabin/cockpit/area lighting product for those with limited installation space or only simple lighting needs. With one light finger touch you can control the power and the brightness scale and the light easily swivels to put the beam where you want it. No mechanical switches to fail, no bulbs to burn out. The EyeBeam Mini™ comes with a variety of easily-applied color faceplates, with standard colors of silver and black. The EyeBeam Mini™ is made from anodized aircraft grade aluminum. Cockpit and cabin lighting, especially on aircdraft, helicopters, boats, recreational vehicles and trucks are plagued by problems from vibration... the EyeBeam™ product line from AveoEngineering overcomes this with a vibration-proof product that has the exclusive Aveo lifetime warranty.

Featuring: • 9-32 volt input range • No external power supply • Swiveling light permits light beam control • Capacitive sensing touch controls • No mechanical switches to fail • Exclusive Lifetime Warranty • Unmatched circuit technology.

Silver..... P/N 11-09678.....**$227.00**
Black..... P/N 11-09679.....**$227.00**

AVEO EYEBEAM DOME



EyeBeam Dome™ - Remote Touch Control Interior LED Light The EyeBeam Dome was developed to meet the requests of an interior dome light for all aircraft, that would complement the amazing Aveo EyeBeam products, and their unique touch-controls. Long gone are the days of mechanical switches which can corrode and spark, etc. Available with a remote control finger-slide panel for intensity and operation.

Black .....P/N 11-10627 .....**$199.00**
Silver .....P/N 11-09679 .....**$199.00**

AVEO POSITAIL NANO



If your aircraft has an extremely thin and streamlined empennage, the PosiTail Nano™ is the ultimate solution! As the world's smallest position light assembly that meets all DO-160F and FAR requirements, this light will make your aircraft legal for night flying if your wing lights are not parallel to your aircraft centerline due to wingtip shapes. This light is also part of Aveo's exclusive GreenAir™ earth friendly aviation lighting series. It is a white position only light..

P/N 11-11551.....**$432.00**

AVEO STROBETAIL NANO STROBE



If your aircraft has an extremely thin and streamlined empennage, the StrobeTail Nano™ is the ultimate solution! As the world's smallest position and strobe light assemblies that meet all DO-160F and FAR requirements, this light will make your aircraft legal for night flying if your wing lights are not parallel to your aircraft centerline due to wingtip shapes. GreenAir™ earth friendly aviation lighting.

P/N 11-11552 .....**$432.00**

AVEO EXCELERON DAYLITE™ LANDING TAXI LED LIGHTS



For Experimental Use Only.

Taxi Light.....P/N 11-15173 .....**$289.95**
Landing Light.....P/N 11-15175 .....**$289.95**

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AVEO VEGA ROTOR ILLUMINATION LIGHT

Want to be sure you don't hit anything with your rotor blade, or make sure people can see it, then the Vega rotor illumination light mounts on your front cowling and provides a purposed coverage cone to illuminate only your rotor and not impact the pilot or anyone else's vision. These lights also are part of Aveo's exclusive GreenAir™ earth friendly aviation lighting series.

P/N 05-06499.....**$438.00**

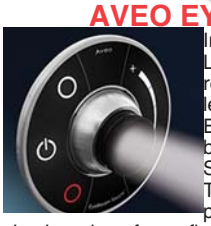


AVEOFLASH WING FAIRING E SERIES

The wing fairings come in a molded fiberglas pair that fits the LSA and Ultra lights footprint. Cessna 150-180 fairings for wing nav lights - pair of right and left.

P/N 11-08136.....**$98.99**

AVEO EYEBEAM TOUCH LIGHTS



Introducing the revolutionary EyeBeam Touch™ LED Cockpit/Map/Cabin light system. With both red and white led lights included as standard and led backlighting of its touch control panel, the EyeBeam Touch™ light swivels to adjust your beam to where you want it. Integral Capacitive Sensing processor technology in the EyeBeam Touch™ means no more buttons to locate and push and no more mechanical failures. Just a simple swipe of your finger to adjust brightness on the dimming slide bar is all it takes. For those flimsy headliners in your cockpit there is finally a light that will not be pressed into your roof to select what you need!

The EyeBeam Touch™ light is available in white, black or silver finish. Extra face plates available and sold separately.

Capacitive sensing technology means a simple light touch of your finger, with or without gloves, to turn the light on/off, select red or white led lighting, and adjust the brightness -- all with the quick touch of your finger.

Description	Part No.	Price
AveoFlash Eyebeam Touch White Finish	11-07864	**$195.00**
AveoFlash Eyebeam Touch Black Finish	11-07865	**$195.00**
AveoFlash Eyebeam Touch Silver Finish	11-07866	**$195.00**
Accessories	**Part No.**	**Price**
AveoFlash Replacement Faceplate White	11-07867	**$8.50**
AveoFlash Replacement Faceplate Black	11-07868	**$8.50**
AveoFlash Replacement Faceplate Silver	11-07869	**$8.50**
AveoFlash Sticker Adhesive for Replacement Faceplates	11-08129	**$5.00**



AVEO EYE BEAM TOUCH NVG

The popular Aveo EyeBeam Touch™ capacitive sensing controlled cockpit and cabin lights are now available in NVG configuration, that is they include green LED lighting compatible with night vision equipment. Also included with the NVG model EyeBeam is the standard selection faceplate locations of white, red and blue LEDs too, so whatever your operational conditions there is a lighting option to match it available from this amazing product. With one light finger touch you can control power, white LED, red LED, green LED, blue LED or the brightness slider scale easily with no mechanical switches to fail and no bulbs to burn out.

The EyeBeam NVG™ also features as standard in its firmware automatic light dimming to OFF and automatic ON for the light when coupled to a door microswitch sensor. With a standard 2 minute delay programmed in. The EyeBeam overcomes this with a vibration-proof product that has the exclusive Aveo lifetime warranty. Features: 9-32 volt input range, No external power supply, Swiveling light permits light beam control, Capacitive sensing touch controls, No mechanical switches to fail, Limited 3 year warranty, Unmatched circuit technology. Specifications: Power supply: 9-32 Volts, Current consumption: 110 mA @ 12 Volts, Capacitive Sensing Interface with LED backlighting, 9 Incremental steps capacitive sensing slide bar for brightness adjust, Swiveling Beam, 2024 Anodized Aluminum Construction

Description	Part No.	Price
Silver Eye Beam Touch NVG	11-08444	**$239.00**
Black Eye Beam Touch NVG	11-08445	**$239.00**
Accessories		
Description	**Part No.**	**Price**
Silver Faceplate	11-08429	**$8.20**
Black Faceplate	11-08428	**$8.20**

AVEO ROCKRACK SWITCHES

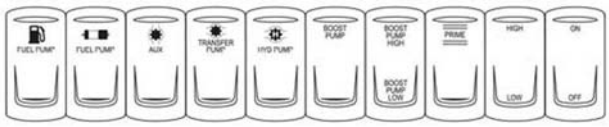
Avionics



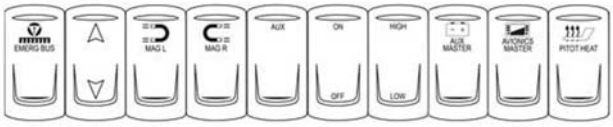
Ice & Heat



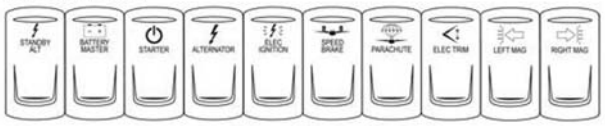
Pumps



General / Misc.



Engine & Airframe



SWITCHES		
Description	**Part No.**	**Price**
Red switch top with icon Avionics Master	11-06642	**$7.50**
Blank Red Top	11-08420	**$4.75**

SWITCH BOTTOMS		
Switch Bottom part - blue - 12V	11-06645	**$29.85**

TAB TERMINALS		
Aveo 14 gauge Tab Terminal 12 pack.	11-07833	**$3.75**
Aveo 14 gauge Tab Terminal 24 pack.	11-07834	**$5.99**
Aveo 14 gauge Tab Terminal 60 pack.	11-07835	**$15.75**
Aveo 14 gauge Tab Terminal 100 pack.	11-08422	**$25.80**

MOUNTING COMPONENTS		
End Module	11-06648	**$2.85**
Middle Module	11-06649	**$2.75**
Single Module	11-06650	**$5.40**
Connector (1 per switch)	11-06651	**$4.65**
Removing Tool - 2 required to remove the switch.	11-06652	**$7.80**



AVEO 2-IN-1 EMI / OVERVOLTAGE SPIKE-D MODULE

Spike-D can be use with lights: Ultra Galactica, Ultra Embedded Galactica, Ultra Aurora, Ultra Embedded Aurora, LSA, Andromeda. PowerBurst, PowerBurst Plues, Gliderburst. PosiStrobe CP Aurora, PosiStrobe CP Galactica, PosiStrobe XP, MiniMax. RedBaron XP Aurora, RedBaron XP Galactica, RedBaron Maxi, RedBaron Mini, RedBaron MaxiMini (NOT HISL!!). R2D2. AveoMaxx. Vega TL, Vega TLR, Vega Helo. All EyeBeam series. For Experimental Aircraft.

P/N 11-14460.....**$199.00**

AVEO 2-IN-1 EMI / OVERVOLTAGE SUPER SPIKE-SD MODULE



Hercules Drop-In, 9-18VDC has one input and can not be use with Spike-SD, current consumption is 12.6A at 9VDC, what more than 8A per channel. Samson Drop-In has one input and can not be use with Spike -SD, current consumption is 11.1A at 18VDC, what more than 8A per channel. For Experimental Aircraft.

P/N 11-14461.....**$239.00**

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NAVSTROBE LIGHTING – KUNTZLEMAN



AIRCRAFT SEXTANT NAV SYSTEM WITH CONSTANT + FAST STROBE 40W

These bulbs are standard parts and have been designed to meet the requirements of TSO-C30c. Complete combination navigation and strobe lights for your aircraft. Emitter Types: Cree LED's. Turn on first: Constant lighting / Turn on second time <3s: Fast Strobe. Switch between modes in fog/cloud etc.

P/N 11-14934 .....**$318.00**

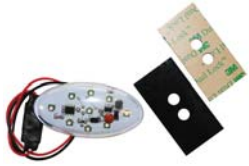
AIRCRAFT NAV SYSTEM WITH CONSTANT + FAST STROBE 7.5W



Note: For Experimental aircraft use only. Not FAA/PMA Approved. Tailfin Meets FAA AC No: 20-74 requirement. Tailfin Meets TC Part V - Chapter 523, Subchapter F, 523-VLA.1393. Complete combination navigation and strobe lights for your aircraft. Emitter Types: Cree LED's. Rated Voltage: 10-30VDC. Turn on first: Constant lighting / Turn on second time <3s: Fast Strobe. Switch between modes in fog/cloud etc.

P/N 11-11994 .....**$119.00**

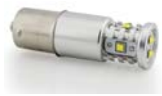
AIRCRAFT ANTI-COLLISION STROBE LIGHT



Aircraft Anti-Collision Strobe Light, 45w, 1350 LM CREE LEDs. Total Emitters: 9 x 5w. Power: 45W. Rated Voltage: 10-15VDC. Draws <280ma @ 14.2VDC. Luminous Flux: 1350 LM/108cdl. 1 mode: fast strobe (100ms). Base Type: 12"/30cm twin leads. Application: Aircraft Anti-Collision Strobe Light. Non-PMA'd. Contains 1 light bulb per pack. Dimensions: 2.7 in x 1.2 in (60 mm x 30 mm). Weight: 0.28 oz (8 g)

White .....P/N 11-12424 .....**$49.85**
Red.....P/N 11-12986 .....**$49.85**
Green.....P/N 11-12985 .....**$49.85**

NAVSTROBE TAILFIN LIGHT



These bulbs are standard parts and have been designed to meet the requirements of TSO-C30c.• Total Emitters: 6 • Power: 30W Equivalent • Color BIN: White • Rated Voltage: 10-28VDC • Draws <340ma @ 14.2VDC • Luminous Flux: 676LM (0 degrees), 666LM (90 degrees) • Color Temperature: 6000~6500K • 2 modes: constant & fast strobe • Base Type: BA15s = Single contact with inline pins. (GE1691 & 1156) • Application: Tailfin Navigation Light replacement. • Contains 1 light bulb per pack • Dimensions: 1.9 in x 0.7 in (50.5 mm x 1.6 cm) • Weight: 0.32 oz (9 g) P/N 11-13587 .....**$69.50**

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AIRCRAFT WINGTIP NAVLIGHT LENS COVER GASKET

Color: Gray. Application: Wingtip Navigation Light lens gasket replacement. Contains 1 per pack. Dimensions: 2.57 in x 1.14 in (40 mm x 28.5 mm x 1.5 mm) Weight: 0.15 oz (2.5 g)

P/N 11-11991 .....**$5.95**

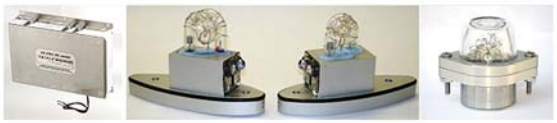


AIRCRAFT WINGTIP NAVLIGHT GREASE

Color: Clear. Application: Wingtip Navigation Light lubricatent. Contains 1 per pack. Dimensions: 4.25 in x .11 in (108 mm x 2.8 mm) Weight: 0.176 oz (5 g)

P/N 11-11992 .....**$5.95**

KUNTZLEMAN DOUBLE DUAL MAGNUM STROBES KIT #1 IS A SET OF SPECIAL HEADS



For builders of RV 7, 9, & 10 aircraft or any other kit that has like mounted wing lights. Due to the wing light configuration on these aircraft, the white rear facing LED on the regular Combo head is of no use, because it can't be seen from the rear. A white position or tail light is then needed. These are strobe and red / green position light equipped heads No white LEDs, a 2 strobe driver box, that fires both wing strobes in an alternating double wink pattern, a white round LED equipped tail light to be mounted at the rear of the aircraft. 50 feet of 5 conductor shielded wire for the wings, plugs, pins and mounting hardware. Total power draw for this system is about 2 ½ Amps at 14 volts..... P/N 11-05833.....**$465.00**



NAVSTROBE PAR 36 LED LANDING LIGHT

Aircraft PAR36 Landing Light, 220w, 109, 400 LM LEDs.
These are non-TSO'd

P/N 11-14745 .....**$149.75**



NAVSTROBE PAR 36 LED TAXI LIGHT

Aircraft PAR36 Taxi Light, 220w, 109, 400 LM LEDs.
These are non-TSO'd

P/N 11-14744 .....**$149.75**



BEACON LIGHT CONSTANT & FAST WHITE STROBES

Note: For Experimental aircraft use only. Not FAA/PMA Approved. NavStrobe Aircraft Beacon Light with Constant & Fast White Strobe 503 LM LED's. Dimensions: 1.9 in x 0.7 in (49.0 mm x 1.8 cm) Weight: 0.32 oz (9 g). 10-28VDC.
Turn on first: Constant lighting / Turn on second time <3s: Fast Strobe. Switch between modes in fog/cloud etc.

5 WATT .....P/N 11-12193 .....**$34.70**
30 WATT .....P/N 11-13522 .....**$69.50**



AIRCRAFT WINGTIP NAVLIGHT CLEAR LENS COVER

Color: Clear Optical Borosilicate glass. Application: Wingtip Navigation Light lens cover replacement. Contains 1 per pack. Dimensions: 1.57 in x 1.04 in (40 mm x 26.5 mm) Weight: 0.55 oz (14 g)

P/N 11-11990 .....**$23.75**

NAVSTROBE AIRCRAFT PANEL LED LIGHT



Note: For Experimental aircraft use only. Not FAA/PMA Approved. Replacement for GE1815 bulb. Rated Voltage: 8-16VDC. 1 mode: constant on. Draws <110ma @ 14.4VDC. Color Temperature: Aviation White 4300k. 1 light per pack.

12V .....P/N 11-14929 .....**$4.80**
24V .....P/N 11-15995 .....**$4.80**

NAVSTROBE AIRCRAFT WINGTIP LIGHT STATUS INDICATOR



Material: Acrylic. Color BIN: Clear with frost coating to reflect light. Application: Wingtip Navigation Light status indicator. Use on Left wingtip in down position or Right wingtip in up position.

Right.....P/N 11-14927 .....**$7.55**
Left.....P/N 11-14928 .....**$7.55**

KUNTZLEMAN DOUBLE DUAL MAGNUM STROBES KIT #2 VANS RV LIGHT KIT



For builders of RV 7, 9, & 10 aircraft or any other kit that has like mounted wing lights. Due to the wing light configuration on these aircraft, the white rear facing LED on the regular Combo head is of no use. A white position or tail light is then needed. They are STROBE and RED / GREEN Position light equipped heads WITHOUT the white LEDs, a 3 strobe driver box, that fires both wing strobes in an alternating double wink pattern and a third STROBE and LED equipped round tail light for mounting at the rear of the aircraft. The tail strobe fires in sync with each wing. Also, included is 75 feet of 5 conductor shielded wire, plugs, pins and mounting hardware. Total power draw for this system is about 4 Amps at 14 volts. TRI3-RV..... P/N 11-05834.....**$584.00**

KUNTZLEMAN STROBE SYSTEMS

KUNTZLEMAN MAGNUM STROBES

The **SINGLE MAGNUM SMART STROBE** Driver is a state of the art single strobe light system. There is not another system on the market like this one. It will operate on 10 to 80 volts of AC or DC input power. It can be powered directly from the engine lighting coil (AC) or from a battery (DC) without any change in brightness or its double wink flash pattern at a 74 per min. rate There are NO options to change and NO special equipment needed. This model is a favorite for king post installations and with the PPC flyers. It is also available with either the standard STREAMLINE HEAD or the COMBO STREAMLINE WHITE HEAD. Both are popular for tail mounting. Average current draw is less than 2 Amps. The driver measures 4 ½" X 3 ½" X 1 ½" and weighs 10 ounces.



Smart Strobe Driver Box only - Single Magnum Smart Strobe driver only, without a strobe head. SS-DO
P/N 11-05116.....**$109.95**



Single Magnum Smart Strobe with round clear Fresnel Head - The globe style is a Fresnel lens. The head comes with 6' of wire and plug attached. SS-TM
P/N 10-01609.....**$149.00**



Streamline Model with Driver and Streamline Head - Includes 25' of 3 conductor wire, plug, pins and mounting hardware (includes adaptor plate for curved surface mounting if needed). SS-SLM
P/N 10-01611.....**$149.00**



SINGLE MAGNUM SMART STROBE DRIVER with a Round Taillight Strobe - Includes 25' of wire and mounting hardware. SS-TL-STR
P/N 11-07345.....**$198.95**



STREAMLINE COMBO Head, White Led & Strobe Combination - Includes 25' of 5 conductor shielded wire, plug, pins and mounting hardware (includes adaptor plate for curved surface mounting if needed). SS-SLCW ..... P/N 11-05114.....**$239.95**



ROUND TAILLIGHT COMBO Head - White Led & Strobe Combination Includes 25' of wire and mounting hardware. SS-TL-L/S..... P/N 11-07346.....**$231.95**

The **DOUBLE DUAL MAGNUM STROBE** Driver is available in two models, the DDM 12 volt DC model and the SDDM smart model. The SMART Model simply means it can be powered by 10 to 80 volts of AC or DC. The 12 volt model is powered by the 12 volt electrical system of your aircraft. The strobe bulb fires a rapid double flash on one head and then the other in an alternating pattern. The first flash catches the eye and the second identifies your position. Total flash rate is 74 per min. Average current draw is less than 2 Amps. The driver measures 4 ½" X 3 ½" X 1 ½" and weighs 10 ounces.



Double Dual Magnum Driver Box Only - 12VDC Driver Box Only 12 volt Model DDM-DO
P/N 11-05118.....**$139.95**

Double Dual Magnum Smart Driver Box Only - Smart Model (10 to 80 volts of AC or DC)SDDM-DO .
P/N 11-05117.....**$160.00**



Double Dual Magnum Driver Box with round clear Fresnel Heads - Two Round Fresnel Heads, driver, 6' of 3 conductor wire, plugs, pins, and installation hardware (Tang Mount used on PPC, TRIKES, or where bolting heads to frame is desired).

STANDARD - 12 VDC Model with /ROUND FRESNEL heads DDM-RH
P/N 10-01610.....**$228.00**

SMART - with /ROUND FRESNEL headsSDDM-RH
P/N 11-04956.....**$247.95**



Double Dual Magnum Driver Box with standard streamline Heads - Two Streamline Heads, driver, 50' of 3 conductor wire, plugs, pins, and installation hardware (includes adaptor plates for curved surface mounting if needed).

STANDARD 12 volt Model with Driver and Two STANDARD STREAMLINE Heads. ..... P/N 10-00824.....**$228.00**

SMART - model with with Driver and Two standard streamline Heads SDDM-SL ..... P/N 11-04995.....**$247.50**



Two ***STREAMLINE COMBO*** heads, driver, 50' of 5 conductor shielded wire, plugs, pins, adaptor plates (for curved or flat surface mounting) and installation hardware. SONEX Aircraft adapter plates available at no additional charge when mentioned at time of purchase.

COMBO - 12 VDC Model with Streamline Combo Heads DDM-SLC
P/N 11-04835.....**$379.00**

SMART - with Streamline Combo Heads SDDM-SLC
P/N 11-04957.....**$397.95**

The **TRIPLE MAGNUM 3 LIGHT STROBE** Driver is a 12 volt DC operated system. It fires 3 strobe heads in a double wink pattern. The two wing tip lights alternate between left and right while the tail, or third light is synchronized to flash every time one of the wing tips are flashing. Resulting in about 140 flashes per minute. Driver box measures 4 ½" X 7" X 1 ½", weighs 17.2 ounces. Current draw with 3 standard heads is about 3 amps. If using two COMBO heads and one standard head it is about 3 ¾ Amps .



Triple Magnum 3 Light DRIVER BOX ONLY - 12 volt Model TRI3-DO..... P/N 11-01355.....**$230.00**



TRI 3 DRIVER with 3 STANDARD HEADS, Streamline or Round. - with 3 standard SL or ROUND FRESNEL heads, please specify. Complete with 75' of wire, plugs, pins, adaptor plates (for flat or curved surface mounting) and all the installation hardware. TRI3-SL
P/N 11-01829.....**$375.00**

TRI 3 DRIVER with 2 COMBO HEADS & 1 STREAMLINE, ROUND FRESNEL or TAILLIGHT HEAD - The TRIPLE MAGNUM 3 light system with 2 COMBO & a choice of either 1 Standard Streamline Head, 1 Round Fresnel head or 1 Round Tail Light without LEDs (Additional cost for the Round Tail Light) for the third head, please specify. Complete with 75' of shielded wire, plugs, pins, adaptor plates (for flat or curved surface mounting) and all the installation hardware. (Please specify choice at time of order) TRI3-SLC
P/N 11-05125.....**$494.00**



TRI 3 DRIVER with 3 COMBO HEADS - The TRIPLE MAGNUM 3 light system with 3 COMBO heads, please specify Streamline Combo or Round Tail light Combo for third head. Complete with 75' of shielded wire, plugs, pins, adaptor plates (for flat or curved surface mounting) and all the installation hardware. The tail COMBO heads both have a strobe and white LEDs to be used as a STROBE and WHITE tail light. TRI3-SLC
P/N 11-05119.....**$599.95**



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KUNTZLEMAN STROBE SYSTEMS

KUNTZLEMAN LED CONTROLLER ONLY



LED Controller only. The controller is capable of powering up to 4 of our special strobe heads. So, if you would like to add more visibility we have 3 additional heads to choose from that will work in conjunction with the two wing tip heads. LED-HACW is a streamline strobe & White AFT Position light, LED-SO is a streamline strobe only and LED-TLS is a Round taillight style strobe only. Each additional head requires a Y-PC patch cord..... P/N 11-12343.....**$136.75**

KUNTZLEMAN LED REPLACEMENT POSITION AND STROBE HEADS



LED replacement position and strobe heads. This items comes with an LED replacement part with Red/White position or a Green/White position and strobe head. This part is for the Anti Collision and Navigation Position Light System. (Part Numbers 11-10687 or 11-12342) This head requires a Y-PC patch cord.
Red/White..... P/N 11-12344.....**$136.75**
Green White ..... P/N 11-12345.....**$136.75**

KUNTZLEMAN LED STREAMLINE WHITE AFT POSITION AND STROBE HEAD



LED-HACW is a streamline strobe & White AFT Position light. This part is for the Anti Collision and Navigation Position Light System. (Part Numbers 11-10687 or 11-12342) This head requires a Y-PC patch cord. ..... P/N 11-12346.....**$136.75**

KUNTZLEMAN Y-PATCH CORD ADAPTER



Y-PC patch cord for the Anti Collision and Navigation Position Light System. (Part Numbers 11-10687 or 11-12342) This head requires a Y-PC patch cord.. P/N 11-12347.....**$14.50**

KUNTZLEMAN LED STREAMLINE STROBE ONLY HEAD



LED-SO is a streamline strobe only. This part is for the Anti Collision and Navigation Position Light System. (Part Numbers 11-10687 or 11-12342). This head requires a Y-PC patch cord..... P/N 11-12348.....**$97.75**

KUNTZLEMAN LED ROUND TAILLIGHT STYLE STROBE



LED-TLS is a Round taillight style strobe only. This part is for the Anti Collision and Navigation Position Light System. (Part Numbers 11-10687 or 11-12342) This head requires a Y-PC patch cord..... P/N 11-12349.....**$97.75**

KUNTZLEMAN REPLACEMENT PARTS AND ACCESSORIES

Standard Streamline Head Assembly **-** Silicon and lexan head measures 3-1/4" x 1" and weighs 1.8 ounces each. (bulb unit, clear lens, adapter plate, 25 feet wire, plug, pins, hardware and heat shrink) SL-HA P/N 11-05127.....**$64.95**

Standard Streamline Bulb Unit **-** Less lensSL-BU P/N 11-05128.....**$39.95**

Strandard Streamline Lens Only **-** SL-L. P/N 11-05130.....**$17.50**

Round head Assembly **-** Round clear Fresnel lens. Measures 2-1/2" dia. at the base and 3-1/2" tall. Weighs 6 ounces, and standard 6 ft. wire and plug installed. RND-HA -CLEAR ..... P/N 11-05135.....**$56.85**

Round Clear Fresnel Lens **-** RND-L..... P/N 11-05139.....**$17.50**

Round Wire Bulb Unit **-** Works on all Magnum drivers. RND-3WBU - 3 Wire.... P/N 11-05137.....**$29.95**

Combo Streamline Head Assembly **-** Fitted with LED position lights. Measures 3-1/4" x 1" and weighs 2.8 ounces. 12 volt LEDs draw only (complete 2 head & wire) SL-HAC-S..... P/N 11-07465.....**$259.95**

SL-HAC-G - Green & White aft LEDs(1 head & wire) SL-HAC-G..... P/N 11-07466.....**$92.75**

W/O Strobe Bulb SL-HAC-WG ..... P/N 11-07348.....**$92.75**

SL-HAC-R - Red/Wh aft LED SL-HAC-R.. P/N 11-07467.....**$134.95**

W/O Strobe Bulb SL-HAC-WR ..... P/N 11-07349.....**$92.75**

SL-HAC-W - White aft LEDsSL-HAC-W ... P/N 11-07469.....**$134.95**

W/O Strobe Bulb SL-HAC-W..... P/N 11-05132.....**$91.75**

Combo Streamline **-** REPLACEMENT Strobe Bulb Unit Only, fits SL and ROUND Combo tail light heads..... P/N 11-05133.....**$39.95**

Combo Streamline **-** LENS Only SL-LC... P/N 11-05134.....**$17.50**

Round Taillight with Strobe Only..... P/N 11-05805.....**$92.75**

Round COMBO Taillight..... P/N 11-05804.....**$129.95**

Round Taillight with LEDs TL-LED..... P/N 11-05806.....**$96.75**

Strobe Head Plug Set - SH-PS..... P/N 11-05140.....**$2.50**

Inline Plug Set **-** IL-PS..... P/N 11-05141.....**$6.50**

Trike Mount Adaptor Kit **-** TRK-MT..... P/N 11-05143.....**$27.95**

3 Wire Cable Extension **-** EXT-3W..... P/N 11-05142.....**$10.85**

Mounting Kit **-** RND-MK..... P/N 11-07347.....**$31.75**

WIG-WAG circuit and a DPDT center off switch to operate 1 or 2 LTRs in a wig-wag mode..... P/N 11-08419.....**$48.75**

KUNTZLEMAN LED WING TIP STROBE AND NAVIGATION SYSTEM



This new wing tip, 100% LED, strobe and navigation light system features a cluster of very bright LEDs and using a common controller that furnishes the heads with a junction point for synchronizing and selecting one of the 7 flash patterns of the LED STROBES. It also allows for a separate power source to the navigation red, green and white LEDs.

The system includes 2 heads (one left & one right), mounting adapter plates for mounting on a radius, 50 feet of 3 conductor wire, plugs, pins, 1 controller, misc. wire connectors and mounting hardware.

Specifications:

- Made in USA
- Navigation Colors: Aviation Red / Green forward and White aft
- Strobe: Synchronized with seven (7) selectable flash patterns
- Weight: 2 heads and controller / 12 ounces
- Power draw: Strobe and Position lights are LESS than 2 Amps at 12 to 14 volts
- Footprint Dimensions (Heads): 3.2" long x 1.1" wide
- Footprint Dimensions (Controller): 2.2" x 5"

Kuntzleman Led Wing Tip Strobe And Navigation System
Standard..... P/N 11-10687.....**$389.95**
LED wing tip strobe with Sonex Adapters.... P/N 11-10688..... **$389.95**

Accessories

Kuntzleman Bushcaddy Adapter..... P/N 11-10689..... **$5.95**
Kuntzleman Trike Adapter..... P/N 11-10690..... **$5.95**

KUNTZLEMAN SELF CONTAINED 12 VDC STROBE



The SC103 STROBE is a self contained 12 volt DC operated light designed specifically for Ultralight use where an external 12 vdc power source (battery) is available. Its physical size is the smallest of any self contained strobe light in its class. Measuring2 ½" dia. At the base and 4" tall. Using the same xenon flash tube and Fresnel lens that is currently being used on its big brother the Single Magnum Smart Strobe. The brightness has been actual flight tested before sunset and is visible at 3 statute miles (FAR 103 requirement). The flash is in a single wink pattern at about 42 per minute, power consumption is 500 ma (1/2 Amp) and it weighs only 7 ½ ounces. The SC103 is mounted with a 1/4 X 20 stud located in the center on the bottom of the unit. Also, a stainless steel tang is supplied. Its rugged construction makes it a great economical stand alone unit.
P/N 11-04098..... **$99.85**

SHOCK MOUNT - Designed to be used when mounting the SC103 strobe in an area of high vibration. P/N 11-06251..... **$16.70**

KUNTZLEMAN SC-LED LED STROBE



The SC-LED STROBE is a self-contained WHITE LED 12/14 VDC operated strobe light. Designed specifically for use where an external 12 VDC power source (battery) is available. Its size is the smallest of any self-contained LED strobe light in its class, measuring 2 ½" diameter at the base by 4.75" tall, and weighing only 7.8 ounces. It is fitted with a Fresnel lens. The flash is in a 5 MULTIPLE BURST PATTERN of 72 cycles per minute. Power consumption is 500 ma (1/2 Amp) with an average draw of 0.3 Amps. The SC-LED strobe is mounted with a 1/4" x 20" stud located in the center on the bottom of the unit. A stainless steel tang is supplied for mounting. Its rugged construction makes it a great economical stand-alone unit. P/N 11-13527.....**$159.95**

KUNTZLEMAN LANDING/TAXI /RECOGNITION (LTR) LIGHTS



LSA and EXPERIMENTAL aircraft line of lights. Made in the USA, called the LTR which stands for Landing-Taxi-Recognition. The LTR consists of 9 extremely bright LEDs, focused through special lenses. This results in a white beam of light that has been measured with a light meter to be 2 1/2 times the brightness of a 55 watt halogen lamp while drawing 1/3 the current and 1 1/2 that of an HID lamp at about the same current. Powered by 12 to14 volts DC it uses only 1.35 Amps of power. The LTR dimensions are 3" Dia. X 1" deep and weighs less than 6 ounces. Flashing it on & off can be accomplished with an led flasher from your local auto parts store. You must see the LTR in operation to believe the light output. Sold with a money back satisfaction guarantee.
P/N 11-06854.....**$229.00**

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WWW.AIRCRAFTSPRUCE.COM

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EXPERIMENTAL AEROLEDS LIGHTING

AEROLEDS AEROSUN LANDING LIGHT



The AeroSun™ is a wing-mounted LED (Light Emitting Diode) landing light with a built-in wig wag mode in addition to its standard operation as a landing/taxi light. The AeroSun™, constructed of extruded aluminum, is a very intense light source that uses 12 high power LEDs to produce up to 1200+ lumens of light using just 24 Watts of power. The product is ideal for installations in aluminum aircraft or composite aircraft where some airflow within the wing cutout exists. Typical installations include aircraft such as RV8,9,10; Zenith, Kitfox and Sonex. NON-TSO.

P/N 11-11359.....**$325.00**

AEROLEDS MICROSUN LANDING LIGHT



The Microsun is a very intense light source that uses three high powered LED's to produce 1800+ lumens of light using 30 Watts of power. It is a small compact light that projects a lot of light and was designed for landing, taxi and recognition. The MicroSun can be installed in the leading edge, wingtip cutout, landing gear or in the cowl on an aircraft and has a built in "wig-wag" or "pulse" feature. Each MicroSun light uses less than half the power of an equivalent 55W halogen light while producing more usable light. The LED light sources last up to 50,000 hours of constant operation, so you will never have to replace this light once it has been installed. It will outlast both Halogen and HID lamps. NON-TSO.

P/N 11-07779.....**$350.00**

AEROLEDS SUNRAY PLUS LANDING LIGHT



The SunRay Plus is a wing-mounted LED (Light Emitting Diode) landing light with a built-in wig wag feature in addition to its standard operation as a landing/taxi light. The SunRay Plus is a very intense light source that uses 4 high power LED's to produce up to 1,000+ lumens of light and 30,000 candela using 10 watts of power. Each SunRay Plus light uses less than half the power of an equivalent 55 watt halogen light while producing more usable light in a more narrow beam. The LED light source last up to 50,000 hours of constant operation, so you will never have to replace this light once it has been installed. It will outlast both Halogen and HID lamps. The SunRay Plus is protected against overheating with a built in protection circuit, is protected from lightning transients and ESD, voltage spikes, reverse voltage, and undervoltage conditions. NON-TSO.

Landing Light ..... P/N 11-09348.....**$295.00**
Mount Kit..... P/N 11-12037.....**$15.95**

AEROLEDS AEROSUN VX LANDING LIGHT FOR RV



The Aerosun Vx is a high intensity wingtip landing/taxi/recognition light designed specifically for the Van's RV family of airplanes. Each unit draws 60 Watts of power and generates over 5000 lumens of light per wingtip. The lights include a built-in wig-wag controller for a synchronized recognition light mode. The Vx can be installed in any RV-6, RV-7, or RV-8 that has a set of W-715-1 fiberglass wingtip fairings with the 6" wide light cove. The Aerosun Vx can also be installed in the RV-9, RV-10, and RV-14 models but require using a conversion kit which is sold separately that enlarges the size of the light cove to accept the Vx. See Options. Non-TSO..... P/N 11-12921.....**$895.00**

AEROLEDS PULSAR EXP NAV / POSITION / STROBE LIGHT



All LED navigation/position/strobe designed for the wingtips of an aircraft and projects a 180 degree light coverage. EXP does not require an external power supply and will retrofit the mounting footprint of legacy lighting..... P/N 11-06577.....**$850.00**

AEROLEDS POLARIS 12V



Polaris (12v) LED NAV bulb replacement for the WL-A-7512 (12v) AeroLEDs. (01-7500-7512-12). Non-TSO. PMA Pending. .6 Amps Max. 9 Watts. 1000 Lumens. Weight: 1 oz. Voltage Range: 9-18 VDC. Current Draw at 14VDC: 0.6 Amps Max. Power Consumption: 9 Watts. Total LED Lumens: 1000. LED Count: 1. Height: 2.0". Width: 1.24" Diameter (round). Depth: 1.07". Weight: 1 Oz. Heat Sink Material: Black Power Coated Aluminum. Lens Material: Silicone. Bulb Base: BAY15S. Rated Life: 50,000 Hours. Temperature Range: -55C to +70C 5 Year Warranty. P/N 11-14497.....**$149.00**

AEROLEDS POLARIS 24V



Polaris (24v) LED NAV bulb replacement for the WL-A-7524 (24v) AeroLEDs. (01-7500-7512-24). PMA Pending. .3 Amps Max. 9 Watts. 1000 Lumens. Weight: 1 oz. 5 Year Warranty. P/N 11-14498.....**$149.00**

AEROLEDS PULSAR NS STROBES



The Pulsar NS (Navigation and Anti-collision Strobe) lights are designed to be installed on the wingtip or in the wingtip cut outs of an aircraft. The SunTail (Anti-collision Strobe and Position) light for the tail of the aircraft is recommended with the Pulsar NS lights. The strobes on the SunTail and Pulsar NS lights will sync to strobe together. Non-TSO.

Experimental Versions:

Description	Part No.	Price
12V Pair	11-15278	**$895.00**
12V (Left Only)	11-15859	**$447.50**
12V (Right Only)	11-15860	**$447.50**
24V Pair	11-15279	**$895.00**
24V (Left Only)	11-15862	**$447.50**
24V (Right Only)	11-15863	**$447.50**

AEROLEDS PULSAR NSP STROBES



The experimental Pulsar NSP (Navigation/Anti-collision Strobe/Position) wingtip lights are designed to be installed on the wingtips of an aircraft where the navigation (red and green) and position (white) lights can be seen to determine the direction of the aircraft.

Experimental Versions:

Description	Part No.	Price
12V Pair	11-15280	**$929.00**
12V (Left Only)	11-15864	**$464.50**
12V (Right Only)	11-15865	**$464.50**
24V Pair	11-15281	**$929.00**
24V (Left Only)	11-15866	**$464.50**
24V (Right Only)	11-15867	**$464.50**



AEROLEDS SUNTAIL WHITE POSITION STROBES

The experimental SunTail (Anti-collision Strobe and white Position) light has been designed for the tail of the aircraft. The SunTail is recommended with the Pulsar NS 180 (Navigation/ Anti-collision Strobe) lights. Available for 14V and 28V electrical systems. Non-TSO.

Description	Part No.	Price
White Experimetal- 12V	11-15268	**$395.00**
White Experimetal- 24V	11-15269	**$395.00**
Red Experimetal- 12/24V	11-10474	**$395.00**



AEROLEDS RV KITS

Four different kits from which to choose. All kits do not requre power supply.

Description	Part No.	Price
Included in RV Kit Option 1: Pulsar NS90 Pair (Nav/Strobe) for wingtip cut out SunTail (Position/Strobe) for the rudder	11-09921	**$1,245.00**
Included in RV Kit Option 2: Pulsar NS90 pair (Nav/Strobe) for wingtip cut out SunTail (Position/Strobe) for the rudder Two Aerosun (landing/taxi/recognition lights)	11-09922	**$1,895.00**
Included in RV Kit Option 3: Pulsar NS90 pair (Nav/Strobe) for wingtip cut out SunTail (Position/Strobe) for the rudder Two Sunray Plus (landing/recognition lights) for wingtips	11-09923	**$1,835.00**
Included in RV Kit Option 4: Pulsar ExP pair (Nav/Position/Strobe) for external wing-tips Two Aerosun (landing/taxi/recognition lights)	11-09924	**$1,400.00**

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CERTIFIED AEROLEDS LIGHTING

AEROLEDS SUNBEAM LANDING TAXI RECOGNITION LIGHT



Sunbeam landing/taxi/recognition light that features two intense Light Emitting Diodes (LEDs). Featuring a 50,000 hour life, the Sunbeams are produced in a rectangular format to fit the Cirrus SR-22, a variety of LSAs and experimental aircraft.
A leader in LED technology, AeroLEDs has created a reliable light source that requires only 25 watts of power to produce over 100 watts or 60,000 candela which amounts to 1600+ lumens. Featuring wig-wag capability, the AeroLEDs on any aircraft can be seen in hazy daylight long before people can make out the airframe and because of their long life they can be active at all times. Individual lights have a built in pulsing capability that is nearly as effective as the wig-wagging.
Sunbeams can be installed by an IA, using a 337 form for certificated aircraft. The IA will file the paperwork. In most circumstances the light will outlast the life of the aircraft.
Like all AeroLEDs products, the Sunbeam is complete sealed and is very rugged. It is protected against overheating with a built-in protection circuit and is also secured against lightning, voltage spikes, reverse voltage and under voltage conditions. The Sunbeam is 2.8" high, 4.03" wide and 1.36" deep P/N 11-11225.....**$429.00**

AEROLEDS SUNTAIL WHITE POSITION STROBE LIGHT



The TSO'd SunTail (Anti-collision Strobe and white Position) light has been designed for the tail of the aircraft. The SunTail is recommended with the Pulsar NS (Navigation/ Anti-collision Strobe) lights. TSO-C30c Type III and TSO-C96a Class II approved. Available for 14V and 28V electrical systems.

Description	Part No.	Price
White Certified - 12V	11-15266	**$495.00**
White Certified - 24V	11-15267	**$495.00**

AEROLEDS SUNBEACON II BEACON LIGHT



The compact SunBeacon II is a direct replacement for the standard beacon. It is available in red or white, and in 12V or 24V. It is TSO C-96a Class II approved for white, TSO-C96a Class I and Class III approved for red.

Description	Part No.	Price
White - 12V	11-15882	**$695.00**
White - 24V	11-15883	**$695.00**
Red - 12V	11-15884	**$695.00**
Red - 24V	11-15885	**$695.00**
Mounting Kit	11-13537	**$45.00**

AEROLEDS PULSAR NAV / POSITION / STROBE LIGHTS



The Pulsar (Navigation/Anti-collision Strobe/Position) wingtip lights are designed to be installed on the wingtips of an aircraft where the navigation (red and green) and position (white) lights can be seen to determine the direction of the aircraft.
TSO Certified: TSO-C30c Type I, Type II, and Type III and TSO-C96a Class II approved.

Description	Part No.	Price
12V	11-15567	**$1,250.00**
24V	11-15568	**$1,250.00**

AEROLEDS PULSAR N STROBE LIGHTS



The TSO'd Pulsar N (Navigation) lights are designed to be installed on the wingtips or in the wingtip cut outs of an aircraft. The Pulsar N provides forward facing red/green lights that are TSO-C30c Type I and Type II approved.

Description	Part No.	Price
12V Pair	11-15999	**$695.00**
12V (Left Only)	11-15870	**$347.50**
12V (Right Only)	11-15871	**$347.50**
24V Pair	11-15271	**$695.00**
24V (Left Only)	11-15872	**$575.00**
24V (Right Only)	11-15873	**$575.00**

AEROLEDS PULSAR NS STROBE LIGHTS



The TSO'd Pulsar NS (Navigation and Anti-collision Strobe) lights are designed to be installed on the wingtips or in the wingtip cut outs of an aircraft. The SunTail (Anti-collision Strobe and Position) light for the tail of the aircraft is recommended with the Pulsar NS lights. The Pulsar NS is TSO-C30c Type I and Type II and TSO-C96a Class II approved.

Description	Part No.	Price
12V Pair	11-15272	**$1,150.00**
12V (Left Only)	11-15874	**$575.00**
12V (Right Only)	11-15875	**$575.00**
24V Pair	11-15273	**$1,150.00**
24V (Left Only)	11-15876	**$575.00**
24V (Right Only)	11-15877	**$575.00**

AEROLEDS PULSAR NSP STROBE LIGHTS



The TSO'd Pulsar NS (Navigation and Anti-collision Strobe) lights are designed to be installed on the wingtips or in the wingtip cut outs of an aircraft. The SunTail (Anti-collision Strobe and Position) light for the tail of the aircraft is recommended with the Pulsar NS lights. The Pulsar NS is TSO-C30c Type I and Type II and TSO-C96a Class II approved.

Description	Part No.	Price
12V Pair	11-15274	**$1,195.00**
12V (Left Only)	11-15278	**$895.00**
12V (Right Only)	11-15279	**$895.00**
24V Pair	11-15275	**$1,195.00**
24V (Left Only)	11-15880	**$597.50**
24V (Right Only)	11-15881	**$597.50**

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Prices Subject to Change Without Notice

AEROLEDS SUNSPOT 36 LX LANDING / TAXI LIGHTS



SunSpot LX is designed as a LED drop in replacement for the existing GE4509 PAR 36 aircraft lights. SunSpot LX is available in a landing or taxi light. SunSpot LX landing light projects 65,000 candela using 45 Watts/3 AMPs max of power. SunSpot LX taxi light projects 15,000 candela. Mounts with existing ring clamp. FAA/PMA

Description	Part No.	Price
AEROLEDs Sunspot 36LX Taxi Light	11-09352	**$350.00**
AEROLEDs Sunspot 36LX Landing Light	11-09351	**$350.00**
AEROLEDs Sunspot 36LX Landing Light w/ Protective Lens Coating	11-12620	**$384.00**

AEROLEDS SUNSPOT 36 HX WITH PULSE LANDING / TAXI LIGHT



SunSpot is designed as a LED drop-in replacement for your existing GE4509, PAR36 aircraft lights. It comes with an integrated "wig-wag" or "pulse" feature built into the light that is recommended to be used throughout your flight to increase recognition from other pilots. SunSpot HX landing light projects 65,000 candela using 45 Watts/3.2 AMPS. SunSpot HX taxi light projects 15,000 candela. Includes integrated "wig-wag" or "pulse" feature and mounts with existing ring clamp. PMA'D.

Description	Part No.	Price
SunSpot36HX Landing	11-09353	**$449.00**
SunSpot36HX Landing with Lens Coating	11-12619	**$484.00**
SunSpot36HX Taxi	11-09355	**$449.00**
SunSpot 4596 Landing	11-14572	**$650.00**
SunSpot 4596 Taxi	11-14573	**$650.00**

AEROLEDS SUNSPOT 46 LX LANDING AND TAXI LIGHT



The PMA'd SunSpot 46 LX was designed as a PAR 46 drop in replacement. The SunSpot 46 LX has both landing or taxi optics incorporated into the light. P/N 11-11744.....**$650.00**

AEROLEDS SUNSPOT 46 HX LANDING AND TAXI LIGHT



The PMA'd SunSpot 46 HX was designed as a PAR 46 replacement with a built in "wig-wag" or "pulse" feature that can be activated by connecting aircraft power to the pulse (yellow) wire. The SunSpot 46 HX has both landing and taxi optics incorporated into the light. P/N 11-11411.....**$750.00**

AEROLEDS SUNSPOT 64 LANDING LIGHT FAA-PMA



The SunSpot 64 offers brightness of over 17,000 lumens, drawing 224 watts. This not only lights up the airport on final approach, but also allows the aircraft to be visible from 10 miles away, day and night. P/N 11-09458.....**$1,650.00**

AEROLEDS SUNSPOT HX SYNCHRONIZER

Ancillary part for the SunSpot 36 and 46 HX that allows the lights to pulse at the same time instead of back and forth (wig-wag). This is recommended when the lights are installed in close proximity to one another in a wingtip or cowling. From a distance they will cancel one another out when wig-wagging therefore they need to come on and off at the same time. P/N 11-14028.....**$17.00**

AEROLEDS SUNSPOT 4596 LANDING LIGHT



The PMA Certified SunSpot 4596 landing light is a drop in replacement for the 250 Watt GE4596 bulb and only draws 100 Watts of power.
P/N 11-14572.....**$650.00**

AEROLEDS SUNSPOT 4587 TAXI LIGHT



The PMA Certified SunSpot 4587 taxi light is a drop in replacement for the 250 Watt GE4587 bulb and only draws 100 Watts of power.
P/N 11-14573.....**$650.00**

EPL POSITION LIGHTS & STROBES



The new LED technology allows excellent navigation lights with only approximately 10% of the input power, compared with conventional navigation lights. The casting in a high-optical plastic makes the EPL (Electronic Position Light) absolutely insensitive against water, vibrations and other environmental influence. The efficiency of the output is much higher than with conventional electric light bulbs. The self-warming of the EPL is low and can be determined as safe. To avoid overheating, the heat balance is controlled electronically. As a precaution you must pay attention to ventilation with a cover installed, so that no heat accumulation within the casing can appear. This may be assumed by suitable constructive measures. These lights are manufactured in Germany. 12V.

EPL Tail Light ..... P/N 11-05121 .....**$218.95**

EPL2 WING TIP LIGHT SET



The next generation of the EPL characterized by a interaction between high performance-LED's and special reflectors. The integrated cooling plate leads off the excess heat of the high performance LED's. The EPL is made of a high-optic, scratch resistant plastic module. The entire control element is integrated into the ACL module where the ACL's dimensions determine the required space. The EPL has a brilliant green and red light with modulated beacon impulse for better perception. It has a defined angle of light of 110° in compliance with the regulations of general aviation. The wingtip lights are prewired to allow easy connection to a 2-lead cable of minimum 0.4 mm² cross section. Flanges allow simple fixture. In addition, it can be affixed to the fuselage or rudders by means of a silicon adhesive. An instruction manual and the shrink tubing required for the assembly are included in the EPL package. 12V.

P/N 11-10679.....**$279.95**

ERB-H ELECTRONIC ROTATING BEACONS



This light is exactly the same as the ERB, only has the mounting flange to attach to the Whelen Lens retaining band. Less power consumption, and less long term damage from Vibration consistently present in Rotorcraft environment . Just requires the 2 wire hook up from the aircraft's electrical system. No other power conditioning systems needed that may be part of the Whelen system. The illumination angle complies to the regulations for general aviation. 12V.

Helicopter..... P/N 11-10677.....**$477.00**
Standard ..... P/N 11-06452.....**$477.00**

ACL -III ELECTRONIC ANTI-COLLISION LIGHT



This anti-collision light is designed to be mounted at a suitable position at the tail unit or at the top of the stabilizer. The ACL III is the direct replacement for the ACL-II Built with many of the same features as the Night legal ERG, this Light does not have the rotating pattern of lights, but still extremely visible both day and night. 12V.

P/N 11-10678.....**$375.00**

RECESSED MOUNT LED LIGHT FIXTURES



Recessed mount convenience light. 3 Bright LEDs behind a frosted panel. Recessed mount with hardware. Dimensions: 2.25" x 2.25" x .5" depth. #6 mounting holes with snap on cover. 12 Volt DC or 24 Volt DC, very low power drain (0.1mA). Applications: Mounts flush into foot wells, door panels, and side panels. Ideal as a convenience light, mp light, or chart light.

12V White	P/N 11-09266	**$13.90**
12V Red	P/N 11-09267	**$13.90**
12V Blue	P/N 11-09642	**$12.90**
12V Green	P/N 11-09643	**$12.90**
24V White	P/N 11-09268	**$13.90**
24V Red	P/N 11-09269	**$13.90**
24V Blue	P/N 11-09644	**$12.90**

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AEROLEDS QUASAR CX LED WINGTIPS FOR CESSNA



Cessna QUASAR Cx integrated LED lighting system. Wingtip integrating state-of-the-art LED landing, taxi, and recognition lighting technology for Cessna aircraft. Designed for easy installation of existing Cessna nav/strobes lights or upgrade to latest LED nav/strobe/position light solutions. **Aircraft Eligibility:**172M, F172M, 172N, F172N, 172P, F172P, 172Q, 172S R172K, 172RG, 180J, 180K, 182P, F182P, 182Q, F182Q, 182R, 182S, 182T, R182, FR182, T182, T182T, TR182, A185F, U206F, TU206F, U206G, TU206G, 206H, T206H. No brighter feature rich LED light on the market. Brighter than any currently available FAA approved incandescent, LED, or HID light. Does NOT require an external device to control recognition mode. Recognition mode is built into the light assembly. Optional Installation kit includes shielded wire, connectors, switches, and breaker.

14/28 Volt Right and left (Late Cessna)..... P/N 05-15082.....**$3,095.00**
14/28 Volt Right and left (Early Cessna) ..... P/N 05-15084.....**$3,095.00**



ULTRALIGHT BEACONS

These miniature self-contained units use solid state circuitry for reliability and a lexan lens that is UV protected and shatter resistant for durability. Now available with an internally regulated flashing LED Lamp. .14 amps & 50,000 hr expected life. 12V DC power source required for both units. Wt. less than 7 oz. Size: 3" H x 2-5/8" W. For Experimental Aircraft Only

Beacon, red lens..... P/N 11-03008.....**$72.25**

OPTIMUS LED AUX LIGHTS



Square *Round*

Utilizing an all new proprietary IRIS Reflector Technology, the Long Range series provides the ultimate focus for long range lighting by producing 693 ft. of usable light from a single 3.5" tall, 10-watt LED. Compared to a standard 55 watt low beam headlight reach of 88 ft. and a standard 65 watt high beam reach of 153 ft.

Optimus lights also feature Cyclops Prime Drive technology for integrated thermal management and dimming capabilities.

Pulse Width Modulation The Optimus Prime utilizes integrated Pulse Width Modulation (PWM) dimming circuitry to manage heat levels. PWM works by flashing the LED at a frequency faster than the human eye can detect, reducing the time that the LED is operating while still delivering 100% light output.

Square..... P/N 11-12267.....**$259.00**
Round..... P/N 11-12266.....**$259.00**



BLACK FLUTED CONTROL KNOB

Black Bakelite knob. Fluted grip. ¼" brass bushing with set screw. ¾" in diameter x 7/16" high. Fits potentiometers for Superior Panel Technology dimmers. P/N 11-07344.....**$4.90**

SINGLE / 2 CHANNEL PWM DIMMERS

The two dimmers include a single channel model. Both use pulse wave modulation, or PWM electronic design for precise control of LED lighting such as LED instrument panel lighting, baggage, utility, map or post lights. The self-contained products are designed for easy installation and feature integrated on/off switches on each rheostat.

Rated at 18 Watts per dimmer channel, the dimmers are capable of operating a large number of interior lighting products and are engineered to provide additional over-current, over-voltage and reverse polarity protection.



Single Channel Pilot's Light Dimmer

Single Channel PWM (pulse wave modulation) dimmers are ideal for operating LED Light Strips and other interior incandescent or LED lighting, such as map lights, convenience, footwell or baggage compartment lighting. Features include reverse-polarity protection and over-voltage protection as well as an integrated on/off switch (in the fully counterclockwise position).

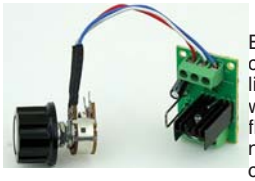
12 Volt DC (14VDC systems) version has 7 Amps of capacity (97W)
24 Volt DC (28VDC systems) version has 4 Amps of capacity (112W)
Just 1.25" x 1.6". Shaft diameter is 17/64" (6.75mm)
Screw-down terminals for easy connection of input and output wires
Powerful enough to operate a wide range of lighting products
High-quality push-on knob. Shaft length accommodates panel widths to 5mm.



2-Channel Pilot's Light Dimmer

2 Channel PWM (pulse wave modulation) dimmers are ideal for controlling more than one bank of LED or incandescent lighting, such as 2-color LED light strips or any combination of lighting (panel lighting, overhead map lights, foot well lighting, etc.). Each rheostat controls a separate lighting channel and contains its own On/Off switch (in the fully counterclockwise position). 1.5 Amp per channel version (12-14VDC systems) controls up to 18W per channel. 7 Amp per channel version (12-14VDC systems) control up to 97W per channel and adds over-current protection and dual independent heat sinks. Ideal for LED or incandescent lighting. Dual rheostat shafts permit independent control of each channel. Screw-down terminals for easy connection of input and output wires. Powerful enough to operate a wide range of lighting products. High-quality push-on knob. Shaft length accommodates panel widths to 5mm

Description	Part No.	Price
Single Channel PWM Dimmer 12V	11-06674	**$35.85**
Single Channel PWM Dimmer 24V	11-07286	**$35.85**
Dual Channel Dimmer 12V	11-10783	**$54.95**
Dual Channel Dimmer 24V	11-14109	**$49.95**



PWM DIMMER

Extremely powerful PWM Dimmer - 7 Amps capacity. Perfect for controlling interior lighting inside your Aircraft. Easy-to-install with smooth control rheostat. High quality fluted knob included. (Note: Rheostat does not have an integrated on/off switch - in full counterclockwise it is OFF). Designed to control both LED and Incandescent lighting - 7 Amps per channel. 12 OR 24 Volt Pulse Wave Modulation (PWM) Electronic Dimmer for DC Lighting Applications.

12V..... P/N 11-14107.....**$34.50**
24V..... P/N 11-14108.....**$34.50**

HIGH POWER 30 AMP (30A) PWM DIMMER



Extremely powerful PWM Dimmer - 30 Amps capacity. Perfect for controlling large banks of LED lighting.. Easy-to-install, on/off switch on rheostat. Push-on knob included. Designed to control both LED and Incandescent lighting - 30 Amps maximum. 12V or 24V Pulse Wave Modulation (PWM) Electronic Dimmer for DC Lighting Applications. Over-current protection, reverse polarity protection and over-voltage protection. On board ATM fuse for additional protection.

12V ..... P/N 11-16081.....**$97.75**
24V ..... P/N 11-16082.....**$97.75**

LIGHTMAN HIGH INTENSITY STROBE



Portable battery operated strobe which is an ideal addition to a pilot survival kit. Flash can be seen up to 3 miles and operates for 3-7 hours on AA batteries. It is impact & weather resistant; size: 3.5" on each triangular side; wt: 3.5oz. w/batteries. Includes storage pouch, belt/visor clip, magnet, & other attachment accessories.

Furnished with clear dome. ..... P/N 11-08200.....**$22.75**

Dome only (Price/ea.)

Amber.... P/N 11-08205..... **$3.50**
Green..... P/N 11-08215..... **$3.50**
Clear..... P/N 11-08225..... **$3.50**
Red..P/N 11-08210 ..... **$3.50**
Blue .P/N 11-08220 ..... **$3.50**

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Prices Subject to Change Without Notice

754 SERIES LED COCKPIT LIGHTS



Parts Sold Separately

These versatile cockpit lights can be used to illuminate the instrument panel. They can be repositioned to illuminate your charts with their 110 degrees of angle adjustment while being able to rotate a full 360 degrees. Dimensions: 3/4" diameter, 1-5/8" tall fully-extended, 7/8" tall at 90 degrees. The mounting stud is 1/4" in diameter and can be mounted onto a surface up to .200" thick. Switchable models facilitate wiring an SPDT switch (not included) to the light, allowing either red or white operation. We also offer a flush-mount flange to mount the light if the back side of the light is unreachable. Flush Mount - (Pictured above) This part is for mounting and LED light Model 754 from the front side. The adapter base is 1-1/2" in diameter, stands 1-2" tall, and has a 1" bolt hole circle.

Model	Description	Body	Part No.	Price
754R-14V	4 Red 14V L.E.D.s	Alum.	11-04393	**$49.85**
754R-28V	4 Red 28V L.E.D.s	Alum.	11-04394	**$49.85**
754W-14V	4 White 14V L.E.D.s	Alum.	11-07481	**$52.75**
754W-28V	4 White 28V L.E.D.s	Alum.	11-07482	**$49.85**
754RW-14V	2 Red 2 White 14V L.E.D.s	Alum.	11-04395	**$49.85**
754RW-28V	2 Red 2 White 28V L.E.D.s	Alum.	11-04396	**$49.85**
754R-14V	4 Red 14V L.E.D.s	Black	11-07483	**$49.50**
754R-28V	4 Red 28V L.E.D.s	Black	11-07484	**$49.85**
754W-14V	4 White 14V L.E.D.s	Black	11-07485	**$49.85**
754W-28V	4 White 28V L.E.D.s	Black	11-07486	**$49.85**
754RW-14V	2 Red 2 White 14V L.E.D.s	Black	11-07487	**$49.85**
754RW-28V	2 Red 2 White 28V L.E.D.s	Black	11-07488	**$49.85**

Accessories	Body Color	Part No.	Price
Flush Mount	ALUMINUM	11-04397	**$14.50**
Flush Mount	Black	11-07502	**$14.75**

LED MAPLIGHTS



The body of the maplight is constructed of aircraft grade 6061 T6 aluminum and black anodize treated for protection from corrosion. The LED bulbs and internal components are high quality components, and are engineered to withstand 150% of their rated voltage without damage. The wire is tefzel coated mil-spec wire used in certified aircraft and the component potting material is a two part epoxy making this maplight highly vibration and shock resistant. The average bulb life of the LED used in this product in excess of 20,000 hours of use and the maplight draws only 20 milliamps of power with virtually no heat produced.

The red LED used in this maplight gives the most light available in environments where night vision must be retained. This "LED Maplight" is built to be durable, simple to operate, lightweight and compatible with dimming systems. Each "LED maplight" is tested twice during production for maximum quality and customer satisfaction. The "LED maplight" is intended for use in Experimental, Amateur-Built aircraft only.

MAPLIGHT I - 4 LEDS			
Color	**Voltage**	**Part No.**	**Price**
Red	12	11-04387	**$67.31**
Green	12	11-04388	**$67.31**
White	12	11-04389	**$67.31**
Red	24	11-04390	**$69.50**
Green	24	11-04391	**$67.31**
White	24	11-04392	**$69.50**
MAPLIGHT II - 6 LEDS			
Color	**Voltage**	**Part No.**	**Price**
Red	12	13-06620	**$77.85**
White	12	13-06621	**$77.85**
Blue	12	13-06622	**$77.85**
Green	12	13-06623	**$77.85**
Red	24	13-06624	**$77.85**
White	24	13-06625	**$76.12**
Blue	24	13-06626	**$77.85**
Green	24	13-06627	**$79.95**
MAPLIGHT II - 6 LEDS Dual Color			
White/Red	12	13-06628	**$86.95**
White/Blue	12	13-06629	**$86.95**
White/Green	12	13-06630	**$99.75**
White/Red	24	13-06631	**$84.59**
White/Blue	24	13-06632	**$86.95**
White/Green	24	13-06633	**$84.59**

Accessories

Surface Mount Adapter SMA/MMII .....P/N 13-06651 .....**$17.95**

1512 SERIES LED EYEBALL COCKPIT LIGHTS



These lights work great in overhead consoles and tight spaces. 30 degree adjustable angle, 360 degree adjustable rotation. LED technology draws less current (40 mA max.) and last much longer, (20,000+ hours.) and are fully dimmable.

The light is availabe in three light color version, two housing colors, and two voltages. The light colors are four red LED's, four white LED's, and two red/two white LEDS that can be lit separately with a SPDT switch (not included.) The housing colors are black or clear anodize. There are two voltages: 14 and 28. The light has a 1.45" flange and mounts in a 1.25" hole. The light requires 1" behind the mounting surface and is only 5/8" in front. It will accept up to 0.2" thick mounting surface.

Model	Description	Body	Part No.	Price
1512R-14V	4 Red 14V L.E.D.s	Alum.	11-07489	**$112.95**
1512R-28V	4 Red 28V L.E.D.s	Alum.	11-07490	**$110.95**
1512W-14V	4 White 14V L.E.D.s	Alum.	11-07491	**$116.95**
1512W-28V	4 White 28V L.E.D.s	Alum.	11-07492	**$108.95**
1512RW-14V	2 Red 2 White 14V L.E.D.s	Alum.	11-07493	**$116.95**
1512RW-28V	2 Red 2 White 28V L.E.D.s	Alum.	11-07494	**$116.95**
1512R-14V	4 Red 14V L.E.D.s	Black	11-07495	**$108.95**
1512R-28V	4 Red 28V L.E.D.s	Black	11-07496	**$110.95**
1512W-14V	4 White 14V L.E.D.s	Black	11-07497	**$116.95**
1512W-28V	4 White 28V L.E.D.s	Black	11-07498	**$116.95**
1512RW-14V	2 Red 2 White 14V L.E.D.s	Black	11-07499	**$108.95**
1512RW-28V	2 Red 2 White 28V L.E.D.s	Black	11-07501	**$116.95**

PRECISE FLIGHT HID LANDING & TAXI LIGHTS



HID Lighting provides the brightest illumination available. Increase Safety Increase Visibility 6X Brighter than Standard Lights 5000 Hour Bulb Life Reduce Heat & Power Consumption For Experimental Aircraft Only Only 35 Watts, Equivalent to 200

Type	Shape	Voltage	Part No.	Price
Taxi Lights	Round	12V	11-05582	**$568.00**
	Round	24V	11-05583	**$568.00**
	Rectangle	24V	11-05586	**$568.00**

FIXED LED COCKPIT LIGHTS



Cockpit and or baggage compartment light that mounts in a 1.250 hole. This light is fixed (does not swivel) and is great for lighting a specific area. It has 4 L.E.D.s that are fully dimmable and only draws 30ma current. It is available in 2 light colors and 2 housing colors.

Voltage	Light Color	Housing Color	Part No.	Price
14	White	Silver	05-08303	**$67.50**
14	Red	Silver	05-08298	**$65.50**
14	White/Red	Silver	05-08301	**$67.50**
14	White	Black	05-08304	**$67.50**
14	Red	Black	05-08299	**$67.75**
14	White/Red	Black	05-10634	**$67.50**
28	White	Silver	05-08352	**$67.50**
28	Red	Silver	05-08343	**$65.50**
28	White/Red	Silver	05-08347	**$67.50**
28	White	Black	05-08353	**$67.50**
28	Red	Black	05-08346	**$65.50**
28	White/Red	Black	05-08302	**$67.50**

LED CABIN LIGHTING



This light can be used for a wide variety of applications. It has a 110° angle adjustment while being able to rotate 360° and are fully dimmable. The light end is 1 1/2" in diameter, 2 3/4" tall fully extended and 1 1/2" high at 90°. The mounting stud is 3/8" and can be mounted to a surface up to 1/2 thick. This light has 12 LEDs that draw amps max.

Voltage	Light Color	Housing Color	Part No.	Price
14	Red	Silver	05-08306	**$107.00**
14	White	Silver	05-08314	**$109.00**
14	Red	Black	05-08307	**$107.00**
14	White	Black	05-08316	**$109.00**
28	Red	Silver	05-08309	**$107.00**
28	White	Silver	05-08318	**$109.00**
28	Red	Black	05-08312	**$109.00**
28	White	Black	05-08321	**$109.00**



OPLITE FAA-PMA SINGLE COLOR 4 LED MAPLIGHTS

Easily installed, dimmable, unobtrusive and efficient, the LED Maplight 4 series consists of four LEDs of the same color that illuminate simultaneously. The LED Maplight 4 series is compatible with all dimming systems. Each LED Maplight 4 is manufactured and tested in accordance with FAA-PMA-approved protocols for quality assurance and customer satisfaction. Precision CNC Machined • Mil-Spec Anodized. • 20,000 Hours LED Life.

Color	Voltage	Part No.	Price
Red	12V	11-13846	**$169.95**
Red	24V	11-13849	**$169.95**
Green	12V	11-13847	**$169.95**
Green	24V	11-13850	**$169.95**
White	12V	11-13848	**$169.95**
White	24V	11-13851	**$169.95**



OPLITE FAA-PMA SINGLE COLOR 6 LED MAPLIGHTS

The Maplight 6 series is available either with all six LEDs of your color choice operating simultaneously, or three white LEDs and three LEDs of your color choice operating independently of the other color. The Maplight 6 series is compatible with all dimming systems. Each LED Maplight 6 is manufactured and tested in accordance with FAA-PMA-approved protocols for quality assurance and customer satisfaction.

Color	Voltage	Part No.	Price
Red	12V	11-13852	**$175.00**
Red	24V	11-13856	**$175.00**
White	12V	11-13853	**$175.00**
White	24V	11-13857	**$175.00**
Blue	12V	11-13854	**$175.00**
Blue	24V	11-13856	**$175.00**
Green	12V	11-13855	**$175.00**
Green	24V	11-13859	**$175.00**



OPLITE FAA-PMA DUAL COLOR 6 LED MAPLIGHTS

The Maplight 6 series is available either with all six LEDs of your color choice operating simultaneously, or three white LEDs and three LEDs of your color choice operating independently of the other color. The Maplight 6 series is compatible with all dimming systems. Each LED Maplight 6 is manufactured and tested in accordance with FAA-PMA-approved protocols for quality assurance and customer satisfaction.

Color	Voltage	Part No.	Price
White/Red	12V	11-13860	**$183.50**
White/Red	24V	11-13863	**$183.50**
White/Blue	12V	11-13861	**$183.50**
White/Blue	24V	11-13864	**$183.50**
White/Green	12V	11-13862	**$183.50**
White/Green	24V	11-13865	**$183.50**

Surface Mount Adapter for MapLights..... P/N 13-06651..... **$17.95**

TASKLIGHT 600 COLOR LED COCKPIT LIGHTS



The TaskLight 600 series is available either with all 6 LEDs of your color choice operating simultaneously, or three White LEDs and three LEDs of your color choice operating independently of the other color. The TaskLight 600 series has an intensity knob and on/off switch built in and operates with input voltages ranging from 10v to 30 volts. Made in the USA, each LED Tasklight 600 is manufactured and tested to AS9100C quality standard and Traceability for quality assurance and customer satisfaction.

Single Color	Part No.	Price
Gooseneck Blue	11-15387	**$188.50**
Gooseneck Green	11-15388	**$188.50**
Gooseneck Red	11-15389	**$188.50**
Gooseneck White	11-15390	**$188.50**
Thru Panel Blue	11-15394	**$188.50**
Thru Panel Green	11-15395	**$188.50**
Thru Panel Red	11-15396	**$188.50**
Thru Panel White	11-15397	**$188.50**
Dual Color	**Part No.**	**Price**
Gooseneck Blue/White	11-15391	**$188.50**
Gooseneck Green/White	11-15392	**$188.50**
Gooseneck Red/White	11-15393	**$188.50**
Thru Panel Blue/White	11-15398	**$188.50**
Thru Panel Green/White	11-15399	**$188.50**
Thru Panel Red/White	11-15400	**$188.50**

Gooseneck Surface Mount Adapter .....P/N 11-15403 ..... **$16.60**



PILOT LIGHT PRO

Pilot Light Pro serves two main functions. It provides hands free panel lighting, as well as map lighting. using the latest in LED technologies it delivers 19 hours of continuous use. Pilot Light Pro is delivered with two AA Procell 1500 batteries installed, and may also optionally be installed using ships power. The internal circuit board will cut off the internal battery source once ships power is turned on. Loss of ships power will return the unit back to it's battery source, leaving you with light to work by in the advent of any problem i.e. loss of alternator.

Quick Installation: Installation is quick and easy if using battery only option, simply peel and stick using 3M power lock. The panel light is fully adjustable see our web site for installation instructions. Wiring to ship's power will require a Licensed A&P and a 337 Form, field approval may be required by local Fisdo.

Blue ..... P/N 11-07819 ..... **$124.95**
Red ..... P/N 11-07836 ..... **$124.95**
Green..... P/N 11-07837 ..... **$124.95**



MAP LIGHT PRO

For those who lack mounting space for Pilot Light Pro, or simple just want Map Lights. Map Light Pro uses the same AA Procell 1500 batteries and yields 24 hours of continuous use.

P/N 11-07820..... **$74.95**



PURE DIGITAL SOLAR POWERED SMART LED LIGHT

High Motion Detection Performance: Built in next generation ePIR technology with outstanding detection performance.

Visual Illumination and Powerful Warning Enhancement: Super bright LED matrix enhances deterrent effect towards intruders and capture abilityof video/CCTV.

Emergency Function: Automatically illuminate in case of power outage.

Hybrid Power Source: Solar power, car lighter and standard AC power supply individuallyor combined charge green Li-polymer battery.

Intelligent Power Management (IPM): Exclusive IPM technology monitors battery capacity and power source status, controlsbattery charge and discharge process, and as well as generate the most efficient illuminating process with dusk to dawn capability.

Practicability: Highly practical for "Security & Safety Combining Programs" with multi-function and lighting back-up features.

In the box: 1. LED Matrix Light with ePIR 2. Solar Panel (10VDC / 3W) 3. Li-Poly Battery (7.4VDC / 1.0 AH) 4. Wall Mounting Plate with Hardware 5. Table Stand (Bonus) 6. Digital Power Supply 12VDC /1.0A (Bonus)

7 LED Light..... P/N 11-12882 ..... **$108.35**
36 LED Light..... P/N 11-12880 ..... **$63.65**
60 LED Light..... P/N 11-12881 ..... **$81.85**



SMART SOLAR LIGHT

SMART Solar Light, Built with CREE LED, 180-Degree Coverage. It offers true Dusk-to-Dawn lighting with innovative SMART lighting profiles. It has built-in auto compensation for all weather conditions and variations of geographic locations. This light is embedded with an exclusive pure digital hybrid lighting engine. Max-brightness or dimming of Moonlight lighting is controlled with user adjustable dials. In SMART AUTO profile it acts as a traditional motion security sensing light. It also can replace the traditional IR illuminator as a white light illuminator for security video surveillance systems without AC power limitation and in darkness conditions it provides enhanced full color image vision. This is a highly efficient SMART solar light designed for residential, commercial, industrial, & recreational lighting. P/N 11-13884 ..... **$103.95**



PSA NAVIGATIONAL AND TAIL LIGHTS COMBINATION

Green/Clear or Red/Clear, 14 Volt, Navigational and Tail Light combination units. They have a mounting footprint of 1.88" to 1.75" cc. They each come in a complete assembly and are sold as a set. They are easy to install and manufactured and tested to meet FAR section 23.183-23.191 and all applicable requirements of D0160G for EMC, EMI, vibration & thermals under normal operating conditions for position lights.

Meets or exceeds AS8037 REV B, AC20-74 and FAR specifications for all color coordinates and minimum intensities. Made in the USA. No RFI. Non-PMA. Weigh in at 1.6 oz. and draw .25 amps each.

Green/Clear ..... P/N 11-14398..... **$110.00**
Red/Clear..... P/N 11-14399..... **$110.00**
Red/Green ..... P/N 11-16300..... **$198.00**

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WWW.AIRCRAFTSPRUCE.COM

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LED LIGHTING - INSTRUMENT LIGHTING

LED CABIN LIGHTS



12 Very Bright LEDs in an ABS Housing. 12or 24 Volt; Very low current draw (under 80 mA) Red , White, Blue, and Green LED colors available. Compact Size - Just 3"x2"x1" with side mounting flanges for easy installation. Broad, "flood" lighting distribution. Extremely resistant to vibration, shock and moisture. Ideal for baggage area and utility light illumination

Light Color	12V	12V Price	24V	24V Price
Red	11-05521	**$44.90**	11-08404	**$44.90**
White	11-05522	**$48.50**	11-08406	**$44.50**
Blue	11-05524	**$44.90**	11-08405	**$44.90**
Green	11-08408	**$46.85**	11-08407	**$48.50**

CABIN LIGHTS



Designed for use in experimental aircraft, these LED lights are excellent for cabin lighting, work station lighting, interior lighting, or cargo space illumination. They feature small size (2" x 3"), low power draw (less than 95ma, and weigh less than 3 ounces. the basic module consists of 3 rows of LED's potted with epoxy in a strong plastic housing. This makes it extremely resistant to vibration and moisture. The modules are very efficient, and are available in 12 or 24V and in super bright white or red colors. Furnished with a diffused light pattern and a 3 ft. cable length. No on-off switch.

12V Red LED..... P/N 11-02880 ..... **$116.75**

LED MAP LIGHT, DOME, AND BAGGAGE AREA LIGHTS



INTERIOR CONVENIENCE AND MAP LED LIGHTING - Three very bright LEDs in an ABS housing. Compact size, just 2" long. #4 holes for horizontal mountnig. 12 volts, low current draw (under 40 mA). Ideal for map lighting or utility installations

Red..... P/N 11-05527 ..... **$7.95**
Green ..... P/N 11-09650 ..... **$7.95**

DOME AND BAGGAGE AREA LIGHTS





Four (4) very bright LEDs. Compact size, just 1.5" long. #4 mounting holes 12 or 24 volts. "Flood" type wide area lighting. Ideal for map lighting, dome or utility installations. Black or Chrome Base.. Chrome Base only comes in White and Red 12V. **For exprimental aircraft only**

Case	Light	Volt	Part No.	Price	Volts	Part No.	Price
Black	White	12V	11-09651	**$7.95**	24V	11-09654	**$7.95**
Black	Red	12V	---	**---**	24V	11-09655	**$7.95**
Black	Green	12V	11-09652	**$7.95**	24V	---	**---**
Black	Blue	12V	11-09653	**---**	24V	11-09656	**$7.95**
Chrome	Red	12V	11-05526	**$7.90**	24V	---	**---**

FLEXIBLE LED LIGHT STRIP GLARE-SHIELD LIGHTING AND DIMMER BY SPT

Superior Panel Technology has developed a brighter, wide-angle LED Light strip for aircraft panel illumination. The 39" LED light strip includes 60 wide-angle white LEDs. The LED light strips are adaptable for both 14V and 28V aircraft can be cut as needed. When on full power, it produces a nice flood light that is amazingly bright and produces enough light to read charts. The LEDs are fully dimmable using the SPT Pulse-Width-Modulation (PWM) dimmer that was specifically designed for the low current draw LEDs.



Description	Part No.	Price
SPT led light strip only 14v / 28v	11-10597	**$48.95**
SPT led light strip dimmer w/o switch	11-10598	**$115.95**
SPT led light strip and dimmer with switch	11-10599	**$142.95**

LED INTERIOR DOME LIGHTS



Interior Dome Light - 12VDC. 18 or 24 LED Dome light.

18 LED..... P/N 13-15806 .....**$21.95**
24 LED..... P/N 13-15803 .....**$24.95**

LED RAIL LAMPS



2-color Red/White LED lights.

12 inches..... P/N 13-15804 .....**$39.95**
18 inches..... P/N 13-15805 .....**$44.95**

LED WATERPROOF STRIP LIGHTS



LED Waterproof Strip Lights. Cool White LED 12VDC.

4 inches..... P/N 13-15807 .....**$11.95**
6 inches..... P/N 13-15808 .....**$16.95**
8 inches..... P/N 13-15809 .....**$18.95**

INSTRUMENT PANEL LIGHT STRIP



for Experimental Aircraft

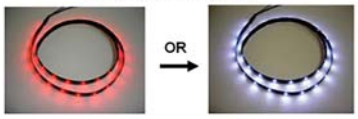
Flexible LED Instrument Lights

Dimmable LEDs encased in a flexible resin strip. Ideal for mounting under glare shields for instrument panel lighting. Available in White, Red and Blue LEDs. Can be trimmed every 2-1/2 inches (every 3 LEDs). Easy-to-install, waterproof, shockproof and requires no inverter to operate. Draws only 83 mA, 12 volts DC, and has a service life of over 10,000 hours. 35" length, 3/8" width and 1mm high. Installs in minutes with double-sided tape

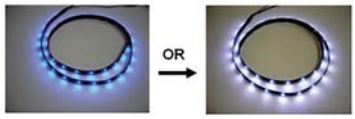
Description	P/N	Price
12V LED Light Strip - Red	11-05224	**$37.90**
12V LED Light Strip - Blue	11-05225	**$37.90**
12V LED Light Strip - White	11-05226	**$37.90**
24V LED Light Strip - Red	11-06828	**$37.90**
24V LED Light Strip - Blue	11-06829	**$37.90**
24V LED Light Strip - White	11-08409	**$37.90**

FLEXIBLE LED INSTRUMENT LIGHTS - DUAL COLOR

Dual Color – Red/White



Dual Color – Blue/White



- Dimmable LEDs encased in a flexible resin strip.
- Identical to standard Flexible LED strips but with twice the LEDs.
- Permits independent control of the RED and White or Blue and White colors.
- Ideal for using White lights for loading/unloading or in cloudy conditions and MIX or use of colored lighting during dusk or night conditions.
- 35" length, 3/8" width and 1mm high. Installs in minutes with double-sided tape
- Power consumption no greater than 160mA.

Description	P/N	Price
12V Dual Flexible LED W001-Dual Red	11-05511	**$54.50**
12V Dual Flexible LED W001-Dual Blue	11-05512	**$55.75**
24V Dual Flexible LED W001-Dual Red	11-08410	**$55.75**
24V Dual Flexible LED W001-Dual Blue	11-08411	**$55.75**

FLEXIBLE LED INSTRUMENT LIGHTS - WITH CIGARETTE LIGHTER AND DIMMER

For production aircraft OR experimental aircraft



- The same quality Dimmable LEDs as our standard Flexible LED instrument Lights but with a Cigarette Lighter plug and in-line dimmer control
- Ideal for non-permanent installation in aircraft and other vehicles
- Power is supplied by the Cigarette Lighter plug (12 Volt systems only)
- In-line dimmer controls lighting level
- Available in Red, White or Blue LEDs.
- Ideal for mounting under glare shields for instrument panel lighting
- Can be trimmed every 2-1/2 inches (every 3 LEDs)
- Easy-to-install, waterproof, shockproof and require no inverter to operate.
- Draws only 83 mA, 12 volts DC, and has a service life of over 10,000 hours
- LED is 35" length, 3/8" width and 1mm high.

Description	P/N	Price
Flexible LED With Cigarette Lighter W003- CLA Red	11-05513	**$48.50**

CRAZEDPILOT LED COCKPIT LIGHTING SYSTEM KITS



Weighs ONLY 2.5 ounces installed! The digital dimmer control uses pulse technology to prevent heat generation and current draw commonly found in inferior designs. This light system does not generate bulb heat – you will never get burned or melt anything! This interior lighting system is very easy to install – trim the light strips to the desired length at 2 inch intervals, wire as shown in the instructions, and light will not only glow softly on your instrument panel but can be turned up bright enough to illuminate clear to the flap controls or the floorboards to find that chart you dropped!

Red..... P/N 11-11201..... **$47.65**
Whie ..... P/N 11-11202..... **$47.65**
Blue ..... P/N 11-12907..... **$47.65**

EL

MINI EYEBALL LED LIGHTS



Mini Eyeball LED spotlight. Powerful & Dimmable 1 Watt LED. Adjustable eyeball directs light beam at 30 degree angle. Designed for overhead consoles or side panels Mounts using spring loaded retainers Dimensions: 1.75" diameter - mounts in 1 1/8" diameter hole - depth is just 3/4". Satin black aluminum housing. 12 Volt DC, very low power drain (200mA). 24 Volt DC, very low power drain (240mA) Applications: Overhead panel, sidewall panels or anywhere a compact powerful LED light is needed.

Light	Volt	Part No.	Price	Volts	Part No.	Price
White	12V	11-09271	**$43.85**	24V	11-09274	**$41.90**
Red	12V	11-09272	**$42.65**	24V	11-09276	**$41.90**
Green	12V	11-09645	**$41.90**	24V	11-09646	**$45.85**
Blue	12V	11-09273	**$41.90**	24V	11-09277	**$41.90**

MINI LED SPOT LIGHTS



• For experimental aircraft • High intensity, dimmable multi-LED lamps• • Easy to install• Flexible pivot mounts • 1.75" length, 1" wide (at lens), 1.75" height (with base)• 160-180 Lumens • 0.15 amps @ 13.8 volts • 12 volts, less than 50mA • Metal housing available in Black or Aluminum • Available in multiple LED color.

Case	Light	Volt	Part No.	Price	Volts	Part No.	Price
Black	Red				24V	11-08771	**$39.50**
Black	White	12V	11-05520	**$45.75**	24V	11-08772	**$45.75**
Black	Blue	12V	11-09285	**$45.75**	24V	11-09289	**$45.75**
Silver	White	12V	11-05518	**$45.75**	24V	11-05517	**$45.75**
Silver	Red				24V	11-10577	**$45.75**

GOOSENECK LED CHART LIGHTS



Features: Bright Gooseneck LED fixtures with 1 Watt LED, Powerful, dimmable and No RF Interference Heavy-duty construction, Beam dispersion – 60 degrees, Includes mounting hardware, Dimensions: Length: 11" (base to top); Flexible shaft length is 8.75". Head is 2"; Width: 0.75 inches (at head), 12 Volt DC, very low power drain (0.15 mA). On/Off switch optional.

12V White LED with switch..... P/N 11-09281..... **$37.50**
12V White LED with out switch..... P/N 11-09283..... **$33.95**
12V Red LED with out switch..... P/N 11-09284..... **$42.75**

SURFACE MOUNT LED LIGHTS



Surface mount convenience light. 2 Bright LEDs behind a frosted panel. Surface mount with hardware. Dimensions: 2.5" x 1.25" x 5/8". #6 mounting holes. 12 Volt DC or 24 Volt DC, very low power drain (0.1mA). Applications: foot wells, door panels, side panels, map light, chart lights or anywhere a dimmable, bright LED light is needed.

Light	Volt	Part No.	Price	Volts	Part No.	Price
White	12V	11-09255	**$11.90**	24V	11-09258	**$11.90**
Red	12V	11-09256	**$11.90**	24V	11-09259	**$11.90**
Green	12V	11-09640	**$11.90**	24V	11-09641	**$11.90**
Blue	12V	11-09257	**$11.90**	24V	11-09261	**$11.90**

FLUSHMOUNT WATERPROOF LED UTILITY LIGHT



Applications: Side panels, overhead consoles, door panels, exterior application (waterproof)
Features: Bright LED fixtures with ¼ Watt LEDs
Powerful & Dimmable, Installs in a 3/4" hole with self-locking nut, Designed for overhead consoles or side panels, Mounts in panels up to 3/4" thickness Dimensions: 1.25" length x 1 ¼" top flange; mounts in 3/4" diameter hole; depth is just 1 1/8"; installed flush height is 1/8" Fresnel lens and clear plastic housing Waterproof and vibration resistant 12 Volt DC, very low power drain (0.1 mA)

12V White ..... P/N 11-09278..... **$8.95**
12V Red..... P/N 11-09279..... **$9.50**
12V Blue ..... P/N 11-09280..... **$9.50**

LED PANEL MOUNT INDICATORS



Specifications: Mounting Hole Dia: 6.35mm. Forward Current If: 20mA. Forward Voltage: 12V or 24V, your choice. Luminous Intensity:1 0mcd. Viewing Angle: 60°. Bulb Size: 5.08mm. Lens Width: 7. RoHS Compliant: Yes.

Color	Volts	Part No.	Price	Volts	Part No.	Price
Red	12V	LEDRED12	**$10.75**	24V	11-07839	**$7.75**
Green	12V	11-07841	**$10.50**	24V	11-07840	**$6.95**

SOLAR BLUE LED AIRPORT TAXIWAY MARKER



Emits blue LED light from both sides. Poly Carbonate, Poly Crystalline Silicon fixture. Maintenance Free. LED Visibility over 1/2 mile. Nickel Metal Hydride Batteries. Secures to asphalt or concrete w/2 part epoxy. Approximately: 4¾" x 4¾" x ¾". Designed to withstand 20 tons PSI. Built for extreme weather conditions. Three (3) to five (5) year life span, Maintenance FREE Batteries charge in approximately four (4) hours using the suns energy. Operate all night (8 or more hours on a full charge). LED brightness equates to 35 lumens.

Blue BSL05DTW..... P/N 11-09385..... **$68.75**

SOLAR GREEN LED CENTERLINE TAXIWAY MARKER



Emits green LED light from both sides. Poly Carbonate, Poly Crystalline Silicon. Maintenance Free. LED visibility over 1/2 mile Nickel Metal Hydride Batteries Secured to asphalt or concrete w/epoxy. Approximately: 4¾" x 4¾" x ¾". Designed to withstand 20 tons PSI. Built for extreme weather conditions. Three (3) to five (5) year life span, Maintenance FREE Batteries charge in approximately four (4) hours using the suns energy. Operate all night (8 or more hours on a full charge). LED brightness equates to 35 lumens.

Green BSL-05DCL..... P/N 11-09394..... **$55.95**

SOLAR GREEN LED THRESHOLD MARKER



Emits Green/Red LED light. Poly Carbonate, Poly Crystalline Silicon. Maintenance Free LED visibility over 1/2 mile Nickel Metal Hydride Batteries Secures to asphalt or concrete w/epoxy. Approximately: 4¾" x 4¾" x ¾". Designed to withstand 20 tons PSI. Built for extreme weather conditions. Three (3) to five (5) year life span, Maintenance FREE Batteries charge in approximately four (4) hours using the suns energy. Operate all night (8 or more hours on a full charge). LED brightness equates to 35 lumens.

Green BSL-05DTH..... P/N 11-09387..... **$55.95**

SOLAR WHITE LED AIRPORT EDGE MARKER



Emits White LED light from both sides. Poly Carbonate, Poly Crystalline Silicon. Maintenance Free. LED visibility over 1/2 mil. Nickel Metal Hydride Batteries Secured with 2 part epoxy Approximately: 4¾" x 4¾" x ¾". Designed to withstand 20 tons PSI. Built for extreme weather conditions. Three (3) to five (5) year life span, Maintenance FREE Batteries charge in approximately four (4) hours using the suns energy. Operate all night (8 or more hours on a full charge). LED brightness equates to 35 lumens.

White BSL-05DEL..... P/N 11-09386..... **$55.95**

SOLAR RED LED AIRPORT OBSTRUCTION MARKER



Emits Red LED light from one single side. Poly Carbonate, Poly Crystalline Silicon. Maintenance Free Nickel Metal Hydride Batteries. Secures with 2 part epoxy. Approximately: 4" x 4" X ¾". Designed to withstand 20 tons PSI. Built for extreme weather conditions. Three (3) to five (5) year life span, Maintenance FREE Batteries charge in approximately four (4) hours using the suns energy. Operate all night (8 or more hours on a full charge). LED brightness equates to 35 lumens.Red BSL03AOM... P/N 11-09389..... **$56.75**

SOLAR LED BEACON MARKER RED



Emits light from all sides. Poly Crystalline Silicon, ABS Plastic. Super Bright Red LED light. Mounted to post or pipe. Approximately: 9" circumference x 6" height. Designed to withstand 20 tons PSI. Built for extreme weather conditions. Three (3) to five (5) year life span, Maintenance FREE Batteries charge in approximately four (4) hours using the suns energy. Operate all night (8 or more hours on a full charge). LED brightness equates to 35 lumens.

Red Beacon VRH-4704 .... P/N 11-09384..... **$61.95**

RUNWAY MARKER ADHESIVE PADS



The Adhesive Epoxy Pads are a non toxic, zero V.O.C., performance thermoplastic adhesive designed to adhere raised pavement markers to the concrete or asphalt surface. When heated with a propane heat torch, a Pad liquefies and fuses with the surface and the marker providing a bond that will last throughout the marker's lifetime. Size: 5" x 5".

P/N 13-10451..... **$5.00**

EL

Prices Subject to Change Without Notice

SOLID STATE LIGHT DIMMING KIT



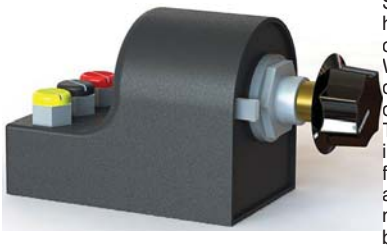
Economical solution for the dimming of aircraft interior lighting. This heavy-duty solid state dimming kit by Superior Panel Technology includes a potentiometer with built-in off switch and 115W power transistor mounted to a heat sink. The supplied colored Mil Spec wire and very easy to follow wiring diagram allows the aircraft builder to customize the wiring harness to fit individual needs. When compared to rheostats, this unit provides more even dimming when a combination of LEDs, incandescent bulbs and electroluminescent lamps (such as SPT's Glow Strips) are used. Appropriate for both 14V and 28V systems. Knob sold separately .....P/N 11-00846.....**$74.75**
Control Knob .....P/N 11-07344.....**$4.90**

LC-40E/LC-40 LIGHTING CONTROLLERS



The LC-40e comes in an anodized brushed aluminum chassis. Features extra control knob sensitivity at dim end of the lighting range where it is needed most. It is microcontroller controlled and has continuous over voltage, current limit & fault protection. Each channel can handle 1.5 amps. LC-40E
P/N 11-03366 .....**$126.95**

PWM DIMMER BY SPT



Superior Panel Technology has developed three new, compact solid state Pulse-Width-Modulation (PWM) dimmers to meet all aircraft dimming needs.
They are extremely easy to install (one terminal screw for power in, one for ground and the third for power out), minimal heat dissipation, and by choosing the right dimmer (EL/LED Dimmer, Heavy Duty or Extreme Heavy Duty) you avoid the "dimming steps" in brightness often found in other PWM dimmers.
The EL/LED Dimmer would be used for LED's and electroluminescent lighting such as SPT's Glow Strips. The Heavy Duty dimmer can handle up to 100 watts. The Extreme Power can be used for up to 400 watt @28V or 200 watt @14V. These dimmers have the smallest footprint on the market for a PWM dimmer with a switch.

Description	Part No.	Price
LED/EL Dimmer with Off Switch	11-10603	**$118.95**
LED/EL Dimmer without Off Switch	11-10604	**$99.85**
Heavy Duty Dimmer with Off Switch	11-10606	**$118.95**
Heavy Duty Dimmer without Off Switch	11-10608	**$98.85**
EXTREME DUTY Dimmer without Off Switch (Only Availablewith out)	11-10612	**$128.95**

CRAZEDPILOT LED LIGHTING FLEXIBLE WATERPROOF STRIP



This flexible 15 ft LED Lighting strip is powered by 12volts, is adhesive backed and waterproof - allowing you to install it in any location you want light to glow. This LED Lighting strip can be powered directly with 12v as a light source for footwells, dome lighting, passenger areas, etc. LED Lighting comes in Red, White, and Blue with a black flexible PC Board technology, and clear silicone-based flexible covering. P/N 11-14143.....**$19.00**

VAL AVIONICS CLA 500 COCKPIT LIGHTING ASSEMBLY



The CLA 500 is a Multiple Circuit, Solid State Cockpit Lighting Assembly that will accommodate (4) independent dimmer lighting circuits such as instruments, sub panels, avionics, eyebrow, overhead, flood, and post lamps etc. The CLA 500 unit itself measures 5"l x 4.7"w x 1.5"h; wt: 0.8 lbs. The unit is rated at 14/28VDC input at 2.5 amps max per circuit. The CLA 500 comes complete with 4 on/off dimmer control switches and connector assembly.The CLA 500 carries a full 1 yr factory warranty.
Not TSO'D P/N 11-05700(14v) **$225.00**
P/N 11-04592(28v) **$250.00**

COCKPIT LIGHTS



TYPE C4A - A multi-purpose light providing narrow spotlight or floodlight beam. Rotate dial for red or white lens. Push-button for instant full light. Adjustable rheostat. Coiled cord & snap-in mounting base makes light portable in cockpit area. New mfg. Most suitable for larger aircraft. 12V .....P/N 11-03921.....**$189.75**
24V .....P/N 11-03922.....**$189.75**

MINIATURE EYEBALL COCKPIT LIGHTS



MOD1 OVERHEAD CONSOLE - The Mod1 Overhead Console is mounted to top of cabin or top wing skin with four stainless steel screws into the four standoffs or posts on Console. All lights are ordered separately. Weight: 3.8 oz.
P/N 11-06003.....**$27.65**

EYEBALL COCKPIT LIGHTS



These high quality cockpit lights are engineered to match the eyeball swivel vents on the page on Air Vents in this catalog. Simple twist on/off operation provides white beam for cockpit lighting. Made from 2024T351 aluminum. Diameter: 2.75". Has 4 mounting holes (1/8"dia.) which are spaced 2-3/8" apart on a mounting plate with a thickness of .71". Made in USA.

Black (no bulb)..... P/N 05-01401..... **$68.85**
Gray (no bulb)..... P/N 05-01402..... **$68.85**
Order 14V or 28V bulb separately
14V..... P/N 11-04197..... **$1.45**
28V..... P/N 11-04172..... **$3.45**

PANEL POST LIGHT



Panel Post Light. Compact design, just 3/4" x 1/2" (6mm shaft diameter). 2 super-bright LEDs. Ideal for panel lighting or map lighting.
12V White .....P/N 13-15801 .....**$14.95**
12V Red.....P/N 13-15816 .....**$14.95**
24V White .....P/N 13-15802 .....**$14.95**
24V Red.....P/N 13-15817 .....**$14.95**

LED TASK LIGHT MODULE 24V WHITE



The LED task light features a rain and brake light, two separate functions in the same package. The LED task light module has a high flash rate which is important in attracting attention in low visiblitity conditions. This is a three wire unit with wires for Brake, Rain and battery negative. It uses LOW power, so minimal that you can power it from a single 9 volt battery. Operating voltage range 5vdc to 18vdc, Dimensions: 2.7"x2.5"x0.89"
P/N 11-02881.....**$74.95**

MINI GOOSENECK LAMP



This mini gooseneck lamp is a versatile, flexible-shaft lamp designed as a map light, chart light, and panel light. The flexible shaft permits the lamp to stand-off and illuminate a larger panel surface, or double as a flexible chart light or map light. When mounted on instrument panels or consoles, the lamp provides a bright and directional lighting source. The 1/4" shaft is flexible yet rigid enough to retain its shape during use.

Length	Color/Volts	Part No.	Price
5-7/8	Red 12V	11-14112	**$21.95**
	Red 24V	11-14116	**$21.95**
	White 12V	11-14114	**$21.95**
	White 24V	11-14118	**$21.95**
10-1/2	Red 12V	11-14113	**$23.95**
	Red 24V	11-14117	**$26.50**
	White 12V	11-14115	**$23.95**
	White 24V	11-14119	**$23.95**

CRAZEDPILOT BULLET LED LIGHTS



They are .9" diameter at the head, and fit thru a 10mm hole. A lot of output for a small LED! Angle of view is very wide! Can be seen a LONG ways away, even in daylight! Pair this product with the LED Strobe and WIG-WAG Controller, and you have an excellent strobe system for a low dollar investment! White .....P/N 11-14140 .....**$7.00**

EL

DIMMERS

LIGHT DIMMING KIT



Kit includes a Mil.Spec Potentiometer, Mil. Spec Power transistor mounted to a heatsink and a wiring harness. Breaker Size: 2A @ 14V, 1.5A @ 28V, Operating Range: 0-32 VDC, Current: 1.4A@ 14V, .7A@28V, Power: 20W P/N 11-02082...**$162.95**

4-CHANNEL LED DIMMER



Easy-to-install, 7 Amps per channel. High quality knobs and wiring kit with stand-offs. 12VDC. Control up to Four (4) different LED or Incandescent light circuits independently.

P/N 13-15799.....**$69.95**

PANEL LIGHT DIMMING RHEOSTATS



These high-quality rheostats are used in production aircraft to dim instrument panel lights. Size: 1-9/16" dia. x 2-1/4" long. Mounts in 3/8" dia. panel hole. Shaft is 1/4" dia. w/flat for knob set screw. New manufacture. Power Rating: 25 Watts.

0-8 OHM Panel light dimming retrostat.....P/N 0144 ..... **$44.95**
0-15 OHM Panel light dimming retrostat.....P/N 0146 ..... **$56.95**

FINGER GRIP KNOB



Finger grip knob or rheostats. 1-1/2" Diameter, 1/4" Hole.

P/N 11-07967 .....**$11.75**

MULTIPLE CIRCUIT SOLID STATE LIGHT DIMMERS



Choose from 2, 3, or 4-circuit heavy-duty 115W light dimming systems by Superior Panel Technology. Circuit board design with pin connector allows for easy and neat wiring. Mil Spec Tefzel color-coded wire is included.. Unlike rheostats, this system will provide even dimming of incandescent lights, electroluminescent lamps (such as the SPT Glow Strips) and LEDS when used in combination on the same circuit. A separate control switch (with circuit breaking off position) is included for each circuit. Knobs sold separately. For 12 or 24 volt as long as there have been no modifications

2 Circuit.....P/N 11-02046 .....**$132.75**
3 Circuit.....P/N 11-02047 .....**$233.95**
4 Circuit.....P/N 11-02049 .....**$275.95**
Control Knob.....P/N 11-07344 .....**$4.90**

K11 AIRCRAFT PANEL DIMMER



Features: • 3 outputs with a tracking capability - One output is the "Master", and the other two can be set to track the master from 0 to any set voltage behind the master. This allows items on the dimmer bus to be grouped according to their relative brightness. Photocell light sensor automatic control capability • Low cost • Performance: • Voltage range: 0 to Input supply - .6V • Output current - Depends on ventilation - Each channel is capable of 5 amps, practical dissipation limitation is ~ 5 amps total for all channels. (For 28 volt systems, current limit is 1 A per channel) Unit connections are made through a DB15 connector, and are easy to integrate into the rest of the aircraft wiring. P/N 11-02244 ..... **$149.95**

MICROPULSE LANDING LIGHT CONTROL



This Micropulse Landing Light Control has 12 to 35 VDC, 0-8 A per channel, Control over 224 Watts per channel in a .9" Inch square by 1.9" Package. Complete compact, light weight, powerful, solid state Landing light controller. The MicroPulse has all the functions you should need. MicroPulse Function Modes: Switch Positions: • OFF Both Circuits Off • L Left on only (CKT1) • R Right on only (CKT2) • L&R Both circuits On • A44 Alternate 44 PPM (STD) • B44 Both Flash 44 PPM • A88 Alternate 88 PPM • A120 Alternate 120 PPM. Capacity: • 96 Watts @12 VDC each channel • 224 Watts @28 VDC each channel. P/N 11-11886..... **$263.95**

MAX DIM DIMMER CONTROL UNIT



5-35 VDC 0-12.5A Control 350 Watts in a 1-1/4" Diameter package. Complete compact, light weight, powerful, solid state dimmer. Great for light wedges. FAA STC Approved. PMA'd . Features: • Aircraft Lighting Boat Cruiser Cabins. • Instrument Panels. •Hundreds of DC Lighting Control applications ..... P/N 11-05738..... **$224.00**

MAXPULSE LANDING LIGHT CONTROL/ PULSER - (STC'D)



Extreme long life, low temperature operation, high current capability, noise free operation and small size makes it a ideal landing light controller for all aircraft. This new STC version sports eight functional pulse, flash and steady state modes of operation. It is also an ideal replacement for old technology controllers requiring large heavy heat sinks and or noisy relays as part of the installation. STC'd P/N 11-06998..... **$259.95**

MAXPULSE LANDING LIGHT CONTROLLER MODEL - B



12-35 volts @ 10 Amps per channel - 2 channels, Ring Connectors, Controlled Output: 0 to 12-35 VDC , 0 to 10 A per channel. No outboard heat sinks, rheostats, or other packages. STC, PMA, RTCA/DO-160E SEC 21: qualified. Configure for Wig Wag or Wing and taxi light pulsing, single light pulsing etc. Increased safety for your passengers and yourself. Hundreds of DC Lighting Applications. Emergency Vehicles. Assembled in the USA P/N 11-08175.... **$259.00**

MAXDIM DIMMER CONTROLLER MODEL - B



Specifications: 5-35 volts @ 15 Amps. Ring Connectors. Controlled Output:. 0 to 5-35 VDC - 0 to 15 A **Capacity**: 75 Watts @5 VDC. 180 Watts @12 VDC. 360 Watts @24 VDC. 420 Watts @28 VDC. 700 Watts @35 VDC Includes: MaxDim unit, installation instructions, color coded terminals, reference panel label, STC printout for your logs, installation template, and knob..... P/N 11-08176..... **$249.95**

MAXDIM DUO DUAL DIMMER CONTROLLER MODEL - C



12 to 35 VDC, 0-15 A per channel, Control 1050 Watts In a 1-1/4 Inch Diameter Package. Complete compact, light weight, powerful, solid state dimmer. Model C accepts spade terminals.

P/N 11-12421..... **$339.00**

MAXDIM DUO DUAL DIMMER CONTROLLER MODEL - D

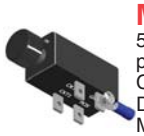


12 to 35 VDC, 0-15 A per channel, Control 1050 Watts In a 1-1/4 Inch Diameter Package. Complete compact, light weight, powerful, solid state dimmer. Accepts ring terminals

P/N 11-08177..... **$345.00**

For Complete info on Dimmers and MaxDim Mini Control Units please visit our website at www.aircraftspruce.com

MICRODIM DUAL DIMMER



5 to 35 VDC, 0-7.5 A per channel, Control over 224 Watts per channel in a .9" Inch square by 1.9" Package. Complete compact, light weight, powerful, solid state Dimmer and switch controller.

Microdim Dual Dimmer Revision SWP has all the functions you will need. Dimming on one channel and switching on channel 2 for the position lights/navigation lighting is activated any time there is output on the dimming channel. P/N 11-11887..... **$268.95**

MICRODIM SINGLE CHANNEL DIMMERS



5 to 35 VDC, 0-7.5 A per channel, Control over 210 Watts In a 0.9" Inch square by 1.9" Package. Complete compact, light weight, powerful, solid state PWM dimmer. Sized for those tight panels with smaller dimensions and depth of 1.9.

Applications and features: • SINGLE CHANNEL control of aircraft Lighting • Aircraft instrument panel lighting • Excellent control of Nulite instrument lighting • LED PWM dimmer, low range enhanced • RTCA/DO-160E SEC 21: RFE Qualified • Instrument Panels • Nulite dimmers • UMA dimmer • LED Glare shields, overheads • Avion Glare shield dimmer • LED lit panels • Hundreds of DC Lighting Control applications • Assembled in the USA

SINGLE

LED 6 mm Bushing	11-15244	**$264.95**
LED 11 mm Bushing	11-15246	**$285.00**
Incandecent 6 mm Bushing	11-11191	**$239.95**
Incandecent 11 mm Bushing	11-15245	**$285.00**

DUAL

Incandecent Only 6 mm Bushing	11-11192	**$259.95**
Incandecent Only 11 mm Bushing	11-15249	**$310.00**
Incandecent Only 6 mm Bushing	11-15248	**$310.00**
Incandecent Only 11 mm Bushing	11-15250	**$310.00**
LED/ Incandecent 11 mm Bushing	11-15251	**$287.95**

EL

Prices Subject to Change Without Notice

UMA INSTRUMENT LIGHTING - PMA'D



The UMA EL Light Bezel System replaces instrument post-lights, provides a uniform light around the dial of each instrument using a solid-state electro-luminescent element rather than a incandescent bulb. The bezels have a design life of 5,000 operating hours. The system consists of a bezel or "wedge", DC to AC inverter, and a connector kit. The bezel fits over the instrument face, and is available in a variety of configurations to accommodate various adjusting knobs. The bezel mounts either between the instrument face and the panel, or between the panel and the overlay. The bezel is held in place by the instrument mounting screws. The DC to AC inverter provides power for as many as 12 bezels or about 25 sq. inches of lighting. To facilitate installation and maintenance a connector kit is supplied with each bezel. Colors are White, Aviation Green, and red, **with white being the only FAA approved color.** The PMA is based on a STC for Beechcraft King Air 90s. To assist you in filing a FAA form 337, the approved data package used for the King Air installation is available from UMA, or can be downloaded on or website. Copies of previously issued 337s are available upon request. * Inverter is required. Must be ordered separately.

Model No.	Size	Cut-Out	Light	Part No.	Price
2-30-W	3-1/8"	SINGLE (Left or right)	WHITE	10-00794	**$65.00**
2-30-G	3-1/8"	SINGLE (Left or right)	GREEN	10-02089	**$65.00**
2-30-R	3-1/8"	SINGLE (Left or right)	RED	2-30-R	**$65.00**
2-31-W	3-1/8"	NONE	WHITE	2-31-W	**$65.00**
2-31-G	3-1/8"	NONE	GREEN	10-02090	**$65.00**
2-31-R	3-1/8"	NONE	RED	2-31-R	**$65.00**
2-33-W	3-1/8"	CENTER	WHITE	2-33-W	**$65.00**
2-33-G	3-1/8"	CENTER	GREEN	10-02091	**$65.00**
2-33-R	3-1/8"	CENTER	RED	2-33-R	**$65.00**
2-34-W	3-1/8"	DOUBLE	WHITE	2-34-W	**$78.75**
2-34-G	3-1/8"	DOUBLE	GREEN	10-02092	**$78.75**
2-34-R	3-1/8"	DOUBLE	RED	2-34-R	**$78.75**
2-35-W	3-1/8"	NONE w/Undercut for VSI	WHITE	11-02095	**$65.00**
2-20-W	2-1/4"	SINGLE (Left or Right)	WHITE	10-00792	**$65.00**
2-20-G	2-1/4"	SINGLE (Left or Right)	GREEN	10-02087	**$65.00**
2-20-R	2-1/4"	SINGLE (Left or Right)	RED	2-20-R	**$65.00**
2-21-W	2-1/4"	NONE	WHITE	2-21-W	**$65.00**
2-21-G	2-1/4"	NONE	GREEN	10-02088	**$65.00**
2-21-R	2-1/4"	NONE	RED	10-00793	**$65.00**

INVERTERS FOR UMA LIGHTING -

5V (JETS) ..... P/N 10-02086.....**$77.75**
14V..... P/N 10-02083.....**$77.75**
28V..... P/N 10-00986.....**$77.75**

Each inverter will run up to 12 lighting wedges.

Rheostat..... P/N 6002.....**$51.75**
Elec. Wire Kit*..... P/N 10-02085.....**$16.50**

Contains AMP connector and connecting pins

UMA ELECTRO-LUMINESCENT LIGHT STRIPS



UMA, Inc. now offers an ultra-thin (0.006") flexible self-adhesive long-life light strip based on the same technology that is used in our EL Light Bezel. Since there is no filament, these light strips are not bothered by vibration or rapid changes in temperature. Perfect for use under a glare shield, or for any other interior lighting need (both aircraft and automotive). Length may be cut as needed. Available colors are Aviation Green & White/Blue. Power Inverter required.

Dimensions	Color	Part No.	Price
0.5"W x 25"L	White/Blue	10-00321	**$79.75**
0.5"W x 25"L	Aviation Green	10-00322	**$79.75**
1.5"W x 18"L	White/Blue	10-00323	**$99.75**
1.5"W x 18"L	Aviation Green	10-00324	**$99.75**

CRAZEDPILOT LED LIGHTING FLEXIBLE WATERPROOF STRIPS



This flexible 15 ft LED Lighting strip is powered by 12volts, is adhesive backed and waterproof - allowing you to install it in any location you want light to glow. This LED Lighting strip can be powered directly with 12v as a light source for footwells, dome lighting, passenger areas, etc. LED Lighting comes in Red, White, and Blue with a black flexible PC Board technology, and clear silicone-based flexible covering.

Red..... P/N 11-14143..... **$19.00**
White ..... P/N 11-14144..... **$19.00**
Blue ..... P/N 11-14145..... **$19.75**

FIBERLITE INSTRUMENT LIGHTING SYSTEM



FiberLites, by Superior Panel Technology, offer an innovative instrument lighting system that uses fiber optics to evenly illuminate aircraft instruments with easily accessible, long lasting, LED light sources. Select up to 8 of any Bezel combination of 3-1/8", **3-1/8" with cut-out (DG,VSI,ALT) and 2-1/4" instruments light bezels. **The FL318CO has a cut-out in one corner. Use this for directional gyros, altimeters, vertical speed indicators and other Instruments with corner knobs. Use the standard FL318 for the attitude indicator. The FiberLite package includes 3 LEDs which can light up 12 instruments. The FiberLite Instrument Light Bezels are FAA approved for certified aircraft. Look in the document section for the Approved Make and Model List. If your aircraft is not on the list then you would need a 337.

Aircraft spruce and spt have worked together to offer a discount on the fiberlites and pwm dimmer when ordered as a package.

Instrument Package -without dimmer ..... P/N 11-04009 ..**$254.95**
FiberLite Instrument Package with PWM dimmer with built in circuit-breaking off switch ..... P/N 11-10601 ..**$349.95**

Individual Parts Pricing:

2-1/4" inst. ..... P/N 11-04000.....**$29.95**
3-1/8" inst. ..... P/N 11-04002.....**$29.95**
3-1/8" inst w/cut out (DG, VSI, ALT) ..... P/N 11-04003.....**$29.95**
14V LED Light Source..... P/N 11-03999.....**$19.95**
28V LED Light Source..... P/N 11-07838.....**$19.95**
Battery Back Up 14V..... P/N 11-06595.....**$47.85**
Battery Back Up 28V..... P/N 11-06596.....**$57.85**
LED EL Dimmer with off switch..... P/N 11-10603 ..**$118.95**
LED EL Dimmer without off switch..... P/N 11-10604 ....**$99.85**
LED Heavy Duty Dimmer with off switch..... P/N 11-10606 ..**$118.95**
LED Heavy Duty Dimmer without off switch... P/N 11-10608 ....**$98.85**
Extreme Duty Dimmer without off switch ..... P/N 11-10612 ..**$128.95**

LED COCKPIT LIGHTING SYSTEM KITS



The simplest and best priced LED cockpit lighting and interior lighting system on the market – the CRAZEDpilot LED Cockpit Lighting System includes over 5 feet of adhesive-backed flexible LED light strip (AVAILABLE IN PURE WHITE) which can be trimmed to any length (or multiple lengths, read on!) The system also contains a digital dimmer control with black panel-mount knob, and detailed installation instructions and clear wiring diagram. Weighs ONLY 2.5 ounces installed! The digital dimmer control uses pulse technology to prevent heat generation and current draw commonly found in inferior designs.

The LED light strips are 8mm wide by 3mm thick made using flexible PC-board technology – with a clear vinyl coating over a black background, these light strips nearly dissapear when not illuminated. The strips are capable of curves and countours of a 2 inch radius, which will fit nicely into the corner of your glare shield or custom panel (see photographs on this page). The 3M adhesive backed light strips bond and stay bonded once placed permanently.

Red..... P/N 11-11201 ..... **$47.65**
White ..... P/N 11-11202 ..... **$47.65**
Blue ..... P/N 11-12907 ..... **$47.65**

PANEL INDICATOR LAMPS



Screw-in terminals, easy retrofit installation. Model: Pilot-12mm-Series.

Color	Part No.	Price
White	13-15811	**$12.95**
Red	13-15812	**$12.95**
Green	13-15813	**$12.95**
Blue	13-15814	**$12.95**
Yellow	13-15815	**$12.95**

FIBER-OPTIC PANEL BACKLIGHTING KIT



Backlight the lettering on reverse engraved panels using FiberLites fiber-optic panels. The panels can be cut to width and normally one fiber-optic panel can illuminate all the text for switches and breakers on a panel. The fiber-optic panels are 3" x 8.5" and come with the needed connectors and three LEDS (either green or white). The panels can also be used as mini flood lights over breakers and switches.

Fiber-Optic Back Light Kit Green.....P/N 11-08561 .....**$149.95**
Fiber-Optic Back Light Kit White.....P/N 11-08562 .....**$149.95**

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PILOT LIGHTS - INSTRUMENT LIGHTING

NULITE INSTRUMENT LIGHTING SYSTEM



Replace your existing lighting system of post lights or indirect lighting using the latest technological developed in optical enhancements. The NULITE uses dual incandescent bulbs with a rated life of 10,000 hours in a translucent material designed to look like an internally lighted unit. Nulites are easily installed by anyone in just minutes and are pre-cut to fit all standard instruments operating on 14, or 28 Volts. NULITE light wedges can be installed over the instrument or between the panel and the instrument. One wire is connected to ground and the other to a dimmable buss. Installation takes about 30 minutes for each unit and does not require any special tooling. The instrument is not altered in any way therefore only a log book entry is required. FAA/PMA approved.

Will not work with DC to AC inverted systems

Voltage	Description	Model No.	Part No.	Price
14v	2-1/4" No Cutout	LW2014	11-03851	**$54.95**
14v	2-1/4" with Left Cutout	LW2014A	11-01257	**$54.95**
14v	2-1/4" with Right Cutout	LW2014B	11-04373	**$54.95**
14v	3-1/8" No Cutout	LW3014	11-02572	**$54.95**
14v	3-1/8" with Left Cutout	LW3014A	11-02673	**$54.95**
14v	3-1/8" with Right Cutout	LW3014B	11-02574	**$54.95**
14v	3-1/8" with Left + Right Cutout	LW3014AB	11-00818	**$54.95**
14v	3-1/8" for Altimeters	LW3014AA	11-02573	**$54.95**
14v	3-1/8" for VSI	LW3014V	11-01099	**$54.95**
14v	4" Light Bar	LB4014	11-02788	**$54.95**
28v	2-1/4" No Cutout	LW2028	11-02571	**$54.95**
28v	2-1/4" with Left Cutout	LW2028A	11-04374	**$54.95**
28v	2-1/4" with Right Cutout	LW2028B	11-04375	**$54.95**
28v	3-1/8" No Cutout	LW3028	11-03852	**$54.95**
28v	3-1/8" with Left Cutout	LW3028A	11-02762	**$54.95**
28v	3-1/8" with Right Cutout	LW3028B	11-03853	**$54.95**
28v	3-1/8" with Left + Right Cutout	LW3028AB	11-01352	**$54.95**
28v	3-1/8" for Altimeters	LW3028AA	11-02851	**$54.95**
28v	3-1/8" for VSI	LW3028V	11-01230	**$54.95**
28v	4" Light Bar	LB4028	11-02789	**$54.95**

NULITE NV6 LIGHTING



Features: Daytime Readability: Because Nulites utilitze an open ring bezel, there are no daytime readability issues., Ease of Installation: A typical aircraft installation takes approximately 8 hours and can be done in the field by an A&P mechanic., Color Shifting: Nulites uses NVIS White Technology that does not shift any color and illuminates what is on the instrument., Upgrades the Panel Not The Instrument: Nulite nvg does not alter the instrument in any way and reduces the need for rotables, Lower Cost: A Nulite nvg conversion cost a third of what traditional filtered conversions cost. Reduce Training Time: With an open ring bezel, there is no need for additional training for Daytime Operations.

Specifications: NVIS White long lasting LED, Pulse type dimming circuit, 28 volt systems with lower power consumption (40ma average per unit) Nulites are FAA approved and STC's are available, .220" thick and tight tolerances of .005", Meets all FAR burn tests, NVIS radiance per MIL-STD-3009

White Light 28V 3-1/8" Round .....P/N 11-08774 .....**$649.95**
White Light 28V 3-1/8" Left Cutout .....P/N 11-08775 .....**$525.00**
White Light 28V3-1/8" Altimeter Cutout .....P/N 11-08776 .....**$649.95**
White Light 28V Left & Right Cutout.....P/N 11-08777 .....**$649.95**
White Light 28V 3-1/8" Right Cutout.....P/N 11-08778 .....**$649.95**
White Light 28V 3-1/8" VSI Cutout .....P/N 11-08779 .....**$649.95**
White Light 28V 2-1/4" Round .....P/N 11-08780 .....**$637.00**
White Light 28V 2-1/4" Left Cutout .....P/N 11-08781 .....**$637.00**
White Light 28V2-1/4" Right Cutout.....P/N 11-08782 .....**$535.00**

LIGHTSAVER



The Lightsaver prevents this massive inrush allowing the filament to draw the rated current even at turn on with no change in typical light output performance. The filament life increases up to 10 times due to reducing the stress induced by inrush current. This is something the lamp manufacturers don't want you to know. After all they are in the business of manufacturing replacement lamps for your aircraft. Installation is simple.

Description	Part No.	Price
24 V 100W	11-07317	**$39.75**
24 V 150W	11-07318	**$38.75**



GLOW STRIPS - GLARE SHIELD LIGHTING

Superior Panel Technology has developed a brighter, more uniform and longer lasting Glare Shield lighting system. The 18" x 1" Glow Strip electroluminescent lamps provide a beautiful fluorescent-like aviation green or a white light output. The ultra-thin lamps (.065 including the adhesive backing) are very flexible and conform to the curves of the underside of the glare shield. The Glow Strips meet the FAA 23.853 burn test. Inverters ARE included with the kit. A solid state dimmer and battery back-up system is available and recommended (see part numbers below).

THE ONLY MANUFACTURER THAT OFFERS A LIFETIME WARRANTY AGAINST LAMP FAILURE.

Green

Single Glow Strip - 14V .....P/N 11-00847 .....**$119.50**
Two Glow Strips - 14V .....P/N 11-00848 .....**$159.50**
Two Glow Strips - 28V .....P/N 11-00849 .....**$159.50**

White

Single Glow Strip - 14V .....P/N 11-10525 .....**$119.50**
Two Glow Strips - 14V .....P/N 11-10528 .....**$159.50**
Two Glow Strips - 28V .....P/N 11-10529 .....**$159.50**

Accessories

Solid State Dimmer .....P/N 11-00846 .....**$74.75**
BattPack Battery Backup 14V - BP12V .....P/N 11-06595 .....**$47.85**
BattPack Battery Backup 28V - BP24V .....P/N 11-06596 .....**$57.85**



NULITE INSTRUMENT LED LIGHTING SYSTEMS

NULITEs are a revolutionary lighting system for aircraft instruments. They give the same lighting appearance as internal lighting kits at a fraction of the cost. NULITEs have a special bezel that focus light toward the instrument, preventing light from reflecting into the pilot's eyes. When sandwiched between the instrument and panel, NULITEs reduce glare and "hotspots" by concentrating 60% of the light on the upper half of the instrument.

Voltage	Description	Model No.	Part No.	Price
14v	2-1/4" LED round	LW2034	11-13932	**$69.95**
14v	2-1/4" LED with Left Cutout	LW2034A	11-13933	**$69.95**
14v	2-1/4" LED with Right Cutout	LW2034B	11-13934	**$69.95**
14v	3-1/8" LED round	LW3034	11-13935	**$69.95**
14v	3-1/8" LED with Left Cutout	LW3034A	11-13936	**$69.95**
14v	3-1/8" LED Altimeter Cutout	LW3034AA	11-13937	**$69.95**
14v	3-1/8" LED with Left + Right Cutout	LW3034AB	11-13938	**$69.95**
14v	3-1/8" LED with Right Cutout	LW3034B	11-13939	**$69.95**
14v	3-1/8" LED for VSI Cutout	LW3034V	11-13940	**$69.95**
28v	2-1/4" LED round	LW2038	11-13941	**$69.95**
28v	2-1/4" LED with Left Cutout	LW2038A	11-13942	**$69.95**
28v	2-1/4" LED with Right Cutout	LW2038B	11-13943	**$69.95**
28v	3-1/8" LED round	LW3038	11-13944	**$69.95**
28v	3-1/8" LED with Left Cutout	LW3038A	11-13945	**$69.95**
28v	3-1/8" LED Altimeter Cutout	LW3038AA	11-13946	**$69.95**
28v	3-1/8" LED with Left + Right Cutout	LW3038AB	11-13947	**$69.95**
28v	3-1/8" LED with Right Cutout	LW3038B	11-13948	**$69.95**
28v	3-1/8" LED for VSI Cutout	LW3038V	11-13949	**$69.95**

NULITE LED INSTRUMENT LIGHT BUNDLES



This LED light wedge and dimmer starter kit from Nulite includes two (2), 3-1/8-inch LW3034 and one (1), 3-1/8 inch LW3034AA light wedges, plus one (1) MaxDim 9100-001-A Dimmer controller from Seaton Engineering and operates on 14 volts. Nulite LED aircraft instrument lights use bright, long-lasting LEDs inside of a special bezel that focuses light toward the instrument, rather than toward the pilot's eyes. The MaxDim Dual controller from Seaton Engineering is the perfect option for controlling lighting and instrument panels in new or existing aircraft.

14V LED Bundle ..... P/N 11-13951 .....**$435.00**
28V LED Bundle ..... P/N 11-13956 .....**$465.00**
14V LED Dual Bundle..... P/N 11-13957 .....**$598.00**
28V LED Dual Bundle..... P/N 11-13958 .....**$442.95**

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Prices Subject to Change Without Notice

LED LANDING LIGHTS

ALPHABEAM II PAR 46 LED LANDING LIGHT





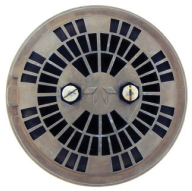
The ALPHABEAM® II LED Aviation Light is an LED Landing and Recognition light for business aviation. ALPHABEAM® II deploys state of the art Light Emitting Diode (LED) technology and is a 'drop-in' replacement for incandescent lamps, requiring no modification to the airplane. This is a major step in improving maintenance costs associated with exterior lighting and enhancing safety with improved lighting performance. The ALPHABEAM® II, will work for many years, as opposed to just months or even weeks with incandescent bulbs.

The ALPHABEAM® II has an extremely uniform beam pattern with more lumens in the beam compared with incandescent technology. With Teledyne's sophisticated multi-stage optical system, raw lumens from the LEDs are efficiently captured and redirected in the perfect beam pattern with very few lumens lost. Pilots have reported excellent performance, with the ALPHABEAM® II improving visual distance by as much as 1000 feet.

Performance Information: • Solid State LED technology • High brightness of 300,000 Candlepower in the beam • 70 Watt Power Consumption Typ. • Operates on 28 VDC Aircraft • Direct replacement for traditional PAR-46, 5.75" bulb sizes • Screw terminals are not polarity sensitive • Moisture Resistant • Notched heatsink for ease of installation

Specifications: • 5000 Lumens in the beam • Bulb Size: PAR 46 (14.61 cm/5.75 in) • Aircraft Electrical Interface: Screw terminal • Operating Voltage: 28 VDC • Wattage: 70 Watts Typ • Field of View: 10° horizontal/10° vertical • Operating Temperature -55°C to +85°C • Storage Temperature: -55°C to +85°C • 2 Year Warranty P/N 11-11742 .....**$1,685.00**

TELEDYNE ALPHABEAM PAR 36LED LANDING & TAXI LIGHT







FAA-PMA APPROVED!

Drop-in replacement for traditional incandescent lights. The Teledyne LED Alphabeam landing & taxi light will replace the following incandescent replacement lamps: 4313, 4509, 4587, 4591, 4594 and 4596. The ALPHABEAM™ LED Landing and Taxi Light, incorporating solid state technology, is designed for durability and long life. The ALPHABEAM™ offers an enhanced field of view compared with the incandescent models it replaces, and greatly improves visibility for night landing and taxi operations.

- No need to modify or alter existing incandes cent mounting
- Patented optical design draws less power, uses less LEDs than other LED based bulbs
- Significantly longer life than traditional incan descent bulbs
- Ruggedized for aircraft shock, vibration and temperature ranges
- Optimized LED's and Drive electronics for maximum life and brightness.
- No dimming nor loss of intensity across volt age range of 12 Vdc to 30 Vdc.
- Reduced maintenance costs
- Meets all environmental requirements of
- RTCA DO-160-E
- FAA/ PMA Approved.
- 3 Year Warranty

Specifications:

- Lamp Type: TIR Lens
- PAR36 - LED Technology
- Wattage: 45W • Voltage: 12 - 30VDC
- Bulb Diameter 4.5 inches
- Maximum Overall Length (MOL): 2.75 inches
- Projected life > 5,000 hours
- Moisture Resistant
- 3 Year Warranty P/N 11-16076 .....**$325.00**

SR 10 INCH SPOT LANDING LIGHT NON TSO



• Landing • 4x4x14 • 2.1lb • 35 Watts 2.4 AMP Draw • 10 LEDs • 3400 Raw Lumens • 676 Lux at 10m • 603.3 Beam Distance • 91000 Peak Beam Intensity.

Black..... P/N 11-11223.....**$284.99**
White ..... P/N 11-14958.....**$299.24**

AML Q-4509 LED PAR 36 LANDING / TAXI LIGHT



LED Q4509(Non-Polarity Applicable from 9V-36V), approximately 15,000 lab life hours, specialized structure for heat emission. Specialized structure for heat emission. High brightness (960LM) at low temperature: The temperature of lamp housing stays under 50°C even after continuous lighting for two hours. Non-polarity , applicable from 9V~36V. 15,000 lab life hours.

P/N 11-11513 .....**$89.95**

HYBRID R-PLUS PAR 36 LAMP RETROFIT KIT 40W 3400 LUMEN LANDING



PAR 36 direct replacement. Using Rigid Industries Patented optics, with Cree or Osram LED's our PAR 36 replacements project light over 2x the distance of the nearest competitor. With versatile 9-36v DC input, patent pending heatsink and diffuser options the choice is clear. US made landing light.

40W 3400 Lumen Landing Light.....P/N 11-11215 .....**$208.99**
40W 3400 Lumen Taxi Light.....P/N 11-11216 .....**$208.99**
40W 1800 Lumen Landing Light.....P/N 11-11217 .....**$142.49**
40W 1800 Lumen Taxi Light.....P/N 11-11218 .....**$117.00**

LEADING EDGE LANDING LIGHT KIT



Kit consists of (2) GE #4509 12V, 100W sealed beam lamps, brackets for installation, switch, switch plate, 60 ft. of 2-conductor hookup wire & instructions.
Size: 4.5"hx5.25"w x2.25"d w/ bulbs installed.

Complete Kit.....P/N 11-08000....**$99.95**
Replacement #4509 Bulbs .....P/N 11-03796....**$12.85**
Switch Plate only .....P/N 11-14900.....**$3.90**

SR-M2 LANDING / TAXI NON TSO



• Landing/Taxi • 10x7x3 • 7 oz • 16 Watts 1.1 AMP Draw • 3 LEDs • 1050 Raw Lumens • 135 Lux at 10m. 224 Beam Distance • 13500 Peak Beam Intensity.

Black ..... P/N 11-11222.....**$142.49**
White..... P/N 11-14957.....**$156.74**

SR-M SPOT LANDING LIGHT NON TSO



• Landing• 10x7x3• 7 oz• 10 Watts .63 AMP Draw• 2 LEDs• 700 Raw Lumens• 296 Lux at 10m• 298 Beam Distance• 29625 Peak Beam Intensity.

Black ..... P/N 11-11221.....**$94.99**
White..... P/N 11-14956.....**$104.49**

SPECTOR SR-Q2 DRIVING LANDING / TAXI



• Landing • 1 lb. • 34.5 Watts 2.5 AMP Draw • 6 LEDs • 3030 Raw Lumens • 178.2 Lux at 10m • 267 Beam Distance • .

Black ..... P/N 11-11220.....**$199.00**
White..... P/N 11-14954.....**$123.49**

HYBRID SR-Q SPOT LANDING



• Landing • 1 lb. • 20 Watts 14.45 AMP Draw • 4 LEDs • 1360 Raw Lumens • 151.1 Lux at 10m • 246 Beam Distance • 15111 Peak Beam Intensity.

Black..... P/N 11-11219.....**$119.99**
White ..... P/N 11-14954.....**$123.49**

SR SPECTOR 10 INCH LANDING / TAXI LIGHT NON TSO



• Landing • 4x4x14 • 2.1lb • 53 Watts 3.7 AMP Draw • 15 LEDs • 5100 Raw Lumens • 345 Lux at 10m • 364.4 Beam Distance • 33200 Peak Beam Intensity.

Black..... P/N 11-11224.....**$360.99**
White ..... P/N 11-14959.....**$379.04**

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GRIMES LIGHTING PARTS – LANDING LIGHTS



FAA-PMA REPLACEMENT PARTS FOR GRIMES LIGHTING

OEM Part Number	MFG Part Number	Description	Part Number	Price
25-0491-1	TR-25-0491-1	Lens	11-15326	**$69.95**
31-2106-1	TR-31-2106-1	Insulator	11-15327	**$125.00**
31-4059-1	TR-31-4059-1	Insulator	11-15328	**$66.00**
31-4851-1	TR-31-4851-1	Lens	11-15329	**$329.00**
31-4852-1	TR-31-4852-1	Lens	11-15330	**$329.00**
41-0261-1	TR-41-0261-1	Cam & Worm Wheel	11-15331	**$475.00**
55-0069-1	TR-55-0069-1	Motor	11-15332	**$800.00**
55-0073-11	TR-55-0073-11	Trigger Coil	11-15333	**$500.00**
55-0073-5	TR-55-0073-5	Trigger Coil	11-15334	**$110.00**
55-0221-1	TR-55-0221-1	Flash Tube	11-15335	**$165.00**
55-0257-1	TR-55-0257-1	Battery Pack	11-15336	**$1,400.00**
55-0295-1	TR-55-0295-1	Contact	11-15337	**$66.00**
55-0339-101G6C2	TR-55-0339-101G6C2	Capacitor	11-15338	**$325.00**
55-0339-151H6F2	TR-55-0339-151H6F2	Capacitor	11-15339	**$520.00**
55-0339-321G2C2	TR-55-0339-321G2C2	Capacitor	11-15340	**$325.00**
55-0339-421G2D2	TR-55-0339-421G2D2	Capacitor	11-15341	**$330.00**
55-0743-641L2D8	TR-55-0743-641L2D8	Capacitor	11-15342	**$700.00**
55-0753-1	TR-55-0753-1	Capacitor	11-15343	**$121.00**
55-0834-641L2D2	TR-55-0834-641L2D2	Capacitor	11-15344	**$408.00**
55-0834-751L2E2	TR-55-0834-751L2E2	Capacitor	11-15345	**$520.00**
55-2198-1	TR-55-2198-1	Battery Pack	11-15346	**$980.00**
A1233A2	TR-A1233A2	Lens	11-15347	**$154.00**
A1233A3T	TR-A1233A3T	Lens	11-15348	**$154.00**
A1257A	TR-A1257A	Gasket	11-15349	**$32.00**
A1280-2	TR-A1280-2	Lens	11-15350	**$168.00**
A1280-3	TR-A1280-3	Lens	11-15351	**$152.00**
A6458	TR-A6458	Motor	11-15352	**$725.00**
A6532	TR-A6532	Motor	11-15353	**$875.00**
A6580	TR-A6580	Worm Wheel Assembly	11-15354	**$299.00**
A6582	TR-A6582	Worm Wheel Assembly	11-15355	**$299.00**
A6932	TR-A6932	Insulator	11-15356	**$110.00**
A6947	TR-A6947	Switch Actuator	11-15357	**$115.00**
A6948	TR-A6948	Switch Actuator	11-15358	**$115.00**

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ELL50 ELECTRONIC LANDING LIGHT



The Thiesen landing light, the ELL50, with it's 50 mm (approx 2") diameter, and less than 80 gram (2.8 ounces) is much more compact than it's forerunner model ELL80, but has a much greater luminous efficiency. Power input of the ELL50 is only 30 watts, with the light output equal to a 90 watt halogen lamp. Again, Thiesen's state of the art molding techniques guaranties weather resistance and therefor can me mounted virtually anywhere on your aircraft including even the wheel pants!

The integrated anti-collision lighting of the ELL50 is also prepared for the intellegent synchronization. The ELL50 can be easily connected to a cable of minimum 1.5 mm² cross section and is prewired with a 0.5 mm² highly flexible cord. An instructions manual and the required shrink tubing are included in the package.

Thanks to its advanced construction the ELL50 is water and seawater resistant and, therefore, ideally suited for use in seaplanes. It has temperature controls and is corrosion and UV resistant.

Description	Part No.	Price
ELL50 Electronic Landing Light	11-13564	**$397.00**
ELL50 Mount Cup	11-13567	**$36.00**

ELL60 ELECTRONIC LANDING LIGHT



The landing light ELL60 is the logical evolution of ELL50 with even more power. Despite its small size (diameter 60 mm) this headlight has an input power of 60 watts, which corresponds to a usual halogen headlight of 180 - 200 watts. For the first time we have designed a new cooling system for the ELL60. In the new developed central cooling, the cooling air is passed through the landing light directly to the heatsink. With this new system it is possible to implement this high performance on such a small space. Of course, the ELL60 is through its complete socketing absolutely vibration inured and can be installed anywhere on the aircraft. The peculiarity of our landing light based on light-emitting diodes is the integrated anti-collision light (ACL). In this technique, the LEDs of the landing light can be controlled as an anti-collision light and is therefore integrated into our system of "intelligent synchronization". Thus, the ELL acts both as a normal landing light as well as anti-collision light in flight direction (ie forward) and increases the visibility of the aircraft in flight significantly. The ELL is pre-wired for easy connection to a cable with at least 1.5 mm² conductor cross section of 0.5 mm² flexible high. The assembly instructions and the shrink tubing required are attached.

Description	Part No.	Price
ELL60 Electronic Landing Light	11-13565	**$496.00**
ELL60 Mount Cup	11-13568	**$36.00**

ELL80IS - ELECTRONIC LANDING LIGHT - INTELLIGENT SYNCHRONIZATION



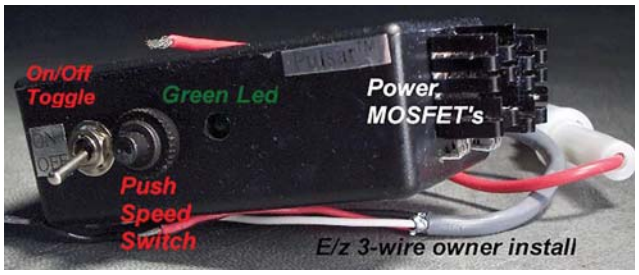
By using the ELL, the Electronic Landing Light, ultralight aircraft are better perceived even during the day. The special feature of the light-emitting diode-based landing light is the integrated anti-collision light (ACL). Thus, the ELL functions both as a normal landing light and as anti-collision light in the direction of flight (ie forward). This significantly increases the visibility of the aircraft in flight.
Landing Lights ELL80is is the logical evolution of the proven ELL80 for integration into the family of "intelligent synchronization". With the specially selected LEDs, the ELL80is achieves four times the light output of its predecessor. Mounting and weight are identical to its predecessor, so that it can be replaced 1:1.
The ELL80is is pre-wired for easy connection to a cable with at least 1.5 mm² conductor cross-section with 0.5 mm² highly flexible stranded wire and has a separate connection for the landing light and for the ACL. The installation instructions and the required shrink tubing are enclosed.
Due to the forward-looking construction, the ELL is water and seawater resistant and therefore ideally suited to be used in seaplanes. It is temperature controlled and corrosion and UV resistant.

Description	Part No.	Price
ELL00iS Electronic Landing Light	11-15985	**$410.00**

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PULSAR LANDING LIGHT PULSE LIGHT SYSTEM



Pulses your landing or taxi light with a steady solid state electronic controller I/C. Filtered for quiet operation. Bulb life is not shortened, in fact bulb life is extended 10Xs longer; because the filaments never completely go out so there is no thermal shock turn-on. Even longer life w/ GE Halogen lights. Your panel landing or taxi light switch is turned OFF, Pulsar's separate On/Off switch turned ON, your light will begin to pulse. If you are landing at night, and want your lights on steady, you simply reach to that landing light switch (which has been off during the pulse mode) and turn it ON.

Your landing light or taxi light will come on steady because Pulsar has not changed or altered your aircraft wiring. Owner installed in 30 minutes. Pulsar is approved for all 100 Watt GE lights. Weight: 3.5 oz.; Size: 3.25" length x 2" width x 1" height. The Standard Pulsar system uses a relay switch. The MOSFET Pulsar system (Metal oxide semi-field effect transistors) uses advanced P-channel technology which does not fail (no transistors or relays) and each pulse is brighter, than other older AvTek's Green-LED allows pilot with a Nose-Landing-Light to know from the cockpit if the light is: Pulsing, on steady or out.

When ordering Pulsar, please indicate how many landing lights you wish to pulse and where they are in your aircraft, as well as your aircraft make and model. Dual Alternating Pulsing lights should never be side by side. Instead dual lights need to be located one in each wing. Two lights side by side can be pulsed together, or pulse just one light and leave the other light off. Now fully FAA/PMA Approved.

Description	Bulb	Part No.	Price
Pulsar for planes with one light on each wing, Recommended for frequent flyers, Mosfet Never needs repair, no transitors/relays	Quartz Q-4509 or Q-4591	11-04408	**$388.95**

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XEVISION LANDING & TAXI LIGHTS



XeVision™ super bright Xenon metal halide arc discharge landing & taxi lights for experimental aircraft. Light so bright and white you'd swear it's daylight; 500,00 candle power (3200 lumens) for our 35 Watt and more than 750,000 candle power (5400 lumens) for our 50 Watt systems – up to more than 8 times brighter than a standard 100 watt incandescent sealed beam. High HID efficiency means less than half the current draw and about ½ of the radiated heat of standard or Halogen lamps.

XeVision™ offers reliable HID pulsing capability based on the proprietary XeStrike™ series ballasts and the patented XePulse and new XePulse II™ pulsing module. All XeVision HID lighting systems are tested up to 100,000 feet altitude. XeVision systems are warranted up to 35,000 feet for continuous fail-safe operation.

XeVision offers retrofit kits for direct replacement or complete lighting system kits for new aircraft installation, different lamp shapes/sizes available. Many installation locations are possible now with a variety of lamp shapes and sizes, extremely small form factor, and lower lamp housing temperatures. They are especially suited for tight spaces in composite aircraft. XeVision reflectors are made of metal, not plastic. High Intensity Discharge (HID) lighting is the most significant breakthrough in aviation lighting since the development of modern sealed beam lamps.

XeVision offers highest quality at a very competitive price with a 5 year warranty and up to 3,000 hour typical lamp life. XeVision HID aviation lighting systems are DO-160E certified (35,50, and 75 watt models)

The XeStrike™ proprietary ballasts XV1D or XV4D are an integral part of all XeVision aircraft lighting systems with the following features: 12 or 24 VDC voltage input., Designed for pulsing or dimming of HID Xenon bulbs with the XePulse™ HID control module., Designed for 35 watt or 50 watt output, 75 watt for special applications only., Extremely low EMI/RFI in combination with third generation D1S bulbs with integrated igniter and double shielded silicone cables., Digital power control for pre-programmable start-up algorithm.

XeVision conversion kit & components	Key features & other information	
 ***XeVision XV-36-SL - Standard landing light conversion kit .*** With XV1D or XV4D ballast and D1S bulb.	Beam angle 9º horizontal & vertical. PAR 36 size. Preferred Application - PAR 36 conversion, lamp diameter 4-5/16"	
XV-36-SL 35 Watt	P/N 11-01760	**$494.00**
XV-36-SL 50 Watt	P/N 11-05038	**$544.00**
 ***XeVision XV-36-ST -*** Standard taxi light conversion kit . XV1D or XV4D ballast and D1S bulb.	Beam angle 55º horizontal & 10º vertical. Preferred Application - PAR 36 conversion, lamp diameter 4-5/16"	
XV-36-ST 35 Watt	P/N 11-01761	**$494.00**
XV-36-ST 50 Watt	P/N 11-05037	**$540.00**
 ***XeVision XV-46-SL*** - Landing light conversion kit . XV1D or XV4D ballast and D1S bulb.	Beam angle 10º horizontal & vertical. Preferred Application - PAR 46 conversion, lamp diameter 5-11/16"	
XV-46-SL 35 Watt	P/N 11-01762	**$494.00**
XV-46-SL 50 Watt	P/N 11-05204	**$539.00**
 ***XV-46-ST -*** Taxi light conversion kit. XeVision XV-46-ST taxi light conversion kit XV1D or XV4D ballast and D1S bulb.	Beam angle 50º horizontal & 8º vertical. Preferred Application - PAR 46 conversion, lamp diameter 5-11/16"	
XV-46-ST 35 Watt	P/N 11-01763	**$494.00**
XV-46-ST 50 Watt	P/N 11-05208	**$540.00**
 ***XV-22*** - Landing or taxi light for external use like gear struts. XV1D or XV4D ballast and D1S bulb.	15º horizontal & 10º vertical. Landing/taxi light conversion designations Preferred Application - Lamp fixture, rectangular, only 2.25" high 4.7" wide, and 4.2" deep.	
XV-22 35 Watt	P/N 11-01765	**$493.00**
XV-22 50 Watt	P/N 11-05209	**$540.00**
 ***XV-23*** - Landing or taxi light in wing area or externally as on a gear structure. With XV1D or XV4D ballast and D1S bulb.	20º horizontal & 8º vertical. Preferred Application - Lamp fixture, rectangular, only 2.25" high 4.7" wide, and 4.2" deep.	
XV-23 35 Watt	P/N 11-01764	**$492.00**
XV-23 50 Watt	P/N 11-05210	**$540.00**

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REPLACEMENT LAMPS

UNIVERSAL REPLACEMENT LAMPS

Our long life incandescent and halogen lamps offer greater light output with increased life and reduced costs. All lamps feature heavy filament construction. Improved design and manufacturing techniques produce a lamp far superior in service with lower cost to the user and packaging provides maximum protection in shipping, handling and storage.



Universal	Grimes	Whelen	Gen. Electric	Cessna	Piper	Aeroflash	Our P/N	Price
12V125W				C17312-3		40-0028	040-0028	**$46.50**
24V150W	-	-	-	-	-	40-0003	040-0003	**$21.85**
U303			GE-303	303			11-01948	**$3.25**
U327			GE-327	327			11-01949	**$0.65**
U330			GE-330	330			11-01950	**$0.55**
U387			GE-387					
U1163	11631						11-01953	**$15.70**
U1512	1512			1512			11-01954	**$16.75**
U1524	1524			1524			11-01955	**$17.75**
U1687	1687						11-01956	**$12.75**
U1940	1940	WRM-1940	GE-1940	1940			11-01958	**$11.55**
U1982-SP	LP-1982SP		GE-1982SP		761-214		11-01960	**$25.85**
UA-7079B-12	1-7079B-12			A-7079B-12			11-01962	**$21.85**
UA-7079B-24	A-7079B-24			A-7079B-24			11-01963	**$29.50**
UA-7512-12	A-7512-12	W1290-14		A-7512-12			11-01964	**$16.75**
UA-7512-24	A-7512-24	W1290-28		A-7512-24	753-478		11-01965	**$16.75**

GALAXY LANDING LIGHT BULBS

Bulb #	Volts	Watts	Par #	Part No.	Price ea
4313	13	250	36	11-03524	**$13.75**
4509Q	13	100	36	11-02220	**$19.65**
4522	13	250	46	11-03525	**$16.85**
4570	28	150	46	11-03528	**$14.85**
4580	28	450	46	11-03529	**$21.85**
4581	28	250	46	11-03530	**$17.35**
4587	28	250	36	11-03531	**$15.95**
4591	28	100	36	11-03532	**$12.65**
4596	28	250	36	11-03535	**$15.75**



AML Q4509 SEALED BEAM

This sealed beam is 30 volt, 100 watts and is 4 1/2" in Diameter. Features: • 13 Volts • 100 Watts • 4 1/2" Diameter • 114 MM.

P/N 11-12157 .....**$14.50**

GRAIN OF WHEAT INSTRUMENT BULBS



Replace burnt out Grain of Wheat Bulbs that are used to illuminate many instrument panels & instruments. These blue-white silicone booted lamps are filtered for illuminating integrally white-lighted aircraft instruments and panels as called out in MIL-L-27160. Available in 14/28V.

14V..... P/N 11-02052.....**$6.50**
28V..... P/N 11-02053.....**$5.85**

GRIMES LAMPS FOR EXTERIOR LIGHTS

Lamp No.	Volts	Application	Price
11-02601	12	Wing Tip Lights, Model E	**$17.95**
11-02603	24	Wing Tip Lights, Model E	**$59.85**

WHELEN LAMPS FOR EXTERIOR LIGHTS

Lamp P/N	Application	Price
11-03219	Wing Tip Strobe, Xenon Flash	**$94.00**
11-03697	Tail Strobe, Xenon Flash	**$111.75**
11-03225	Flash Tube for SA & A450	**$106.00**
11-03274	Flash & Socket for A500	**$208.95**
11-03216	Halogen Lamp, A500/A555/A600	**$23.65**
11-02602	Replacement bulb (14V)	**$49.75**
11-02604	Replacement bulb (28V)	**$59.85**
11-03897	(12V) Rotating Beacon	**$13.75**



REPLACEMENT PADDLE LAMPS

LED Replacement Navigational / Position Lamps in RED or GREEN, 14 or 28 volts, weighing in at less than .0285 lbs. drawing .12 amps, and packing a powerful 100+ Foot Candles of light. They are "Plug & Play" with no modification or alterations required and no flashing, just the continuous output required day or night. Visit aircraftspruce.com for a listing of direct replacements.

Description	Color	Voltage	Part No.	Price
P7512-14VR	Red	**14**	11-12241	**$77.65**
P7512-28VG	Green	**28**	11-12244	**$73.50**

WHELEN FLASH TUBE FOR GRIMES STROBES



This flash tube replaces Grimes P/Ns 30-0467, 30-1467, 30-1331, 30-1172-5, & 30-0515 series. Used on many Cessna aircraft.

W55-0221-1 .....P/N 11-02780 ..... **$112.75**



3 WATT LED NAVIGATION LIGHT BULBS

High-Output 3 Watt LED navigation light bulbs. LED retro-fit for older Grimes navigation lights. Models: 1156, 1157 and 1076. ....P/N 13-15810 ..... **$16.95**



LED MIDGET FLANGED BI-POLAR LAMP T1-3/4 (5-28 VOLTS)

Replaces miniature lamps: # 328, 345, 350, 7335 (5/6V), 330, 382, 394 (12/14V), 327, 376, 387 (24/28V). Attention: Not intended for use with Post Light Assemblies

P/N 11-09629 .....**$6.95**



MINIATURE BAYONET BASED T3 1/4 LED LAMP

Replaces miniature lamp: # 6MB, 44, 47, 755, 1302, 1847 (5/6v); 12MB, 57, 386,756, 1445, 1815, 1889, 1893 (12/14v); 1437, 24MB (24V); 28MB, 313, 757, 1819, 1829 (28V); 48MB (48V); 60MB, 1835 (60V); 120MB, NE51H, 967 (120VAC); 130MB (130V) P/N 11-09628 .....**$6.95**

MARTEK AIRCRAFT 4509 LANDING LIGHT LAMP

Lamp	Part No.	Price	Lamp	Part No.	Price
4509	11-08431	**$7.95**	Q4509	11-08432	**$13.95**
4537	11-08433	**$12.85**	4570	11-08434	**$17.75**
4580	11-08435	**$24.75**	4587	11-08436	**$15.85**
4591	11-08438	**$15.85**	4596	11-08439	**$15.85**
4626	11-08440	**$12.95**			



WHELEN REPLACEMENT REFLECTOR LAMPS

Whelen Replacement Reflector Lamps: W678, W1512, W1524, WA7079B12.

Description	Part No.	Price
Wing Tip Strobe, Xenon Flash	A427	**$94.00**
Tail Strobe, Xenon Flash	A435	**$111.75**
Flash Tube for SA & A450	A469B	**$106.00**
Flash & Socket for A500	A506	**$208.95**
Halogen Lamp, A500/A555/A600	A508-14	**$23.65**
Halogen Lamp, A500/A555/A600	A508-28	**$28.90**
Rotating Beacon	WRM-1940	**$13.75**
Replacement lamp 28V / 75W W1982SP	11-13906	**$49.99**



AEROLEDS POLARIS

Polaris (12v) LED NAV bulb replacement for the WL-A-7512 (12v) AeroLEDs. (01-7500-7512-12) PMA Pending.

12V.....P/N 11-14497 ..... **$149.00**
24V.....P/N 11-14498 ..... **$149.00**



WINGTIP AND TAIL LED BULB SET

Finally a powerful LED replacement for the expensive RA-7512 (14V) and W-1290 (28V) reflector-type navigation bulbs found on many General Aviation aircraft.

Set of 2 bulbs (Red and Green)..... P/N 11-14885..... **$36.95**
Set of 3 bulbs (Red, Green, and Clear) ..... P/N 11-14884..... **$49.50**

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REPLACEMENT LAMPS







GE Lamp No.	Volts/Amps/Watts	WAMCO P/N	AML P/N	Price
43	2.5V 500mA	11-10886	11-12699	**$0.50**
44	6.3V 250mA	11-10974	11-12702	**$0.50**
53	14.4V 120mA	11-11039	11-12388	**$0.64**
55	7V 410mA	11-10978	11-12724	**$0.50**
67	13.5V 590mA	11-10979	11-12705	**$0.70**
81	6.5V 1020mA	11-10957	11-12712	**$0.40**
85	28V 40mA	11-10945	11-12707	**$0.60**
93	12.8V 1040mA	11-11040	11-12411	**$0.84**
94	12.8V 1040mA	11-11041	11-12412	**$1.20**
209	6.5V 1780mA	11-11062	11-12768	**$1.30**
301	28V 170mA	11-10990	11-12729	**$0.95**
303	28V 300mA	11-11042	11-12679	**$0.94**
304	28V 300mA	11-11043	11-12689	**$1.55**
305	28V 510mA	11-11008	11-12418	**$0.75**
306	28V 510mA	11-11044	11-12396	**$1.30**
307	28V 670mA	11-11024	11-12380	**$1.06**
308	28V 670mA	11-11013	11-12398	**$1.10**
309	28V 900mA	11-11045	11-12693	**$1.32**
311	28V 1290mA	11-11027	11-12683	**$1.20**
313	28V 170mA	11-10953	11-12377	**$0.52**
315	28V 900mA	11-11046	11-12756	**$1.20**
316	6V 700mA	11-10954	11-12694	**$0.80**
327	28V 40mA	11-10946	11-12662	**$0.60**
327R	28V .04Amp	-----	11-14291	**$3.60**
328	6V 200mA	11-10952	11-12382	**$0.54**
330	14V 80mA	11-10968	----	**----**
334	28V 40mA	11-10965	11-12387	**$0.60**
336	14V 80mA	11-10993	11-12690	**$0.80**
356	28V 170mA	11-10955	11-12401	**$0.76**
382	14V 80mA	11-10969	11-12402	**$0.64**
385	28V 40mA	11-10982	11-12726	**$0.70**
386	14V 80mA	11-10984	11-12417	**$3.60**
387	28V 40mA	11-10944	11-12383	**$0.58**
388	28V 40mA	11-10970	11-12416	**$0.54**
425	5V 500mA	11-10949	11-12710	**$0.68**
623	28V 370mA	11-10971	11-12722	**$1.10**
685	5V 60mA	11-11010	11-12738	**$1.13**
715	5V 115mA	11-10975	11-12626	**$0.60**
718	5V 115mA	11-11011	11-12739	**$1.20**
757	28V 80mA	11-10947	11-12709	**$0.54**
1251	28V 230mA	11-11063	11-12682	**$1.14**
1252	28V 230mA	11-11064	11-12770	**$1.86**
1309	28V 520mA	11-11073	11-12842	**$1.35**
1315	2.5V 1000mA	11-11047	11-12757	**$1.32**
1317	6V 510mA	11-11069	11-12775	**$1.50**
1385	28V 720mA	11-11094	11-12678	**$4.95**
1495	28V 300mA	11-10976	11-12390	**$0.74**
1512	14V 21W	11-15187	----	**----**
1524	28V 21W	11-15183	----	**----**
1665	28V 800mA	11-11056	11-12467	**$2.80**
1680	6V 4100mA	11-11057	11-12765	**$1.30**
1691	28V 610mA	11-11058	11-12687	**$0.60**
1769	2.5V 200mA	11-10958	11-12713	**$0.86**
1815	14V 200mA	11-10985	11-12680	**$0.74**
1819	28V 40mA	11-10966	11-12395	**$1.10**
1820	28V 100mA	11-10950	11-12378	**$0.50**
1829	28V .07Amp	-----	11-14331	**$0.98**
1864	28V 170mA	11-10972	11-12391	**$0.56**
1873	28V 200mA	11-11000	11-12695	**$0.90**
1982SP	28V/75w	-----	11-15185	**$26.50**
1982	28V 75W T-3	11-11115	----	**----**
1987	28V 150W	11-11128	11-12468	**$26.70**
2182	14V 80mA	11-10948	11-12687	**$0.60**
2232	28V 640mA	11-11080	11-12783	**$1.68**
2233	28V 770mA	11-11081	11-12784	**$1.65**
3011	28V 1290mA	11-11082	11-12686	**$1.80**
3071	5V 60mA	11-11051	11-12685	**$2.00**
3150	5V 60mA	11-11028	11-12629	**$1.30**
3335	28V 16mA	11-11061	11-12384	**$1.60**
4009	28V 40mA	11-11029	11-12748	**$0.90**
6832	5V 60mA	11-11016	11-12393	**$1.16**
6838	28V 24mA	11-11025	11-12386	**$0.98**
6839	28V 24mA	11-11001		
7009	28V 20mA	11-11078	11-12385	**$2.30**
7132	5V 75mA	11-11030	11-12749	**$0.90**
7152	5V 115mA	11-10980	11-12389	**$0.95**
7153	5V 115mA	11-11009	11-12691	**$0.72**
7265	5V 60mA	11-11017	11-12628	**$1.02**
7267	5V 115mA	11-11049	11-12760	**$0.96**
7327	28V 40mA	11-10986	11-12419	**$1.20**
7382	14V 80mA	11-10987	11-12463	**$0.95**
7387	28V 40mA	11-10956	11-12624	**$0.80**
7715	5V 115mA	11-11067	11-12773	**$1.18**
7839	28V 24mA	11-11018	11-12784	**$1.65**
8552	28V 20mA	11-11095	11-12795	**$4.35**
8623	28V 40mA	11-11088	11-12789	**$3.50**

GE Lamp No.	Volts/Amps/Watts	WAMCO P/N	AML P/N	Price
8628	6V 200mA	11-11019	11-12743	**$0.80**
8918	14V 100mA	11-10998	11-12706	**$0.95**
11631	6.2V 40W	11-11121	11-12847	**$14.95**
16870	6.2V 40W	11-11126	11-12814	**$20.55**
1044-1	28V 40mA	11-11070	11-12776	**$3.85**
1044-06	28V 40mA	11-11065	11-12771	**$2.20**
1044-08	28V 40mA	11-11068	11-12774	**$1.18**
1098BPEG- PL	10V 27mA	11-11020	11-12744	**$0.80**
120MB	120V 25mA	11-11071	11-12777	**$1.30**
1280-01	28V 24mA	11-11075	11-12779	**$1.38**
1280-08	28V 24mA	11-11076	11-12780	**$1.38**
1280-481	28V 24mA	11-11052	11-12762	**$1.00**
1309IF	28V 520mA	11-11083	11-12785	**$1.70**
1495X	28V 300mA	11-10999	11-12708	**$2.12**
1665AF (1665IF)	28V 800mA	11-11084	11-12698	**$1.56**
1970X	28V 100W	11-11122	11-12813	**$17.90**
1978X	10V 100W	11-11114	11-12812	**$26.50**
1982SP	28V 75W	11-11118	11-01960	**$25.85**
2059X	12V 10W	11-11108	11-12799	**$7.50**
2232SB	28V 640mA	11-11096	11-12796	**$3.85**
"305AF (WL-305IF)"	28V 510mA	11-11048	11-12758	**$0.94**
3071AS15	5V 60mA	11-11077	11-12781	**$1.44**
3071BPE	5V 60mA	11-11031	11-12750	**$0.90**
3071BPEG- PL	5V 60mA	11-11002	11-12621	**$0.78**
307IF	28V 670mA	11-11060	11-12697	**$1.07**
376AS15	28V 60mA	11-10988	11-12627	**$1.58**
382AS10	14V 80mA	11-11014	11-12741	**$0.78**
385AS15	28V 40mA	11-11026	11-12747	**$0.88**
387AS15	28V 40mA	11-10981	11-12725	**$1.10**
387BPGPL	28V 40mA	11-11050	11-12761	**$1.20**
4009BPE	28V 40mA	11-11032	11-12751	**$1.07**
4009BPEG- PL	28V 40mA	11-11012	11-12740	**$0.76**
565-101	28V 24mA	11-11111	11-12803	**$9.50**
6180AS15	5V 60mA	11-11004	11-12736	**$2.80**
6832AS15	5V 60mA	11-10994	11-12684	**$1.25**
6833AS15	5V 60mA	11-10983	11-12727	**$0.58**
6838-1001	28V 24mA	11-11074	11-12466	**$2.70**
6838AS15	28V 24mA	11-11033	11-12752	**$0.90**
6839AS15	28V 24mA	11-11034	11-12754	**$1.45**
6839BPE	28V 24mA	11-11005	11-12413	**$1.20**
683AS15	5V 60mA	11-10992	11-12730	**$0.62**
685AS15	5V 60mA	11-11066	11-12772	**$1.16**
7009AS15	28V 20mA	11-11085	11-12786	**$1.85**
7132AS15	5V 75mA	11-11021	11-12703	**$1.34**
7132AS15T- PL	5V 75mA	11-11022	11-12745	**$0.80**
713AS15	5V 75mA	11-10977	11-12723	**$0.50**
7152AS15	5V 115mA	11-11035	11-12704	**$1.36**
7153AS15	5V 115mA	11-11036	11-12755	**$1.36**
7153SAS15	5V 115mA	11-11059	11-12766	**$1.04**
715AS15	5V 115mA	11-11037	11-12696	**$0.90**
718AS15	5V 115mA	11-11038	11-12701	**$0.90**
737AS15	28V 50mA	11-11079	11-12782	**$1.95**
7715AS15	5V 115mA	11-11015	11-12742	**$0.78**
8GH003912-06	6V 12W	11-11107	11-12798	**$11.70**
8GH004554-28	28V 11.5W	11-11109	11-12802	**$7.80**
8GH005448-28	28V 11.5W	11-11110	11-12848	**$7.90**
"8GH005597- 12"	12V 25W	11-11113	-----	**----**
"8GH005678- 06"	6V 10W	11-11106	11-12797	**$6.60**
"8GH007429- 28"	28V 11.5W	11-11112	11-12843	**$11.50**
A1G	65VAC 90VDC Max	11-11086	11-12787	**$1.70**
A1H	95VAC 135VDC Max	11-11089	11-12790	**$1.90**
A1H-R18	95VAC 135VDC Max	11-11090	11-12791	**$2.10**
A3C	95VAC 135VDC Max	11-10989	11-12728	**$0.60**
A-4174-24	28V 40W	11-11123	11-12845	**$25.85**
A-4174-24X	28V 40W	11-11130	11-12816	**$40.95**
A-7512-12	14V 26W	11-04366	----	**----**
A-7512-24	28V 26W	11-04367	----	**----**
A-7079B-12	14V 40W	11-11124	----	**----**
A-7079B-24	28V 40W	11-15189	----	**----**
A9A	65VAC 90VDC Max	11-10959	11-12715	**$40.00**
B1A	65VAC 90VDC Max	11-11006	11-12737	**$0.70**
B2A	95VAC 135VDC Max	11-11023	11-12746	**$0.80**
C7A	65VAC 90VDC Max	11-11091	11-12792	**$2.10**
C9A	95VAC 135VDC Max	11-11087	11-12788	**$1.70**
DT1673A	5V 21mA	11-11093	11-12794	**$2.50**
G9B	95VAC 135VDC Max	11-11092	11-12793	**$2.20**
KPR102	2.4V 700mA	11-10995	11-12731	**$0.64**
KPR103	3.6V 700mA	11-10996	11-12732	**$1.90**
KPR104	2.2V 470mA	11-10997	11-12734	**$0.64**
PR12	5.95V 500mA	11-10960	11-12716	**$0.40**
PR18	7.2V 550mA	11-10967	11-12721	**$0.42**
PR2	2.38V 500mA	11-10961	11-12717	**$1.20**
PR3	3.57V 500mA	11-10962	11-12718	**$0.56**
PR6	2.47V 300mA	11-10963	11-12719	**$0.40**
PR7	3.7V 300mA	11-10964	11-12720	$0.40

EL

NORMAN AIRCRAFT LAMPS

Since 1985 Norman Lamps, a U.S. based corporation, has been a valued supplier of certified aircraft lamps to the U.S. Defense Department (DOD), Naval Air Systems Command (NAV-AIR), and the Federal Aviation Administration (FAA). We are specialists in design, development, production and worldwide distribution of high quality, long life lighting products

Lamp No.	Size	Volts/Amp	Part No.	Price
53	G 3-1/2	14.4/.12	08-12244	**$0.35**
75	T4	28/2.67	11-13902	**$31.75**
90	G 6	13/.58	08-12245	**$0.49**
93	S 8	12.8/1.04	08-12246	**$0.55**
94	S 8	12.8/1.04	08-12247	**$0.75**
100	T1	28/.024	08-14671	**$0.90**
194	T 3-1/4	14/.27	08-12248	**$0.45**
259	T 3-1/4	6.3/.25	08-12249	**$0.45**
305	S 8	28/.51	08-12250	**$0.95**
306	S 8	28/.51	08-12251	**$1.25**
307	S 8	28/.67	08-12252	**$0.95**
308	S 8	28/.67	08-12253	**$0.95**
313	T 3-1/2	28/.17	08-12254	**$0.35**
316	T 3-1/4	6/.70	08-12255	**$0.95**
328	T 3-1/4	6/.20	08-12256	**$0.40**
335	T 3-1/4	28/.04	08-12257	**$0.55**
337	--	--	08-12259	**$0.95**
382	T 1-3/4	14/.08	08-16167	**$0.50**
387	T 1-3/4	28/.04	08-12260	**$0.34**
1004	B6	12.8/.94	08-12261	**$0.82**
1141	S 8	12.8/1.44	08-12263	**$0.58**
1142	S 8	12.8/1.44	08-12264	**$0.75**
1143	RP 11	12.5/1.98	08-12265	**$1.95**
1383	R 12	13/1.54	08-12266	**$3.25**
1414	T 4-1/2	14/.46	08-12267	**$0.85**
1495	T 4-1/2	28/.61	08-12268	**$1.15**
1524	GG10	28/1	08-13467	**$18.75**
1683	S 8	28/1.02	08-12269	**$0.85**
1813	T 3-1/4	14.4/.1	08-12270	**$0.55**
1818	T 3-1/4	28/.17	08-12271	**$0.65**
1819	T 3-1/4	28/.04	08-12272	**$0.55**
1820	T 3-1/4	28/.10	08-12273	**$0.57**
1829	T 3-1/4	28/.07	08-12274	**$0.55**
1864	T 3-1/4	28/.17	08-12275	**$0.75**
1891	T 3-1/4	14/.24	08-12276	**$2.75**
1893	T 3-1/4	14/.33	08-12277	**$0.45**
1940	T 7	14/50	08-12278	**$6.85**
4552	PAR 64	28/250	08-12279	**$35.85**
4559	PAR 64	28/600	08-12280	**$28.50**
4570	PAR 64	28/150	08-12281	**$9.50**
4580	PAR 64	28/450	08-12282	**$19.75**
4591	PAR 36	28/100	08-12283	**$11.95**
4596	PAR 36	28/250	08-12284	**$11.95**
4626	PAR 36	28/150	08-12285	**$14.85**
6838	T 1	28/.024	08-12287	**$0.84**
1816R	T 3-1/4	13/.33	08-12298	**$0.95**
1939X	T 7	28/50	08-12300	**$4.75**
313R	T 3-1/4	28/.17	08-12311	**$0.98**

Lamp No.	Size	Volts/Amp	Part No.	Price
678	T 3	6/1.67	08-12397	**$17.65**
Q4509	PAR 36	13/100	08-12451	**$12.95**
1073	S 8	12.8/1.8	08-13110	**$0.48**
1144	RP 11	12.5/1.98	08-13111	**$12.94**
1308	B 6	28/.056	08-13112	**$0.62**
1309	B 6	28/.52	08-13113	**$1.65**
1315	G 5	2.5/1.00	08-13114	**$1.66**
1385	R 12	28/.71	08-13115	**$3.15**
1692	S 8	28/.61	08-13116	**$0.98**
1777	S 8	12.8/1.52	08-13465	**$0.95**
1816	T 3-1/4	13/.33	08-13117	**$0.36**
1828	T 3-1/4	37.5/.05	08-13118	**$11.75**
1982	T 3	28/75	08-13119	**$29.34**
1982SP	T 3	28/75	08-13120	**$11.85**
1991	T 3-1/4	14/25	08-13469	**$18.75**
1999	T 3-1/4	2/25	08-13998	**$18.75**
2232	S 8	28/.64	08-13121	**$0.92**
3150	T 1-3/4	5/.06	08-16180	**$1.60**
303	G 6	28/.30	08-13122	**$0.72**
304	G 6	28/.30	08-13123	**$0.80**
309	S 11	28/.90	08-13124	**$1.16**
311	S 11	28/1.29	08-13125	**$0.96**
327	T 3-1/4	28/.04	08-13126	**$0.32**
334	T 3-1/4	28/.06	08-13128	**$0.46**
336	T 3-1/4	14/.08	08-13129	**$11.70**
4313	PAR 36	12/12	08-13130	**$23.85**
4509	PAR 36	13/100	08-13131	**$7.95**
4522	PAR 46	13/250	08-13132	**$24.50**
4537	PAR 46	13/100	08-13133	**$6.95**
4553	PAR 46	28/250	08-13134	**$22.50**
4581	PAR 46	28/450	08-13135	**$23.00**
4582	PAR 46	28/450	08-13136	**$23.00**
4587	PAR 36	28/250	08-13137	**$11.85**
4593	PAR 36	28/50	08-13138	**$11.50**
4594	PAR 36	28/100	08-13139	**$11.75**
67	G 6	13.5/.59	08-13140	**$8.06**
6839	T 1	28/.024	08-13141	**$1.15**
685	T 1	5/.06	08-13142	**$0.38**
89	G 6	13/.58	08-13143	**$0.36**
7079-24	GG-12A1	28/1.54	08-13468	**$22.70**
7512-12	--	14/28	08-13464	**$19.95**
7512-24	--	28/28	08-13466	**$19.95**
7604	--	--	08-13144	**$9.50**
PR6	--	--	08-13145	**$1.08**
Q4559	PAR 64	28/600	08-13146	**$72.75**
Q4681	PAR 64	28/450	08-13147	**$32.50**
--	T 4 14/25	12V	08-13463	**$20.85**

GE REPLACEMENT LAMPS

GE MINIATURE LAMPS FOR COCKPIT/WING/TAIL LIGHTS

Lamp No.	Primary/Application	Volts	Amps/Watts	Part No.	Price
B-31/2 Bulb 7/16" (11mm) Diameter					
GE-PR3	Flashlight-3D Cells	3.57	.50A	11-03071	**$0.59**
GE-PR6	Flashlight-2D Cells	2.47	.30A	11-03070	**$0.54**
GE-PR7	Flashlight-3D Cells	3.70	.30A	11-03072	**$0.74**
GE-PR12	Flashlight-5D Cells	5.95	.50A	11-03073	**$0.58**
GE-PR18	Flashlight-6D Cells	7.20	.55A	11-03074	**$0.78**
B-6 Bulb 3/4" (19mm) Diameter					
GE-1308	Reading Light	28	.56A	11-03076	**$2.95**
GE-1309	Aircraft Interior	28	.52A	11-04162	**$3.85**
GE-1317	Emergency Landing	6	.51A	11-03075	**$2.95**
G-31/2 Bulb 7/16" (11mm) Diameter					
GE-356	Map Light	28	17A	11-04184	**$3.35**
GE-1450	Indicator	24	.035A	11-03077	**$8.80**
G-41/2 Bulb 9/16" (14mm) Diameter					
GE-55	Panel Indicator	7	2 CP	11-04194	**$1.49**
GE-57	Panel Indicator	14	2 CP	11-04195	**$0.88**
GE-456	Instrument	28	.17A	11-03080	**$3.55**
G-5 Bulb 5/8" (16mm) Diameter					
GE-1315	Emergency Lighting	2.5	1.0A	11-03037	**$3.35**
G-6 Bulb 3/4" (19mm) Diameter					
GE-81	Wing/Tail	6.5	1.02A	11-04196	**$2.45**
GE-303	Cockpit Light	28	.30A	11-04172	**$3.45**
GE-304	Cockpit Light	28	.30A	11-04173	**$3.20**
GE-623	Aircraft - 2 Filaments	28	.37A	11-03041	**$3.35**
GE-1251	Aircraft - 2 Filaments	28	.23A	11-03039	**$0.93**
GE-1252	Aircraft - 2 Filaments	28	.23A	11-03040	**$3.95**
S-8 Bulb 1" (25mm) Diameter					
GE-305	Wing/Tail	28	.51A	11-04174	**$3.90**
GE-306	Wing/Tail	28	.51A	11-04175	**$4.95**
GE-307	Wing/Tail	28	.67A	11-04176	**$3.35**
GE-308	Wing/Tail	28	.67A	11-04177	**$2.86**
GE-315	Wing/Tail	28	.90A	11-04180	**$3.95**
GE-1619	Instrument	6	4.1A	11-03025	**$3.85**
GE-1665	Aircraft	28	.80A	11-03034	**$3.35**
AML-1665AF	Aircraft	28	.80A	11-10813	**$2.35**
GE-1680	Wing/Tail	6	4.1A	11-04165	**$3.40**
GE-1691	Aircraft - 2 Filaments	28	.61A	11-03029	**$8.75**
GE-1692	Marine - 2 Filaments	28	.61A	11-03030	**$9.45**
GE-1777	Aircraft Tail Light	12.8	1.52A	11-04014	**$6.95**
GE-2233	Spiral Lead	28	.766A	11-03033	**$2.40**
S-11 Bulb 1-3/8" (35mm) Diameter					
GE-309	Aircraft	28	.90A	11-03036	**$5.70**
GE-311	Wing/Tail	28	1.29A	11-04178	**$4.50**
T-1 Bulb 1/8" (3mm) Diameter					
GE-685	Aircraft	5.0	.06A	11-03042	**$1.52**
GE-718AS15	Aircraft - 1 Filament	5.0	.115A	11-03043	**$1.65**
T-13/4 Bulb 7/32" (5.5mm) Diameter					
GE-85	Indicator	28	.04A	11-03044	**$2.30**
GE-327	Eyebrow/Post Lt.	28	.04A	11-04015	**$0.95**

Lamp No.	Primary/Application	Volts	Amps/Watts	Part No.	Price
GE-328	Panel Indicator	6	.20A	11-04181	**$1.65**
GE-330	Eyebrow/Post Lt.	14	.08A	11-04016	**$1.25**
GE-334	Panel Indicator	28	.04A	11-04182	**$1.35**
GE-387	Panel Indicator	28	.04A	11-04185	**$0.98**
GE-388	Panel Indicator	28	.04A	11-03045	**$1.35**
T-21/4 Bulb 9/32" (7.5mm) Diameter					
GE-786	Emergency-Halogen	6	2.0A	11-03046	**$7.60**
T-3 Bulb 3/8" (9.5mm) Diameter					
GE-1978X	Navigation	10	100W	11-03047	**$25.50**
GE-1982	Navigation	28	75W	11-03048	**$21.50**
T-31/4 Bulb 13/32" (10mm) Diameter					
GE-43	Indicator	2.5	.50A	11-03049	**$1.65**
GE-44	Panel Indicator	6.3	.25A	11-04186	**$0.97**
GE-316	Instrument	6	.70A	11-03050	**$4.35**
GE-323	Aircraft	3	.19A	11-13900	**$11.95**
GE-400	Aircraft	28	.10A	11-03054	**$2.10**
GE-757	Indicator	28	.08A	11-03053	**$1.62**
GE-1813	Wing/Tail-All Frosted	14.4	.10A	11-04166	**$1.95**
GE-1815	Indicator	14.0	.20A	11-03052	**$1.37**
GE-1816	Map/Dome Light	13	.33A	11-04167	**$1.60**
GE-1818	Panel Indicator	24	.17A	11-04168	**$2.85**
GE-1819	Panel Indicator	28	.04A	11-04169	**$1.65**
GE-1820	Panel Indicator	28	.10A	11-04170	**$1.90**
GE-1873	Aircraft	28	.17A	11-03056	**$5.60**
GE-464	Aircraft	28	.17A	11-03055	**$1.80**
GE-1864	Panel Indicator	28	.17A	11-04171	**$1.65**
T-4 Bulb 1/2" (13mm) Diameter					
GE-1986	Navigation	28	250W	11-03058	**$69.75**
GE-1987	Navigation	28	150W	11-03057	**$37.95**
T-5 Bulb 5/8" (16mm) Diameter Electric Discharge Lamps					
GE-1978X	Navigation	10	100W	11-03047	**$25.50**
GE-1982	Navigation	28	75W	11-03048	**$21.50**
GE-5004CW	Cool White	A.C.	4W	11-03060	**$8.50**
GE-5004WW	Warm White	A.C.	4W	11-03061	**$7.35**
GE-5008CW	Cool White	A.C.	8W	11-03063	**$7.05**
GE-5008WW	Warm White	A.C.	8W	11-03064	**$7.75**
GE-5104WW	Warm White	A.C.	4W	11-03062	**$5.35**
GE-5108WW	Warm White	A.C.	8W	11-03065	**$7.50**
GE-5113WW	Warm White	A.C.	13W	11-03068	**$6.65**
T-7 Bulb 7/8" (20mm) Diameter					
GE-1940	Rotating Beacon	14	3.57A	11-03794	**$13.75**
Cockpit & Wing/Tail Lights					
GE-53	Panel Indicator	14.4	1 CP	11-04193	**$0.99**
GE-67	Clock, tail, cargo area	13.5	8	11-01394	**$3.55**
GE-89	Cockpit Light	13	6 CP	11-04197	**$1.45**
GE-93	Wing/Tail	12.8	15 CP	11-04199	**$2.85**
GE-94	Wing/Tail	12.8	15 CP	11-04200	**$3.65**
GE-313	Cockpit Light	28	.17A	11-04179	**$1.95**
GE-336	Post Light	14	.08A	11-04183	**$1.10**
GE-356	Map Light	28	17A	11-04184	**$3.35**
GE-1073	Illuminator Lights	12.8	1.80A	11-04012	**$2.65**
GE-1141	Wing/Tail	12.8	1.44A	11-04161	**$1.85**
GE-1495	Panel Indicator	28	.30A	11-04164	**$3.15**

Note: GE brand bulbs will be provided if available. Some model lamps are no longer manufactured by GE, in which case we will provide an equivalent lamp meeting the same specifications.

EL

GE SEALED BEAM LAMPS FOR LANDING & TAXI LIGHTS

Lamp Diameter	Lamp No.	PAR	Design Volts	Watts	Part No.	Price
4 1/2" (114mm)	GEH-7604	36	12.8	50	11-04023	**$16.50**
4 1/2" (114mm)	GE-4509	36	13	100	11-03796	**$12.85**
4 1/2" (114mm)	GE-4700	36	13	100	11-03807	**$59.95**
5 3/4" (146mm)	GE-4522	46	13	250	11-03797	**$34.85**
4 1/2" (114mm)	GE-Q4631	36	13	250	11-03083	**$69.50**
4 1/2" (114mm)	GE-4313	36	13	250	11-03795	**$31.50**
4 1/2" (114mm)	GE-4537	36	13	100	11-03798	**$18.75**
4 1/2" (114mm)	GE-4502	36	28	50	11-04187	**$18.50**
8" (203mm)	GE-4552	64	28	250	11-04189	**$94.50**
8" (203mm)	GE-4557	64	28	400	11-04190	**$64.75**
8" (203mm)	GE-4559	64	28	600	11-04017	**$34.85**
4 1/2" (114mm)	GE-4627	36	28	100	11-03088	**$53.85**
4 1/2" (114mm)	GE-4626	36	28	150	11-04191	**$31.75**
4 1/2" (114mm)	GE-4589	36	28	50	11-03084	**$18.95**
4 1/2" (114mm)	GE-4593	36	28	50	11-03085	**$23.85**
4 1/2" (114mm)	GE-4591	36	28	100	11-03802	**$39.75**
4 1/2" (114mm)	GE-4594	36	28	100	11-03803	**$17.75**

Lamp Diameter	Lamp No.	PAR	Design Volts	Watts	Part No.	Price
4 1/2" (114mm)	GE-4713	36	28	150	11-03089	**$141.90**
4 1/2" (114mm)	GE-4587	36	28	250	11-03090	**$26.50**
5 3/4" (146mm)	GE-4551	46	28	250	11-03093	**$19.65**
5 3/4" (146mm)	GE-4553	46	28	250	11-03799	**$29.50**
5 3/4" (146mm)	GE-4554	46	28	450	11-03095	**$94.85**
5 3/4" (146mm)	GE-4571	46	28	150	11-03092	**$34.85**
5 3/4" (146mm)	GE-4581	46	28	450	11-03097	**$43.50**
5 3/4" (146mm)	GE-Q4681	46	28	450	11-03101	**$89.90**
5 3/4" (146mm)	GE-4582	46	28	450	11-03098	**$59.75**
5 3/4" (146mm)	GE-Q4566	46	28	450	11-03096	**$108.75**
5 3/4" (146mm)	GE-Q4597	46	28	450	11-03099	**$176.75**
7" (178mm)	GE-4541	56	28	450	11-03102	**$49.95**
8" (203mm)	GE-4559X	64	28	600	11-03104	**$46.50**
8" (203mm)	GE-Q4559	64	28	600	11-03103	**$58.85**
4 1/2" (114mm)	GE-4505	36	28	50	11-04188	**$19.90**
5 3/4" (146mm)	GE-4580	46	28	450	11-03901	**$29.75**
5 3/4" (146mm)	GE-4570	46	28	150	11-03801	**$14.95**

GARMIN AERA 500 SERIES GPS



The Garmin aera™ lineup of touchscreen GPS portables. Featuring crisp 4.3-inch QVGA wide-format displays with menu-driven tap-and-drag user interface. Transition seamlessly from runways to roadways with the best in Aviation and Automotive moving-map navigation. Leveraging Garmin's industry-leading expertise in integrated systems design, the aera series offers a full range of smart, easy-to-use guidance solutions for today's pilot/motorist. In your aircraft, the aera's detailed Sectional chart-style shaded mapping and extensive terrain and aviation databases (including private airports and heliports) help you visualize your flight path in relation to nearby navaids, terrain, SUAs, obstructions, and so on. For added safety, a database-driven terrain advisory feature offers TAWS-like color coding and pop-up alerts when possible obstructions or ground proximity conflicts loom ahead. Garmin's patented Panel Page affords a reassuring backup to your panel-mounted instruments with its exclusive display of GPS-derived HSI, altimeter, groundspeed, vertical speed and turn indication. Plus, on the aera 550 and 560 models, preloaded Garmin SafeTaxi® charts provide detailed taxiway diagrams and position information for over 950 U.S. airports – while an included AOPA Airport Directory database gives you detailed listings, phone numbers, facilities and fuel location information on over 7,400 U.S. landing sites, as well as airports of entry for Canada, Mexico and the Caribbean. Other premium aera 550/560 features include high-resolution 9 arc-second terrain/obstacle detail, database-derived IFR airways map mode, and more. Further, TIS traffic alerting is supported by all four aera models (through an interface with your aircraft's Garmin GTX 330 Mode S transponder or other compatible third-party traffic devices).

Description	Part No.	Price
aera 510 without XM Receiver/Antenna	10-05777 Americas	**$599.00**
aera 510 with XM 42 Weather/Antenna	11-13102 Americas	**$1,198.00**
	11-08051 Atlantic	**$999.00**

Accessories for the 500, 510, 550, and 560	Part No.	Price
Garmin aera Power Data Cable	11-08088	**$59.95**
Garmin aera Lithium-Ion Battery	11-08090	**$29.95**
Garmin Portable Friction Mount	11-08118	**$27.75**
Garmin aera Yoke Mount	11-08085	**$48.95**
Garmin aera Cigarette Lighter Audio Cable	11-08086	**$48.95**
Garmin 496 696 aera USB Cable	11-07503	**$13.95**
Garmin Vehicle Power Cable	11-08120	**$22.95**
Garmin GA 25MCX Antenna	11-07281	**$28.95**
Garmin GA 27C Remote Antenna	11-00052	**$78.50**
Garmin GA 26C Suction Cup Mount	11-02685	**$13.90**
Navishield Garmin aera Series	11-08217	**$14.95**
Airgizmo Garmin aera Dock	11-08321	**$119.95**
Glare Wizard for Garmin aera	11-08392	**$34.75**
Garmin aera Automotive Mounting Kit	10-05521	**$27.95**

Accessories for the 510 and 560 Only	Part No.	Price
Garmin aera Cigarette Lighter Audio/USB	11-08087	**$63.75**

Accessories for the 550 and 560 Only	Part No.	Price
Garmin GTM 20 Traffic Cable	11-08124	**$111.95**

GARMIN AERA 795/796 GPS



Revolutionary new 3D Vision technology shows a virtual 3-D behind-the-aircraft perspective of surrounding terrain derived from GPS and the onboard terrain database – a feature previously only available in our panel-mount avionics. Simply slide your finger across the touchscreen to rotate the view and show land and water features, obstacles, runways and airport signposts in relative proximity to the aircraft. Internal GPS provides position updates at a rate of 5 times per second (5 Hz). aera 796's bright 7" diagonal high-definition sunlight-readable display makes detailed mapping easy to see in any lighting conditions and works in both portrait and landscape mode. The physical design has been optimized to fit on the yoke or for use as a knee-mounted device. There are only 4 touch keys on the bezel representing "Back", "Menu", "Direct-to" and "Nearest" for quick navigation to the most frequent used functions. All other functions are quickly accessed through Intuitive onscreen icons with labels. This unique touchscreen interface even allows you to quickly pan across the map screen and pinch to zoom. Fullfills the role of either a Class I or Class II electronic flight bag, greatly reducing the need to rely on paper charts in the cockpit. Initial georeferenced VFR sectional and IRF enroute charts come preloaded that show your aircraft's position overlaid directly on the relevant chart. When in IFR map mode, the 796 can display victor airways, jet routes, minimum enroute altitudes and leg distance, much like what's found on traditional enroute charts.

aera 796 Americas without XM Weather P/N 11-12654.....**$1,499.00**
aera 796 Americas with GMX 42..... P/N 11-12870.....**$2,098.00**

Accessories	Part No.	Price
795/796 Power Data Cable	11-10044	**$59.95**
795/796 AC Power Home Dock	11-10045	**$139.50**
795/796 Carry Case	11-10046	**$49.95**

Accessories	Part No.	Price
795/796 Battery Pack	11-10047	**$178.95**
795/796 Lap Mount	11-10048	**$46.95**
Touchscreen Clean Cloth	11-10049	**$4.75**



GARMIN GMX 42 SIRIUS XM RECEIVER/GMX 40

Check the weather and listen to satellite radio with this receiver and a subscription to SiriusXM™ services. To set up, simply position the antenna and then connect it to your device. At this time, the GXM 42 is only compatible with the aera™ 796.

GMX 42..... P/N 10-05525..... **$599.00**



GARMIN AERA 660 GPS

Affordable feature-rich navigation, stunning display and streamlined database updating. This compact 5-inch capacitive touchscreen boasts a bright, sunlight readable display complete with rich, interactive maps and a built-in GPS/GLONASS receiver that can be viewed in portrait or landscape modes for optimum customization. The aera 660 encompasses many of the features of the renowned aera® and GPSMAP® aviation portable series, adding Connext® wireless capabilities, Garmin WireAware™ wire-strike avoidance technology and more. Cost-effective database options along with built-in Wi-Fi® database updating capabilities allow customers to more easily access the most up-to-date data, including daily U.S. fuel prices. Bluetooth® supports the display of ADS-B "In" traffic and weather1 from a variety of sources, including the GDL® 39/GDL 39 3D, Flight Stream and the GTX 345 ADS-B transponder.

North America..... P/N 10-06025..... **$749.00**

Accessories

Aera 660 Aviation Cradle, CLA - Aviation Mount with Power Cable and Audio Jack. ..... P/N 10-06027..... **$59.95**
Aera 660 Aviation Cradle Bare Wires - Connect the bare wires to a panel mount to transfer data..... P/N 10-06028..... **$59.95**
Aera 660 Aviation Cradle GDL - Receive ADS-B benefits with this connected mount. ..... P/N 10-06029..... **$59.95**
Aera 660 Ball and Socket Mount Kit..... P/N 11-14476..... **$32.80**
Aera 660 Rectangular Base with 1 inch Ball Mount ..... P/N 11-14474..... **$9.50**
Aera 660 Home Dock ..... P/N 11-14477..... **$28.50**
Aera 660 Orentiation Yoke Mount ..... P/N 11-14478..... **$48.75**

Prices Subject to Change Without Notice



GTX 345.

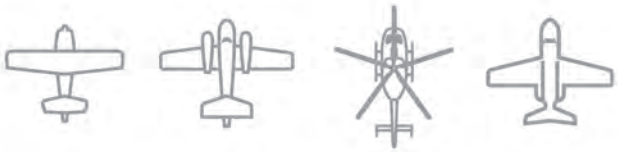
The all-in-one ADS-B solution that fits your panel.

The Garmin GTX 345 series of transponders. ADS-B Out and optional WAAS position source and ADS-B In for weather and traffic. Displays on select Garmin avionics, portables and tablets using Garmin Pilot™ and ForeFlight Mobile. And the same footprint as most existing transponders. Learn more at Garmin.com/ADS-B.

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GDL™ 52

PORTABLE RECEIVER | SYNTHETIC VISION | ADVANCED SXM® WEATHER | SIRIUS XM® MUSIC* | ADS-B TRAFFIC | PATENTED TARGETTREND™ TRAFFIC DISPLAY

GARMIN.COM/GDL52

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WHEN YOU'RE BUILDING YOUR PERFECT PANEL,

DOUBLE DOWN WITH TXi.



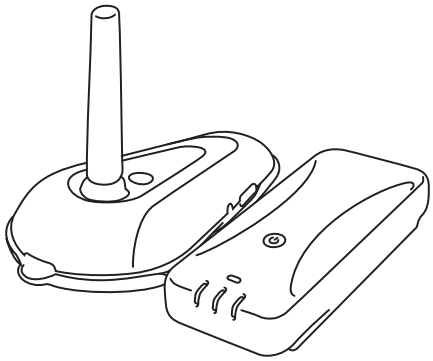
TXi™ SERIES FLIGHT DISPLAYS | HSI MAP | SINGLE-FINGER ZOOM | REMOVE STANDBY INSTRUMENTS | AUTOPILOT INTEGRATION | SYNTHETIC VISION

FASTER. SHARPER. SMARTER. AND OPTIMIZED FOR YOU.

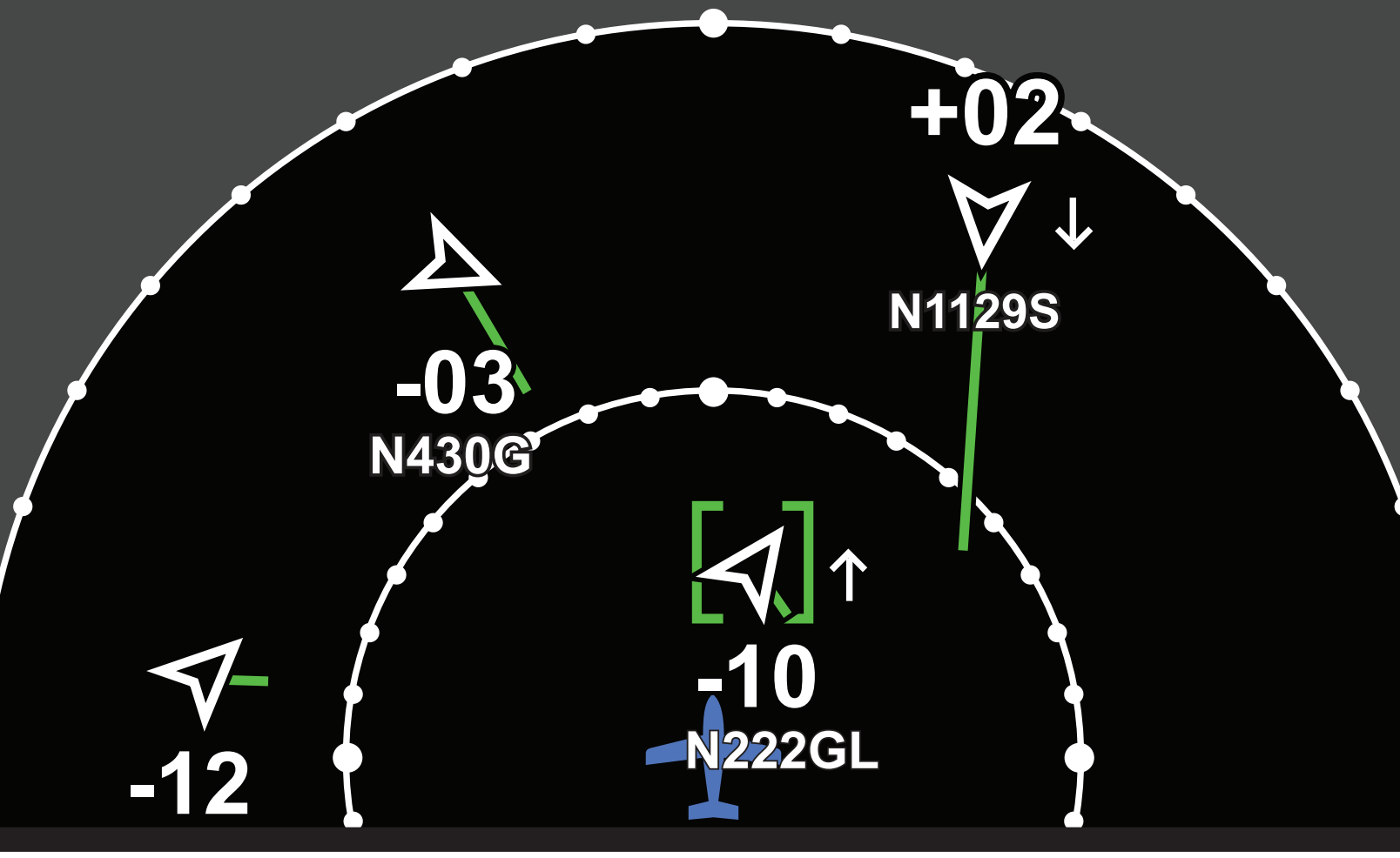
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YOU ALREADY HAVE ADS-B "IN." GET ADS-B "OUT" WITH A GTX 335 FOR $2,995[1], AND GET A MORE COMPLETE PICTURE OF THE TRAFFIC AROUND YOU.

Meet the requirements for ADS-B "Out" and unlock TIS-B ground station information with a single, affordable solution[2]. The Garmin GTX 335 ADS-B transponder with built-in WAAS position source. See. And be seen. **Garmin.com/GTX335**

[1]MSRP
[2]Promotional pricing available on orders placed before Dec. 29, 2017. See your Garmin Authorized Dealer for details.
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Major Dan Rooney | Folds of Honor founder, fighter pilot & PGA golfer





D2® Charlie Aviator Watch

- GPS NAVIGATION
- RICH MOVING MAP
- ADVANCED WEATHER DISPLAY
- GARMIN.COM/D2CHARLIE

Major Dan Rooney is a Garmin Ambassador. ©2017 Garmin Ltd. or its subsidiaries.



An opportunity like this only comes along once an airplane.

(Unless you add a second as your HSI).

G5 Electronic Flight Instrument with optional autopilot capability for your experimental or LSA. Or integrated backup to complete your G3X® or G3X® Touch system.

Learn more at Garmin.com/experimental.

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A LOT HAS CHANGED IN THE 25 YEARS SINCE WE INVENTED PORTABLE GPS NAVIGATION, INCLUDING PORTABLE GPS NAVIGATION



Introducing aera 660. Garmin.com/aera

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Attitude awareness you can bank on.

G5 electronic flight instrument for certificated aircraft.
Exceptional performance and reliability as a standalone primary attitude indicator or turn coordinator. Plus airspeed and altitude for enhanced situational awareness.

Garmin.com/Aviation

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GARMIN D2 PILOT GPS AVIATION WATCH



Garmin re-imagines the aviation portable with the first highly capable GPS watch designed specifically for aviators. D2's features include Garmin's signature direct-to and nearest navigation functions, as well as a built-in altimeter with adjustable baro setting, altitude alerting capabilities, display of both local and Zulu/UTC time, and the ability to seamlessly integrate with the Garmin Pilot™ app, VIRB™ action camera, and more.

Description	Part No.	Price
Garmin D2 Usb Charger Cable	10-05481	**$19.99**
Garmin D2 Euro Ac Adapter	10-05482	**$24.75**
Garmin D2 Ac Adapter	10-05910	**$19.50**
Grmin D2 External Battery Pack	10-05484	**$78.75**
Garmin D2 GPS Abc Watch Band Olive Green	10-05485	**$15.26**
Garmin D2 GPS Abc Leather Watch Band	10-05486	**$34.95**
Garmin D2 GPS Abc Watch Band Light Gray	10-05487	**$15.25**
Garmin D2 GPS Abc Watch Band Black	10-05489	**$15.85**
Garmin D2 GPS Abc Watch Band Orange	10-05490	**$15.85**
Garmin D2 Tempe	10-05491	**$28.95**
Garmin D2 Fabric Wrist Strap Kit	10-05492	**$21.25**
Garmin D2 Bicycle Mount Kit	10-05493	**$12.75**
Garmin D2 Carabiner Strap	10-05494	**$28.75**
Garmin D2 Official Geocaching Kit	10-05495	**$19.75**
Garmin Heart Rate Monitor	10-05497	**$49.95**
Garmin D2 Foot Pod	10-05498	**$68.75**
Garmin Soft Strap Premium for Heart Rate Monitor	10-05499	**$11.75**
Uma 2-1/4 Vsi 0-2000 Ft.	10-05500	**$315.00**
Garmin Chirp	10-05502	**$26.50**

GARMIN D2 BRAVO GPS AVIATION WATCH



The Garmin D2 Bravo incorporates Garmin's signature direct-to and nearest airport navigation features complete with a worldwide aviation navigation database. New and exclusive benefits such as altitude alerts including preset alerts for altitudes requiring supplemental oxygen, as well as easy access to current aviation weather information, set D2 Bravo apart from other pilot watches on the market. In addition to in-flight functionality, D2 Bravo incorporates versatile activity tracking features and multi-sport functions while supporting Smartphone connectivity. With uncompromising details such as a stainless steel bezel and domed sapphire lens, D2 Bravo combines GPS and wearable technology that Garmin is known for and offers a sophisticated new form factor suitable for pilots and aviation enthusiasts alike.

Garmin D2 Bravo Aviation Watch ..... P/N 10-05888 ..... **$549.00**
D2 Bravo Charging Clip ..... P/N 11-14405 ..... **$24.99**
Leather Replacement Band - Black ..... P/N 11-14409 ..... **$59.99**
Leather Replacement Band - Brown ..... P/N 10-05889 ..... **$59.99**

GARMIN D2 BRAVO PILOT WATCH TITANIUM EDITION



Garmin is pleased to introduce D2 Bravo Titanium, an addition to the popular D2™ family of pilot watches. D2 Bravo Titanium is a premium aviation GPS smartwatch that combines contemporary design with sophisticated connectivity to bring pilots and aviation enthusiasts an elite aviator watch. With uncompromising details such as a hybrid titanium band and gunmetal bezel, sapphire lens and high-resolution color display, D2 Bravo Titanium combines the GPS wearable technology Garmin is known for with a sleek form factor suitable for activities both inside and outside of the cockpit. It also boasts new multisport activity profiles like golf and advanced fitness training, as well as the addition of Garmin Elevate™ wrist-based heart rate technology, allowing customers to measure heart rate 24/7. Additional features on D2 Bravo Titanium are also available to existing D2 Bravo customers via a free software upgrade, including the display of Terminal Aerodrome Forecasts (TAFs), integration of an automatic logbook and a customizable aviation watch face that allows customers to input the tail number of their aircraft. ..... P/N 11-14403 ..... **$849.00**

GARMIN D2 CHARLIE PILOT WATCH



The D2 Charlie aviator watch is an elegant and functional timepiece that boasts global navigation information, rich and colorful moving maps and a host of connectivity options. Designed with pilots, aviation enthusiasts and aspiring pilots in mind, the D2 Charlie aviator watch features high-resolution mapping, real-time worldwide weather radar as well as airport information that includes frequencies, runway information, METAR data and more. Garmin Elevate™ wrist heart rate technology also allows customers to measure heart rate 24/7 alongside daily activity tracking. Available with leather and silicone bands or in a titanium edition featuring titanium and silicone bands, D2 Charlie can easily adapt in seconds using these QuickFit™ bands for use in the cockpit, on the golf course or in the boardroom.

Titanium ..... P/N 11-15323 ..... **$999.00**
Leather ..... P/N 11-15320 ..... **$799.00**

GARMIN GPS TRADE-IN / TRADE-UP PROGRAM

Trade-in only applies towards a purchase of a new Garmin unit listed below (one unit per trade-in). Trade-in must be complete, having all accessories, and the unit must be in good cosmetic and working condition. Any unit not meeting this requirement can receive a lesser trade-in value or have the unit returned.

1. Purchase a new GPSMAP 695, 696, or Aera 500, 510, 550, 560.
2. At the time of order, our sales representatives will give you your customer number and order number to use when sending in your trade-in unit.
3. Once you receive your new Garmin unit, please call our customer service number at 800-861-3192 and reference your customer number and order number to receive an RMA to ship your trade-in to Aircraft Spruce and Specialty.
4. After we receive your trade-in, we will verify that the unit is complete and in good cosmetic and working condition. Once verified we will credit you the trade-in value. ***Units with missing accessories will add delay to the credit process. Please note that Garmin does not repair the GXM 40 antenna, so all XM GPS units must be working or may be returned to customer.***

GDL 39 ..... **$250.00**
GPSMAP 496 ..... **$900.00**
GPSMAP 495 ..... **$750.00**
GPSMAP 396 ..... **$650.00**
GPSMAP 296 ..... **$500.00**
GPSMAP 196 ..... **$200.00**
GPSMAP 696 ..... **$1,100.00**
GPSMAP 695 ..... **$900.00**
aera 560 ..... **$1,075.00**
aera 550 ..... **$725.00**
aera 510 ..... **$600.00**
aera 500 ..... **$350.00**

Verify current trade-in values at time of order by calling 877-477-7823 or email us at info@aircraftspruce.com. We will beat any other supplier's price on any unit. Aircraft Spruce no longer accept the Pilot III, 90 Series, 195, 196, 295, 296, 396, 495 or 496 for trade.

USED GARMIN GPS UNITS

Used Garmin GPS units are subject to availability.
Please call 877-477-7823 for availability and current prices.

Description	Part No.	Price
Used GDL 39	11-12370	**$450.00**
Used Garmin GPSMAP 196	11-02713	**$250.00**
Used Garmin GPSMAP 296	11-03593	**$475.00**
Used Garmin GPSMAP 396	11-04737	**$625.00**
Used Garmin GPSMAP 495	11-07063	**$825.00**
Used Garmin GPSMAP 496	11-07064	**$450.00**
Used Garmin GPSMAP 695	11-10051	**$800.00**
Used Garmin GPSMAP 696	11-10050	**$875.00**
Used Garmin aera 500	11-09522	**$325.00**
Used Garmin aera 510	11-09521	**$400.00**
Used Garmin aera 550	11-09520	**$575.00**
Used Garmin aera 560	11-09519	**$550.00**

GARMIN PILOT™ AVIATION APP



Garmin is excited to announce Garmin Pilot, a new aviation app for the iPad, iPhone, and Android mobile devices. The app brings Garmin's industry-leading aviation technology to mobile devices; offering pilots complete trip planning, DUATS filing, weather, navigation and electronic flight bag capabilities. Garmin Pilot is the perfect complement to our extensive line of aviation navigation products and services. Garmin Pilot incorporates the intuitive icon user interface and many of the same great features from our other popular products. Pilots will find it very familiar and easy to use. The Garmin Pilot app will help with every facet of your trip - Planning, Filing, and Flying.

Note: Garmin Pilot app only serves USA for charts and navigation. Expanded coverage expected in future.

Pro with Safe Taxi and Geo-Ref Charts ..... P/N 13-11867.....**$149.99**

GARMIN GXM 42 SIRIUS XM RECEIVER



The Garmin GXM 42 portable SiriusXM Aviation weather receiver that when paired with an aera 796 allows pilots to access new weather services made available by SiriusXM's enhanced satellite network. The updated SiriusXM Aviation service gives pilots access to comprehensive weather products as they become available, allowing operators to make educated decisions in-flight as it relates to weather. The GXM 42 is the latest addition to a vast lineup of weather antenna receivers to offer state-of-the-art SiriusXM Aviation information. GXM 42 can also receive SiriusXM Satellite Radio for an additional fee.

P/N 10-05525.....**$599.00**

GARMIN USB AVIATION DATA CARD GNS™ SERIES PROGRAMMER



Garmin USB Aviation Data Card Programmer for the GNS series of products. Boasting improved performance and RoHS compliance (allowing global availability), this data card programmer enables customers to transfer terrain and obstacle databases from flygarmin.com with unprecedented speed and efficiency. The data card programmer offers greatly enhanced transfer speeds, ensuring that dealers and customers alike spend less time in front of the computer. When transferring Terrain and Obstacle databases to GNS 430/530 WAAS and non-WAAS data cards, users can expect up to 80% faster transfer speeds. This data card programmer is backwards compatible with previous Terrain data cards, so a data card is not required. P/N 10-05931.....**$69.75**

GARMIN FLIGHT PLAN MIGRATOR KIT



Flight Plan Migrator Kit to include the new data card programmer. This kit will benefit from the speed improvements that this data card programmer delivers. The Flight Plan Migrator Kit will be available in the fourth quarter.

P/N 11-14031.....**$397.00**

AV



GARMIN GPSMAP 696 / 695 QUICK REFERENCE GUIDE

This reference guide is compatible with the GARMIN GPSMAP 696/695. P/N 11-07351 .....**$39.99**



GARMIN 296/396 HOW TO DVD

P/N 11-07816 .....**$25.00**

GARMIN HIGH SPEED MULTI CHARGER



Add 2 high-speed USB ports to your vehicle's 12 V outlet without losing the ability to power your compatible device. Use each USB port to charge a phone, tablet or any other device that needs power on the go. P/N 11-12113 .....**$27.50**



QREF GUIDES FOR GPS UNITS

Now you've got a choice. The quick reference books feature easy-to-use tabbed pages for concise procedures and navigation help in a compact size, prefect for someone who wants complete information or is new to a system. The cards provide all the essential information in a 5" x 8" full-color, hard plastic card for those who are already familiar with their system. Either way, Qref keeps you in the know, quickly and easily.

GPS Model	Card P/N	Price	Book P/N	Price
Garmin aera	13-07064	**$13.99**	13-07063	**$27.95**
GPSMAP 195	13-06355	**$13.95**	13-06291	**---**
GPSMAP 196	13-06356	**$13.95**	13-06292	**$18.95**
GPSMAP 295	13-06357	**$13.95**	13-06293	**$22.95**
GPSMAP 296	13-06360	**$13.95**	13-06294	**$22.95**
GPSMAP 396	13-06362	**$13.95**	13-06295	**$27.95**
GPSMAP 495	13-06362	**$13.95**	13-06313	**$21.95**
GPSMAP 496	13-06362	**$13.95**	13-06315	**$25.95**
GPSMAP 696/695	13-06363	**$13.95**	13-06316	**$27.85**
GMX200	13-06353	**$13.95**	---	---
GNS 430	---	---	13-06288	**$27.95**
GNS 480/CNX80	13-06418	**$13.95**	13-06289	**$27.95**
GNS 530/430	13-06354	**$13.95**	13-06290	**$27.95**
G1000 Card	13-06417	**$13.95**	---	---
G1000 non WAAS	---	---	13-06423	**$48.95**
G1000 WAAS	---	---	13-06424	**$48.95**
Garmin Cirrus	---	---	13-06425	**$48.95**
AIRMAP 2000C	13-06365	**$13.95**	13-06317	**$21.75**
AIRMAP 600C	13-06364	**$13.95**	13-06318	**$16.95**
AV8OR	13-06348	**$13.95**	13-06287	**$27.95**
AV8OR Ace	13-07066	**$13.95**	13-07065	**$28.95**
GEOPILOT II	13-06347	**$13.95**	13-06286	**$24.95**
EKP-II			13-06285	**$27.95**
EKP	13-06322	**$13.95**	---	---
KLN 89B	13-06368	**$13.95**	---	---
KLN 90B	13-06367	**$13.95**	---	---
KLN 94	13-06366	**$13.95**	13-06422	**$23.95**
KLN GX Series	13-06369	**$17.25**	---	---
Avidyne Entegra version 3-5	---	---	13-06358	**$48.95**
Avidyne Entegra version 6-7	---	---	13-06359	**$48.95**

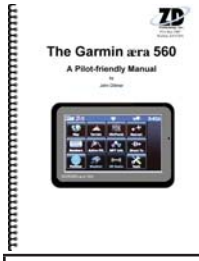
VISIT OUR WEBSITE FOR A COMPLETE LIST OF QREF GPS GUIDES.



JEPPESEN GARMIN GPSMAP TRAINING CDS

The Jeppesen Training CDS let pilots learn at their own pace, practicing procedures at the comfort and safety of a computer desktop, rather than flying heads-down. Easily and quickly get the users familiar with operations by using a visual hands-on approach.

Description	Part No.	Price
Jeppesen GPSMAP 196 Interactive	11-02442-1	**$52.25**
Jeppesen GPSMAP 296 Interactive	11-02848-1	**$46.70**
Jeppesen GPSMAP 396 Interactive	11-04514-1	**$63.95**



GPS MANUALS

Pilot-friendly manuals are available for most receivers. Our task-oriented manuals are simplified directions that lead you step-by-step through all the GPS operations. Includes descriptions of all page

s.

Description	Part No.	Price
Garmin aera 560 Manual	11-10829	**$34.95**
GPSMAP 396 Guidebook	11-04311	**$40.00**
GPSMAP 196 Guidebook	11-04313	**$36.75**
Garmin G300 Manual	11-09130	**$49.95**
Garmin G900X Manual	11-09093	**$54.95**
Bendix/King KLN-90B Guidebook	11-04303	**$39.95**
Bendix/King KLN-90B/900 Guidebook	11-04305	**$45.00**

GARMIN GLO FOR AVIATION



GLO for Aviation can receive position information from both the GPS and GLONASS satellite constellations, allowing it to connect to up to 24 more satellites than devices that rely on GPS alone. This allows GLO to lock on to satellites approximately 20% faster and keep up with even the most demanding jet speeds. What's more, GLO updates its position information 10x per second – up to 10x more often than the GPS receivers in many mobile devices. In the Box: • GLO Unit • Cigarette Lighter • Mount • USB Cable • 6 month trial for Garmin Pilot App. ***Note: Garmin Pilot app only serves USA for charts and navigation. Expanded coverage expected in future. Garmin GLO will provide aviation grade GPS signal worldwide.***

Description	Part No.	Price
Garmin GLO For Aviation	11-10779	**$129.00**
Garmin GLO GPS with Vehicle Power Cable	11-11571	**$99.00**
Accessories	**Part No.**	**Price**
Garmin Pilot App Pro Unlock W/ Safetaxi & Geo Ref Charts	13-11867	**$149.99**

GARMIN GTX 35R ADS-B KIT



Advanced ADS-B "Out" Solution for Experimental Aircraft. Integrates with G3XTM series flight displays for fingertip control and squawk code entry. Satisfies NextGen requirement for ADS-B "Out" when paired with a GPS position source. Provides 1090 MHz ES (Extended Squitter) output for operations at any altitude, in airspace around the world. Simplifies installation with remote-mount design that saves panel space. Offers low power consumption and enhanced reliability. ..P/N 11-14575 .....**$2,165.00**

GARMIN GTX 45R KIT



Complete ADS-B Solution for Experimental Aircraft. Integrates with G3XTM series flight displays for fingertip control and squawk code entry. Satisfies NextGen requirement for ADS-B "Out" when paired with a compatible GPS position source. Provides 1090 MHz ES (Extended Squitter) output for operations at any altitude, in airspace around the world. Supports dual-link ADS-B "In," which provides the most complete traffic picture, plus subscription-free weather on select avionics, mobile devices and portables[1]. Streams weather, traffic, GPS position and backup attitude via Connext® to Garmin Pilot™ and ForeFlight Mobile apps as well as aera® 795/796 and aera 660 portables. P/N 11-14574 .....**$3,437.00**

TRIG TN70 ADS-B SYSTEM





If you already own a suitable Trig transponder then our TN70 kit is the easiest way to meet the mandate. The TN70 includes a certified WAAS GPS and companion WAAS GPS antenna, designed to enhance your aircraft via a simple install that will deliver excellent ADS-B Out performance. If you need a Trig transponder to complete your TN70 ADS-B solution, then simply add one of our class leading products certified to FAA TSO C166b, the latest ADS-B standard. A Trig transponder is the hub of an ADS-B Out system, using 'extended squitter' to communicate with ground stations and suitably equipped aircraft. It's worth remembering; if you intend to use ADS-B In to access ADS-B ground services (TIS-B and FIS-B) then a compliant ADS-B Out must be installed. A Trig transponder is an ideal way to ensure your ADS-B Out is compliant.

TN70 ..... P/N 11-13061 .....**$1,865.00**
TN70 with custom harness..... P/N 11-13303 .....**$1,944.00**

TRIG TN72 GPS RECEIVER



Flying in busy skies, or in remote areas means that many pilots want to exploit the visibility and safety that ADS-B provides. ADS-B In traffic receivers, used in general aviation today, allow a pilot to view ADS-B Out equipped aircraft on a cockpit display. The TN72 meets the position requirements of FAR 91.227 and can be used by Light Sport and Experimental aircraft in the U.S. to meet the 2020 ADS-B mandate. The TN72 is a highly affordable solution when used in combination with a Trig transponder. A TN72 will be visible across all ADS-B In traffic platforms. By installing a TN72 with your Trig transponder you will have a certified collision avoidance safety benefit – that's easy to install and proven to work with Trig transponders. ..... P/N 11-14845 .....**$359.00**

TRIG 2020 ADS-B BUNDLE



Many pilots are equipping with ADS-B and Trig provides solutions for both certified and uncertified aircraft owners. Trig's 2020 ADS-B Bundle, for light-sport, experimental and home builders. Trig's ADS-B kit contains all the certified components needed to allow flight in 2020 rule ADS-B airspace for these aircraft types. The ADS-B Bundle features; Trig's highly popular TT22 compact transponder, the latest TN72 X GPS Position Source (certified to TSO-C199) and the matching TA70 GPS antenna. This provides a fully compatible ADS-B Out solution that meets the requirements of FAR 91.227 for light-sport and experimental aircraft. Customers will save by purchasing the bundle over the regular price.

P/N 11-16299 .....**$2,569.00**

GARMIN GDL 39/393D ADS-B RECEIVER



The GDL 39 portable ADS-B receiver combines a dual-link ADS-B receiver and a GPS receiver into a single unit that streams ADS-B traffic and subscription-free weather to Garmin aviation portables, iPads and a wide array of other mobile devices. The GDL 39 provides wireless support for the aera 796/795 and compatible mobile devices, such as the iPad, via built-in Bluetooth connection. Other Garmin portables including the GPSMAP 696/695 and the aera 500 series can connect to the GDL 39 with a single cable.

Description	Part No.	Price
GDL39 Portable ADS-B and GPS Receiver for GPSMAP696/695	11-10725	**$599.00**
GDL39 Portable ADS-B and GPS Receiver for GPSMAP396/496/495	11-10726	**$599.00**
GDL39 Portable ADS-B and GPS Receiver for aera 500 Series	11-10727	**$599.00**
GDL39 Portable ADS-B and GPS Receiver with DC Power Cable "IPAD" and Android /795	11-10728	**$599.00**
GDL39 Portable ADS-B and GPS Receiver for aera 796/795	11-10729	**$599.00**
GDL39 Portable ADS-B and GPS Receiver with Bare Wire "BT"	11-10730	**$599.00**
GDL 39 Portable Receiver for iPad/Android/795 w/Battery	11-11587	**$649.00**
GDL39R Remote Mount Remote Mount Portable ADS-B & GPS Receiver	10-05503	**$799.00**
GDL 39 3D Portable Receiver for iPad/Android/795 w/Battery	11-12368	**$899.00**
GDL 39 ADS-B / GPS with Aera 660 Aviation Cradle	11-14882	**$599.00**
GDL 39 3D ADS-B / GPS with Aera 660 Aviation Cradle	11-14881	**$849.00**
GDL 39 3D Portable ADS-B / GPS Receiver	11-12367	**$849.00**
Power/Data Cable,GDL39 to GPSMAP696/695	11-10732	**$63.75**
Power/Data Cable,GDL39 to GPSMAP 396/496/495	11-10733	**$59.95**
aera 500 Series Aviation Mount,CLA w/audio, mini-B & GDL39	11-10734	**$63.75**
Power/Data Cable,Bare Wire,GDL39	11-10735	**$63.75**
aera 796/795 Aviation Mount,CLA w/audio, mini-B & GDL39	11-10736	**$59.95**
Battery,GDL39	11-10737	**$89.95**
GDL 39 Mount	11-10799	**$48.95**
GDL 39 Carry Case	11-10800	**$18.95**
GDL 39 Replacement Antenna	11-10802	**$29.95**

FLIGHTBOX DUAL-BAND ADS-B RECEIVER



FlightBox Dual Band is an in-flight weather and traffic receiver. It receives ADS-B data over both the UAT 978 MHz band and the 1090-ES band, with support for uplink weather and traffic data from FAA ground towers and for direct ship-to-ship traffic from both 1090-ES and UAT-equipped aircraft. Fully Assembled System: This version of FlightBox is sold fully assembled, tested, and ready to run. Simply power it up and fly. One Year Warranty: All factory assembled FlightBox systems come with a one year warranty and one year of technical support.

Part No.	Description	Price
11-14763	OFS Flightbox Dual-band ADS-B Receiver	**$325.00**
11-14764	OFS Flightbox Dual-band ADS-B Receiver W/ GPS	**$360.00**
11-14765	OFS Flightbox Dual-band ADS-B Receiver With Battery Pack	**$360.00**
11-14766	OFS Flightbox Dual-band ADS-B Receiver W/ GPS Battery Pack	**$395.00**
11-14767	OFS Remote Antenna Mount Kit For ADS-B	**$60.00**
11-14768	OFS Glare Shield Friction Mount For ADS-B	**$40.00**
11-14769	OFS Remote Usb GPS Unit For ADS-B	**$35.00**
11-14770	OFS Serial Interface For ADS-B	**$75.00**

TRIG TA70 GPS ANTENNA



The TA70 can be paired with either the TN70 or TN72 GPS receivers. Each antenna comes with a simple installation guide and fixing kit. The antenna is light, easy to install and comes with a superior gasket feature – this provides coverage of existing antenna holes, giving a secure and weather tight seal. The TA70 antenna is included as standard in a TN70 GPS kit. This simplifies compliance as both the GPS and antenna meet the FAA 2020 mandate for ADS-B. For certified aircraft owners in North America, Trig offers a free FAA STC for the TA70 – this makes it straight forward to use in numerous popular airplane types.

P/N 11-15241 .....**$299.00**

AV

KING KGX 150R ADS-B UAT RECEIVER



ADS-B Receiver with optional WIFI, best optimized for those who fly above and below 18,000 feet or want to replace their existing transponder with the KT 74 1090 extended squitter transponder. Also includes an integrated ADS-B OUT Compliant WAAS GPS. The KGX 15OR provides the ADS-B traffic and weather services to non-certified wireless tablet or certified compatible panel display. No external controller is needed.

KGX150R..... P/N 11-15381.....**$2,595.00**
KT74/KGX150R Package ..... P/N 11-15380.....**$6,520.00**

STRATUX PORTABLE ADS-B IN GPS



If you're a pilot, chances are good that you've heard about ADS-B. You probably know that an ADS-B receiver can make flying safer and more efficient by providing real-time weather, traffic, TFRs, and other flight data directly to your iFly 720, 740 and all WiFi enabled tablets and phones! You probably also know that most of the ADS-B receivers on the market are quite expensive. Stratux RXWX is shipped fully assembled; just power it up and fly.

P/N 11-15474 .....**$189.00**

LEVIL BEACON ADS-B OUT WITH GPS



It allows pilots to broadcast their position to both ground stations and other aircraft around, making aviation safer. Allows EA pilots to have an all-in-one solution that eliminates the need to upgrade avionics. Available to consumers at a lower price than any existing solution in the market today. Minimized installation time and cost with an integrated circuit board, altimeter encoder, WAAS GPS, and wireless sniffer. Combining low cost, easy installation, and practicality make the Beacon one of the top competitors in the ADS-B market.

With GPS ..... P/N 11-15313.....**$1,315.00**

UAVIONIX SKYBEACON INTEGRATED WINGTIP ADS-B OUT SYSTEM



SkyBeacon is a 2020 compliant, near zero-install, Class B1S ADS-B UAT transmitter integrated into a wing tip position light for experimental aircraft. An internal wireless monitor decodes replies from legacy Mode C transponders. Integrated uAvionix FYX WAAS GPS. 14 CFR §91.227 compliant. Smart phone configurable over WiFi. For Experimetal Aircraft Only.

P/N 11-15515 .....**$1,499.00**

UAVIONIX ECHOUAT ADS-B OUT TRANSCEIVER



Traffic | Weather | 2020 Compliant ADS-B Out. echoUAT is a remotely mounted ADS-B transceiver that provides 2020 compliance, traffic and weather to your EFIS and iPad for the same cost as ADS-B receive-only solutions. For use in Light Sport and Experimental Aircraft. While other companies are looking to cash in on the ADS-B mandate by selling you a new transponder and WAAS GPS, uAvionix is taking a different approach. echoUAT works with your existing avionics, allowing you to put your savings in the fuel tank and fly more. Keep your Mode C transponder (Already have a KT76A, Narco, Garmin Mode C, Apollo, Becker, Funkwerk, Microair or Terra? With the echoUAT wireless transponder monitor, there is no need to replace your existing transponder.) Use your existing WAAS GPS Traffic and Weather to your existing supported EFIS Support for popular iPad and Android Apps.

P/N 11-15205 .....**$999.00**

UAVIONIX BUNDLE ECHOUAT WITH SKYFYX-EXT ALL-IN-ONE RECEIVER



The echoUAT is a Class B1S ADS-B UAT transmitter coupled with a dual-link 1090MHZ / UAT receiver. An integrated Wi-Fi system transmits traffic and weather to popular Electronic Flight-Bag (EFB) applications on iOS and Android, including ForeFlight Mobile. Direct interface support for common EFIS systems such as Dynon SkyView, GRT and MGL. A zero-install, internal wireless monitor decodes replies from legacy Mode C transponders for maximum retro-fit capability. Extensive position source compatibility, including the uAvionix SKYFYX GPS. The echoUAT meets the performance requirements of 14 CFR 91.227. SkyFYX combines a high precision WAAS GNSS sensor with an integrated RAIM processor. Resilient against jamming, spoofing and GPS range errors—SkyFYX provides reliable navigation in challenging environments. SkyFYX is the most affordable ADS-B rule-compliant position source companion for the echoUAT ADS-B transceiver.

All in Oe..... P/N 11-15210.....**$1,399.00**
Remote Mount..... P/N 11-15209.....**$1,450.00**

UAVIONIX SKYFYX-EXT GPS ALL-IN-ONE RECEIVER AND ANTENNA



SkyFYX combines a high precision WAAS GNSS sensor with an integrated RAIM processor. Resilient against jamming, spoofing and GPS range errors—SkyFYX provides reliable navigation in challenging environments. SkyFYX is the most affordable ADS-B rule-compliant position source companion for the echoUAT ADS-B transceiver. The SkyFYX meets the performance requirements of 14 CFR 91.227. For use in Experimental and LSA aircraft. P/N 11-15215 .....**$571.00**

UAVIONIX SKYFYX GPS SOURCE REMOTE MOUNT RECEIVER



SkyFYX combines a high precision WAAS GNSS sensor with an integrated RAIM processor. Resilient against jamming, spoofing and GPS range errors—SkyFYX provides reliable navigation in challenging environments. SkyFYX is the most affordable ADS-B rule-compliant position source companion for the echoUAT ADS-B transceiver. The SkyFYX meets the performance requirements of 14 CFR 91.227. For use in Experimental and LSA aircraft. P/N 11-15206 .....**$548.00**

AV

Prices Subject to Change Without Notice

STRATUS 2S PORTABLE ADS-B IN / GPS / AHRS RECEIVER



For several years Stratus has given pilots easy situational awareness for an unbelievable price. It's the simple-to-use, pocket-sized, portable wireless receiver that transforms your iPad into the ultimate flight tool. Pilots get subscription-free weather, GPS information, back up attitude and ADS-B traffic – all integrated with ForeFlight Mobile. The best just got better with the Stratus 2S. The model offers improved performance across the board, including better ADS-B reception, enhanced thermal capabilities, and a next generation power connector.

Features:
Built for ForeFlight
Subscription-free in-flight weather
Built-in AHRS
Dual-band ADS-B traffic
WAAS GPS unlocks track up and terrain
8-hour battery
Designed, tested and built in the USA
Product Specs

P/N 11-14468 ..... **$899.00**

APPAREO STRATUS ES DIGITAL TRANSPONDER FOR EXPERIMENTAL AIRCRAFT



Note: Unit can only be sold for experimental aircraft.
Stratus ES is a 1090 MHz extended squitter (ES) transponder. Designed with the common 1.65 tall form factor, it's an easy replacement for your existing transponder. Stratus ES is a solid state transmitter that provides 310 watts nominal power output. Its modern keypad makes entering a squawk code easy. The convenient VFR button minimizes pilot keystrokes.
The Stratus ES was built without GPS in order to provide affordable ADS-B Out to aircraft owners who have already invested in WAAS GPS. Stratus ES will make an aircraft rule-compliant when paired with any of the following navigators for 2020 compliance:
Garmin 430W, 530W, 650, 750
Avidyne IFD440, IFD540

ES Unit Only - No Harness..... P/N 11-15407..... **$2,395.00**
ith 4ft Harness ..... P/N 11-15408..... **$2,519.00**

APPAREO STRATUS ESGI TRANSPONDER AND STRATUS 2I ADS-B RECEIVER



Stratus ESGi is a kit that contains two products: a certified Stratus ESG transponder, and a non-certified ADS-B receiver.
Features:
- 1090ES (Mode S extended squitter)
- Built-in WAAS GPS
- Meets global mandates for ADS-B Out
- Push-button operation
- Easy-to-use interface
- Pressure altitude monitor

Unit Only - No Harness ..... P/N 11-14859..... **$3,295.00**
Unit with 4ft Harness ..... P/N 11-15482..... **$3,370.00**
Unit with Custom Harness..... P/N 11-15484..... **$3,415.00**

APPAREO STRATUS ESG 1090 ES DIGITAL TRANSPONDER



Note: Unit can only be sold for experimental aircraft.

Stratus ESG was designed as a simplified "all-in-one box" solution for 2020 compliance, with non-glass panel aircraft in mind. ADS-B Out Transponder. Built-in WAAS GPS. GPS antenna included. Stratus ESG is a 1090 MHz extended squitter (ES) transponder with built-in WAAS GPS. Designed with the common 1.65" tall form factor, it's an easy replacement for your existing transponder. Stratus ESG is a solid state transmitter that provides 310 watts nominal power output. Its modern keypad makes entering a squawk code easy. The convenient VFR button minimizes pilot keystrokes.

Description	Part No.	Price
ESG Unit Only	11-14464	**$2,795.00**
With Custom Harness	11-14467	**$2,889.00**
With 4 ft. Harness	11-14466	**$2,844.00**
Interface Kit	11-14673	**$148.95**
ABS-B Antenna	11-14672	**$57.95**
Stratus 1S/2S Appareo Interface Kit	11-14673	**$148.95**
Stratus 2 Appareo Interface Kit	11-16213	**$150.00**

GARMIN GDL® 50 PORTABLE ADS-B / GPS RECEIVER



Note: For use with the Garmin Pilot App and other Garmin Portable systems only.
Note 2: GDL 50 can only receive ADS-B information in the USA.
Wirelessly Link to Weather, Traffic, GPS and More
Receive subscription-free animated U.S. datalink weather¹ via ADS-B "In". ADS-B "dual-link" traffic with TargetTrend™ and TerminalTraffic™ technology3. Wireless connectivity for display on select mobile device apps and Garmin portables. Compact device with rechargeable battery; designed to sit on aircraft glareshield. Provides GPS position data, backup attitude and more
Providing an easy-to-use and completely portable aviation datalink, the compact GDL 50 ADS-B receiver lets you access the subscription-free ADS-B weather and traffic services available in the U.S. — all while providing GPS position, speed and altitude information as well as backup attitude reference. Better still, you can use our Connext® wireless connectivity to stream this information onto multiple Garmin aviation portables (including aera® 660, aera 796 or aera 795 series) as well as iPad® tablets and mobile devices with the Garmin Pilot™ app.

GDL-50 ..... P/N 11-16232..... **$799.00**
GDL-50R (Remote) ..... P/N 11-16233..... **$799.00**

GARMIN GMC 507 AUTOPILOT CONTROL HEAD FOR G3X



When installed with G3X Touch flight displays, the GMC 507 offers alternative, dedicated autopilot controls. While autopilot features can be selected using the touchscreen controls on G3X Touch flight displays, this unit allows for easier pitch, vertical speed and airspeed adjustments by using the control wheel. Additionally, separate knobs allow easy twist-control of heading/track and altitude. And for added safety, the controller's dedicated LVL mode button commands automatic recovery from steep or unusual attitudes, prompting the autopilot to return the aircraft to straight-and-level flight.
An Advanced Autopilot Mode Controller for Your Airplane
- Dedicated controller for advanced Garmin autopilot modes
- Control wheel for speed selection
- Dedicated heading/track and altitude knobs
- LVL mode button commands automatic recovery from steep or unusual attitudes
- Dedicated heading and track buttons

Note: G3X Touch system must be running software revision 5.70 or later

P/N 11-16219 ..... **$1,099.00**

AV

GPS PROTECTORS

NAVIGATION SCREEN PROTECTORS



The Pre-cut navigation screen protectors provide excellent protection from scratches. The anti-glare layer reduces unwanted reflections, increasing contrast, clarity, and viewing comfort even with the use of polarized lenses. This film is thick enough to protect the screen, yet thin enough to have no effect on touch screen sensitivity. Light tack adhesion provides for residue-free removal. Does not require special cleaners. Available for: ADR, Anywhere Map, Avidyne, Apollo, Chelton, Eclipse Avio, Garmin, King, Vista Nav, and more.

Description	Part No.	Price
Flight Bag NAV	11-07140	**$21.25**
Map LS-800	11-07141	**$22.25**
CNX-80	11-07142	**$13.50**
Aspen EFD PRO	11-07143	**$16.95**
1 pc. Avidyne	11-07144	**$28.75**
2 pc. Avidyne	11-07145	**$48.00**
5 pc. Piper Models	11-07146	**$72.00**
1pc FlightMax 500	11-07147	**$14.50**
1pc Chelton IDU	11-07148	**$16.95**
4 pc. 2G-430	11-07149	**$43.25**
4 pc. 2G-430	11-07150	**$57.75**
2PC C-P	11-07151	**$59.65**
3PC Eclipse Avio	11-07152	**$96.00**
1PC G-1000	11-07153	**$34.75**
1 pc AV8OR	11-08214	**$14.85**
2PC G-1000	11-07154	**$49.85**
3PC G-1000	11-07155	**$83.75**
Garmin 430	11-07157	**$12.95**
Garmin 480	11-07158	**$13.95**
Garmin G600/G500	11-07161	**$32.85**
Garmin 796/795	11-10723	**$19.85**
Garmin GTN 650	11-10855	**$14.95**
Garmin GTN 750	11-10854	**$17.95**
Garmin 696	11-09441	**$18.75**
Garmin aera	11-08217	**$14.95**
GMX-20	11-07163	**$16.50**
GMX-200	11-07164	**$18.95**
196,296,396,496	11-07165	**$13.95**
KMD 250	11-07166	**$13.75**
King KMD550	11-07167	**$14.95**
CIS-1000	11-07168	**$22.25**
AV8OR Ace	11-08216	**$18.75**

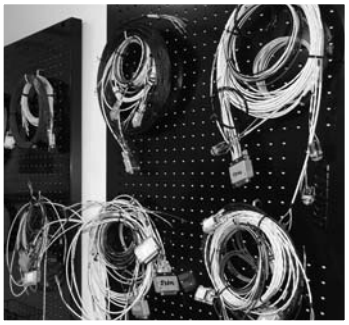
EZCLEAR INSTRUMENT CLEANING KIT



This product meets Garmin G1000 Pilot Guide specs for cleaning and is safe to use on glass panels. EZCLEAR Instrument Cleaning provides a safe, effective way to remove fingerprints and dust from glass panels, instruments and more. The kit contains three EZCLEAR Cleaning Packs and one Polishing Cloth; these items have been specifically paired together to ensure safe and effective screen cleaning. Per the instructions, the user wipes the surface with the Cleaning Pack and then dries the area with the Polishing Cloth. The Cleaning Packs are ammonia free, aviation-grade and will not remove or damage any anti-reflective coating. The Polishing Cloth is washable. This kit will last between 3-4 months depending upon frequency of use. P/N 09-02394..... **$18.50**

AVIONICS WIRE HARNESS SHOP







We have added an in-house harness assembly shop providing avionics wire harnesses for the experimental market ranging from single avionics units to custom coax cable assemblies to complete panel wiring systems. Our harnesses are all professionally assembled and neatly labeled allowing for easy installation by the customer. Although many of the harnesses are standard and stocked on the shelves for same day shipping, we also offer our customers custom-made harnesses to specific lengths for each wire you will need during installation. When you start working on your avionics panel, rely on our shop's expertise and support for all your harness needs. Contact our Avionics department at 800-826-3160 or visit our website for any questions or requests for quote on our growing list of of avionics units we can provide the harness solutions for.

EZCLEAR AND NAVISHIELD GPS PROTECTOR KITS



The pre-cut Navishield screen protectors provide excellent protection from scratches. The anti-glare layer reduces unwanted reflections, increasing contrast, clarity, and viewing comfort even with the use of polarized lenses. This film is thick enough to protect the screen, yet thin enough to have no effect on touch screen sensitivity. Light tack adhesion provides for residue-free removal.
These EZCLEAR products meet Garmin G1000 Pilot Guide specs for cleaning and is safe to use on glass panels. EZCLEAR Instrument Cleaning provides a safe, effective way to remove fingerprints and dust from glass panels, instruments and more. Click here to see EZCLEAR featured in the February 2011 edition of AOPA Pilot. The kit contains three EZCLEAR Cleaning Packs and one Polishing Cloth.

Description	Part No.	Price
GPS Protection Kit for Garmin aeras	11-09429	**$33.00**



GARMIN PORTABLE FRICTION MOUNT

Keep your device in easy sight with this portable friction mount, and then remove it from your vehicle when you arrive at your destination. Lets you use your device in more than one vehicle. For aera 500 series.
P/N 11-13670 ..... **$23.95**

AV

GARMIN PANEL PACKAGES



GARMIN AIRCRAFT PANEL PACKAGES

We have put together some avionics packages for VFR pilots using only the latest in Garmin technology. Some of the bundles are certified and others are for experimental application so be sure to choose the correct package for your aircraft needs. These bundles do include some cost savings versus buying each item a la cart so take advantage and get your panel set up in one quick order. We also offer a custom wiring harness that you can add-on to your package to make installation a breeze. Note: We can create a custom package with any combination of avionics units we carry so please contact our sales department if one of the combinations above is not exactly what you need.

Package	Part No.	Price
PACKAGE C - CERTIFIED		
• Garmin Aera 510 Americas • Airgizmos Panel Dock • GTR 225 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-05046	**$4,977.00**
PACKAGE D - EXPERIMENTAL		
• Garmin Aera 510 Americas • Airgizmos Panel Dock • GTR 200 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-05047	**$4,426.00**
PACKAGE E - EXPERIMENTAL		
• Garmin Aera 510 Americas • Airgizmos Panel Dock • GTR 200 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-05048	**$2,676.00**
PACKAGE F - CERTIFIED		
• Garmin Aera 510 Americas • Airgizmos Panel Dock • GTR 225 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-05049	**$5074.00**
PACKAGE I - CERTIFIED		
• Garmin Aera 796 Americas w/o XM Antenna • Airgizmos Panel Dock • GTR 225 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-07124	**$5,294.00**
Package	**Part No.**	**Price**
PACKAGE J - CERTIFIED		
• Garmin Aera 796 Americas w/o XM Antenna • Airgizmos Panel Dock • GTR 225 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable • Airgizmos Panel Dock • GTR 225 Com • GTX 330ES Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-07125	**$2,953.00**
PACKAGE K - EXPERIMENTAL		
• Garmin Aera 796 Americas w/o XM Antenna • Airgizmos Panel Dock • GTR 225 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable • Airgizmos Panel Dock • GTR 200 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-07126	**$4,744.00**
PACKAGE L - CERTIFIED		
• Garmin Aera 795 Americas • Airgizmos Panel Dock • GDL 39 with Battery • GTR 225 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-07127	**$6,106.00**
PACKAGE M - EXPERIMENTAL		
• Garmin Aera 795 Americas • Airgizmos Panel Dock • GDL 39 with Battery • GTR 200 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-07128	**$5,558.00**
PACKAGE N - CERTIFIED		
• Garmin Aera 795 Americas • Airgizmos Panel Dock • GDL 39 3D with Battery • GTR 225 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-07129	**$6,256.00**
PACKAGE O - EXPERIMENTAL		
• Garmin Aera 795 Americas • Airgizmos Panel Dock • GDL 39 3D with Battery • GTR 200 Com • GTX 327 Transponder • ACK A-30.9 Encoder • Garmin Power Data Cable	11-07130	**$5,759.00**
Custom Harness for Garmin VFR Pkgs	11-07573	**$325.00**

AV

AIRGIZMOS PANEL DOCKS

GARMIN AERA 500 SERIES DASHBOARD MOUNT



Dashboard Mount for Garmin Aera 500, 510, 550, 560. Adjusts easily, like a rearview mirror, so you can position your device for the best viewing angle. Secure the mounting base to your vehicle's dashboard with either permanent or temporary adhesive disks (included). P/N 11-09102 .....**$19.75**

AIRGIZMOS GARMIN 695, 696, 795, 796, AERA XM ANTENNA DOCK



Here is the perfect companion to your new Garmin 695, 696, 795, 796, or aera 560 and the AirGizmos Panel Dock. Designed to mobilize your costly XM antenna. It helps to maintain the clean look of a permanenet installation by organizing the antenna cable. Freely move ONE XM antenna from location to location, avoiding high costs of additional equipment and service subscriptions. P/N 11-09118 .....**$74.50**

AIRGIZMOS GARMIN 396/496 ANTENNA DOCK PREMIUM SET



Designed to mobilize your costly 396 or 496 XM antenna. It helps to maintain the clean look of a permanenet installation by organizing the antenna cable. Freely move ONE XM antenna from location to location, avoiding high costs of additional equipment and service subscriptions. Kit Includes: 2 Cradles, 1 Base, 2 Cables P/N 11-09119 .....**$116.75**

AIRGIZMOS IPAD MINI KNEE DOCK



AirGizmos Knee Dock has the ability to adjust the angle of the iPad mini for best viewing angle. This feature cuts down on glare and increases the enjoyment of using the amazing iPad mini in the cockpit.

Mini 3 .....P/N 11-12097 .....**$75.75**
Mini 4 .....P/N 11-15458 .....**$74.95**

AIRGIZMOS PANEL DOCK SMALL MOUNTING RAIL KIT



For use with small format Panel Docks: 496 Panel Dock, AV8OR Panel Dock, AERA Panel Dock, etc. Mount the Panel Dock™ when you don't have any existing radio stack space available. P/N 11-12093 .....**$13.95**

AIRGIZMOS AIRMOUNT- MOUNT ONLY



Finally there is a flexible mounting solution for tablet devices. You can leave your tablet in the protective case and still secure it in the aircraft. The AirMount adjusts on three sides, holding your tablet device in any orientation. With several mounting options available to use with the AirMount, this is possibly our most flexible mounting solution yet.

P/N 11-14561 .....**$69.95**

AIRGIZMOS AIRMOUNT WITH FIXED MOUNT



This device has mounting holes that are the same as a standard 3 1/8" instrument. That means you can use an existing instrument hole and mount one of our surface mount devices to your panel.

P/N 11-14564 .....**$87.75**

AIRGIZMOS AIRMOUNT WITH SUCTION MOUNT



The AirGizmos Suction Mount holds your iPad securely using a heavy duty suction cup to attach it to your windshield or any other smooth surface. Our Suction Mount is designed to be used in rental aircraft or in planes that do not have enough panel space for one of our panel mount solutions. Included with the Suction Mount are three different lengths of extension arms: 1", 2", and 3", to accommodate just about any mounting situation. P/N 11-14561 .....**$69.95**

AIRGIZMOS AIRMOUNT WITH TILT MOUNT



If you need to mount your iPad mini or iPad air in your plane this might be the solution you are looking for. The base mount is designed to be screwed to a panel using a standard instrument mounting holes. The iPad snaps in and is held securely.

P/N 11-14563 .....**$96.75**

AIRGIZMOS PANEL DOCK FOR IPHONE 6 & 7



Replace your aging Garmin handheld with an iPhone running your choice of flight software. It is made easy with the iPhone 6 & 7 Panel Dock being a direct replacement for your existing x96 Panel Dock. The iPhone 6 & 7 Panel Dock fits in the same opening as the Garmin x96, and therefore can be used with the AirGizmos Horizontal or Vertical tilt adapters.

P/N 11-15229 .....**$69.95**

AIRGIZMOS GARMIN ANTENNA DOCK 696/796 PREMIUM SET



Designed to mobilize your costly Garmin 696 or 796 XM antenna. It helps to maintain the clean look of a permanenet installation by organizing the antenna cable. Freely move ONE XM antenna from location to location, avoiding high costs of additional equipment and service subscriptions. Kit includes: 2 cradles, 1 base, 2 cables. P/N 11-09121 .....**$99.75**

AIRGIZMOS GARMIN 696/796 PREMIUM BEAN BAG SET



Designed to mobilize your costly Garmin 696 OR 796 XM antenna. It helps to maintain the clean look of a permanenet installation by organizing the antenna cable. Freely move ONE XM antenna from location to location, avoiding high costs of additional equipment and service subscriptions. Kit includes: 1 cradle, 1 base, 1 bean bag, 2 cables. P/N 11-09122 .....**$129.95**

AIRGIZMOS GARMIN 396/496 PREMIUM BEAN BAG SET



Designed to mobilize your costly 396 or 496 XM antenna. It helps to maintain the clean look of a permanenet installation by organizing the antenna cable. Freely move ONE XM antenna from location to location, avoiding high costs of additional equipment and service subscriptions. Kit includes: 1 cradle, 1 base, 1 bean bag, 2 cables. P/N 11-09120 .....**$133.80**

AIRGIZMOS IPAD MINI PANEL MOUNT



Designed to be screwed to a panel using a standard instrument mounting holes. The iPad mini snaps in and is held securely. Length: - 5.53 inches Height: - 8.18 inches Depth: - 1.76 in

P/N 11-12096 .....**$89.95**

AIRGIZMOS PANEL DOCK LARGE MOUNTING RAIL KIT



For use with large format Panel Docks like the Garmin 695/696 and Bendix King AV8OR ACE. Mount the Panel Dock™ when you don't have any existing radio stack space available. P/N 11-12095 .....**$18.95**

AIRGIZMOS IPAD MINI 4 PANEL DOCK™



Your iPad mini4 can finally have the prominent position on your panel that it deserves! Included is a cooling port on the back of the iPad mini4 Panel Dock™. This port is compatible with standard avionics cooling fans if you decide you want to use this feature. The iPad mini4 Panel Dock™ is designed to work with the existing Angle Adapter. Radio stack compatible at 8.0"H x 6.25"W x 1.32" D / 4.4 ounces. Fits the same opening as the 696/796/iFly Panel Docks..

P/N 11-14355 .....**$119.95**

AIRGIZMOS IPAD MINI I IPAD AIR KNEE DOCK



The AirGizmos™ iPad mini/air Knee Dock is our answer to the problem of needing an accessible place in the cockpit for the iPad mini and iPad Air. If you have become accustomed to using charts on your iPad mini or air, you will enjoy having immediate access right at your fingertips.

P/N 11-16173.....**$69.95**

AIRGIZMOS PANEL DOCK FOR THE GARMIN AERA SERIES



Fits the aera 500 GPS like a glove. Replaces the 496 Panel Dock without modifying the panel. Installs easily in a standard 6.25" opening. Allows quick and easy removal of your portable GPS. Includes an integrated actuator for the power button. Gives your instrument panel a professional, finished look. P/N 11-08321.....**$119.95**

AIRGIZMOS PANEL DOCK FOR GARMIN 695/696



Securely mounts the Garmin GPSMap 695/696. Designed to allow quick and easy removal of your portable GPS. Made from durable, high quality plastic similar in appearance to the GPS itself. Gives your instrument panel a professional, finished look.

Garmin 695/696 Panel Dock .....P/N 11-09439 ...**$178.95**
GPSMAP Angle Adapter .....P/N 11-07310 .....**$46.85**

AIRGIZMOS GARMIN AERA AND 696 GXM-40 ANTENNA AERO DOCK



Here is the perfect companion to your new Garmin 696 or aera 560 and the AirGizmos Panel Dock. Now you can move the XM antenna from plane to plane, or from vehicle to vehicle.

P/N 11-11289 ..... **$72.75**

AV

AIRGIZMOS PANEL DOCKS



AIRGIZMOS AERA 660 PANEL DOCK

When you snap your aera 660 GPS into the Panel Dock, you will immediately appreciate the glove-like fit. The Panel Dock conforms to every curve of the new aera 660. The Panel Dock also matches the look and feel of the rest of your avionics stack, giving you a pleasant, professional looking panel.
P/N 11-14552 ..... **$109.95**



AIRGIZMOS PANEL DOCK FOR GARMIN 196/296/396/495/496

Designed to securely hold your Garmin 196, 296, 396, or 496 portable GPS. It fits nicely in a standard 6.25" avionics stack. Allows you to quickly remove your portable GPS from your plane for upgrades, flight planning, or for use in your car or boat. The Panel Dock is shipped with a set of mounting hardware necessary for attaching it to an avionics stack. P/N 11-03509 ..... **$89.95**



AIRGIZMOS PANEL DOCK FOR GARMIN 295

The Garmin 295 is held safely and securely, but can be easily removed in a matter of seconds. The external power and antenna connections are made at the back of the unit, and the cables are secured from falling into the panel with special keyholes machined into the dock.
P/N 11-04315..... **$89.95**



AIRGIZMOS GARMIN HORIZONTAL PANEL DOCK ANGLE ADAPTER

The Vertical Tilt Adapter angles the viewing angle of the GPS so it is more readable when the GPS is mounted at the bottom of a tall instrument panel. This adapter fits the same opening as the Panel Dock itself, so adding the vertical tilt should be very easy for existing installations. ***REQUIRES P/N 11-03509.*** P/N 11-05029..... **$24.95**



AIRGIZMOS HORIZONTAL TILT ADAPTOR FOR GARMIN UNITS

AirGizmos Horizontal Tilt Bracket angles the GPS at a fixed angle of 15 degrees, providing a much more convenient viewing angle. This adapter fits in the same panel cutout as the Panel Dock, so if you already have a Panel Dock you can attach this adapter without having to modify your installation. ***REQUIRES P/N 11-03509.*** P/N 11-04671 ..... **$22.85**

AIRGIZMOS 396 XM ANTENNA DOCK



Now you can move the XM antenna from plane to plane, or from vehicle to vehicle. It is designed to mobilize your costly 496 XM antenna. Using a simple twist & lock mechanism (no tools required) the base will lock your antenna into the preinstalled cradle, and your 396 XM antenna is ready to go! P/N 11-04694 ..... **$74.95**



AIRGIZMOS PREMIUM BEANBAG XM 396 & 496 ANTENNA MOUNT

Designed to mobilize your costly 496 XM antenna. It helps to maintain the clean look of a permanenet installation by organizing the antenna cable. Package includes: base, cradle, beenbag assembly, and two cables. P/N 11-07007.....**$117.50**

AIRGIZMOS 396 & 496 XM CRADLE & CABLE



This product wil allow you to use the AirGizmos XM Antenna Dock in a second vehicle or aircraft. Use of this product requires that you first purchase the AirGizmos XM Antenna Dock. P/N 11-04781 ..... **$38.95**

AIRGIZMOS PANEL DOCK COVER FOR GARMIN 196/296/396/496



This panel is for Garmin panel dock for models 196/296/396/496. Protects unit from UV rays and hides unit in the aircraft so that theft is less likely to happen. Can be used even if Garmin unit has not been installed yet.
P/N 11-04775 ..... **$18.65**



AIRGIZMOS IPAD AIR/IPAD PRO 9.7 PANEL DOCK™

The iPad Panel Dock is designed to quickly and securely mount your 9.7" iPad Air or iPad Pro on the surface of your panel while allowing the iPad to be easily removed when necessary. It requires only four screws and you are all set to go.
P/N 11-16223 ..... **$89.95**



AIRGIZMOS IPAD MINI PANEL DOCK

Mount your iPad mini securely in the instrument panel while still allowing it to be easily removed when you are not flying. The iPad mini Panel Dock is designed to work with the existing Angle Adapter. Radio stack compatible at 8.0"H x 6.25"W x 1.32" D / 4.4 ounces . Fits the same opening as the 696/796/iFly Panel Docks. Not for use with the iPad Mini 4. P/N 11-11460..... **$122.75**



AIRGIZMOS AV8OR PANEL DOCK

Securely mounts Bendix/King AV8OR GPS. Installs easily in a standard 6.25" opening. Designed to allow quick and easy removal of your portable GPS. Includes right angle extension cable for weather antenna. Gives your instrument panel a professional, finished look. Width: 6.25" Height: 4.00" P/N 11-07782..... **$83.75**

AIRGIZMO AV8OR ACE PANEL DOCK



Designed to securely mount your AV8OR ACE in the panel, the AV8OR ACE Panel Dock is the perfect companion to this GPS from Bendix/King. Designed to match the styling of the rest of the avionics in your panel. It fits a standard 6.25" radio stack. The AV8OR ACE can be snapped into the Panel Dock with either the standard battery or the extended battery attached to the GPS.
P/N 11-08589..... **$99.95**

AIRGIZMOS PANEL DOCK FOR AVMAP EKP-IV



Now you can mount the beautiful, detailed display of the AvMap EKP-IV directly in your instrument panel using the AirGizmos EKP-IV Panel Dock. The AirGizmos EKP-IV Panel Dock is designed to hold the AvMap securely yet it allows you to easily remove your portable from your plane whenever the need arises. The AirGizmos EKP-IV Panel Dock offers easy installation, quick release, hassle-free management of cables, and elegance of design..... P/N 11-04371..... **$109.95**

AIRGIZMO GEOPILOT PANEL DOCK



This GPS has a nice large screen to go with it's small size. Our Panel Dock is designed to hold the GeoPilot securely in your panel while allowing it to be easily removed for portable use. Made from durable, high quality plastic similar in appearance to the GPS itself. Gives your instrument panel a professional, finished look..... P/N 11-05615 ..... **$96.95**

AIRGIZMO GEOPILOT II PLUS PANEL DOCK



Fits in a standard 6.25" radio stack. Power and antenna cables are organized and managed. The included WxWorx weather receiver bracket provides additional organization in the cockpit by providing a secure mount for the WxWorx receiver box.P/N 11-06855 ..... **$109.95**

AIRGIZMOS IFLY 700 / 720 PANEL DOCK



Mount your iFly 700/720 GPS in your instrument panel. Using our Panel Dock you can enjoy your portable GPS in a more stable and safe installation. We have added a space inside of the Panel Dock to hold the iFly 700 external battery. Designed to be mounted horizontally or vertically. P/N 11-10848 ..... **$119.95**



AIRGIZMOS PANEL DOCK FOR AIRMAP 1000/2000C

The cables supplied by Lowrance fit through keyhole slots on the back of the unit. The release latch at the top of the Panel Dock permits quick removal of the device for use in another vehicle or simply for security purposes..... P/N 11-04372..... **$109.95**

AIRGIZMO LOWRANCE 600 PANEL DOCK



Panel Dock will allow the AirMap 600c to be nicely mounted in your panel while still allowing it to be easily removed and used as a handheld. Made from durable, high quality plastic similar in appearance to the GPS itself. Gives your instrument panel a professional, finished look. P/N 11-05616..... **$62.95**

AIRGIZMOS AERO COVER



Fits all of the major brands of GPS and XM weather antennas. It will protect your antenna from the elements. It is streamlined and attractive. Best of all, it gets your antenna out of your way. P/N 11-04777..... **$64.95**

AIRGIZMOS XM ANTENNA CABLE



XM Antenna Cable. Straight, 2 meter extension for Garmin XM Weather AntennaP/N 11-04780..... **$13.95**

AIRGIZMOS AERO DOCK



Gives you the option of mounting the antenna on the outside. Designed to mobilize your costly 396 XM antenna. It helps to maintain the clean look of a permanent installation by organizing the antenna cable. Freely move ONE XM antenna from location to location, avoiding high costs of additional equipment and service subscription. Kit includes: 1 cradle, 1 base, 1 cable, mounting hardware. P/N 11-04778..... **$74.75**

AV

SANDIA SAI 340 QUATTRO PLUS THE 5-IN-1 INSTRUMENT



The SAI-340 Quattro Plus is a five-in-one attitude, airspeed, altitude, slip indicator that includes Instantaneous Vertical Speed (I)VSI. With smooth, high-quality graphics and an easy to read EFIS presentation, the Quattro Plus makes a great addition to a traditional six pack panel. This instrument is a cost-effective way to replace steam-gauge standby instruments in retrofit EFIS-equipped aircraft.

Displays precision airspeed, attitude, altitude, slip and Instantaneous Vertical Speed (I)VSI in an EFIS presentation. MFD is an excellent replacement for steam-gauge standby instruments in retrofit EFIS equipped aircraft. Backup lithium battery provides up to 2 hours battery life. Fits a 3-inch panel hole. Weighs just over 11 ounces. TSO approved

Additionally, the Quattro Plus has a built-in battery which provides up to two hours of stand-alone operation if needed—thus ensuring an added level of redundancy. The MFD fits directly into a standard round 3-inch instrument hole with no panel modification, making it a near drop-in installation..... P/N 11-12817..... **$2,995.00**

GARMIN FLIGHTSTREAM 110 / 210



Part of the Garmin Connext™ family of flight connectivity solutions, the Flight Stream 110/210 is a small wireless gateway that is easily installed in your aircraft, enabling a combination of up to 4 compatible tablets or phones to stream information to and from your avionics system via Bluetooth®. The Flight Stream 110 offers GPS, attitude, weather and traffic streaming from the GDL 88 ADS-B datalink and GDL 69 SiriusXM™ datalink, while the Flight Stream 210 adds the capability for flight plan syncing with the GTN 750/650 series and GNS 430W/530W series navigators as well as the ability to display attitude information using an on-board AHRS[1].

Description	Part No.	Price
110 With Custom Harness	11-13327	$545.00
110 Without Harness	11-13059	$495.00
210 With Custom Harness	11-13326	$975.00
210 Without Harness	11-13058	$949.00

GARMIN FLIGHT STREAM 510



Advanced Connectivity and Revolutionary Avionics Integration. Enables Database Concierge wireless avionics database updates. Permits 2-way flight plan transfers between compatible apps and avionics[1]. Initiate phone calls and send/receive text messages from contacts on your Apple® device, using the Garmin Pilot™ app through your compatible avionics, optional Connext® datalink and service plan. Streams traffic, weather, GPS information and back-up attitude information from your avionics to select portables and mobile devices. Lets mobile devices wirelessly control SiriusXM™ satellite music from any position in the cabin.

P/N 11-14578..... **$1,259.00**

FAT GECKO TABLET AND IPAD MINI MOUNT



Designed to securely hold any tablet or iPad between 7 and 10.5 inches, the Delkin Devices Fat Gecko Tablet & iPad Bracket allows you to mount your device in places you normally would not be able to. Attach it to a countertop while cooking, your desk at work, even the window of your car; the possibilities are endless! This innovative accessory easily compliments your equipment in any situation, including photography, videography, aviation, gaming and various other activities.P/N 11-14718..... **$44.95**

G-FORCE MOUNTS



The powerful G-Force vacuum base can withstand 23g of shear force, making a sturdy, lasting bond wherever you have a smooth, non-porous surface. That includes glass, plastic, even gelcoat. Creates a stable, reachable platform for your portable GPS that makes programming a breeze Take it from airplane to auto. It even works in the boat. All G-Force Mounts include appropriate mounting hardware and an easy-to-follow User Guide.

Mount for Garmin aera 700 Series - The G-Force GF220 Mount is all you need to turn your portable, large-format GPS into a heads-up display that will confirm your skill to think past the yoke.
P/N 11-10740..... **$69.75**

Mount for Apple iPod - The G-Force GF260 iPad Mount comes complete: with a custom-designed cradle, tailored to your iPad-1 or iPad-2, secured to the remarkable G-Force GF2 Twin base.
P/N 11-10741..... **$66.75**

Mount For Mini-tablet PC'S - I f you want to turn your mini-tablet PC into a heads-up display, you want the G-Force GF163 Mount. The G-Force GF163 mount connects to your mini-tablet with the legendary Air Base.
P/N 11-12115..... **$56.99**

Mount for Early Garmins - The G-Force Mount docks directly to the OEM cradle supplied by Garmin International with its GPS/MAP models 195 through 496. Other Garmin models and units from other manufacturers may require an interface cradle at additional cost. Cradles are not included with purchase. P/N 11-08097..... **$42.75**

Mount for Garmin 695/696 - This G-Force GF2 Mount is all you need to turn your portable, large-format GPS into a heads-up display that will confirm your skill to think past the yoke. In the time it takes to unravel your headset, your portable, large-format GPS will look like a fixed addition to your panel instrument array. P/N 11-08099..... **$73.85**

GF1.2 Aera Mount - The G-Force GPS Mount Manages your cockpit Resources, Restores your priorities, Returns valuable seconds to your command P/N 11-08773..... **$42.75**

GF7 Camera Mount - Now, High-Speed Photography is a One-handed No-Brainer. Attach your lightweight camera or video to this G-Force GF1 Mount, fitted with an industry standard 1/4-20 camera stud.
P/N 11-08103..... **$42.50**

GF27 Camera Mount -Twice the holding power means double security. Dock your heavier camera to the G-Force GF2 Mount, fitted with an industry standard 1/4-20 camera stud. P/N 11-08104..... **$79.50**

FAT GECKO CAMERA MOUNTS



Secure cameras to any smooth surface including: motorcycles, cars, airplanes, and more. Fat Gecko's suction cups are so strong they can safely secure hold a camera weighing up to six pounds. Allows for 360° tilt, 360° turn, and 360° rotation for all the best filming angles in any activity The 1/4 x 20 tripod mounting screws means you can use virtually any digital still or video camera on the market. Equipped with a removable extension tube so you can film around tire wells or over windshields.

Description	Part No.	Price
Fat Gecko Camera Mount	11-07877	$79.99
Fat Gecko Mini Mount - Single suction cup, with a 3" extension bar. Tested to carry 4 lbs.	11-07917	$32.60
Fat Gecko Mini Tree Antenna - Gives users a quick and easy way to mount GPS antennas and others out of the way. To be used in conjunction with the Fat Gecko Mini Mount	11-07919	$23.95

FAT GECKO TABLET AND IPAD BRACKET



Mount your tablet or ipad anywhere. Attach your Tablet, iPad or eReader to a countertop, window, desk, tray table, tripod or car seat for hands-free use almost anywhere. The adjustable bracket holds any tablet or iPad between 7 and 10.5 inches securely, while the female 1/4-20 tripod thread on the back of the bracket allows you to attach your device to the mount of your choice, including Fat Gecko Mounts, tripods, light stands, hand straps and more. P/N 11-13585..... **$18.95**

AV

Prices Subject to Change Without Notice

ADVENTURE PILOT GPS – AVMAP GPS

ADVENTURE PILOT IFLY 520 GPS



Note: USA Database Coverage Only.
A new level of value boasting versatility and portability with internal power in a smaller 5" form factor. Built for the harsh elements that iPads can't support. Superior reception, extreme operating temperature ranges pilots need at a fraction of the competition's price—even the updates are affordably priced. Sunlight readable and provides both VFR and IFR situational awareness in a simple-to-use 5" Touchscreen. Cord free flying up to 2 hours when ship power is not available. Go straight from the runway to the highway with iFly Streets™. Automatically transition to and from the Airport Diagram upon takeoff and landing. Plan your next flight on official VFR and IFR charts with access to public and private airports. Presents your position over official charts with un-paralleled clarity due to the extensive optimization process. Grab the latest TAF, METAR, Winds Aloft, TFRs and other data before takeoff for reference in flight. Active Alert System monitors and generates warnings of approaching concerns.
Without Street Maps..... P/N 11-12034 ..... **$389.00**

ADVENTURE PILOT IFLY 740B TOUCHSCREEN



The 7-inch touch screen aviation GPS has been reborn! The next evolution is still big and bright enough to read easily in flight and affordable!
An included suction mount with multiple articulation points. The touch screen interface is incredibly simple to use. No installation or setup required. Just turn it on and you're ready to fly!
The iFly 740b is loaded with digital copies of FAA sectionals, IFR Low Enroute charts, airport diagrams, approach plates, and more. In fact, everything from planning to flying is designed around image enhanced maps from the FAA. Sweep your finger across the screen to scroll through the map, quick-tap to switch to another sectional, drag a route line to avoid a TFR, tap an airport to get detailed information, etc, etc. It's easy, intuitive, and fast.
iFly 740B..... P/N 11-15662 ..... **$499.00**
External Battery Pack..... P/N 11-15708 ..... **$129.95**

WXWEATHER FOR THE AV8OR AND AV8OR ACE



WX WEATHER BLUE TOOTH KIT - This is the weather kit for the Honeywell AV8OR & AV8OR Ace. The connection for this is a bluetooth receiver (no cable required to interface the two units). Includes: Basic Receiver, Bluetooth Interface Module, Portable Antenna, AC & DC Adapter, Mounting Hardware
P/N 11-06712 ..... **$573.00**

WX WEATHER PORTABLE ANTENNA - Small and portable, the XM Radio antenna allows you to receive a satellite signal from XM Radio and XM WX Satellite Weather (subscriptions required). A 23-ft. cable ensures flexible installation to the WxWorx receiver via an SMA connection. The antenna features a magnetic mount that firmly affixes it to metal surfaces, with rubber feet to prevent scratching. NOTE: This antenna is not compatible with the original WxWorx receiver (Model WXP03).
P/N 11-06716 ..... **$27.95**

AUDIO CABLE - Code:AUDCAB..... P/N 11-06729 ..... **$15.75**

WX WEATHER DC POWER SUPPLY - 50 ft. extension cable for the XM Digital Antenna Code:DCDC2 ..... P/N 11-06730 ..... **$18.95**

WX WEATHER DC POWER WITH PLUG - Code:DCDCLUGS
P/N 11-06731 ..... **$27.80**

WX WEATHER AC POWER SUPPLY - Code:ACDC2
P/N 11-06732 ..... **$17.75**

WXWORX on Wings WR-10 USB Bundle..... P/N 11-10871 ..... **$955.00**

WXWORX on Wings WR-10BT BT Bundle... P/N 11-10877 ..... **$971.00**

WXWORX XM Weather Package for iPad .... P/N 11-10885 ..... **$955.00**

WXWORX Mobile Link DC Power Cable..... P/N 11-11228 ..... **$14.95**

WXWORX Baron Mobile link Wi-Fi Antenna . P/N 11-11229 ..... **$7.50**

AVMAP EKP V GPS



Fully Portable: A brilliant 7" display, with built-in battery and GPS, only 0.8" thick. EKP V is slim and light, yet very powerful: with built in u-blox 5 GPS receiver, built-in battery and speakers.
Offering full Connectivity: Thanks to the special Docking Station, you can connect EKP V to several on-board devices at the same time (autopilot, XM WX, CAS, EIS, EFIS etc.) so that the large 7" LCD becomes multifunctional and capable to display different flight info.
Fully Customizable: Easily change the layout choosing what to see and where to display it: maps, taws, weather, vertical profile on map, nav data, HSI, EFIS. Set different PROFILES for different aircrafts with different settings for taws, selective display and even different hard keys configurations.
User Friendly: The new practical keyboard includes a configurable key, a progressive jostick and a smart wheel selector. Ease of use is ensured by the new graphic interface and the full qwerty virtual keyboard.
The cartography for AvMap aeronautical products includes information from several sources: Background and land elevation, Terrestrial data, Marine objects, Jeppesen data, Low Airways (Victor Airways), Private airports, Vertical obstructions, VFR reporting points, And more!
P/N 11-09748..... **$1,500.00**

ACCESSORIES

Description	Part No.	Price
AVMAP EKP V EFIS Bundle	11-11495	$2,567.00
AVMAP EKP V Option Cockpit Cradle Kit	11-11131	$150.00
AVMAP EKP V Option Docking Station	11-11132	$300.00
AVMAP EKP V PC Interface Cable	11-11490	$28.50
AVMAP EKP Leg Strap	11-11487	$23.95
AVMAP EKP V Knee Pad Bracket	11-11486	$24.00
AVMAP EKP V Li-Ion Rechargeable Battery	11-11491	$43.50
AVMAP EKP V Serial Cable	11-11493	$28.50
AVMAP EKP V & Geopilot II Plus Dash/Panel Mount	11-11496	$26.00
AVMAP EKP V & Geopilot II Plus Yoke Mount	11-11497	$48.75
AVMAP EKP V & Geopilot II Plus Suction Dash Mount	11-11498	$35.75
AVMAP EKP V & Geopilot II Plus Mounting Bracket	11-11499	$7.50
AVMAP EKP V A2 ADAHRS	11-11488	$799.00
AVMAP Engi Box (Rotax) North	11-13657	$899.00
Accessories for Geo Pilot II/Plus	**Part No.**	**Price**
Airgizmo Panel Dock for Geopilot II	11-05615	$96.95
Airgizmos Panel Dock for Geopilot II+	11-06855	$109.95

Visit www.aircraftspruce.com for complete AVMAP packages.

AVMAP ULTRA - EFIS



AvMap Ultra is a stand alone EFIS with a 3.5" ultra bright LCD display. The unit is compact (only 63.3 mm /2.49" of installing depth) and ultra light: only 230 g (8.1 Oz)! Designed for light-sport, ultralight and experimental aircraft. Ultra compact: only 2.49" of installing depth, and only 3.74" x 3.74" of external frame. Ultra bright: 3.5" ultra bright LCD display with 500 cd/m2 brightness. Ultra powerful, packed with everything you need: • 3.5" ultra bright LCD • GPS • Solid state 3-axis gyro • 3-axis accelerometer • 3-axis magnetic field sensor • Pitot and Static air data sensors • UAV motion processor and sensor fusion software • Preloaded with Jeppesen database (APT, VOR, NDB) The AvMap Ultra can display on the 3.5" LCD two different pages: PFD and HSI. Change Page by using the rotor knob. Your Navigation back-up! The AvMap Ultra also provides navigation back-up: in the HSI screen you can select from the preloaded Jeppesen Database an Airport, a VOR station or NDB transmitter as your navigation point. The Ultra EFIS contains an internal world magnetic model that allows it to calculate the local magnetic deviation and dip. The Ultra EFIS can calculate current position and ground speed even in the absence of GPS.
P/N 11-12004..... **$899.00**

AV

BAD ELF GPS PRO



Connect up to 5 devices at a time via Bluetooth The real-time GPS data from a single GPS Pro can be used by up to 5 devices simultaneously – any combination of supported iPad, iPhone, or iPod touch devices. This is great for: Jet pilots: the entire crew can share the data from a single GPS Pro sitting on the glareshield or in the side window. Or share your GPS data with passengers in the cabin so they can follow the flight on their own iPads. General aviation pilots: use your iPhone or iPod touch as a backup for charts on your iPad, switching instantly if needed without re-pairing or connecting. Road trips: the whole family can share the GPS data from a single GPS Pro. Features: Large LCD screen with backlight • Extra-long battery life and 10Hz reporting rate • Standalone GPS datalogger (100+ hours) • Rugged and splash-proof to IPX4 standards • Works with all location-based Apps. • iPod touch (2nd, 3rd, & 4th generations) • iPhone 4S, iPhone 4, iPhone 3GS, & iPhone 3G • iPad (3rd generation), iPad 2, iPad. Specs: Fast GPS lock times (45 seconds or less) • 2.5 meter accuracy • 60k feet maximum altitude • 1000 MPH maximum speed • Up to 10Hz position update rate • 66-channel MTK GPS chipset • SBAS/WAAS/EGNOS/MSAS • Mini-USB port for charging and ElfPort expansion • 128x96 dot LCD screen with backlight • 100+ hour datalogger memory • Upgradeable Firmware • Dimensions: 3" x 2.4" x 0.7" (76.5mm x 61.5mm x 17.5mm) • Weight: 3.2 oz (90 grams)

P/N 13-12274.....**$149.99**

BAD ELF BLUETOOTH GPS PRO+



PX4 certified, rugged, and splash-proof. Don't be afraid to take your GPS Pro along on your next adventure. Compact, rugged, and splash-proof, the GPS Pro will survive the journey and then let you share with your friends your amazing trip. Works with all location-based apps.Bad Elf GPS Pro in the cockpit Apps galore. The Bad GPS Pro meets all requirements under Apple's MFi program, and works great with any location-based app in the App Store. To simplify your search for great apps, we've categorized many apps that we know work well with the Bad Elf GPS Pro by your favorite activities. We've tested the GPS Pro with all the major flight planning and aviation chart apps as well as many marine, fitness, car navigation, and golf apps.

P/N 13-15933.....**$249.99**

BAD ELF GPS / GLONASS RECEIVER FOR APPLE LIGHTNING CONNECTOR



The Bad Elf GPS gets rave reviews from the most demanding customers in military, commercial, and private aviation. More and more blue water and freshwater marine enthusiasts have chosen the Bad Elf GPS for their adventures. Add a high performance GPS and voice guided turn-by-turn application with the included upgrade of the CoPilot street navigation app for your iPod touch, iPad, or iPad mini (USA purchases only). **Made for These Apple Devices:** iPod touch (5th generation), iPhone 5, iPad (4th generation), iPad mini.

P/N 13-14960.....**$99.99**

BAD ELF CABLE FOR LIGHTNING CONNECTORS



The Bad Elf Charge & Sync Cable for Lightning Connector offers a unique, patent pending design that delivers cleaner cable management by directing the length of the cable toward the back side of your Apple device. This cable comes in both 1 meter and 2 meter lengths to suit your needs. By using a thicker wire gauge, Bad Elf ensures that power flows to your device without degradation. Bad Elf cables are certified MFi products.

1 Meter..... P/N 13-15934 .....**$25.95**

JEPP SKYBOUND G2 ADAPTER



Required for Skybound updates. The Adapter utilizes USB technology found standard on most computers. Orange Label Version.

Minimum System Requirements: • Pentium 266MHz or faster CPU • 32 MB RAM minimum • 10 MB free disk space • Microsoft Windows 2000 SP3, or Windows XP SP1 • Microsoft Internet Explorer 6.0 or better • Internet Connectivity • Available USB port

P/N 11-13197.....**$69.95**

DUAL UNIVERSAL XGPS150 RECEIVER WITH BLUETOOTH



The XGPS150 is very simple to use. There is a quick set up process that includes pairing your device with the Receiver. Once this is done, the Receiver will automatically connect to the device it was last paired with, and you will be able to use it with hundreds of apps that require location information. The XGPS150 also comes with a useful GPS Status Tool App (available free on the iTunes store, not required for the device to work). The App is a simple utility application for use with the XGPS150.

P/N 11-09941.....**$98.95**

DUAL XGPS190 GPS / AHRS / ADS-B WEATHER & TRAFFIC RECEIVER



The XGPS190 features a WAAS GPS, dual band (978/1090 MHz) ADS–B receiver for weather & traffic information, and AHRS artificial horizon for EFB apps with synthetic vision. The receiver works with many EFB apps. It connects to up to 2 devices via Bluetooth, and is compatible with iPad, Android and Windows tablets. The internal battery lasts 5 hours of continuous operation, and the receiver can be charged with the included 12–30V adapter and wall charger. A non–slip pad is also included for convenience.

P/N 11-14334.....**$799.00**

DUAL SKYPRO GPS RECEIVER XGPS160 FOR IPAD & ANDROID



GPS Receiver with fast signal acquisition and 10Hz positioning updates, making it an ideal GPS for pilots, race car drivers and other fast moving applications. The WAAS receiver is compatible with both GPS (USA) and GLONASS (Russia) systems and it connects via Bluetooth to up to 5 Apple or Android devices. This GPS Receiver also comes with a useful GPS Status Tool app. (Available free on the iTunes App Store). The SkyPro GPS Receiver also includes a non-slip pad for use in a cockpit, car or a boat.

P/N 11-11996.....**$149.00**

XGPS170D DUAL BAND ADS-B / GPS BLUETOOTH TRAFFIC & WEATHER RECEIVER



The XGPS 170D features a WAAS GPS and dual band (978/1090 MHz) ADS–B receiver for weather & traffic information. The receiver works with many EFB apps. It connects to up to 2 devices via Bluetooth, and is compatible with iPad, Android and Windows tablets. The internal battery lasts up to 5 hours of continuous operation, and the receiver can be charged with the included 12–30V adapter and wall charger. A non–slip pad is also included for convenience.

P/N 11-15135.....**$549.00**

AV

GARMIN G5 ELECTRONIC FLIGHT INSTRUMENT



Backup or Primary Flight Instrument with Optional Autopilot Capability.
G5 electronic flight instrument for experimental amateur-built (EAB) and light sport aircraft (LSA). The compact and cost-effective G5 delivers exceptional performance and reliability, serving as either a backup instrument to G3X™ or other EFIS systems or as a standalone primary flight display, with optional autopilot mode annunciation. Boasting a bright, 3.5-inch sunlight-readable liquid crystal display (LCD) with built-in GPS, G5 displays attitude, ground track, altitude, airspeed, groundspeed, vertical speed, slip/skid, course (lateral) deviation, vertical deviation and incorporates a dedicated HSI page. Even more capabilities are available when integrated with G3X glass flight displays. Additionally, the G5 can serve as part of a highly capable standalone autopilot solution when paired with compatible autopilot mode controllers and autopilot servos.

Seamless Cockpit Integration
The G5 offers EAB/LSA aircraft owners a cost-effective path to add a primary or backup flight instrument to their cockpits, which combines essential flight information on an easy-to-read display. Suitable for installation in place of a standard 3-1/8-inch (79.4 mm) flight instrument, the G5 can easily be integrated into an EAB/LSA cockpit. The easy-to-install G5 flight instrument measures 3 inches in depth when paired with the backup battery and 2.1 inches without the battery. Installation is further simplified as the G5 incorporates pitot and static inputs that easily integrate with the aircraft's existing pitot/static system. The G5 includes a built-in GPS antenna.

Description	Part No	Price
Experimental G5 without Harness	11-14312	**$1,199.00**
Experimental G5 with 4 ft Harness	11-14579	**$2,149.00**
Experimental G5 with Custom Harness	11-14447	**$1,353.00**
STC'D G5 without Harness	11-14579	**$2,149.00**
STC'D G5 with 4 ft Harness	11-14582	**$2,210.00**
G5 Installation Kit	11-14313	**$50.00**
G5 Back-up Battery	11-14314	**$150.00**

GARMIN INREACH SE®+ SATELLITE COMMUNICATOR



Satellite Communicator that sends and receives messages with GPS, color screen and virtual keyboard. Combines the latest satellite communication technology and product innovation to make it the most feature-rich, and easy to use satellite communicator that both sends and receives messages available on the market at an affordable price point. With a color screen and virtual keyboard, standalone mode provides full, free-form texting capabilities to any cell phone number or email address, social media posting, the ability to change service modes and configure user settings – all without the need for a paired, companion device. Offers a sleek, pocket-sized design, intuitive LED indicator for satellite availability, audible message notifications, and a long-lasting internal rechargeable lithium battery for ultimate convenience and portability.

P/N 11-11425 ..... **$399.99**

GARMIN INREACH EXPLORER



Navigate, create waypoints, log your trip and find your way back. Send and receive text messages. Trigger an interactive SOS. Plan, track and share your journey. You can do all of this from one rugged handheld device with 100% global coverage from Iridium. You can also pair it with your mobile device to access topographic maps and U.S. NOAA charts.

P/N 11-12868 ..... **$449.99**

GARMIN INREACH® MINI



inReach Mini is your go-to connection for maintaining off-the-grid contact. It's our palm-sized satellite communicator for adventures where size and weight matter. inReach Mini lets you send and receive text messages, track and share your journey and, if necessary, trigger an SOS alert to contact the GEOS 24/7 emergency response team. With inReach connectivity, your family and friends will know they can stay in touch globally.

Orange..... P/N 11-16335 ..... **$349.99**
Black..... P/N 11-16336 ..... **$349.99**

GARMIN G5 DG / HSI



Glass Upgrade for DG/HSI and Attitude Instruments in GA Aircraft
- Replaces traditional electromechanical instruments; can be configured in attitude, DG/HI/HSI and turn coordinator positions
- Bright, sunlight-readable 3.5" LCD color display, sized to fit standard 3-1/8" instrument cutout
- Certified via approved model list (AML) for STC'd installation on more than 560 aircraft makes and models
- Includes a 4-hour backup battery with battery status indicator
- Dual G5 installation offers reversionary display capability plus the added redundancy of dual ADAHRS and dual backup batteries

The G5 electronic flight instrument delivers exceptional performance, reliability and ease of installation as a drop-in replacement for primary attitude and/or directional gyros in type-certificated fixed-wing aircraft. Providing an economical upgrade path via a comprehensive approved model list (AML), the compact and cost-effective G5 is bringing modern "glass cockpit" reference to thousands of aircraft that would otherwise depend on older, vacuum-driven equipment.

Description	Part No	Price
G5 DG HSI for Certified Aircraft without Harness	11-15014	**$2,449.00**
G5 DG HSI for Certified Aircraft with 4 ft Harness	11-15029	**$2,623.00**
G5 DG HSI for Certified Aircraft with Custom Harness	11-15030	**$1,966.00**
G5 DG HSI with GAD 29 for Certified Aircraft	11-15015	**$2,975.00**
G5 DG HSI with GAD 29 for Certified Aircraft with 4 ft Harness	11-15031	**$3,120.00**
G5 DG HSI with GAD 29 for Certified Aircraft with Custom Harness	11-15032	**$3,045.00**

GARMIN G5 FLUSH MOUNT PANEL BRACKET



This flush mount bracket is a neat solution to mount a Garmin G5 standby EFIS to your panel. This aluminum mounting bracket can be fixed vertically or horizontally depending on your needs. There are 4 holes for #3 rivets to fix the mounting bracket to the panel. See Garmin G5 Flush Single for panel cut-out dimensions. Can be rotated 90 degrees if needed for panel obstruction.

P/N 11-15457 ..... **$59.75**

GARMIN SMP G5 ADAPTER PLATE



The G5 adapter plate is fabricated from 0.050 thick 2024-T3 aluminum per the dimensions shown in Figure 4-11. Apply a finish coat of paint to adaptor plates as desired prior to final installation. These may be field fabricated if needed and must have some type of corrosion protection (primer, alodine, etc.).

P/N 11-15379 ..... **$25.00**

GARMIN G5 FLUSH MOUNT PANEL BRACKET



With this flush mount, the G5 unit may be recessed into the instrument panel which positions the display flush with the instrument panel. Some instrument panels may not be capable of supporting this modification. The Recessed Adapter Plate includes reference holes and can be used as a template for creating the recessed cutout. Supports one or two G5 units.

P/N 11-15518 ..... **$89.95**

INREACH ACCESSORIES

Description	Part No.	Price
Inreach SE Adjustable Handheld Mount	11-15020	**$18.99**
Inreach SE Friction Mount	11-15025	**$34.75**
Inreach Powered Mount with Suction Cup	11-15027	**$69.95**
Inreach Powered Mout	11-15026	**$28.95**
Inreach SE Backpack Tether	11-15021	**$18.99**
Inreach SE Spine Mount Belt Clip	11-15023	**$7.50**
Inreach SE Swivel Belt Clip	11-15028	**$6.95**

GARMIN GTN 650 GPS/NAV/COMM SYSTEM



Note: Per Garmin, Aircraft Spruce can only offer this product to experimental aircraft with harness*

Garmin is changing the course of aviation yet again! Introducing the GTN 650 "next generation" touchscreen avionics. This panel-mount unit is certified and approved for installation in hundreds of makes and models of general aviation aircraft. The GTN 650 has GPS/NAV/COM capabilities and new features like intuitive touchscreen operation, graphical flight planning, victor airway and high-altitude jet route navigation, remote transponder, SafeTaxi® and more.

Thanks to built-in terrain, mapping and obstacle databases, the GTN provides a greatly enhanced, high resolution presentation of the surrounding area. A built-in terrain elevation database shows color-coded alerts when potential terrain conflicts are ahead. Full Class B TAWS alerting is also available as an option. The SBAS/WAAS equipped GTN 650 series lets pilots fly GPS-guided LPV glidepath approaches down to ILS-comparable minimums. In addition, precise course deviation and roll steering outputs can be coupled to select autopilots so that IFR flight procedures may be flown automatically. This includes all ARINC 424 leg types, excluding RF legs (for example, when coupled with a G500/G600 Flight Display, the aircraft can fly fully coupled missed approaches, including heading legs).

Included: • Garmin GTN 650 System (Black) • Garmin GTN Americas Database or Garmin International Database • Garmin GA 35 WAAS Antenna • Garmin GTN Harness

For certified aircraft please see our partner USA avionics shops.

Pricing below is for an experimental aircraft only with harness.

Garmin GTN 650 Americas w/ harness..... P/N 11-09702 ...**$9,939.00**
Garmin GTN 650 International w/ harness.... P/N 11-09706 .**$10,429.00**
Garmin GTN 650 W/ Custom Harness..... P/N 11-12957 ...**$9,875.00**

GARMIN GTN 625



Note: Per Garmin, Aircraft Spruce can only offer this product to experimental aircraft with harness*

Introducing the next generation of aircraft navigation. The GTN 625 is a 2.64-in.-tall standalone GPS navigator that puts a wealth of features – like high-resolution terrain mapping, graphical flight planning, traffic display and more – right at your fingertips. With the GTN 625's revolutionary new touchscreen interface, you're rarely more than two taps away from all of the system's primary functions. Traditional concentric knobs are also available for those who are used to that style of data input. The GTN family makes it easier than ever to get where you're going. Graphical flight planning capabilities allow you to edit your entire route using the map screen and easily enter new waypoints or modify existing ones. The system's robust 15-channel GPS receiver generates five position updates per second. Packed full of multifunction display capabilities, the GTN 625 brings enhanced situational awareness to your cockpit. With high-resolution terrain mapping – including topography features, cities, airports, terminal areas, SUAs and more – and optional Class B TAWS alerting, you'll find your way around the airspace safely and with ease. The system even allows you to load and follow Victor and jet airways. On the ground, built-in Garmin SafeTaxi® U.S. airport diagrams give you geo-referenced runways, taxiways, FBOs and hangars. Couple the system with a GDL™ 69 series datalink receiver and XM® subscriptions, you can overlay NEXRAD radar right onto your moving map display and receive satellite music. Or add a Garmin traffic system and pinpoint other aircraft in your vicinity. The GTN 625 can control the GTX™ 32/33 remote transponder, which could also save you valuable panel space. The GTN 625 features a front-loading SD™ card reader, so you can easily update your databases. In The Box: GTN 625, Cleaning cloth, SD card with databases, Installation kit, Simulation software DVD, Familiarization video DVD, Pilot's guide, Cockpit reference guide, Complimentary database update certificate.

Garmin GTN 625 W/ Custom Harness..... P/N 11-12959 ...**$8,224.00**
Garmin GTN 625 with G3X Purchase ..... P/N 11-14424 ...**$5,695.00**
Garmin GTN 625 and GTX 345R Mode S Transponder
Bundle without Harness..... P/N 11-14328 ...**$8,395.00**
Garmin GTN 625 and GTX 345R Mode S Transponder
Bundle WITH Harness..... P/N 11-14915 ...**$9,172.00**

GARMIN GTN 750 GPS/NAV/COM SYSTEM

Note: Per Garmin, Aircraft Spruce can only offer this product to experimental aircraft with harness*



Packed full of powerful avionics, the GTN 750 is a fully integrated GPS/NAV/COMM solution. The 6-in.-tall system's intuitive touchscreen controls and large display give you unprecedented access to high-resolution terrain mapping, graphical flight planning, geo-referenced charting, traffic display, satellite weather and much more. Touch and Go - With the GTN 750's revolutionary new touchscreen interface, you're rarely more than two taps away from all of the system's primary functions. Navigate with Ease - The GTN family makes it easier than ever to get where you're going. Graphical flight planning capabilities allow you to preview your entire route on the map screen and easily enter new waypoints or modify existing ones. The system even lets you load Victor and jet airways. In IFR conditions, you now have more landing options, as well. The SBAS/WAAS-certified, 15-channel GPS receiver generates five position updates per second, enabling you to fly GPS-guided LPV glidepath instrument approaches down to as low as 200 ft. The system also includes a complete package of VHF navigation capabilities, with a 200-channel VOR/ILS with localizer and glidescope.

A fully certified, 2,280-channel VHF communications transceiver provides a standard 10 W (or optional 16 W) of power output. See More than Ever Before - With a wealth of multifunction display capabilities, the GTN 750 brings enhanced situational awareness to your cockpit. Couple the system with a GDL™ 69 series datalink receiver and XM® subscriptions, you can overlay NEXRAD radar right onto your moving map display and receive satellite music. Or add a Garmin traffic system and pinpoint other aircraft in your vicinity. The GTN 750 can even control the GMA 35 remote audio panel with clearance recorder, advanced auto squelch and more.

Garmin GTN 750 Americas w/ harness.....P/N 11-09703 ...**$14,616.00**
Garmin GTN 750 International w/ harness...P/N 11-09704 ...**$14,906.00**
Garmin GTN 750 W/ Custom Harness.....P/N 11-12960 ...**$14,495.00**

GARMIN GTN 725



Note: Per Garmin, Aircraft Spruce can only offer this product to experimental aircraft with harness

With its 6.9-in. (diagonal) display, intuitive touchscreen interface and wide range of multifunction display capabilities, the GTN 725 is so much more than just a GPS navigator. The 6-in.-tall system puts high-resolution terrain mapping, graphical flight planning, charting, traffic display, satellite weather and much more right at your fingertips. With the GTN 725's revolutionary new touchscreen interface, you're rarely more than two taps away from all of the system's primary functions. Traditional concentric knobs are also available for those who are used to that style of data input. The GTN family makes it easier than ever to get where you're going. The system even lets you load Victor and jet airways. The GTN 725 also allows you to enter your most recently visited or nearest airports as waypoints or "Direct-To" destinations. Built-in Garmin U.S. FliteCharts™ or optional Jeppesen®-style geo-referenced ChartView™, provides you with approach plates and procedures, while Garmin SafeTaxi® lets you see geo-referenced runways, taxiways, FBOs and hangars. The GTN 725's robust 15-channel GPS receiver generates five position updates per second. Packed full of multifunction display capabilities, the GTN 725 brings enhanced situational awareness to your cockpit. With high-resolution terrain mapping – including topography features, cities, airports, terminal areas, SUAs and more – and optional Class B TAWS alerting, you'll find your way around the airspace safely and with ease. Couple the system with a GDL™ 69 series datalink receiver and XM® subscriptions, you can overlay NEXRAD radar right onto your moving map display and receive satellite music. Or add a Garmin traffic system and pinpoint other aircraft in your vicinity. The GTN 725 can even control the GMA 35 remote audio panel with clearance recorder, advanced auto squelch and more. Use the GMA 35 and a GTX™ 32/33 remote transponder to save up to 3 in. of panel space versus a typical GNS 430/530 install.

P/N 11-09972.....**$12,250.00**
Garmin GTN 725 W/ Custom Harness..... P/N 11-12961.....**$12,995.00**

GARMIN GAD™ 29 DATA BUS CONVERTER



GAD 29 is an affordable ARINC 429 avionics data bus module that can be used to interface up to 2 IFR-capable GPS navigators with the G3X, G3X Touch and G5 series electronic flight displays. It can also be used to adapt the GTX 800 series active traffic system for use with G3X and G3X Touch displays. This compact GPS/navigation data adapter, when installed with the GTN 750 or GTN 650 series or legacy GNS 530 or GNS 430 navigators, can enable such advanced features as GPS steering, WAAS LPV vertical approach guidance, HSI map navigation, coupled VNAV and more for access via your compatible flight display system.

P/N 11-15450..... **$699.99**

Prices Subject to Change Without Notice

GARMIN PANEL MOUNT



GARMIN G3X EFIS / EMS / GPS TOUCH SYSTEM

The G3X Touch is a large touchscreen glass flight display system designed for installation in experimental amateur-built and light sport aircraft (LSA). The non-certified G3X Touch system offers pilots easy-to-read, easy-to-use, high-resolution 10.6-inch flight displays with split-screen functionality and a host of advanced interface options – all at a great price.
Large Touch Display: A large 10.6-inch display. Since G3X Touch is scalable and easily configurable, pilots can choose to install up to three G3X Touch displays in their panel. Incorporating the latest in infrared touchscreen technology, the display offers a resilient, high-resolution, sunlight readable screen that demonstrates Garmin's industry-leading experience in integrated flight decks. Enhanced Functionality and Situational Awareness: The G3X Touch display provides pilots with an intuitive split-screen mode with the option to view PFD, MFD, and engine information on a single display. Synthetic vision (SVX™) is a standard feature on G3X Touch, which provides a rich, three-dimensional depiction of terrain, obstacles, water features, the runway environment, and more.
Seamless Integration and Familiar Interface: G3X Touch interfaces with Garmin's industry-leading experimental autopilot, which gives pilots autopilot control through the touchscreen interface, while still supporting the optional, stand-alone GMC 305 autopilot control panel.

Steps	Garmin #	Description	Part No.	Price
1. Pick Your System	K10-00016-40	Single Display GDU 460 System With Out EIS	11-12636	**$5,499.00**
--	K10-00016-45	Single Display GDU 460 System With EIS	11-12638	**$6,099.00**
--	K10-00016-55	Dual Display GDU 460 System With EIS	11-12640	**$9,399.00**
Connector Kit	010-12150-00	GDU 460/465 Install Kit	11-12646	**$65.00**
--	K10-00181-00	GSU 25 Connector Kit	11-11433	**$65.00**
--	011-02886-00	GEA 24 Engine Module Connector Kit	11-11434	**$125.00**
--	011-00871-10	GMU 22 Install Kit	11-12213	**$75.00**
--	011-01796-00	GMU 22 Mounting Bracket	11-13501	**$39.00**
--	010-12150-01	GDU 45X Connector Kit	10-05860	**$74.75**
2. Select Antenna(s)	010-11373-00	GA 26 XM (remote dash mount) Antenna	11-09466	**$98.85**
--	010-10052-04	GA 26C GPS (remote dash mount) Antenna Kit	11-00051	**$78.95**
--	010-11370-10	GA 57X GPS/SM (external mount) Antenna	11-09467	**$221.95**
3. Add Engine Probe Package	K00-00512-00	4 Cylinder Lyc/Cont Probe Kit	11-09469	**$1,079.00**
--	K00-00513-00*	6 Cylinder Lyc/Cont Probe Kit	11-09474	**$1,349.00**
--	K00-00514-00**	Rotax 912 Probe Kit	11-09476	**$321.00**
--	494-30004-02	Fuel Pressure (Injected), 50 PSIG, 1/8-27 NPT	11-09477	**$109.50**
--	494-30004-03	Fuel Pressure (Carbureted) / Coolant Pressure,	11-09478	**$109.50**
--	494-10001-00	Fuel Flow, 1/4" Female NPT	11-09479	**$255.95**
--	494-50005-00	RPM, Hall Effect, Slick magneto	11-09480	**$119.75**
--	494-50005-01	RPM, Hall Effect, Bendix magneto	11-09481	**$117.75**
--	909-D0000-00	Ammeter, Shunt, +/-50 mV, 100 amps	11-09482	**$29.95**
--	494-70000-0	CHT Type Thermocouple 3/8-24 Bayonet	10-05779	**$66.75**
--	494-70002-00	TIT, Type K thermocouple, 7/16-20, bayonet	11-09483	**$85.75**
	494-70004-00	Oil Temperature Probe RTD 5/8-18 UNF-3A	10-05780	**$66.75**
--	494-70005-00	Carb Temp, RTD, 1/4-28	11-09484	**$75.00**
--	494-30004-00	Oil pressure 150 PSI 1/8-27 npt sensor kit	10-05863	**$84.75**
--	494-30004-01	Manifold pressure 30 PSI 1/8-27 npt sensor kit	10-05864	**$79.95**
--	494-70001-00	EGT Type K Bayonet Sensor	10-05865	**$59.75**
4. Add Transponder for Remote Mode S (Optional)	GTX 23	Remote Mount GTX 23 Mode S Transponder	11-10001	**$2,199.00**
5. Add Com for Remote Radio	010-01076-01	GTR 20 Remote Comm Radio for G3X Touch Only	11-12647	**$995.00**
6. Add Autopilot	GSA 28	GSA 28 Single Autopilot Servo	11-11450	**$750.00**
--	011-02950-000	GSA 28 Connector Kit	11-12171	**$30.00**
--	010-01068-00	GSA 28 Capstan Kit	11-11436	**$149.00**
--	011-02952-00	GSA 28 Servo Install Kit Without Mount Bracket	11-11437	**$45.00**
--	011-02952-01	GSA 28 Servo Install Kit Wit Mount Bracket	11-11438	**$75.00**
RV Aircraft Servo Packages	011-02952-10	GSA 28 Servo Install Kit for RV 6 Roll	11-11440	**$87.00**
--	011-02952-11	GSA 28 Servo Install Kit for RV 4 & 8 Pitch	11-11441	**$75.00**
--	011-02952-12	GSA 28 Servo Install Kit for RV 7, 8 & 10 Roll	11-11442	**$75.00**
--	011-02952-13	GSA 28 Servo Install Kit for RV 9 Roll	11-11443	**$75.00**
--	011-02952-14	GSA 28 Servo Install Kit for RV 6, 7 & 9 Pitch	11-11444	**$75.00**
--	011-02952-15	GSA 28 Servo Install Kit for RV 10 Pitch	11-11445	**$75.00**

GARMIN PANEL MOUNT



GARMIN G3X EFIS / EMS / GPS TOUCH SYSTEM

The G3X Touch is a large touchscreen glass flight display system designed for installation in experimental amateur-built and light sport aircraft (LSA). The non-certified G3X Touch system offers pilots easy-to-read, easy-to-use, high-resolution 10.6-inch flight displays with split-screen functionality and a host of advanced interface options – all at a great price.
Large Touch Display: A large 10.6-inch display. Since G3X Touch is scalable and easily configurable, pilots can choose to install up to three G3X Touch displays in their panel. Incorporating the latest in infrared touchscreen technology, the display offers a resilient, high-resolution, sunlight readable screen that demonstrates Garmin's industry-leading experience in integrated flight decks. Enhanced Functionality and Situational Awareness: The G3X Touch display provides pilots with an intuitive split-screen mode with the option to view PFD, MFD, and engine information on a single display. Synthetic vision (SVX™) is a standard feature on G3X Touch, which provides a rich, three-dimensional depiction of terrain, obstacles, water features, the runway environment, and more.
Seamless Integration and Familiar Interface: G3X Touch interfaces with Garmin's industry-leading experimental autopilot, which gives pilots autopilot control through the touchscreen interface, while still supporting the optional, stand-alone GMC 305 autopilot control panel.

CONTINUED FROM THE PREVIOUS PAGE.

7. Add Autopilot Control Panel	010-01169-00	GMC 305 Autopilot Control Panel	11-11446	**$750.00**
--	010-12034-00	GMC 305 Install Kit	11-11447	**$29.95**
8. Add ADS-B Weather	--	GDL 39 Portable ADS-B Receiver With Bare Wire Cable	11-10730	**$599.00**
9. Add Pitot Tube & AOA	010-01074-00	GAP 26 Unheated Pitot Tube	11-11448	**$199.00**
--	010-01074-10	GAP 26 Heated Pitot Tube	11-11449	**$299.00**
--	010-01074-20	GAP 26 Heated & Regulated Pitot Tube 14V	11-12973	**$449.00**
--	--	PBK-12 PAINTABLE GRETZ BRACKET	10-01820	**$109.75**
--	010-01287-00	GI 260 Angle of Attack Indicator for G3X or G3X Touch	11-12648	**$249.00**
10. ARINC Interface	010-01172-00	GAD 29 ARINC Interface	11-11454	**$425.00**
--	011-03271-00	GAD 29 Connector Kit	11-11455	**$50.00**
11. Pick Wire Harness	--	G3X VFR Harness EFIS/EMS 4CYL CON/LYC	11-09485	**$885.00**
--	--	G3X IFR Harness EFIS/EMS 4CYL CON/LYC	11-09486	**$1,070.00**
--	--	G3X VFR Harness EFIS/EMS 6CYL CON/LYC	11-09487	**$922.00**
--	--	G3X IFR Harness EFIS/EMS 6CYL CON/LYC	11-09488	**$1,107.00**
--	--	G3X VFR Harness EFIS/EMS Rotax	11-09489	**$794.00**
--	--	G3X IFR Harness EFIS/EMS Rotax	11-09490	**$986.00**
--	--	G3X VFR No Engine Data Harness	11-09709	**$691.00**
--	--	G3X IFR No Engine Data Harness	11-11293	**$769.00**
--	--	G3X Screen Add-On Harness	11-12273	**$295.00**
--	--	Garmin G3X Auto Pilot Harness	11-11294	**$225.00**
--	010-01546-00	Garmin G3X ADS-B GPS System	11-13819	**$845.00**
--	011-03914-00	Garmin G3X GPS Install Kit	11-13820	**$30.00**
--	--	G3X GAD 27 Solid State Controller	10-05937	**$499.00**
--	--	G3X GAD 27 Connector Kit	10-05938	**$85.00**
--	--	Installation Kit for Garmin GPS 20A	11-13820	**$30.00**
--	010-01765-00	GDU™ 470 7-inch display, GPS Display, AM Portrait (Display Only)	11-14969	**$2,995.00**
--	010-01056-00	GDU™ 450 7-inch display, GPS Display, AM Landscape (Display Only)	10-05740	**$2,995.00**
--	010-01056-10	GDU™ 455 7-inch display, GPS Display, AM, SXM Landscape (Display Only)	10-05742	**$3,495.00**
--	010-01057-00	GDU™ 460 10.6-inch Landscape (Display Only)	11-12642	**$3,895.00**
--	010-01057-10	GDU™ 465 10.6-inch GPS Display, AM, SXM Landscape (Display Only)	11-12645	**$4,395.00**
--	K10-00016-04	System LRU kit with GSU 25, GMU 11, GTP 59 and configuration module	11-14971	**$1,500.00**
--	K10-00016-03	G3X LRU kit with GSU 25B, GMU 22, GTP 59 and configuration module	11-14961	**$2,599.00**
--		GAP 26 Heated & Regulated Pitot Tube 28V	11-14963	**$399.00**
--		G3X Add-on Vertcal Power or GAD 27 Harness	11-14964	**$250.95**
--	011-02950-01	GSA 28 Connector Kit Right Angle (One Per Servo)	11-14918	**$110.00**
--	010-12150-02	GDU 470 7" Install Kit	11-15037	**$71.75**
--	011-04349-90	GMU 11 Connector Kit	11-15066	**$32.95**
WWW.AIRCRAFTSPRUCE.COM FOR GARMIN G3X IFR SYSTEM				

Prices Subject to Change Without Notice

GARMIN GTX 335 DIGITAL TRANSPONDER



All-inclusive 1090 MHz ADS-B "Out" Transponder Solution:

- Satisfies NextGen equipage requirements for ADS-B "Out"
- 1090 MHz output enables aircraft to operate at any altitude, in airspace around the globe
- Combines Mode S Extended Squitter (ES) transponder and optional WAAS/GPS position source in a single unit
- Useful display features include flight time, count-up and count-down timers, plus current pressure altitude readout
- Easy replacement for your existing transponder, with common 1.65-inch tall form factor

PANEL MOUNT		
Part No.	**Description**	**Price**
11-15034	GTX 335 Unit Only	**$2,995.00**
11-14167	GTX 335 with 4ft harness	**$2,845.00**
11-14168	GTX 335 with custom harness	**$2,922.00**
11-15035	GTX 335 GPS with 4ft harness	**$3,072.00**
11-15420	GTX 335 with GAE 12 / 4ft harnesss	**$3,317.00**
11-15036	GTX 335 GPS with custom harness	**$3,075.00**
11-14165	GTX 335 NVG with 4ft harness	**$3,577.00**
11-14166	GTX 335 NVG with Custom harness	**$3,608.00**
REMOTE		
Part No.	**Description**	**Price**
11-14171	GTX 335R with 4ft harness	**$2,892.00**
11-14172	GTX 335R with custom harness	**$2,922.00**
11-14173	GTX 335R GPS with 4ft harness	**$3,485.00**
11-14174	GTX 335R GPS with custom harness	**$3,654.00**

GARMIN GTX 345 DIGITAL TRANSPONDER



All-in-one Transponder Solution for ADS-B "Out" and "In" • 1090 MHz ADS-B "Out" enables aircraft to operate at any altitude, in airspace around the globe • Combines Mode S Extended Squitter (ES) transponder and optional WAAS/GPS position source in a single unit • Provides access to dual-link ADS-B "In" traffic and subscription-free weather on compatible displays • Wirelessly stream weather, traffic, GPS position and backup attitude via Connext™ link to Garmin Pilot™ and ForeFlight Mobile apps as well as the aera® 795/796 portables • Easy replacement for your existing transponder, with common 1.65-inch tall form factor

PANEL MOUNT		
Part No.	**Description**	**Price**
11-14175	GTX 345 with 4ft harness	**$4,406.00**
11-14176	GTX 345 with custom harness	**$4,515.00**
11-14177	GTX 345 GPS with 4ft harness	**$5,342.00**
11-14178	GTX 345 GPS with custom harness	**$5,495.00**
REMOTE		
Part No.	**Description**	**Price**
11-14179	GTX 345R with 4ft harness	**$5,251.00**
11-14180	GTX 345R with custom harness	**$4,479.00**
11-14181	GTX 345R GPS with 4ft harness	**$5,095.00**
11-14182	GTX 345R GPS with custom harness	**$5,168.00**

GARMIN GAE12 ALTITUDE ENCODER



Conveniently mounts to the transponder back plate for easy installation and service, precluding the need for a static leak check after removal of the transponder for maintenance. The altitude encoder is configured using either the configuration interface on the display units or via the PC based install tool. The encoder can be used at altitudes up to 30,000ft.& can be configured to output the data to a GTN Navigator. This unit is only compatible with the GTX 335(R)/345(R) ..... P/N 11-14162 ..... **$249.00**

GARMIN GTX 330 ES TRANSPONDER

Note: Sold with harness. Cannot be sold without harness.



A panel-mounted Mode S digital transponder series with traffic datalink capability and dedicated pushbutton keys for squawk code selection. With IFR-certified ES, or Extended Squitter, versions of the GTX 330, this offers an affordable pathway to ADS-B compliance for the Next Generation airspace system. Enables transponders to automatically transmit more accurate, and more useful, traffic surveillance data. Certified to TSO-C166b, authorization for 1090 MHz extended squitter transmission. The ADS-B reports provide ground controllers with considerably faster updates than traditional radar

All the features of the standard GTX 330 transponder are retained in the ES version. Unit dimensions, WxHxD: 6.25"W x 1.65"H x 11.25"D (15.9 x 4.2 x 28.6 cm). Weight: 4.2 lb (1.9 kg). In the Box: GTX 330/330D transponder, Installation Kit, and Pilot's Guide.

GTX330 to 330 ES Upgrade ..... P/N 10-05899 ..... **$1,225.00**

GARMIN GMA 342 AUDIO PANEL



Affordable Audio Control for Your Certified Avionics Draws on top-end Garmin audio technology for "home theater" quality sound with dedicated music volume knobs for pilot and copilot. 3D Audio processing helps pilots "locate" inputs coming into their headsets, Advanced Auto Squelch technology automatically adapts to quiet or noisy environments without clipping words or cutting out during conversation. Digital voice recorder offers instant replay of comm radio inputs

Offers slide-in replacement upgrade for GMA 340 and select third-party audio panels

For pilots who want the best of the basics in audio control, combined with rich "home theater" quality sound, the GMA 342 all-digital audio panel is a perfect fit. It's affordably priced yet loaded with features previously found only on high-end audio management systems. Plus, for easy system upgrade, it offers direct slide-in replacement for legacy GMA 340 or select third-party audio control panels. So it doesn't take long for your installer to pull out the old and slide in the new.

P/N 11-14973 ..... **$1,495.00**

GARMIN GMA 345 AUDIO PANEL WITH BLUETOOTH®



Bluetooth® Audio Panel for Your Certified Avionics. Bluetooth connectivity enables easy access to phone calls and audio entertainment. Draws on top-end Garmin audio technology for "home theater" quality sound with dedicated music volume knobs for pilot and copilot. 3D Audio processing helps pilots "locate" inputs coming into their headsets. USB charging port provides power for smartphones, tablets, music players and more. Offers slide-in replacement upgrade for GMA 340 and select third-party audio panels.

Description	**Part No**	**Price**
GMA 345	11-14972	**$1,640.00**
GMA 345/342/340 6 Place Custom Harness	11-13333	**$395.00**
GMA 345/342/340 4 Place Custom Harness	11-13334	**$325.00**
GMA 345/342/340 2 Place Custom Harness	11-13335	**$215.00**

GARMIN GTX 327 MODE C TRANSPONDER



With the intro of the GTX 327, Garmin revolutionizes a part of the panel that has been long overlooked. This full-featured, TSO certified transponder brings a unique level of functionality and utility to your airplane. Its solid state transmitter provides 200 watts nominal power output and eliminates the need for a cavity tube which will eventually fail and require expensive replacement. And since the GTX 327 design is 100% solid state there is no warm up time, lower power consumption and lower heat emission. All of which translates to a longer service life. Some of the GTX 327 biggest features are the easiest to see. Among them, the easy-riding DSTN Liquid Crystal Display which reverses yellow numbers out of black for optimal viewing. An innovative keypad makes entering a squawk code a snap. And a dedicated VFR button allows for quick and easy 1200/VFR squawking. The GTX 327 also offers two important timing functions. The first screen shows the current time and count up timer. The second indicates flight time and a count down timer. Together they represent a whole new standard in transponder utility.

GTX 327 with Harness ..... P/N 11-00329 ..... **$1,955.00**

GARMIN GTX 328 MODE-S TRANSPONDER



Note: Sold with harness. Cannot be sold without harness.

Designed exclusively for Europe, GTX 328 satisfies the European requirement for a Mode S solution that meets the reduced certification requirements for the VFR Mode S mandate. GTX 328 is intended to serve VFR/Class 2 aircraft where there is adequate size and power consumption support for a GTX 328 unit and is a straightforward retrofit. GTX 328 offers the same great value, reliability and innovation that pilots and aircraft owners have come to know from Garmin — at an affordable price..... P/N 11-05275 ..... **$2,565.00**

Garmin GTX 328 W/ Custom Harness ..... P/N 11-12956 ..... **$2,692.00**

For a quote on complete custom panels for experimental aircraft please email: avionics@aircraftspruce.com

AV

GARMIN GTR 225/GNC 255 VHF NAV/COM RADIOS



Replacement products for the popular SL30 and SL40 models. Meets the requirements of the 8.33 kHz channel spacing mandate recently enacted by the European Union under the Single European Sky (SES) initiative. The GNC series NAV/COM radios offer all of the same COM features, while also adding navigation capability with VOR/ILS with Glideslope. The GNC series works well with select Garmin flight displays including the G500, G600, G500H and G3X to display the NAV indicators in the primary field of view, and can integrate with most autopilots. The GTR and GNC series are more powerful than their SL-series predecessors with versions available with 10- or 16-watt transmit power. The GTR 225 includes 10 watts of transmit power and 25 kHz frequency spacing. All products in the series have received the Federal Aviation Administration's (FAA) Technical Standard Order (TSO) authorization.

GTR 225 Com 10W with 5 ft. Harness ..... P/N 11-11351 .**$1,902.00**
GTR 225A Com 8.33 KHZ 10W with Harness. P/N 11-11352 .**$2,347.00**
GTR 225B Com 8.33 KHZ 16W with Harness. P/N 11-11353 .**$3,473.00**
GTR 225 COM with Custom Harness ..... P/N 10-05721 .**$1,910.00**
GNC 255A Nav/Com 8.33 KHZ 10W with Harn... P/N 11-11354 .**$3,910.00**
GNC 255B Nav/Com 8.33 KHZ 16W with Harn... P/N 11-11355 .**$4,746.00**

Important Notes: • This is for experimental aircraft use only. • See Harness tab for unit details. • Standard Kit comes with Rack, Connector Kit, and Back plate. • "Standard Kit + Harness" model includes all the same + the harness. Includes Rack, Connector Kit, Back plate, and selected harness.

GNC 255B / GTR 225B NVG



NVG Capable COM and NAV radios. The GNC NAV/COM and GTR COM series of radios are now even better with the addition of new, NVG capable versions.

GNC255B Standard..... P/N 10-05787.....**$5,685.95**
GTR225B Standard..... P/N 10-05788.....**$4,133.95**

GARMIN GTR 200 PANEL MOUNT COM RADIO



The GTR 200 panel mount comm radio for experimental and light sport aircraft that offers a slim design and powerful features, including advanced auto-squelch, 3D audio, stereo intercom, stereo music input, alert inputs, best-in-class standby frequency monitoring, on-screen frequency identification, and much more. The GTR 200 is the first to integrate advanced audio panel features like a two place auto-squelch stereo intercom, which senses the amount of sound in the cockpit and automatically adjusts the mic squelch for effortless intercom use regardless of the cockpit noise level. With its advanced integration with the Garmin G3X glass flight display, or other compatible Garmin portable products, the GTR 200 is able to receive a frequency and identifier in the comm's standby position directly from the G3X's waypoint page, allowing the pilot to ensure accurate transfer and reduce workload.

Description	Part No.	Price
Garmin GTR 200 Com Radio - Standard Kit	11-11999	**$1,199.00**
Garmin GTR 200 Com Radio - Standard Kit + Harness to Audio Panel	11-12085	**$1,344.00**
Garmin GTR 200 Com Radio - Standard Kit + 2-Place Harness with Jacks Attached	11-12003	**$1,448.00**
Garmin GTR 200 Com Radio Standard Kit + Custom Harness	11-12084	**$1,493.00**

This is for experimental aircraft use only. Standard Kit comes with Rack, Connector Kit, and Back plate. "Standard Kit + Harness" model includes all the same + the harness.

GARMIN GMA 240 AUDIO PANEL



Non-TSO'd so it's priced really low. Yet, it includes an intercom and will support dual COMM, dual NAV, dual AUX receivers, and dual music audio inputs – plus up to three unswitched inputs for telephone ringers, altitude alerts, or other warning tones. Pilots can connect up to two dedicated music sources to the rear connector (e.g. XM music and CD player) and over-ride one of those sources at any time by plugging-in a device (e.g. MP3 player) into the 2.5 mm front jack. The music source's volume can be increased or decreased with the GMA 240 by pulling out the copilot volume knob. The 2.5 mm front jack also makes it easy for pilots to make and receive cell phone calls. It has a full-duplex telephone interface with intercom isolation capability. Specifications: * Weight: 15.5 oz (440 g) * Dimensions: 1.3" x 6.29" x 7.12" * Power: Input voltage range: 11-33 Vdc, 4.3 W normal * Temperature range: -20C to +55C * Altitude: 55,000 MSL unpressurized * Transceiver inputs: 3 (including TEL) * Receiver inputs: 4 * Alert inputs: 3 * Input impedance: 500 Ohms * Input isolation: 60 dB min * Bandwidth: 100 Hz to 6.5 kHz * Music inputs (stereo): 2 * Music gain: -20 dB @ min. volume, +26 dB @ max. volume

P/N 11-06619 .....**$869.00**

GARMIN GMA 340 AUDIO PANEL



The Garmin GMA 340 audio panel is compact and lightweight, making it an excellent choice for panels with limited space. Audio panel features include 3 transceiver inputs, 5 receiver inputs, and 2 unswitched inputs. The intercom provides 6 positions, 3 volume controls, 2 VOX level controls, 6 VOX circuits, and 2 stereo music imputs. This unit features 3 stereo headphone outputs and 2 speaker outputs, and the marker beacon receiver features input impedance of 50 ohms. Size: 6.8"d x 6.29"w x 1.3"h. Power req.: 11-33 VDC

GMA 340 Audio Panel..... P/N 11-18960 .....**$1,585.00**
GMA 340 with basic harness ..... P/N 11-08061 .....**$1,689.00**
GMA 340 with Harness (4 place) ..... P/N 11-07170 .....**$1,795.00**

GARMIN GMA 350 AUDIO PANEL

Note: Per Garmin we cannot sell the GMA 350 to certified aircraft. For experimental aircraft please contact us for the wire harness form that is required and allow 2-3 weeks to ship.



The first truly all-digital audio panel, Garmin's GMA 350 introduces a number of new technologies to the cockpit, including voice recognition, 3-D audio processing, advanced auto squelch and more. **Features**: Intuitive front panel layout with cursor control and volume indicator. Six/Seven position intercom: pilot, copilot, four or five passengers. Three stereo headset amplifiers: pilot, copilot, and passengers. Two stereo music source inputs Five selectable intercom operational modes. Independent pilot, copilot, and passenger volume controls. Individual VOX processing for each mic input. Automatic selection of radio audio source when corresponding mic is selected. Split COM transceiver function. Copilot may transmit and receive on one COM while pilot transmits and receives on another. Voice recognition. Automatic audio adjustment for ambient noise. 3-D Audio. Marker beacon receiver with lamp driver outputs.

GMA 350 Audio Panel..... P/N 11-09667.....**$1,908.00**
GMA 350H Audio Panel ..... P/N 11-09668.....**$2,242.00**
GMA 350 With Custom Harness ..... P/N 11-12963.....**$2,395.00**
GMA 350H With Custom Harness ..... P/N 11-12964.....**$2,575.00**
GMA 350C (Standard) w/ install kit..... P/N 11-13824.....**$2,196.00**
GMA 350C (Remote) w/ install kit..... P/N 11-13825.....**$2,695.00**
GMA 350HC (Helicopter) w/ install kit..... P/N 11-13826.....**$2,433.00**
GMA 350H Custom wire harness 6 place... P/N 11-13330.....**$395.00**
GMA 350H Custom wire harness 4 place... P/N 11-13331.....**$325.00**
GMA 350H Custom wire harness 2 place... P/N 11-13332.....**$215.00**

The Garmin GMA 350 can only be sold over the counter to expermental aircraft (must verify) with harness. For certified aircraft, it must be installed by a Garmin Dealer. Please call 1-800-826-3160 for partner shop location for certified installs. (price of installation not included)

GARMIN GMA 35 REMOTE AUDIO PANEL



*****Note: Per Garmin, Aircraft Spruce can only offer this product to experimental aircraft with harness*****

Features: • Remote mounted for use with the GTN 750 series • 6 or 7 position intercom: pilot, copilot, 4 or 5 passengers • 3 stereo headset amplifiers: pilot, copilot and passengers • 2 stereo music source inputs • Up to 8 selectable intercom operational modes with synoptic intercom routing • Independent pilot, copilot and passenger intercom volume controls • Individual VOX processing for each MIC input • Automatic selection of radio audio source when corresponding MIC is selected • Automatic volume adjustments based on ambient sound levels • Flexible split COMM transceiver function. Copilot may transmit and receive on one COMM while pilot transmits and receives on another. • Marker beacon receiver P/N 11-12196....**$2,575.00**

GARMIN GTN 635 GPS / COM SYSTEM USA



TThe 2.64" GTN 635 puts high resolution terrain mapping, graphical flight planning, multiple weather options and traffic display right at your fingertips. GTN 635 Features: • GPS TSO'd to C146c, authorized for Class 1,2,3 (LPV) • GPS WAAS-certified to Gamma-3 approach capability • WAAS-corrected GPS signal accuracy to 1 M RMS • graphical flight planning (including airway navigation) • VHF COMM transceiver: 8.33 or 25 kHz channel spacing • com transmit power: 10 W standard, 16 W optional • extensive optional interface capabilities: lightning, weather, traffic and TAWS-B terrain alerting • integrated control/display for remote transponder • flight control system interface for select autopilots • optional XM WX Satellite Weather and SiriusXM Satellite Radio • SafeTaxi® airport diagrams • award-winning product support and 2-year warranty • Unit dimensions, WxHxD:6.25"W x 2.65"H x 11.25"D (15.9 x 6.7 x 28.6 cm) • Display size, WxH: 4.46"W x 1.98"H (11.33 x 5.02 cm); 4.9" diag (12.4 cm).

GTN Unit Only ..... P/N 11-11281 .....**$8,586.00**
GTN Unit and Harness ..... P/N 11-11282 .....**$8,686.00**
GMA 635 With Custom Harness..... P/N 11-12958 .....**$8,750.00**

AV

Prices Subject to Change Without Notice

GARMIN GNS 430W



All-in-one GPS/Nav/Comm solution. It features a WAAS-certified GPS, 2280-channel capacity comm and 200-channel ILS/VOR with localizer and glideslope. High-speed 5 Hz processing makes navigation calculations and map redraw rates five times faster than earlier GNS series navigators.
Built-in WAAS navigation capabilities. It is approved to fly LPV "glideslope" approaches without reference to ground-based navaids of any kind. Featuring an advanced 15-channel receiver capable of five position updates per second, GNS 430W meets the FAA's stringent TSO C146a standards for WAAS "sole means" navigation — providing vertical and lateral approach guidance into thousands of U.S. airports previously inaccessible in IFR conditions.
4-inch high-contrast display with brilliant colors makes it easy to read and interpret pilot-critical information. Conveniently scan information from wide viewing angles, even in direct sunlight.
Integrates built-in terrain and navigation databases, providing a clear, concise picture of where you are and where you're heading. The 430W's huge Jeppesen® database, updated with front-loading data cards, contains location reference for all airports, VORs, NDBs, Intersections, Flight Service Stations, published approaches, SIDs/STARs, Special Use Airspace and geopolitical boundaries.

GNS 430W/530W Wiring Harness ..... P/N 11-06749 ..... **$98.50**
Navishield 430 Screen Protector ..... P/N 05-04224 ..... **$12.95**
Flight Plan Data Card ..... P/N 11-07593 ..... **$324.00**
Power Simulator Cable ..... P/N 11-04870 ..... **$58.75**

The Garmin GNS 530W/430W can only be sold over the counter to expermental aircraft (must verify) with harness. For certified aircraft, it must be installed by a Garmin Dealer. Please call 1-800-826-3160 for partner shop location for certified installs. (price of installation not included)

GARMIN GMA™ 245/245R AUDIO PANELS



GMA 245 and GMA 245R, all-digital, Bluetooth audio panels designed for experimental amateur-built (EAB) and light sport aircraft (LSA). The GMA 245 is a panel-mount audio panel with a rich set of convenient and simple-to-use controls, designed to interface with the G3X Touch™ flight display. These Bluetooth-enabled audio panels boast superior sound quality and an impressive list of additional features such as industry-leading auto squelch, music bass boost, advanced equalizer settings, 3D Audio processing, wireless integration with the VIRB® XE action camera and more. When interfaced to the G3X Touch flight display, both audio panels introduce more capabilities that allow for convenient wireless communication and offer advanced integration potential that provides pilots with an exclusive in-flight experience.

GMA 245 Panel Mount ..... P/N 11-14308 ..... **$1,325.00**
GMA 245R Remote Mount ..... P/N 11-14309 ..... **$1,199.00**

GARMIN 430 GPS GOAL PAGE SET-UP TRAINING MANUAL



This spiral bound book contains over 300 pages of clearly described procedures for the operation of the Garmin GNS-430. From updating the data system to shut down each phase of operation is explained with full color screen shots to help students relate to the real unit.

P/N 17-00050 ..... **$65.50**

GARMIN GAD™ 29 DATA BUS CONVERTER



GAD 29 is an affordable ARINC 429 avionics data bus module that can be used to interface up to 2 IFR-capable GPS navigators with the G3X, G3X Touch and G5 series electronic flight displays. It can also be used to adapt the GTX 800 series active traffic system for use with G3X and G3X Touch displays.
This compact GPS/navigation data adapter, when installed with the GTN 750 or GTN 650 series or legacy GNS 530 or GNS 430 navigators, can enable such advanced features as GPS steering, WAAS LPV vertical approach guidance, HSI map navigation, coupled VNAV and more for access via your compatible flight display system.

P/N 11-15425 ..... **$499.99**

GARMIN GDL 82 BUILT-IN GPS ADS-B KIT



The GDL 82 Automatic Dependent Surveillance-Broadcast (ADS-B) datalink, is the latest addition to the comprehensive lineup of certified ADS-B solutions available from Garmin. GDL 82 is a small, lightweight Universal Access Transceiver (UAT) datalink with a built-in GPS receiver. For aircraft owners looking for an economical and turnkey solution to satisfy the requirements of ADS-B "Out", GDL 82 is a straightforward path to meet regulatory requirements.

GDL82 with GPS Kit ..... P/N 11-15319 ..... **$1,795.00**
GDL82 with GPS Kit& 10 ft Harness ..... P/N 11-15986 ..... **$1,831.00**

GARMIN G3X GMC 307 CONTROL PANEL



High-end Capability for Your G3X™. Dedicated controller for advanced Garmin autopilot modes. Control wheel for altitude selection. Dedicated heading and altitude knobs. LVL mode button commands automatic recovery from steep or unusual attitudes. Allows for standalone operation of the autopilot. The GMC 307 control panel offers a dedicated interface for G3X autopilots in experimental and light sport aircraft.

P/N 11-13822 ..... **$1,099.00**

GARMIN GI-106B CDI



Stay on course with the GI 106B, a high-quality course deviation indicator from Garmin. The panel-mounted GI 106B includes a VOR/LOC/GPS needle as well as a glideslope needle, which can be hidden and disabled by an installer if the glideslope functionality is not needed. The GI 106B contains LED-lit GPS, NAV and VLOC mode annunciators, for an easy-to-read and modern look. TO/FROM annunciators are also LED, and when invalid, the needles are simply hidden out of the pilot's view instead of using conventional invalid flags. The GI 106B is compatible with the same pinout connections as the legacy GI 102A and GI 106A course deviation indicators, allowing for an easy upgrade path. It also features anti-reflective lenses and LED flood lighting for viewing at night.

With Install Kit. P/N 10-05960 ..... **$2,395.00**

GARMIN GDL® 51 SIRIUSXM / GPS RECEIVER



Providing an easy-to-use and completely portable aviation satellite link, the compact GDL 51 SiriusXM receiver lets you access continuous, detailed weather information — plus more than 150 channels of digital-quality music, news, sports and other entertainment programming. Better still, you can use our Connext® wireless connectivity to stream SiriusXM services onto multiple Garmin aviation portables (including aera® 660, aera 796 or aera 795 series) as well as iPad® tablets and other mobile devices with the Garmin Pilot™ app. So you get more access — on more devices — without spending more money.

GDL 51 Portable ..... P/N 11-15317 ..... **$649.00**
GDL 51R Remote Mount ..... P/N 11-15318 ..... **$649.00**

GARMIN GDL® 52 ADS-B / SIRIUSXM / GPS RECEIVER



Note: For use with the Garmin Pilot App and other Garmin Portable systems only.
Note 2: GDL 52 can only receive ADS-B information in the USA.
Receive SiriusXM Aviation satellite weather and digital audio entertainment[1] plus subscription-free ADS-B U.S. datalink weather[2] and traffic. ADS-B "dual-link" traffic with TargetTrend™ and TerminalTraffic™ technology3. Wireless connectivity for display on select mobile device apps and Garmin portables. Provides GPS position data, backup attitude5 and more. Receive the first three-months of a monthly subscription to the SiriusXM Pilot Preferred aviation weather package and the SiriusXM All Access audio programming package at no cost with GDL 52.

GDL 52 Portable ..... P/N 11-15315 ..... **$1,149.00**
GDL 52R Remote ..... P/N 11-15316 ..... **$1,149.00**

GARMIN BASE MOUNT FOR GDL® 51 / 52 MOUNTING BRACKET



Stability and mobility all in one! Our base mount will keep your compatible aviation unit secure and in reach for navigating on the fly.

P/N 11-15524 ..... **$24.50**

AV



KING KSN 770 INTEGRATED SAFETY NAVIGATOR

An affordable, WAAS-Enabled, Integrated MFD with a flexible hybrid user interface. Features: • High-res VGA display (5.7" diagonal, 5.25" high). • Hybrid user interface • Electronic charts and maps. • WAAS GPS enroute and approach navigation system. • **TCAS and Radar, **TAWS and Stormscope. • XM WX interface. • 10W COM with optional high-power 16W COM.-Digital radio core • Analog and digital inputs/ outputs. • EPIC/APEX FMS Core. • Simple to use • Affordable pricing • Enhanced ground proximity warning system (option). • Nav/Com (10W Com with 16W option) ..... P/N 11-12340 ..... **$8,475.00**

SILVER CROWN KX-165A NAV/COM SYSTEM



Large, self-dimming, microprocessor-controlled gas discharge readouts and solid-state electronic tuning provide fast, accurate selection of all 200 Nav & 760 Comm frequencies. On the COMM side, the KX165 system gives you 10W minimum transmitter power for maximum range and clarity. And on the NAV side, the KX165's useful 'Radial' feature offers you an instant readout of the radial you're on (from the 'active' VORTAC station), digitally displayed in the 'standby' NAV frequency window. The KX-165A is TSO'd and offers 32 channels of com frequency memory, an additional CDI mode. The GPS "Quick Tune" feature allows the pilot to select and remotely tune the standby com & nav freq. from the KLN94 GPS 28V

25 khz ..... P/N 11-00644 ..... **$4,995.00**
8.33 khz ..... P/N 11-16032 ..... **$5,504.00**

CROWN KX 125 DIGITAL NAV/COM



The KX-125 is ideal as a replacement radio, a primary system for homebuilts or a very affordable back-up. COMM section provides 760 frequencies, 'flip-flop' frequency selection, a built-in audio amplifier with sidetone and audio leveling, direct tuning, stuck-microphone alert, and even remote transfer of both COMM and NAV frequencies. Its separate NAV section offers 200 frequencies, including localizer. Includes unit, install kit, nd manual.

14V ..... P/N 11-03844 ..... **$5,074.00**
KX-125 Unit Only ..... P/N 11-02585 ..... **$4,195.00**

CROWN KI SERIES INDICATORS



The KI203, KI208, KI204, & KI209 indicators feature an internal VOR/ LOC converter and are compatible with the KX155 transceiver. The KI203 & KI204 have rectilinear meter movement, while the KI208 & KI209 feature pivot needle action. The KI206 has rectilinear meter movement and works with the KX165 & KNS80. The KI209 includes GPS interface capability. Size: 3.125" x 8"D; Weight: 1.5lbs.

KI 203 NAV Indicator ..... P/N 11-03407 ..... **$1,825.00**
KI 204GS Indicator ..... P/N 11-03408 ..... **$3,305.00**
KI 209A GS Indicator ..... P/N 11-03409 ..... **$2,735.00**
KI 208 NAV Indicator ..... P/N 11-00876 ..... **$1,415.00**
KI 208A 14/28V with install ..... P/N 11-07599 ..... **$2,095.00**
KI 209 GS Indicator ..... P/N 11-00878 ..... **$2,297.00**
KI 206 GS Indicator ..... P/N 11-04209 ..... **$2,295.00**
Approach KI 204 Indicator Cbl. .. P/N 11-05669 ..... **$154.95**



BENDIX/KING XVUE TOUCH FLIGHT DECK SYSTEM

The xVue Touch is centered around an industry leading 10.1" display with a near 4K resolution and 1000 nits of luminescence. This stunning and intuitive interface places all critical functions just two touches away on its anti-glare, anti-smudge, and anti-scratch display. With cutting edge 97% touch accuracy, it is easy to control all of the functionality that comes standard with the system, including SmartView Synthetic Vision, Vertical Situation Display, and ADS-B In weather and traffic display. These features, within a variety of possible screen configurations, lead to improved situational awareness and safety. P/N 11-16286 ..... **$5,499.00**



BENDIX/KING KT 74 TRANSPONDER

The KT 74 transponder from Bendix/King is the easiest upgrade to the popular KT 76A/C and KT 78A models, with a 'plug and go' capacity. And it's ADS-B compliant, therefore meeting all 2020 requirements. It is low-cost, easy to install and fits into your existing panel. Suiting your needs now and in the future.

KT 74 ADVANTAGE: • Retrofit - 'plug and play' installation • Low-cost solution that will offset future costs • Low power consumption • ETSO and TSO approved Mode S • Accurate readings with updates every few seconds • More efficient routing and better situational awareness • Meets ADS-B 2020 requirements* ..... P/N 11-12038 ..... **$2,429.00**

CROWN KY 96A & KY 97A COM



Bendix/ King has designed the KY 96A and KY 97A to operate on 760 frequencies from 118.00 MHz to 136.975 MHz. You can switch between active and standby frequencies. Simply tune the desired frequency into the standby window ("STBY") while monitoring the "USE" channel-when the time is right, simply push the frequency transfer button to transfer the standby frequency into the active window. A remote switch may be installed as an additional means of providing the "flip-flop" function. Up to nine channels can be easily programmed by the pilot into the memory of the KY 96A or KY 97A. The KY 96A & KY 97A remember displayed frequencies and stored frequencies without batteries or external hookup during power shutdown or in the event of a power interruption and have an easy-to-read, illuminated LCD display.

KY 96A (28V) ..... P/N 11-03411 ..... **$3,359.95**
KY 97A (14V) ..... P/N 11-03410 ..... **$3,175.00**
KY 97A Unit only ..... P/N 11-02583 ..... **$3,205.00**

Accessories

King Install Manual KY96A/97A ..... P/N 11-18005 ..... **$231.95**
KY 96A / KY 97A Install Manual CD ..... P/N 11-02374 ..... **$5.95**
Approach KY 96A / 97A COM Cable ..... P/N 11-05666 ..... **$169.95**



CROWN SERIES KT-76A MODE C TRANSPONDER

The KT76A is a panelmount, class 1-A transponder and provides maximum performance at any altitude up to 35,000 ft. A compact unit with Large Scale Integrated (LSI) circuitry, reducing both weight and power requirements. All Mode A & Mode C transponders perform the same functions: replying to radar interrogations, providing Air Traffic Control (ATC) with positive identification, and showing your ground speed on the Controller's radar monitor. If you have an encoding altimeter or blind encoder, the transponder will transmit your altitude as well.

KT76A 06 14V (Transponder) ..... P/N 11-02438 ..... **$1,628.00**
28V Dropping Resistor ..... P/N 11-00913 ..... **$210.75**
Replacement Bulb Container ..... P/N 11-00522 ..... **$19.95**
14V Without Harness ..... P/N 11-02440 ..... **$1,831.00**
28V Without Harness ..... P/N 11-02441 ..... **$2,042.00**

KING SILVER CROWN KT 76C MODE C TRANSPONDER



The unit features a bright, gas plasma display that shows the selected transponder code and, in a new feature, the encoder altitude output.The KT 76C will fit directly into the existing location of a KT 76A. However, in 28V installations the existing dropping resistor must be bypassed. Unit operates from 11-33VDC. Available with or without antenna.

Without KA 61 Antenna ..... P/N 11-03413 ..... **$2,918.00**
With KA 61 Antenna Without Harness .... P/N 11-03414 ..... **$3,093.00**

SILVER CROWN KY 196A & KY 197A COM



This unit measures a trim 1.3" x 6.3" and weighs just 2.8 lbs. The 28V KY196A delivers 16W minimum transmit output power and the 14V KY197A delivers 10W minimum transmit output power. Both units incorporate solid-state construction, with a digital frequency synthesizer generating all COMM frequencies. Total frequency storage capacity is eleven, including those in "USE" and "STBY". The 118.00MHz to 136.975MHz range of the KY-196A & KY-197A provide 760 COMM frequencies. An audio leveling feature automatically amplifies weak audio signals and mutes strong signals.

KY 197A (14V) ..... P/N 11-03848 ... **$6,190.00**

Honeywell Crown Series can only be sold over the counter. Silver Crown series can only be sold to expermental aircraft (must verify) with harness. For certified aircraft, it must be installed by a Honeywell Dealer. Please call 1-800-826-3160 for partner shop location for certified installs. (price of installation not included)

BENDIX KING UPGRADES

See www.aircraftspruce.com for details on upgrading your current Bendix King Avionics.

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SILVER CROWN KMA 24 AUDIO PANEL



Bendix/King's easy-to-use KMA 24 & KMA 24H systems are self-contained, all solid-state and stand only 1.3" high in your Silver Crown stack. The "slant top" package tailors it for the top slot in your instrument panel. KMA 24 controls as many as 3 transceivers and 6 receivers, including the internal marker beacon receiver and its automatically dimmed 3-light presentation. KMA 24H controls up to 5 transceivers and 5 receivers, or 4 transceivers and 6 receivers. KMA 24H includes the internal marker beacon receiver & VOX intercom, which provides unprecedented flexibility.

KMA 24 with HF Auto..... P/N 11-03381 ..... **$2,225.00**

CROWN KR 22 AUDIO PANEL



The Bendix/King KR 22 Marker Beacon Receiver is a fully independent panel-mounted unit with its own audio output and self-test feature. The unit is all solid-state, and its compact size makes it an easy fit in virtually any panel.A crystal-controlled superheterodyne receiver and 3-light presentation ensures that the KR 22 will give precise visual and aural indications of marker beacon passage. Excellent receiver selectivity eliminates interference. Headphone audio is provided, or if speaker output is desired, the KR 22 may be interfaced with the KA 134 or other audio control panel. P/N 11-03843 ..... **$1,395.00**



BENDIX KING KMA 30 AUDIO PANEL

The KMA 30 is a convenient "slide in" replacement for select older audio panels. Saves the expense of re-wiring the entire avionics suite. Music and phone Bluetooth® capability provides unsurpassed audio flexibility throughout your airplane. Makes it simple for the pilot to control audio throughout the aircraft. Can even turn music on or off for the pilot while in isolate mode. Delivers full, duplex telephone capability.

KMA 30 .....P/N 11-11262 ..... **$1,935.00**
Installation Kit.....P/N 11-11263 ..... **$88.75**

Honeywell Crown Series can only be sold over the counter. Silver Crown series can only be sold to expermental aircraft (must verify) with harness. For certified aircraft, it must be installed by a Honeywell Dealer. Please call 1-800-826-3160 for partner shop location for certified installs. (price of installation not included)

MICHEL TKM SLIDE-IN REPLACEMENT RADIOS



MX 11R COM

The MX 11 Comm is designed as a slide in replacement for the Narco Com 11, Com 11B, Com 111, Com 111B, and Com 120. The unit will replace the com 10 and Com 110 when the Nav 10 and Nav 110 are not used in the system. The MX 11 is warranted for 2 years. The MX 11 is the same unit as the earlier MX \-11 except it does not come with the tray. P/N 11-18815 ..... **$1,589.00**

GLIDESLOPE ADAPTER CABLE FOR MX 12

Direct replacement for Narco MK 12 P/N 11-18847 ..... **$153.95**



MX 170C NAV/COM

An ideal Nav/Com unit to replace King KX 170 & 175 series Nav/Coms. 14VDC. Features active & standby display w/flip-flop capability, plus storage capability in Nav and Com.

P/N 11-18830 ..... **$2,875.00**



MX 300B NAV/COM

The MX 300 Nav/Comm is designed to replace the RT 328T, RT 308C, RT 328T, RT 328A, RT 528A, RT 328C, RT 528E, RT 328D, and RT 508A. The MX 300 is available in the black face plate shown above or in a beige face plate to match many Cessna panels. The MX 300 operates on 13.75 vdc with 7 Adc maximum current in transmit.

With Black Face Cover..... P/N 11-18835 ..... **$2,875.00**
With Tan Face Cover ..... P/N 11-04825 ..... **$3,024.00**



MX 385 NAV/COM

MX 385 is a direct replacement for RT385 & RT485 series Nav/Com units. Features active & standby displays w/flip-flop capability plus storage in Nav & Com.; 28VDC.

Black Face..... P/N 11-18845 ..... **$2,879.00**
Tan Face ..... P/N 11-09203 ..... **$2,875.00**

Note: All Michel radios are furnished standard with black face. Tan face for Cessna panels are available at same prices on special order.



KING KI208A-10 VOR/LOC INDICATOR

The KI 208A VOR/LOC Indicator with VOR/LOC Converter and GPS Switching Relays has internal lighting. Internal relays allows from switching between VHF Nav and GPS. It is used with the KX 155 or KX 155A and KLN 89, KLN 89V, or KLN 94. Specifications: * Weight: 1.00 lbs. (0.45 kg) * Width: 3.25 in. (8.26 cm) * Power Required: 14/28 VDC @ 60 mA max. * Height: 3.25 in. (8.26 cm) * Length: 8.00 in. (20.32 cm) * Lighting Power: 14/28 VDC P/N 11-07599 ..... **$2,095.00**

KING INSTALLATION KITS

Model	Part No.	Description	Price
KMA 20	11-00897	Installation Kit	$528.00
KMA 24	11-00898	Installation Kit	$184.75
	11-00909	Mounting Tray	$178.75
KMA 24H-52	11-00899	Installation Kit	$189.95
	11-00909	Mounting Tray	$178.75
KMA 24H-70/71	11-00902	Installation Kit	$189.95
KA 51B	11-00904	Installation Kit	$278.95
KN 53	11-00905	Installation Kit	$189.95
	11-00906	Mounting Tray	$334.00
KN 62A/64	11-00908	Installation Kit	$199.95
	11-00925	Mounting Tray	$386.00
KN 63	11-00929	Mounting Tray	$49.95
KN 72	11-00930	Installation Kit	$189.95
KT 76A	11-00912	Mounting Tray	$133.75
	11-00913	28 Volt Kit	$210.75
KT 76A / 76C	11-00935	Installation Kit	$194.75
KNS 80	11-00937	Mounting Tray	$327.00
KR 87	11-00942	Installation Kit	$559.95
	11-00943	Mounting Tray	$148.85
KLN 90B	11-00944	Installation Kit	$389.00
KY 96A/ 97A	11-00914	Installation Kit	$179.95
	11-00915	Mounting Tray	$291.95

Model	Part No.	Description	Price
KG 102A	11-00947	Installation Kit	$875.00
KMT 112	11-00946	Installation Kit	$189.95
KX 125	11-00916	Installation Kit	$279.95
	11-00948	Mounting Tray	$315.00
KLX 135	11-00053	Installation Kit	$194.50
	11-00950	Mounting Tray	$242.95
KX 155/165	11-00951	Installation Kit	$188.80
	11-00952	Mounting Tray	$87.90
KX 155/165 GS	11-00919	Installation Kit	$184.75
	11-00955	Mounting Tray	$340.00
KY 196/197	11-00957	Mounting Tray	$519.00
KY 196A/197A	11-00914	Installation Kit	$179.95
	11-00915	Mounting Tray	$291.95
KI 203 thru 207	11-00958	Installation Kit	$192.50
KI 208/209	11-00922	Installation Kit	$189.75
KI 209A	11-02342	Installation Kit	$194.75
KI 525A	11-00959	Installation Kit	$279.95
KDI 572	11-00961	Installation Kit	$279.95
	11-00962	Mounting Plate	$43.50
KGX WI131A	11-15382	Installation Kit	$304.95
KGX WI1315I	11-15383	Installation Kit	$24.95
KGX GX1315I	11-15384	Installation Kit	$24.75

AV

ICOM PANEL MOUNT TRANSCEIVERS

ICOM IC A220 TRANSCEIVER



Easy channel selection - It is fast and easy to select any of the memory channels in the IC-A220. The "flip-flop" arrow button switches between main and stand-by channels. The dual watch function allows you to monitor two channels simultaneously. Additionally, the improved auto stack memory stores the last 20 channels used and allows you to recall those channels easily.

GPS memory function - When connected to an external GPS receiver* equipped with an airport frequency database, the frequency data such as nearby airports can be transferred and made available. * Ask your dealer for available GPS receiver details.

12V/24V DC power source - The built-in DC-DC converter accepts a 12/24V (11.5–27.5V) DC power source. The IC-A220 is easily installed in most airplanes or vehicles.

Description	Part No.	Price
A220 Unit Only	11-13688	**$1,195.00**
A220 Unit + 2 place, 3ft Harness	11-12324	**$1,413.00**
A220 Unit with Custom Harness	11-12325	**$1,375.00**
A220 with PS-80 Base Station	11-13689	**$1,995.00**
A220 with MB-53 for Mobil Mount	11-13690	**$1,449.00**
A220 MBA-3 Rear Panel Adapter	11-14470	**$89.75**

ICOM HM-176 MICROPHONE



The iCOM HM-176 is the compatable microphone for the A210 A200 PS80. Works best with the A210 Air band panel mount transceiver with intercom and OLED display.
PN 11-05618 P/N 11-06208.....**$142.95**

ICOM IC A220TSO TRANSCEIVER



The A220 TSO version meets RTCA-160G requirements for use in strict environments. This A220 version can be used for a primary VHF radio in general aviation (part 23) class aircraft. The A220 TSO version is also accepted for ETSO approval under the TSO/ETSO reciprocal acceptance policy. For information on what qualifies as a Part 23 aircraft go to the FAA site. Environmental Qualification Form The A220 TSO version can only be serviced by Icom America Inc. All repairs or adjustment must be performed by Icom America as per the TSO approval requirements.

A220TSO Only ..... P/N 11-14551 ..... **$1,495.00**
A220TSO with 3Ft Harness ..... P/N 11-14691 ..... **$1,567.00**

ICOM IC A210 CONNECTOR



Connector for the Icom A210 25 Comm Transceiver.
P/N 10-05914.....**$20.80**

ICOM PS-80 BASE STATION



The PS-80 offers quick, easy installation of the IC-A210 in one compact desk-top unit that combines a power supply, speaker, microphone, headphone and antenna connectors. Power Supply is user selectable for 110 or 220/240 V AC operation and supports a full 7 Watt transmitter output. Large internal speaker booms out 5 watts of audio. Microphone, headphone and antenna connectors are standard in the PS-80 so no wiring is necessary. Just plug in your selected hand or desktop microphone or headphone and outside antenna and youre on the air. Optional SM-6 Desktop Microphone, HM-7 or MIC Hand Microphone and B-ANT Base Station Antenna to complete the package are available and sold separately. Radio not included (use 11-05839 for complete system) Specifications: * Input voltage: * 117 V AC +/- 10%, * 220 V AC +/- 10%, or * 240 V AC +/- 10% (selectable) * Output voltage: 13.8 V DC +/- 5% (negative ground) * Output current: 6 A * Duty rate: 1 hour for maximum current * Ripple voltage: Less than 20 mV rms * Useable Temperature Range: -10°C to +40°C; +14°F to +104°F * Dimensions (projections not included): 200(W) x 200(H) x 300(D) mm; 7.9(W) x 7.9(H) x 11.8(D) in * Weight: 6.0 kg; 13.2 lb

Icom PS-80 Base Station ..... P/N 11-14303 ..... **$895.00**
Icom A210B PS-80 Microphone ..... P/N 11-18581 ..... **$284.00**
Base Station Antenna for Mounting Model B Antenna on top Buildings
P/N 11-18581 ..... **$284.00**

ICOM A120 MOBILE COM RADIO



Icom's A120 air band mobile introduces two new features: Active Noise Cancelling (ANC) and Bluetooth® capabilities. The newly added built-in ANC reduces background noise and is effective in extremely noisy airport environments. The automatic noise limiter (ANL) reduces pulse-type noise such as engine ignition. Insert the optional UT-133 Bluetooth® unit and connect a third-party wireless Bluetooth® headset.

This unit is great for any mobile application and it's available in a base station. Both are built to mil spec for superb reliability!

ON-hook scan and dualwatch functions

The ON-Hook scan function automatically starts scanning when the hand microphone is hooked on the microphone hanger. When you take the microphone OFF hook, the scanning stops at the priority channel or displayed channel. The Dualwatch function checks the priority and operating channels alternatively.

Side tone function

When using a third-party headset with the optional OPC-871A headset adapter, the side tone function allows you to monitor your own transmitted voice via the connected headset. Even when using a hand microphone, your voice can be monitored from the headset.

Features:

- Compatible with both 12V and 24V systems
- Dualwatch and priority scan functions
- Power on password protection
- CI-V commands for external control
- Connect with other radio devices with the VE-PG3 RoIP gateway

Standard ..... P/N 11-14122 ..... **$895.00**
With 120V Power Supply ..... P/N 11-14123 ..... **$1,132.00**
With 220V Power Supply ..... P/N 11-14124 ..... **$1,185.00**

ACCESSORIES

Description	Part No.	Price
Icom SP-30 20W Large External Speaker.	11-14125	**$89.00**
Icom VS3 Blutooth Pendant Earpiece Mic with PTT	11-14126	**$119.75**
Icom HM216 Standard Mic for A120	11-14127	**$37.95**
Icom HM-217 Mic with Speaker and Programmable Buttons	11-14128	**$79.95**
Icom SM-26 Desktop Mic with Monitor Switch	11-14129	**$72.00**
Icom OP-C2275 5M Connection Cable	11-14130	**$119.00**
Icom OPC-1122 PC to Mobile Radio Programming RC-232S Cable	11-14131	**$79.75**
Icom OPC-1122U PC to Mobile Radio Programming USB Cable	11-14132	**$79.75**
Icom OPC-2344 Modular Connector Programming Cable	11-14133	**$108.00**

ICOM IC-A110-05B VHF AIR BAND TRANSCEIVER



The Icom IC-A110-05B is rugged and reliable for serious ground crew communications. The IC-A110-05B can plug right into an AC wall (110W) receptacle. Great for FBOs. The unit features a front mounted speaker, free from any obstacle blocking and puts out 10W of power for the external speaker. *Covers the 118-136.975 frequency range. **Features**: * Equipped EEPROM system provides maintenance free memory backup capability, without the use of a separate backup battery * Various scan functions, such as VFO and priority scans are available * Limited number of keys for simple manipulation, but providing advanced multi-functions * A total of 20 memory channels are available * 36 W (pep) of powerful output, 9W (Carrier) output. * Excellent durability to cope with even the toughest workplace **Specifications** * Dimensions: 150(W)x 50(H) X 180(D) mm * Weight: 1.5kg; 3lb. 5 oz. * Warranty 2 years * Power supply requirement: 13.75 VDC and 27.5 VDC * Current drain: Transmitting: 5.0 A max, Receiving: 4.0 A * Operating temperature range: IC-A110(-30° C to +60° C); IC-A110EURO(-20° C to +55° C) * Frequency stability: IC-A110 (5 ppm)

Icom B-ANT Building Antenna ..... P/N 11-18581 ....**$284.00**
Icom K220A Magnetic Mount Car Antenna ..... P/N 11-06196 .....**$55.00**
Icom K220C Hole Mount Car Antenna ..... P/N 11-06197 .....**$49.95**
Icom OPC-871 Headset Adapter ..... P/N 11-06198 ....**$124.75**
Hand Microphone for A110 ..... P/N 11-08864 .....**$38.95**

AV

Prices Subject to Change Without Notice

FLIGHTLINE RADIOS – TRANSPONDERS

FLIGHTLINE 760A COM PANEL MOUNT



The FL-760A is extremely small and one of the lightest radios in the industry at just under 1 lb in weight (replaces the FL-760). It provides a frequency range of 118 to 137 MHz with a 5 watt transmitter and 11 - 33 volt power supply. The built-in 2-place VOX intercom is sensitive and perfect for small aircraft cockpits. Users can switch between frequencies with the "flip/flop" option or use scan mode to sift through 32 programmable frequencies; additionally, there is a single button relegated to the 121.50 emergency frequency only. The FL-760A now offers updates to the original: Push-to-Talk (PTT) feature and audio inputs are separate for pilot and co-pilot. Also, intercom, VOX, volume and mic gain adjustments are now conveniently programmable from the front panel. This transceiver is ideal for noisy cockpits providing very clear reception, minimal squelch, and clear output.

Features: • Built-in 2-place VOX intercom • Easily select channels via the 32 programmable memory channel call-up, emergency button, or scan function • Not plug compatible with certain features (power and ground are plug compatible) • Separate PTT and audio inputs for pilot and co-pilot • Intercom, VOX, volume and mic gain adjustments are programmable from front panel • Less than 1 lb in weight • Backlit display for easy reading • Pilot can select the receive notification LED color via the front panel.

760A Com Panel Mount ..... P/N 11-14280 ..... **$799.00**
2 Place 3ft. Harness with Jacks attached..... P/N 11-14281 ..... **$175.00**

FLIGHTLINE FL-M1000AB BASE STATION



FL-M1000A Air Band Land Radio installed in an Astron Base Station.

The FL-M1000A is an Air Band Land Mobile Radio designed for land vehicles, or base station use, not for Aircraft. The radio can be operated with Hand Microphone or Headset. You can choose audio output from External Speaker and/or Headphone. The radio has various built-in Scan functions.

Features: Convenient Base Station Enclosure, Easy to read alpha/numeric display, Scanning, Usable in the 760 Channel VFO mode Simple to program, Compatible with a standard Push-to-Talk Switch and Air Band Headset, Priority scanning, Multiple speakers, antennas, cables and programming options, Front panel control of external speaker. Hand Mic is included. P/N 11-09190 ..... **$895.00**

FLIGHTLINE FL-M1000A AIR BAND RADIO



FL-M1000A Air Band Land Radio installed in an Astron Base Station.

The FL-M1000A is an Air Band Land Mobile Radio designed for land vehicles, or base station use, not for Aircraft. The radio can be operated with Hand Microphone or Headset. You can choose audio output from External Speaker and/or Headphone. The radio has various built-in Scan functions.

Features: Installs in any vehicle, Easy to read alpha/numeric display, Scanning, Usable in the 760 Channel VFO mode, Simple to program, Compatible with a standard Push-to-Talk Switch and Air Band Headset Priority scanning, Multiple speakers, antennas, cables and programming options, Front panel control of external speaker. Hand Mic is included.

M1000A Radio..... P/N 11-09189 .... **$655.00**
Hand Microphone for M1000A..... P/N 11-11381 .... **$156.75**

SANDIA STX 165 MODE AIRCRAFT XPDR



The STX 165 Sports a professional 1/2 3ATI Bezel that compliments any aircraft panel. Its bright OLED display is readable in virtually all lighting conditions and automatically dims for night time operations. Check out just a few of the STX 165 features.

• Built-in Encoder: Simplifies installations and lowers cost. • Three Timer Functions: Elapsed Flight Time, Up Timer, Down Timer • Pressure Altitude Display: See what altitude your transponder is reporting to Center • Optional OAT Probe Input: Displays Outside Air Temp.,Density Altitude, Icing Alert • Small and Light Weight: 7.4" behind the panel depth, 1.3 lbs. • Electrical Input Voltage: 11-33 Vdc • Current Requirements: 500mA@28Vdc • Power Output: 200 Watts Nominal • Dimensions: 1.78"H x 3.5"W x 7.34"L • Weight: 1.30Lbs • Alt. Encoder: Built-in 35K' Encoder; External RS-232 • Temperature: -20 degrees to +55 degrees C

Sandia STX 165 Panel Mount..... P/N 11-09251 ..... **$1,585.00**
Sandia STX 165R Remote..... P/N 11-09252 ..... **$1,495.00**
Sandia STX 165 OAT Option..... P/N 11-09253 ..... **$329.00**
Sandia STX 165 with 5 Foot Harness..... P/N 11-11962 ..... **$1,656.00**
Sandia STX 165 with Custom Harness..... P/N 11-14021 ..... **$1,677.00**

GARRECHT TRANSPONDERS





VT01
UltraCompact

The Garrecht Transponder VT-01 is a flexible and modular system concept, in a compact size (57mm) with a very low current and integral alticoder. Available as Class-1 (125 Watt) or Class-2 (71 Watt) System. Specifications: Cetification i.a.w: ETSO-2C112a, ED-73B

•Min. RF Output power @Antenne: Class 1: 125 Watt Class 2:71 Watt. • Integral alticoder: Yes • Weight control unit: 0,21 kg. •Weight main unit: 0,61 kg •Supply voltage: 9-32 V DC • Power consumption (operation) @ 13,8 V (1200 Mode A/C or 50 Mode-S replies): Class 1: 0,24 A Class 2:0,22 A • Power consumption (on Ground) @ 13,8V (Squitter active): Class 1: 0,17 A Class 2: 0,16 A

Transponder Class 1 ..... P/N 11-04529..... **$2,927.00**
Transponder Class 2 ..... P/N 11-04530..... **$2,647.00**
Transponder UltaCompact Class 1 ..... P/N 11-05869..... **$2,420.00**
Transponder UltaCompact Class 1 ..... P/N 11-05870..... **$2,195.00**

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AV

USED AVIONICS FROM AIRCRAFT SPRUCE

Virtually all these avionics are in "Serviceable" condition. This is an FAA term that means that the radios have been repaired as needed, tested according to the manufacturer's procedure, and meet the manufacturer's performance specifications. These radios are legally approved for installation and use. These radios come with either a Yellow Tag or a 8130-3 Serviceable tag. Both tags certify that the radio is in "Serviceable" condition. The difference is the geographical area where the tag is accepted. The Yellow Tag is accepted in North America, while the 8130-3 tag is accepted worldwide. Generally 8130-3 tags are issued for our radios, because we rarely know exactly where it will be sent when it is in the shop. With an 8130-3 tag, we know that it can be used by any of our customers. Serviceable units carry a 90 day warranty. All used avionics are subject to availability, and will be shipped with the tray and connector included. Prices can vary. Please specify 14V or 28V when ordering.

All "With Glideslope" units are Glideslope ready.

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3M WX-11 Stormscope	11-06007
3M WX-8 Stormscope	11-06008
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ARC (Cessna) IN-385A	11-06009
ARC (Cessna) IN-386A	11-06010
ARC (Cessna) IN-514B	11-06011
ARC (Cessna) IN-525B	11-06012
ARC (Cessna) R-446A ADF Receiver	11-06013
ARC (Cessna) RT-328T NAV / COMM	11-06014
ARC (Cessna) RT-359A Transponder	11-06015
ARC (Cessna) RT-385A NAV / COMM	11-06016
ARC (Cessna) RT-459A Transponder	11-06017
ARC (Cessna) R-485B NAV / COMM	11-06018
ARC (Cessna) R-443B Remote Glideslope Receiver	11-06019
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ARNAV STAR 5000 VFR GPS Navigator	11-06020
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Collins ADF-650 ADF System	11-06023
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PLEASE CALL FOR PRICE AND AVAILABILITY. USED AVIONICS DATA BASES ARE FOR NORTH AMERICA ONLY.

AERO SAFETY SYSTEMS AH500 CENTRAL WARNING PANEL (4X4)



The AH500 combines flight, engine and aircraft configuration data to generate voice and visual alerts. The unit is programmed to warn off against switched, analog and EFIS data inputs based on the switched state, value threshold or combinations of inputs to generate envelope alarms. Envelope alerts could include oil pressure profiles, speed/ configuration envelopes, gear not down and oxygen alerts. Data is gathered from directly connected switches and analog inputs as well as being able to take flight and engine data from Electronic Flight Information Systems (EFIS) and Engine Monitors when available via serial buses. Alerts are mapped to custom voice and/or sunlight readable and auto dimming captions with integration to a remote Master Caution, Master Warning, and alert acknowledgment switch. P/N 11-15372 .....**$1,145.00**

AERO SAFETY SYSTEMS AH501 MASTER CAUTION / MASTER WARNING SWITCH



The AH501 is combined Master Warning and Master Caution annunciator and combined with a high quality snap action alert acknowledgement switch. The AH501 allows the pilot to quickly recognize, acknowledge and mute new alerts and is ideally positioned directly in front of the pilot, just below the coaming for bringing alerts to your attention while keeping your head up. The unit can be wired as a remote Master Caution and Master Warning Annunciator for common EFIS systems such as the Garmin G3X and Dynon. When combined with the Aero Safety Systems AH500 or AH502SD Central Warning Panel annunciators, it functions as a consolidating Master Caution/ Master Warning indicator and new alert acknowledge/voice mute switch as well as providing automatic dimming for night operation. P/N 11-15373 .....**$150.00**

AERO SAFETY SYSTEMS AH502SD CENTRAL WARNING PANEL



The AH502sd combines flight, engine and aircraft configuration data to generate voice and visual alerts. The unit is programmed to warn off against switched, analog and EFIS data inputs based on the switched state, value threshold or combinations of inputs to generate envelope alarms. Alerts are mapped to custom voice and/or sunlight readable and auto dimming captions with integration to a remote Master Caution, Master Warning and alert acknowledgment switch. The front mounted SD card allows for easy adjustment of programming and voice files.

P/N 11-15374 .....**$945.00**

SANDIA SRU MODULE ENCLOSURES



SRU 1



SRU 5



SRU 10

The **SRU 1** is a single card enclosure which accepts any MARC70 interface module. The SRU 1 is ideally suited for installations where only one MARC70 card is required or where there is limited real estate for mounting the larger enclosures. The SRU 1 can be mounted in any axis and either inside or outside the pressure vessel.

SRU 1 .....P/N 11-11325 .....**$174.95**

The **SRU 5** is a multi-card enclosure that accepts up to five MARC70 interface modules. The SRU 5 can be mounted either inside or outside the pressure vessel. When less than five interface modules are used with the SRU 5, cover plates are placed over the unused card slots. If additional cards are required at a later date, the cover plates can be removed and the appropriate interface card installed. When installing the SRU 5 ample room should be allowed for both connector clearance and for inserting and removing the interface modules. The SRU 5 as well as the interface modules can be mounted in any axis.

SRU 5 .....P/N 11-11326 .....**$375.00**
SRU5-1 .....P/N 11-11327 .....**$375.00**

The **SRU 10** is multi-card enclosure that accepts up to ten MARC70 interface modules. It is ideally suited for installations that will require more than five interface modules. As with the SRU 5, unused slots are covered with cover plates included in the installation kit. These extra slots can be used on future installations, eliminating the need for additional mechanical engineering and approval. The SRU 10 can be installed either inside or outside the aircraft's pressure vessel. For installation flexibility, the SRU 10 and the installed interface modules can be mounted in any axis. Ample room should be allowed for both the connector and for inserting and removing the interface modules.

SRU 10 .....P/N 11-11328 .....**$555.00**



SANDIA SA 3 REGULATOR INCANDESCENT DIMMING MODULE

Regulator/Dimming Board. Provides .5 amps of annunciator drive for lighting display annunciator. Will provide 1 amp short term for test purposes. Switchable between bright and din with both modes field adjustable. P/N 11-11314 .....**$555.00**



SANDIA SA 3L REGULATOR LED DIMMING MODULE

Regulator/Dimming Board. Provides 0.5 amps of annunciator drive for lighting LED annunciators. Will provide 1 amp short term for test purposes. Switchable between bright and din with both modes field adjustable.

P/N 11-11315 .....**$535.00**



SANDIA SA 15 SIGNAL INVERTER MODULE

Inverter Board converts a High to a Low or a Low to a High to provide common annunciator power. 14 inverter outputs. P/N 11-11317 .....**$550.00**



SANDIA SA 24 DIODE ISOLATION MODULE

Diode Isolation Module. Provides 23 lines of diode ground in - ground out isolation. Internal FET allows simultaneous test of all lines to ground. Requires 28 Vdc for test

P/N 11-11318 .....**$450.00**



SANDIA SR 263 DUAL 6 POLE RELAY MODULE

Two, six pole nitrogen filled relays. Can be activated simultaneously or individually

P/N 11-11319 .....**$3,100.00**



SANDIA SR 623 SIX 2 POLE RELAY MODULE

This SR 623 has a total of six, two pole relays in nitrogen filled metal cases.

P/N 11-11321 .....**$1,350.00**



SANDIA SR 34-1 12 POLE SWITCHING MODULE

The SR34 uses three, four-pole sealed relays to provide a total of 12 lines of signal level switching.

P/N 11-11322 .....**$394.00**



SANDIA SR 54-1 20 POLE RELAY SWITCHING UNIT

The SR54 switching is ideally suited for GPS and other Long Range Navigation Systems that share an HSI/ CDI with a VOR/LOC receiver. The twenty poles of switching allow all resolver and steering lines to be switched simultaneously. And the built-in reversionary switching circuitry to ensure VOR/LOC steering is always displayed on the indicator should power be lost or if an ILS frequency is selected in the NAV receiver. P/N 11-11323 .....**$599.00**



SANDIA SR 64-1 24 POLE RELAY SWITCHING UNIT

The SR64 has six, four-pole relays to provide a total of 24 lines of switching. This multi-purpose switching unit has its relays arranged in a group of four (16 poles) and two single relays (4 poles each). P/N 11-11324 .....**$600.00**



SANDIA AIS RELAY SWITCHING UNITS

A general purpose Avionics units. Operates on 28Vdc; PMA'd NSN 5999-01-544-0513

24 Pole .....P/N 11-11313 .....**$650.00**
20 Pole .....P/N 11-11302 .....**$486.00**



SANDIA ST 26 TACH GENERATOR ADAPTER

The ST 26 is a Tach Generator Adapter that converts sinusoidal, 26vac – 400hz output of the Turbine Engine Tach Generators to a digital signal. This TSO approved adapter can be used for aircraft instrument displays or for other control – data collection systems. The ST 26 is approved to work with the most common aircraft tachometers models.

P/N 11-11331 .....**$769.00**

AV

GUARDIAN AVIONICS IFDR 650 CONNECTED COCKPIT & CARBON MONOXIDE DETECTOR SYSTEM



The iFDR 650 is a state-of-the-art connected cockpit system and it is engineered with two Smart USB chargers which provide fast and efficient charging to all your portable electronics. The unit is installed in your panel and communicates with your GPS and engine monitor via the RS232 data bus. Bluetooth technology provides multiple data feeds from the iFDR 650 to as many as three iPads or iPhones. (*The iFDR Connect App can be found in the App Store.) Pilot(s) and passenger(s) can view real time GPS, Engine, and instrument data simultaneously on their iPad(s) and iPhone(s). At the same time, you can use your handheld device to access additional WiFi and Bluetooth products in the aircraft. . P/N 13-16436 .....**$889.00**

GUARDIAN SMARTLINK 554-101 FLIGHT DATA RECORDER CO DETECTOR



The smartLink 554-101 is a Flight Data Recorder, CO Detector, and AHRS that works with the Guardian Avionics smartPlane system. This unit is panel mounted in a small 1 58" x 1 1/4" position (optional 2.25" round adapter plate available) to provide convenient visibility in-flight. The smartLink 554-101 communicates with the smartMFD iOS app via Bluetooth connection.

P/N 13-20698 .....**$669.95**

GUARDIAN SMARTLINK 554-201 FLIGHT DATA RECORDER CO DETECTOR



The smartLink 554-201 is a Flight Data Recorder, CO Detector, and AHRS that works with the Guardian Avionics smartPlane system. This unit is remote mounted behind the panel to save space in smaller panels. The smartLink 554-201 communicates with the smartMFD iOS app via Bluetooth connection.

P/N 13-20699 .....**$669.95**

GUARDIAN SMARTLINK 650 FLIGHT DATA RECORDER CO DETECTOR AND USB



The smartLink 650 is a Flight Data Recorder, CO Detector, and USB Power Supply (2.1 amp / 1.0 amp) that works with the Guardian Avionics smartPlane system. This unit is panel mounted in a small 1 58" x 1 1/4" position (optional 2.25" round adapter plate available) to provide convenient visibility in-flight. The smartLink 650 communicates with the smartMFD iOS app via a USB cable connection and a Bluetooth connection. P/N 13-20700 .....**$759.00**

GUARDIAN SMARTLINK 555 FLIGHT DATA RECORDER CO DETECTOR



The smartLink 555 is a Flight Data Recorder, Pulse Oximeter, CO Detector, and AHRS that works with the Guardian Avionics smartPlane system. This unit is panel mounted in a small position to provide convenient access to the Pulse Oximeter in-flight. The smartLink 555 communicates with the smartMFD iOS app via Bluetooth connection.

P/N 13-20702 .....**$859.95**

GUARDIAN SMARTLINK 851 FLIGHT DATA RECORDE CO DETECTOR



The smartLink 851 is a Flight Data Recorder, CO Detector, USB Power Supply (dual 2.7 amp) and AHRS that works with the Guardian Avionics smartPlane system. This unit is remote mounted behind the panel or on a smartPlane iPad mount to save space in smaller panels. The smartLink 851 communicates with the smartMFD iOS app via a USB connection or Bluetooth connection.
NORSEE Approved Remote Mounted Flight Data Recorder, CO Detector, USB Power Supply, and AHRS with Bluetooth and USB Connection.

P/N 13-20703 .....**$949.95**



TALOS AEOLOS SENSE 3B EFIS SENSOR BOX

The TalosAvionics instruments consist of a Sensory Unit and a Display Device:
The Sensory Unit includes all necessary electronics/sensors (Three-axis gyroscope, three-axis accelerometer, three-axis magnetometer, GPS and airspeed sensor). It can be installed at a convenient place on the aircraft and it is connected via WiFi to the Display Device.
The Display Device could be any Tablet,or Smart-Phone (Pilot Choice). Up to 10 Display Devices can be connected to one sensory unit at the same via WiFi.
Aeolus-Sense_3B includes the A-EFIS (Aircraft Electronic Flight Information System), which is a TalosAvionics application that runs on the smart-phone/tablet and communicates with the Aeolus-Sense instruments (IOS & Android).
A-EFIS makes use of digital filtering methods and state of the art stochastic models in order to track the attitude of the airplane with accuracy and robustness.
Unique AHRS in-flight reset recovery in any flight attitude. It is NOT necessary to perform straight and level flight for AHRS recovery as other instruments need.
As a warning indicator, if power to the Aeolus-Sense is interrupted, the A-EFIS application turns black&white to indicate to the pilot that the instrument is offline.
Instrument Backup Feature. If power to the Aeolus-Sense is interrupted the A-EFIS application turns black & white and it continues to operate on the internal sensors of the Display Device if there are any..

3B EFIS Sensor Box .....P/N 11-15528 ..... **$675.00**
3C EFIS Sensor Box .....P/N 11-15529 ..... **$935.00**
3B ADS-B EFIS Sensor Box .....P/N 11-15530 ..... **$889.00**
3C ADS-B EFIS Sensor Box .....P/N 11-15531 .... **$1,095.00**

GPSMAP 696 & 695 ACCESSORIES

Description	Part No.	Price
Power Data Cable	11-07056	**$26.95**
Carrying Case	11-07049	**$49.95**
Lap Mount	11-07050	**$49.95**
Battery Pack	11-07051	**$179.00**
Yoke Mount	11-07057	**$74.95**
US AC Adapter	11-07052	**$49.95**
Intl. AC Adapter	11-07053	**$49.95**
12/24V Cig. Plug	11-07054	**$28.95**
GXM 40 Flange Mount	11-07059	**$3.95**
MCX to BNC Antenna Cable	11-90210	**$24.95**
696 Audio Jack	11-07783	**$13.95**
GA25MCX Antenna	11-07281	**$28.95**
Airgizmo 695/696 Panel Dock	11-09439	**$178.95**
Glare wizard for 695-696	11-08027	**$36.75**

GPSMAP 296, 396, 495, & 496 ACCESSORIES

Description	Part No.	Price
Garmin Power Data Cable	11-02694	**$29.50**
Garmin Battery Pack	11-04856	**$64.95**
City Navigator Europe	11-01192	**$149.95**
GA 26C Remote GPS antenna	11-00051	**$78.95**
GA 56 Low Profile External Antenna	11-18756	**$299.00**
GMX 30 Flange Mount with screws	11-06267	**$7.25**
Cigarette Adapter with speaker (car only)	11-02693	**$49.95**
Cigarette Adapter	11-02696	**$24.95**
USB Cable	11-02692	**$12.95**
Carrying Case	11-18863	**$24.75**
Garmin 512MB Data Card	11-06268	**$226.95**
Naishield Garmin 495/496 Screen Protector	11-07165	**$13.95**
Make it Glare Wizard Glareshield for 495/496	11-07939	**$34.95**

FREEFLIGHT RANGR ADS-B SYSTEM



The FreeFlight Systems RANGR 978 Transceiver Lite comes an all-inclusive package - a rule-compliant ADS-B Out solution for those operating at FL180 and below with the added benefit of ADS-B In weather and traffic data. It automatically synchronizes with legacy transponders without the need for additional pilot interaction. The XVRL is a low cost, lightweight, installed system for rule compliance - without sacrificing performance. All the necessary components for installation are included, no fine print. STC approved in accordance with AC 20-165A, AC 20-172A

ADS-B in and out.....P/N 11-13893 .... **$3,653.00**
ADS-B out only .....P/N 11-13892 .... **$2,735.00**

AV

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MID CONTINENT CDIS –ANNUNCIATORS

MID-CONTINENT 2 INCH CDI



This indicator will fit the need of aircraft owners of LSA all the way up to business aircraft. The CDI allows for precise and accurate readings. Nav, GPS and VLOC annunciation are built-in and backlit by LED lighting, providing enhanced nighttime and sunlight readability. The CDI has TSO approval from the FAA and will interface with most nav and GPS receivers.

Specifications:

- Power Input: Accepts 11 to 32 Volts DC.
- Lighting: Internal white LED. Lighting control voltage is selectable for 5, 14, or 28
- Weight: 0.6 lbs.
- Length: 3.5 inches

Mid-Continent Instruments and Avionics - CDI MD222-406 (This unit has the NAV/GPS & VLOC annunciations for the Garmin units)
P/N 11-05106 ..... **$2,506.00**

Mid-Continent Instruments and Avionics - CDI MD222-506 (This unit has the NAV/GPS & BC for all other applications)
P/N 11-05107 ..... **$2,506.00**

MD200-706 CDI GS Indicator ..... P/N 11-06014 ..... **$995.00**

MD 200-707 ..... P/N 10-06043 ..... **$2,217.00**



MID-CONTINENT HORIZONTAL ANNUNCIATORS

Incudes CDI and suspend mode switching, independent of OBS per new GTN requirements.

Features: Compatible with Garmin GTN 6XX/7XX WAAS Navigators. Compact, self-contained GPS annunciation control unit. Automatic-dimming and daylight readable LED lighting. Single cutout and locking D-subminiature connector reduces installation costs. Quality Mil-Spec connector included. TSO-C129 certified. Qualified to RTCA DO-160 environmental specs. Designed and built in Wichita, Kansas, USA. One-year limited warranty.

14V Horizontal ..... P/N 10-04769 ..... **$1,280.00**

28V Horizontal ..... P/N 10-04768 ..... **$1,282.00**



MID-CONTINENT 3" CDI

3 in. model fits standard panel cutout. Lighted.

- All-metal construction with ball bearings in critical areas
- FAA TSO and ETSO approved for use with all GPS and VOR systems
- High-quality rectilinear meter movements
- Annunciations for NAV, GPS and Back Course
- True course resolver output
- Pin-for-pin replacement for Collins Micro Line IND 350 Series CDI
- Can be used to replace old-style navigation indicators
- Compatible with WAAS GPS receivers
- Quality Mil-Spec connectors included

Specifications

- Voltage input: 14 VDC or 28 VDC
- Current input: 0.3 amps max
- Standard cutout (3 1/8-inch round)
- Weight: 1.4 lbs.
- Altitude: 0 to 55,000 ft.
- Rear mount panel mounting

MD200-706 CDI Glideslope, Lighted P/N 10-06014 ..... **$2,313.00**



MID-CONTINENT REMOTE RELAY UNIT

This remote-mounted 24-pole unit features eight nitrogen-filled relays (3 poles per relay) with gold-plated contacts. Ideal for GPS/VOR transfer and audio switching applications, this unit provides unequaled integrity with fail-safe fault monitoring through interlocking of all internal relays. 28V, TSO. P/N 10-06016..... **$980.00**





REMOTE SWITCHING RELAY UNIT

Remote mounted 24-pole unit features eight Nitrogen-filled relays (3 poles per relay) with Gold-plated contacts Ideal for GPS/VOR transfer and audio switching applications. Relays are activated individually by voltage or ..... ground keying or as a group by ground keying. FAA PMA Approved (certified to 55,000 ft.) Versatile Mounting - Horizontal, Vertical or flat mount configurations. Fail-safe fault monitoring through interlocking of all internal relays. Adjustable dimmer output for external annunciations. Quality MIL-SPEC connector kit included. Specifications: Width: 2.86", Height: 1.52" , Depth: 2.6", Weight: .75lbs

Remote Relay Unit 14V.....P/N 10-02125 ..... **$980.00**

Remote Relay Unit 28V.....P/N 10-02127 ..... **$980.00**

MID-CONTINENT GPS ANNUNCIATORS



MD41-1408A



Vertical View

With fingertip annunciation and flight information in the pilot's primary view, Annunciation Control Units (ACU) offer important features in an efficient design. As an interface with popular NAV and GPS systems, the ACU provides vital safety information including waypoint, approach status and integrity alerting. Approved to strict TSO standards, Mid-Continent Instruments and Avionics ACUs are engineered as a compact, affordable solution to the challenge of installing several switches. Most versions are configured 14V or 28V with vertical or horizontal mounting and feature long-life lamps with automatic photocell dimming.

GARMIN WAAS ACU - GNC 420W, GNS 430W/530W			
Model No.	**Configuration**	**Part No.**	**Price**
MD41-1510	28V Horz. for Garmin GTN650/750	10-04768	**$1,282.00**
MD41-1512	14V Horz. for Garmin GTN650/750	10-04769	**$1,280.00**
MD41-1464A	Horizontal, 14V (head only)	10-02665	**$1,282.00**
MD41-1468A	Horizontal, 28V (head only)	10-02663	**$1,280.00**
MD41-1484W	Horizontal, 14V WAAS	10-02657	**$758.00**
MD41-1488W	Horizontal, 28V WAAS	10-02659	**$749.00**
MD41-1494W	Vertical, 14V WAAS	10-02660	**$749.00**
MD41-1498W	Vertical, 28V WAAS	10-02661	**$749.00**

GPS 400/500, GNC 420/520, GNS 430/530			
MD41-1404A	Horizontal, 14V (head only)	10-02669	**$1,228.00**
MD41-1418A	Vertical, 28V (head only)	10-02672	**$1,268.00**



MID-CONTINENT ANNUNCIATION CONTROL UNIT

Designed to place annunciation and mode selection for the Terrain Awareness Warning System (TAWS) within the pilot's direct field of view, these annunciators provide tactile feedback to the pilot through internally lighted push buttons. Featuring automatic photocell dimming and manual and remote test capability, these units have excellent daylight readability. AWS Annunciation Control Unit - 28V, Vertical. P/N 11-14271..... **$1,543.00**

MID-CONTINENT ANNUNCIATION CONTROL UNIT MD41-444



Annunciation Control Unit 14V, Horizontal. With internal relay.
P/N 11-00967 ..... **$1,464.00**

AV

KNEEBOARD FOR HANDHELD GPS & PDAS



This angled kneeboard accommodates virtually every handheld GPS or PDA. The circular base is slightly cone-shaped for a leg-conforming fit and is wiggle-free secured around either upper leg with a velcro tape. The GPS or PDA attaches with velcro on a slant surface, which is angled about 30° and permits a perpendicular view on the screen. P/N 11-01285 .....**$18.70**

TABLET MOUNTING SYSTEM



For iPad®, iPad2, iPad (3rd Generation), iPad Mini and other Tablet PCs by simply changing the mounting claws. Sturdy, durable high quality frame construction. Touch points securely hold your tablet in place without any damage. Universal metal tube clamp securely mounts to microphone stands and keyboard stands with tube diameters of up to 28mm. Multi-angle adjustment allows universal positioning of the tablet. The adapter allows for mounting the plate directly to a microphone stand. Quick set-up and release. Weight Packed: 0.88 lb(0.4 kg) Width Packed: 6"(15.24 cm) Height Packed: 8"(20.32 cm) Depth Packed: 3"(7.62 cm)

P/N 11-11869 .....**$29.95**

ANGEROLE INSTRUMENT PANEL MOUNT



The photo illustrates the Model 241 040 fitted to a blank instrument panel. An adaptor plate (included with the mount) fits any standard 2-1/4"" instrument panel hole so, generally, it can be fitted without any modifications to your airplane. If your application needs it, we can supply this mount with a 3-1/8"" panel adaptor plate.

If you don't have an unused panel hole, a viable alternative is to drill two holes and simply bolt the mount directly to your panel. The "footprint" area is only 2" x 0.5" so there's probably going to be somewhere you can make it fit. Naturally, you need to be certain this is appropriate, sensible and legal for your installation before drilling holes in your airplane.

P/N 11-07238.....**$225.00**

GUARDIAN INSTRUMENT PANEL FLUSH MOUNT FOR IPHONE 6 / 7



The iFDR Panel Mount series is a flush mounting system to easily dock and seamlessly integrate your Apple iPhone 6 or iPhone 7 into your aircraft instrument panel -- giving it a clean, professional appearance in an easy to view position! Once installed, the iFDR mount allows your iPhone to be docked in seconds, fully connected to power and audio with built-in cable ports. Removal is just as easy -- just slide, push, and remove! Add the convenience of all your favorite iOS aviation apps and communication on your iPhone 6 or 7 in easy reach and integrated in your new or existing panel with the iFDR Panel Mount for iPhone 6 / 7.

iPhone 6/7.....P/N 13-18917 .....**$99.00**
iPhone 6+/7+.....P/N 13-18918 .....**$145.75**

GUARDIAN INSTRUMENT PANEL FLUSH MOUNT FOR IPAD MINI



The iFDR Panel Mount for Apple iPad Mini is a flush mounting system to easily dock and seamlessly integrate your existing iPad Mini into your aircraft instrument panel -- giving it a clean, professional appearance in an easy to view position! Once installed, the iFDR mount allows your iPad to be docked in seconds, fully connected to power and audio with built-in cable ports. Removal is just as easy -- just slide, push, and remove!

iPad Mini .....P/N 13-18919 .....**$149.75**
iPad Air Pro 9.7.....P/N 13-18921 .....**$199.75**

CYCLONE 600 - 6 PORT AVIONICS COOLING FAN



The Cyclone-600 is a light weignt, highly reliable brushless DC avionics blower that delivers 45-50 CFM of forced air to onboard aircraft electronics. The universal mounting system mounts vertical, horizontally or at 45 degrees for straight forward installations for all aircraft make and models. ***Specifications***: * Voltages: 12-14 VDC 600mA; 24-48 VDC 500mA * CFM: 45/50 CFM at 6000 RPM * Dimensions: 4.5in (H) x 3.0in (W) x 6.25in (L)

Description	Part No.	Price
Cyclone 600 6 Port Fan 12-14V	11-05221	**$319.95**
Cyclone 600 6 Port Fan 24/28V	11-05222	**$349.95**

CYCLONE 100 VDC BLOWER KIT



This New blower's universal mounting bracket makes it easy to set-up and install on a verity of aircraft Install immediately on experimental, sport and soon on general aviation, business, rotor-craft, commercial class aircraft as well as Land-Mobile, Marine and Military Vehicles. ***Specifications:*** * Light Weight: 52 grams, 0.115 lbs * Enclosure: Aluminum, (powder coated) * Vdc, amperage: 12 = 10.2-15.8Vdc, 0.320ma * Vdc, amperage: 24 = 18.2-28.5Vdc, 0.300ma * 1 port = 5/8 inch x 1.0 * Max Static pressure: H2O = 0.64 * Max Air Flow: 6.7 CFM * Universal Mounting Bracket: (4)(mt)(h) * Operating Temp: -55C to +70C * FAA-PMA (pending), 6-30-08 * Ultra-Small Size: 2.0H x 1.00W x 2.0L * Easy Installation: (4 x 6-32) * 1 year Limited Warranty

Description	Part No.	Price
Cyclone 100 12 VDC Blower Kit LS03-02040	11-06567	**$129.95**
Cyclone 100 24 VDC Blower Kit LS03-02041	11-06568	**$129.95**
Cyclone 21 3 Port Cooling Fan 12V FAA/PMA	11-18380	**$129.95**
Cyclone 21 3 Port Cooling Fan 24V FAA/PMA	11-18381	**$129.95**
Cyclone 600 6 Port Cooling Fan 12V FAA/PMA	11-05221	**$129.95**
Cyclone 600 6 Port Cooling Fan 24V FAA/PMA	11-05222	**$129.95**

SANDIA SAFE 328 - 3 PORT COOLING FAN



The SAFE 328 is a three port blower that can effectively cool a complete avionics suite. Providing a nominal 20 CFM of cooling air (no load), the SAFE 328 provides an alert output should the blower RPM drop below a preset level.

Specifications: • Operating Voltage: 28Vdc • Current Draw: 400 MA Nominal (550MA stratup) • Size: 5.58" x 4.75" x 1.25" • Weight: 1.18 lbs. Certification: PMA DO160D P/N 11-11301..... **$448.00**

SANDIA ACF 314 (3 PORT FAN)



The ACF 314 and ACF 328 simultaneously cool up to three avionics units. Operating on 14Vdc and 28 Vdc respectively the ACF 314 and ACF 328 supply up to 20 cubic feet of cooling air per minute, helping maintain your avionics at a proper operating temperature. FAA PMA's and have passed stringent envrionmental testing to ensure years of reliable service. ***Specifications***: • Operating Voltage: 14Vdc • Current Draw: 960mA (1.7A at startup) • Size: 5.18" x 5.18" x 2.1" • Weight: 1.18 lbs.

AFC 314 (14V).....P/N 11-06345 ..... **$239.95**
AFC 328 (28V).....P/N 11-11300 ..... **$259.75**

SANDIA ACF 528 5 PORT FAN



The ACF528 is a FAA-PMA'd five port cooling fan that produces cooling air for one to five avionics units. Supplying up to 20 cubic feet of air per minute at 28 Vdc, the ACF528 can easily cool an entire stack of avionics. The ACF528 uses a brushless blower motor to provide years of reliable RunQuiet ™ operation. **Specifications:** * Operating Voltage: 28Vdc * Current Draw: 480mA (850mA startup) * Size: 5.13" x 6.77" x 2.1" * Weight: 1.18 lbs * Certification FAA-PMA: DO160C

P/N 11-08020.....**$279.00**

SANDIA SAFE 128 AXIAL FAN



The SAFE 128 is an axial fan that is designed to attach directly to an avionics unit's cooling port. Providing a nominal 20 CFM (no load) of cooling air. The SAFE 128 provides an alert output whenever the fan RPM drops below a preset level.

Specifications: * Voltage: 28 Vdc * Current Draw: 100mA nominal <.250mA Startup * Size: 2.36" x 2.87" x 1.44" * Weight: .25 lb. * Certification: PMA,DO160D * With Fault Detention P/N 11-08019.....**$197.75**

AV

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XCOM & TRIG TRANSCEIVERS

XCOM REMOTE HEAD



he newest addition to the XCOM range is the XCOM VHF Remote Head option. Interfacing with the XCOM VHF, this tiny unit provides remote access to all of the capabilities of the XCOM VHF Radio in one quarter of the space. Ideal for training situations, tandem seat aircraft, limited space installations or simply to provide easy access for both pilot and co-pilot, this unit duplicates the entire XCOM VHF display and provides full access to all functions (except power on) from the front panel of the radio. The connection between the remote head and the XCOM VHF radio is via a simple cable allowing all of the controls on either panel to be duplicated on the remote. When the master unit is changed, the remote head follows and vice versa. For example, if the pilot in the front seat of the aircraft adjusts the radio to 123.450 then the remote display also adjusts to show 123.450. If the toggle button is pressed on the remote, then the frequencies are toggled on both units. All of the XCOM features apart from powering on can be duplicated with a remote head option. The remote head is extremely small, being less than 1 1/2" deep (40mm), allowing it to be installed in places where the XCOM will not fit such as in the very tight confines of the panel in the Pitts Special

P/N 11-04399 ..... **$394.00**



XCOM INSTRUCTIONAL DVD

Instructional DVD explaining the complete operation and set-up of the XCOM VHF Transceiver. 30 minutes duration. P/N 11-05674 ..... **$4.95**



XCOM GLIDER BOOM MICROPHONE

Boom Microphone - More than 1200 made and used all over the world, 3 year guarantee.

P/N 11-05675..... **$169.99**



XCOM GLIDER SPEAKER

Glider Speaker - Clear sound and easy to understand 5 watts output 8 ohm.

P/N 11-05676..... **$42.50**

XCOM VOLTAGE CONVERTER 15-38V



Switch mode voltage converter with soft shutdown and intelligent control. Input Voltages 15 to 38 Volts, Output 13.2 Volts 7 amps. Compact, efficient, short circuit protected, reverse polarity protected, overload protected. Perfect for warbirds. Made in the UK. Lightweight 195 grams (6.8 oz), Mounting bracket supplied.

P/N 11-05680..... **$210.95**

XCOM STEREO VIDEO PATCH CABLE



Seamlessly connect a Stereo or Mono Video Camera, Tape Recorder or Digital Voice Recorder into your aircraft headsets and record all communications between the Pilot and Co-Pilot, ATC and other Aircraft. Perfect for making your own aviation videos with crystal clear narration, flight training or many other uses.P/N 11-05658... **$43.00**



TRIG TY91/TY92 DUAL CONTROL TRANSCEIVERS

The TY91/TY92 is an innovative two-part radio with a remote mounted radio and a panel mounted controller. A crisp clear display and simple user interface. The 'Dual Watch' feature allows the monitoring of two frequencies at the same time. There are 9 pre-set channel memories which are all easily selectable. The radio can integrate with popular GPS units; this allows the automatic display of en-route radio frequencies (uses industry standard SL40 protocol). Also has a built-in two place intercom with an aux input, saving further cost and weight. • EASA ETSO and FAA TSO certification • Two controller option for tandem cockpits • Unbeatable value and quality – designed and manufactured in the U.K. • Two year worldwide warranty.

TY91..... P/N 11-13343..... **$1,635.00**
TY92..... P/N 11-11344..... **$2,899.00**

TRIG TY97 SLIMLINE VHF



Trig's TY97 aviation radio sets a new standard in high power dual 25 kHz and 8.33 kHz radio design. Combining great quality and performance each radio is housed within a superbly engineered unit, slim-line and light. At only 33mm high (1.3") the radio saves valuable stack space, but retains innovative and practical features. The TY97 is a 16 Watt certified radio, designed for high performance aircraft with a 28 volt power supply. With enhanced performance the TY97 ensures successful reception and transmission over long distance or from high altitudes.

TY97 ..... P/N 11-14888..... **$2,655.00**
TY97A 25 khz ..... P/N 11-15377..... **$2,559.00**

TRIG TY91 VHF RADIO SYSTEM



The majority of GA users including light sport, ultra-light, glider and balloon pilots will fit the Trig TY91 radio, this lower powered 6 watt model is ideal for the majority of applications. Features: • Can be set at 25 kHz and 8.33 kHz • Receiver - Class C, Class E / Transmitter - Class 4, Class 6 • 6 Watt power output • Compact and light weight • Take up minimal space and weight • Dual watch and two place intercom • Operation is simple, rapid frequency selection • Nine programmable memories • Can be battery operated • Full certified • Compliments Trig's TT21 and TT22 Mode S Transponders • Flexible installation options due to 2 piece design • Can be mounted in a standard 2 1/4" hole or even smaller compact mount • Once fitted, the depth of the radio control head is less than 1 1/2" deep • Crisp display, visible in all lighting conditions • TY91 is a lower powered model, ideal for light sport, ultra light, glider and balloon pilots and majority of GA users P/N 11-10721... **$1,325.00**

TRIG TY96 SLIMLINE VHF RADIO



The TY96 aviation radio is designed to provide fast switching between 8.33 kHz and 25 kHz. Its slimline and lightweight design—at only 33mm in height—saves valuable stack space while retaining innovative and practical features. The TY96 is a certified 10 watt radio designed for general aviation and light sport applications and is ideally suited to the needs of experienced and novice pilots alike.

TY96 ..... P/N 11-14888..... **$2,655.00**
TY96A 25 khz ..... P/N 11-15376..... **$1,695.00**

TRIG TT22 MODE S TRANSPONDER



Trig makes the world's smallest and lightest certified GA transponders. The TT22 Trig compact transponder can fit into the tightest panel space. This allows general aviation, light sport and glider pilots to fit other instrumentation or displays that otherwise might not have been possible. The TT22 is a class 1 transponder suitable for use in higher performance aircraft flying above 15,000 feet and / or above 175 knots. Compact size - takes minimal panel space, fits in a standard instrument hole. ntegrated altitude encoder . Certified for IFR / VFR flight. Certified class 1 transponder 250 watts nominal output. Low weight – 440g (0.8 lbs). Low power consumption. 1090ES ADS-B Out capable. EASA ETSO and FAA TSO Certification – includes TSO C166b the latest ADS-B standard. Unbeatable value and quality - designed and manufactured in the U.K. Two year worldwide warranty.

Description	Part No.	Price
TT22 Transponder	11-08322	$1,989.00
TT22 Transponder and 4 ft. Harness	11-12078	$2,166.00
TT22 Transponder and Custom Harness	11-12079	$2,232.00
TT22 and TN70 ABS-B Out Combo	11-14872	$3,829.00
TT22 and TN70 ABS-B Out Combo with 4ft Harness	11-14874	$4,077.00

AV

HANDHELD BATTERIES – TRIG AVIONICS

BATTERIES AND BATTERY CHARGERS FOR HANDHELDS

Battery Model	Description	Part No.	Price
For Icom A24/A6			
BP-210N	7.2V 2000mAh Ultra long life	11-08251	**$42.75**
BP-211N	Lightweight, Ultra ling life. Li-On charger required.	11-08254	**$49.95**
EMS-211	Rapid Desktop Cgr for BP-211/N	11-08256	**$51.65**
For ICOM A23/A5 Handheld aviation radios-			
BP-197H	Alkaline Battery pack	11-01082	**$23.95**
BP-200XL	9.6v 1450 mAh long Life Ni-MH	11-06351	**$56.75**
BP-200L	9.6V 850mAh	11-08274	**$44.50**
CP-12L	12VDC Cig Lighter for A5	11-08249	**$15.95**
For ICOM A-4 Handheld aviation radios-			
BP-196	9.6v 1500 mAh pk	11-00227	**$49.95**
EMS-196	Desktop Fast Charger BP-195/196	11-08248	**$49.85**
For ICOM A-22 &A-3 radios-			
CM-166	NiMH Battery 12.0v 1200 mAh	11-00228	**$51.85**
EMS-166	Desktop Charger for CM-166	11-08236	**$51.95**
EC-166	Wall charger for CM-166	11-08234	**$11.85**
BC-79A	Desktop Charger	11-18557	**$59.95**
For ICOM IC-A14 / IC-A14S Handheld aviation radios-			
BP-232N	Operating Time: 15.5 hours	11-08231	**$42.75**
For ICOM A-20, A-21, & Delcom-			
CM-7x	13.2v 1000 mAh pk	11-00230	**$51.95**
IC-WC	Wall charger for CM-7 / CM-7X	11-08237	**$11.95**
IC-8	8 cell AA case 3-1/4" tall	11-08246	**$26.75**
IC-CP	Car Power/Charge cord	11-00351	**$13.85**
For ICOM R-1 radios-			
BP-83	7.2v 600 mAh pk	11-00233	**$39.95**
BP-83xh	7.2v 1500 mAh pk	11-00234	**$49.50**
BC-79A	Desktop Quick Charger	11-18557	**$59.95**
Icom Chargers			
CP-11L	DC Power/Charge Cord for ICOM IC-T90A, IC-91AD, IC-A24, IC-A5	11-06348	**$29.95**
EMS-201	7.2V thru 13.2V Ni-cd & Ni-MH	11-08245	**$49.95**
EMS-210N	Smart charger for ICOM	11-06350	**$54.95**
EMS-232	Rapid Desktop Charger for Icom-style Lithium ION Bttys	11-08233	**$49.95**
EMS-30i	Desktop smart-quick charger.	11-06352	**$52.50**
For Yaesu Aviator Pilot & Aviator Pro nav/com radios-			
FNB-41xh	9.6v 1000 mAh pk	11-00237	**$44.85**
FNB-47xh	7.2v 1800 mAh pk	11-00238	**$49.95**
FNB-41xs	9.6v 1450 mAh pk	11-06354	**$53.50**
EMS-41/47	Rapid Cgr for FNB-40/41/47	11-08244	**$52.00**
FNB-80LI	7.2V 1600mAh Yaesu & Vertex	11-08268	**$45.50**
CBE-41	Battery Eliminator	11-06355	**$24.50**
CBE-80	Battery Eliminator Cig Lighter	11-08269	**$23.95**
E-DC-5BA	DC Power Cord, Cig Lighter	11-08241	**$18.75**
EM-57-83	Super Desktop Charger	11-08239	**$51.50**
For Bendix/King radios-			
BP-KX99	10.0v 1500 mAh pk	11-00240	**$45.50**
KX-99XH	10.0V 2700 mAh	11-08257	**$51.95**
IC-CP	Car Power/Charge cord	11-00351	**$13.85**
KX-99	Battery case, 8-cell AA (BP-99A)	11-08258	**$32.85**
For STS handheld radios-			
BP-STS+	7.2v 1400 mAh pk	11-00241	**$38.75**
WC-STS	Wall Charger	11-00352	**$20.75**
For Bearcat/Uniden 100/200/250XLT-			
For Bearcat/Uniden 2500XLT, 3000XLT, & 3500XLT-			
BP-2500x	6.0v 1000 mAh pk	11-00322	**$57.85**
For Bearcat/Uniden Trunk Tracker & Sportcat-			
BC-120	4.8v 1000 mAh pk	11-00323	**$17.25**
BC-120x	4.8v 1500 mAh pk	11-00324	**$27.95**
BP-120XE	4.8V 2000 mAh Long Life	11-08272	**$31.85**
BP-120XX	4.8V 2500 mAh	11-08273	**$29.50**
BP-120 80	4.8v 800 mAh pk	11-08270	**$13.85**
BP-120 110	4.8v 1100 mAh pk	11-08271	**$18.75**
For Santec/Narco radios-			
BP-800	9.6v 600 mAh pk	11-00242	**$32.50**
BP-800sh	9.6v 1000 mAh pk	11-00325	**$37.95**
Standard C228A/C528A/C628A, etc.			
CNB-152XS	12V 1800mAHr NiMH	11-08261	**$49.95**
CNB-152XH	12V 1200mAh Long Life	11-08259	**$42.50**
CSA-181	Quick Desktop Charger	11-08266	**$49.95**
For Bose Aviation Headset Series 1			
BP-A	14.4v 1250 mAh	11-00243	**$80.00**
Battery Eliminators			
CBE-152	DC Battery Eliminator for standard-ADI-JRC radios	11-08262	**$23.95**
CBE-196	Battery Eliminator for ICOM	11-08247	**$23.85**
CBE-83	12VDC. 5W, Voltage & Current limiting, & noise filter!	11-08238	**$22.95**

TRIG TT21 MODE S TRANSPONDER



Trig makes the world's smallest and lightest Mode S certified GA transponders. The TT21 Trig compact transponder can fit into to the tightest panel space. This allows general aviation, light sport and glider pilots to fit other instrumentation or displays that otherwise might not have been possible. The TT21 is a class 2 transponder and our most popular compact transponder model. Compact size - takes minimal panel space, fits in a standard instrument hole. Integrated altitude encoder. Certified for IFR / VFR flight. Certified class 2 transponder 130 watts nominal output. Low weight – 440g (0.8 lbs). Features: • Low Weight • Minimal Panel Space • Low Power Consumption • 130 Watts Nominal Output • Integrated Altitude Encoder • Simple Installation • Easy to Use Rotary Knobs • Support for ADS-B Out.

TT21 Mode S Transponder Complete Kit.... P/N 11-07999..... **$1,839.00**
Install Kit..... P/N 11-09755..... **$163.75**
Mounting Tray..... P/N 11-09758..... **$28.95**
RAM Cradle UNI Thick Tablets ..... P/N 11-09768..... **$23.70**
TC20 Control ..... P/N 11-09762..... **$467.00**

TRIG TT31 MODE S TRANSPONDER



Trig's TT31 transponder is the perfect retro-fit for the popular Bendix King KT76A and KT78A transponders. The TT31 is a certified Class 1 transponder which will 'plug and play' straight into the existing Bendix King tray. This significantly reduces both installation time and cost. It provides pilots with class leading Mode S technology that is also 1090ES ADS-B Out capable too (ADS-B functionality requires a Trig tray). Retrofit – 'plug and play' installation for KT76A and KT78A transponders. Certified Mode S and 1090ES ADS-B Out capable. Certified for IFR / VFR flight. Lowest power consumption in class. 240 watts nominal output. Great functionality and performance. Features: • European Mode S • Low Power Consumption • No Cavity Tube • 240 Watts Nominal Output • Plug and Play Installation • Backlit LCD Display • Easy to Use Rotary Knobs • Timer/Stopwatch Function • Altitude Monitor • Certified 1090ES ADS-B out

TT31 Mode S Transponder .....P/N 11-07997 ..... **$2,226.00**
TT31 Mode S Transponder Replacement KT-76X
P/N 11-07998 ..... **$2,225.00**
TT31 Installation Kit.....P/N 11-09754 ..... **$126.75**

TRIG TMA44 STANDARD AUDIO PANEL



The TMA44 suits aircraft owners looking for a great value panel that covers general aviation requirements. This panel supports 2-4 seats with independent control of crew and passenger audio. The TMA44 enables simple control of all your navigation, communication and entertainment choices – benefiting from Trig's 'Better by Design' philosophy. The result, a logical and high quality interface that's easier to use. The TMA44 has features pilots need to operate in both IFR and VFR flight, whilst providing mono entertainment options too. P/N 11-16007 ..... **$1,095.00**

TRIG TMA45 STANDARD AUDIO PANEL



The TMA45 is our fully featured panel, perfect for aircraft owners who don't want to compromise. If you are looking for great quality audio, stereo music and mobile phone support via Bluetooth then this panel provides it all. The control of your navigation, communication and entertainment will be simplified as the TMA45 benefits from Trig's 'Better by Design' philosophy. The result – a logical and high quality interface that's easier to use, with features pilots and passengers will really appreciate. P/N 11-16011 ..... **$1,695.00**

TRIG TN72 GPS RECEIVER



TN72 GPS receiver, a certified position source for ADS-B. Glider, light-sport and general aviation pilots can enhance their safety by connecting a TN72 position source to their existing Trig transponder. The TN72 GPS receiver is a fully certified product (FAA TSO-C199) designed for voluntary equipage and use in areas outside of designated or mandated ADS-B airspace. Once configured, the TN72 GPS receiver provides precise and reliable data with non-zero quality indicators. P/N 11-14845 ..... **$359.00**

TRIG TY92 VHF RADIO SYSTEM



The TY92 is a high power performer, the perfect VHF comm radio for heavier aircraft and high performance types. It's the ideal retro-fit radio that can be installed out with the main avionics stack providing the option of a standby radio. Just like the TY91 the TY92 takes up minimal space and weight but is designed for aircraft with a 28 volt supply. Compact size, low weight - takes minimal panel space, only 74mm deep. 8.33 and 25 kHz channel spacing. Dual watch – monitor two frequencies at the same time. Unique 'Push Step' feature provides the fastest frequency selection. High Power Output – designed for 28 volt systems. 16 Watts Nominal Output. Simple Installation. EASA ETSO and FAA TSO certification. Unbeatable value and quality – designed and manufactured in the U.K.. Two year worldwide warranty. P/N 11-11344 ..... **$2,899.00**

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ENCODERS

ACK A-30 ALTITUDE ENCODER



Add Mode C capability to your aircraft the most cost-effective way. The ACK encoder is the smallest, lightest, highest quality encoder available today and features the latest solid-state electronics for high reliability. Installation is quick and easy and usually is completed in less than 1 hour. It is compatible with most transponders in use today and reports altitude to 30,750 ft. Includes quick-release mounting tray, 4-ft. color-coded wiring harness with prewired jack, static line and fittings for installation in any aircraft, and installation manual with popular transponder pin-outs. 3yr. warranty. P/N 11-01561 ..... **$233.95**

ACK A30.9 (MOD 9) ENCODER



The ACK A30.9 (Mod 9) encoder is ideal for use with most GPS and TAWS systems, and works well with most of today's mode S transponders. Feature Gray code in 100ft. increments and RS-232 in 10 or 100 feet increments. Furnished with a 4 ft. harness, pre-wired jack, quick release mounting tray, fittings, static line, and installation manual. Reports altitude to 42,000 ft. One Year Warranty. P/N 11-02375 **$249.95**

TRANS-CAL ALTITUDE ENCODER MODEL SSD120-30N



Reliable service for over 10 years. * Pin for pin replacement for most other manufacturers encoders. * Comes with Mating Connectors with Cable Clamps, and Mounting Bracket. * Optional: Available with two independent RS232 serial data ports selectable message protocols for most popular avionics interfaces. Programmable for 100' and 10' resolutions. See Part No. 11-06983 * Optional: Available with adapter plates that will allow the installer to mount the unit in another manufacturers mounting tray.

30,000 ft. Range P/N 11-06489 ..... **$274.95**
35,000 ft. Range ..... P/N 11-09608 ..... **$315.00**
SSD120-30N-MOD1 ..... P/N 11-09916 ..... **$274.95**

TRANS-CAL ALTITUDE ENCODER MODEL SSD120-30N-RS232



Reliable service for over 10 years. Pin for pin replacement for most other manufacturers encoders. Optional: Available with adapter plates that will allow the installer to mount the unit in another manufacturers mounting tray. * Will operate on either 14 or 28 VCD at 0.270 Amps. There are two versions of this model: •Standard Version SSD120-30N-RS232 •Version SSD120-30N-RS232-MOD1 for NARCO AT-5A, 6A, 50, 50A Transponders.

30,000 ft. Range ..... P/N 11-06983 ..... **$356.00**
35,000 ft. Range ..... P/N 11-09609 ..... **$439.00**
SSD120-3N-RS232-MOD1 ..... P/N 11-09917 ..... **$325.00**

TRANS-CAL ALTITUDE ENCODER MODEL SSD120-35C-RS232



The smallest, lightest, and lowest power consumption Altitude Digitizer on the market. The SSD120-35C-RS232 is a solid-state Altitude Encoder that is designed to provide a rugged and reliable altitude digitizer for applications where size, weight and economy are critical. Incorporating one ICAO gray code port, as well as two RS232 serial altitude data outputs, this encoder is a simple and robust addition to any avionics installation requiring accurate pressure altitude information for multiple aircraft systems. P/N 11-15366 ..... **$214.95**

TRANS-CAL ENCODER PROGRAMMER



The ECP-100 allows the avionics technician to assign serial port protocols, 100' or 10' resolution and/or allow programming of the calibration curve on Trans-Cal Altitude Encoders using the RS232 port. Trans-Cal Altitude Encoders with RS232 ports are a popular pressure altitude solution; providing serial altitude data in the aircraft for a variety of systems. The ECP-100 provides a quick, rugged and reliable method to set serial port protocol assignments (message and baud rate) and calibrate Trans-Cal altitude encoders without using a PC. P/N 11-13201 ..... **$658.00**

TRANS-CAL NANO ADAPTER PLATES



Trans-Cal Industries has developed Adapter Plates that allow the technician to quickly replace existing or legacy encoder installations in favor of the new Trans-Cal SSD120-(XX)N series of altitude digitizer/encoders. These plates simplify the installation task by providing an adapter designed for the Trans-Cal unit, while utilizing the exisiting mounting tray. All adapter plates include stainless steel mounting hardware and are approved for installation under TSO-C88a and ETSO-C88a

Adapter Plate	Part No.	Price
ACK	11-09603	**$23.95**
Ameri-King	11-09605	**$23.95**
Sandia	11-09602	**$23.95**
Shadin	11-09604	**$23.95**
SSD120 and Narco	11-09601	**$23.95**
Sandia 103035	11-13198	**$23.99**
Sandia 103036	11-09602	**$23.95**

SANDIA SAE5-35 ALTITUDE ENCODER



The SAE5-35 altitude encoder from Sandia is small (1" high), lightweight (12 oz.) and utilizes Gillham Grey code in 100' resolution for optimum performance and accuracy. Features two RS232 outputs in 10 foot resolution, simplifying installations. All connectors are on the same side for easy mounting, and digital calibration eliminates analog drift. Altitude In-Flight Monitoring (AIM) mode alerts the pilot when he strays off altitude. Requires virtually no warm up time and uses very little power. Fully TSO'd and backed by factory 3 year warranty. Power: 11-33VDC. P/N 11-00665 ..... **$399.00**

SANDIA SAC 7-35 AIRDATA COMPUTER



The SAC 7-35 is FAA TSO Approved as an altitude encoder. It provides standard Gillham Grey code for legacy transponders and RS-232 data for the new generations of transponders. Altitude Alerting. The SAC 7-35 has SANDIA Aerospace's exclusive AIM (Altitude Inflight Monitoring) that alerts the pilot anytime he deviates more than 100 feet from his selected altitude. Fuel Flow. The addition of a fuel flow transducer (two for a twin) and your SAC 7-35 provides all the fuel flow data your navigation systems needs to monitor your fuel situation. Airdata Computer. The SAC 7-35 is a full up TSO'd Airdata Computer offering all of the functions and capabilities of systems costing thousands of dollars more. The SAC 7-35 has multiple interface formats that allow it to provide data to a wide variety of avionics systems. Designed and manufactured to most exacting standards, you can depend on SANDIA Aerospace products to provide years of reliable service. And every product is backed by a three year warranty and personal service support.

P/N 11-07938..... **$2,445.00**

SANDIA SAC 7-35-01 AIRDATA COMPUTER



The SANDIA aerospace SAC 7-35-01 is an airdata computer and data translator that interfaces the Garmin 400W/500W navigators Downlinked Aircraft Parameters in ARINC 429/743 format to the Collins TDR 94D for ADS-B out capabilities. Note: Interfaces with Garmin 400W/500W navigators. Functions: • Altitude Encoder. The SAC 7-35 is FAA TSO Approved as an altitude encoder. It provides standard Gillham Grey code for legacy transponders and RS-232 data for the new generations of transponders. • Altitude Alerting. The SAC 7-35 has SANDIA Aerospace's exclusive AIM (Altitude Inflight Monitoring) that alerts the pilot anytime he deviates more than 100 feet from his selected altitude. • Fuel Flow. The addition of a fuel flow transducer (two for a twin) and your SAC 7-35 provides all the fuel flow data your navigation systems needs to monitor your fuel situation. • Airdata Computer. The SAC 7-35 is a full up TSO'd Airdata Computer offering all of the functions and capabilities of systems costing thousands of dollars more. The SAC 7-35 has multiple interface formats that allow it to provide data to a wide variety of avionics systems. P/N 11-09321..... **$4,194.00**

TRANS-CAL ALTITUDE DATA SIMULATOR



The Model ADS-100 is an all solid-state device that simulates the output of altitude encoders/digitizers in both parallel and serial (RS232) data formats. Designed to substitute for an altitude encoder when testing and troubleshooting an aircraft's altitude reporting system, the ADS-100 provides two RS-232 compliant outputs in addition to the ICAO pressure altitude code. The Model ADS-100 provides a simple and robust means of simulating serial and parallel altitude data inputs for multiple aircraft systems. The bright two-line vacuum fluorescent display gives the test technician a view of the current altitude code transmission on both the serial and parallel ports. LED indicators display the status of the encoder strobe, power and serial data protocol pins, as well as the binary ICAO altitude code. Audible alerts are generated at 1000' or 100' altitude code transition points. Front panel switches control the device power, altitude hold, ascent/descent rate, audible signals and serial data protocol. P/N 11-13199 ..... **$549.00**

MICROAIR EC2002 ALTITUDE ENCODER



EC2002 will accurately report the aircraft's altitude from -1000 to +35,000ft. The altitude output will be via the 10 line Gillham "Gray" code. Accuracy has been measured as a 40 foot drift over 35,000 feet. Lowest power requirements of any altitude encoder today. Typical current consumption of 10 – 90mA, this makes it the logical choice for all battery only operators. Small size and light weight make installation very simple. The chassis is flanged, and is predrilled with mounting holes for easy attachment. The connections consist of the well know DB-15 electrical connector with pin assignments identical to many existing encoders, and a 1/8" NPT fitting which is an industry standard for aircraft equipment. These connections make it compatible with all ATC transponders currently available. P/N 11-05105 ..... **$365.00**

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BECKER MODE S BXP-6403



The BXP6403-2-(01) is a compact and lightweight single block Mode-S transponder. It is certified according to ETSO-2C112b and is suited for VFR and IFR operations up to 15000 feet. The transponder is equipped with extended squitter and SI code function and it provides an interface to the central aircraft data system. Provides ADS-B via extended squitter. The BXP6403-2-(01) is designed for slide-in mounting (tray available) and fits into a 160.3 x 41.28 mm cut out. The use of an adapter (available as accessory) allows for retrofit in a KT 76 A tray.

Description	Part No.	Price
Bxp6403-2-(01) - Mode S Transponder with installation kit for retrofit of kt76a - for vfr installation type 175 watt power output, extended squitter	11-06608	**$3,490.00**
Bxp6403-1-(01) - Mode S Transponder with installation kit for retrofit of kt76a - for ifr installation type 250 watt power output, extended squitter	11-06609	**$3,785.00**
Mode S Tansponder with installation kit for new installation. Class 2 for vfr installation type 175 watt power output, extended squitter	11-06694	**$3,757.00**
Mode S Transponder with installation kit for new installation. Class 1 for ifr installation type 250 watt power output, extended squitter	11-06695	**$3,696.00**

BECKER RFA6403-1 RETROFIT ADAPTER FOR KT76A



Attach the RFA6403 adapter to the back of any Becker BXP6403 Mode A/C/S transponder and make it a “slide-in” replacement for a KT-76A transponder.

P/N 11-11462.....**$319.00**

BECKER BE6400-01 BLIND ENCODER



The BE6400 blind encoder is designed with an integral plug to allow direct mounting to any Becker transponder. It also incorporates a built in port for simple connection to the static system. Other features include reporting increments of 100 feet and altitude capability up to 20,000 feet. P/N 11-11461.....**$395.00**

BECKER AR 6201 TRANSCEIVER



AR6201 series of square sized VHF transceivers from Becker are a family of affordable airborne radios optimized by their functionalities, state of the art technology, compact dimensions, and low weight for many different aircraft categories in general aviation, from smaller to larger aircraft.

The radios fit in any 2 1/4 inch cut out for easy installation and the different models are equipped with sunlight readable LC displays and high performance transmitters with 6 or 10 watts power output, continous power supply from 10.25 to 33 V DC, 8.33 kHz / 25 kHz channel spacing, sensitive receiver, VOX intercom and many other features. • 8.33 or 25 kHz • Supply voltage 9-33 V DC • 6 W or 10 W transmit power • VOX / INTERCOM • Scan (SCN) mode active/preset frequency • Tandem Operation.

ModelPart No.	Channel Spacing	Part No.	Price
AR6201-(022)	VHF transceiver 6W, 8.33/25kHz spacing, blue white backlight LC - display Article - No. 0636.399 - 910	11-08550	**$1,895.00**
AR6201-(122)	VHF transceiver 6 W, 25 kHz channel spacing only, blue white backlight LC - display Article - No. 0636.355 - 910	11-12272	**$1,695.00**
---	Wiring Harness	11-07086	**$297.95**

BECKER CU 6401-1 CONTROL UNIT



Control Unit for the BXP 6402 series transponders. Together with the Mode-S transponder BXP 6402, the control unit CU 6401 forms the aircraft part of the air traffic control system.

CU 6401-1 P/N 11-07859.....**$995.00**

BECKER BXP6402-2-R TRANSPONDER



The BXP 6402-2R-(01) remote controlled Mode-S transponder forms, together with the corresponding control unit, the airborne component of the Air Traffic Control (ATC). It functions in accordance with the secondary radar principle and allows air traffic control to locate, identify and track aircraft.

BXP 6402-2 150W Remote ..... P/N 11-07860.....**$2,853.00**
BXP 6402-1 250W Remote ..... P/N 11-07861.....**$3,474.00**
BXP 6402 Remote Harness ..... P/N 11-07195.....**$272.95**

BECKER BXP6401-2-(01) MODE-S TRANSPONDER



Single block Mode-S transponder. It is certified according to ETSO-2C112a and is suited for VFR and IFR operations up to 15,000 feet. Equipped with extended squitter and SI code function and it provides an interface to the central aircraft data system. It allows ELS, supports EHS, as well as ADS-B via extended squitter. Designed for panel mounting and fits into a 2 ¼ inch cut out.

BXP6401-2-(01)..... P/N 11-05326.....**$2,975.00**
Becker 1K6401 Harness ..... P/N 11-07192.....**$239.00**

BECKER GK 615 PORTABLE VHF STATION



The carrying case contains the battery, speaker, antenna socket, the 5 way DIN socket for the micro- phone or microphone speaker and the voltage converter. A microphone, a headset or a helmet (ultralight) can be connected to the 5-way DIN socket. The built-in battery is a maintenance-free recharge- able 12 V / 2 Ah dry lead acid battery. The transmitter power is approximately 5 to 7 W. Charging voltage can be varied between 10 V and 32 V. Charging time approx. 8 hours. The nominal operating time for the portable VHF station is approximately 6 hours at a keying ratio of 1:10 normal ra- dio traffic) and transmitter output power of 5 W. Features: • Frequency Range: 118.000 MHz to 136.990 MHz • Channel Spacing: 8.33 or 25 kHz • Channel Selection: 8.33 or 25 kHz (selectable) • RF-Output Power: > 6 W (carrier power) • Receiver Sensitivity: > 12 dB sinad for 2 uV.

Model No.	Watts	Description	Part No.	Price
0940.472 923	5	Becker GK 615-5 Portable VHF Station	11-12319	**$3,309.00**
0940.432 923	10	Becker GK 615-10 Portable VHF Station	11-12320	**$3,793.00**

BECKER AR6203 VHF / AM TRANSCEIVER



The AR6203 VHF-AM transceiver is smaller and lighter than its forerunner due to implementation of state-of-art DSP (Digital Signal Processing) technology it is designed in a 160mm format and is equipped with a highly efficient AM transmitter, a very sensitive receiver and a full graphic LC-display that allows easy reading under all light conditions, including full sun light readibility. Push button and display illumination can be dimmed.

Description	Part No.	Price
AR6201-022: 8.33/25kHz Switchable, 6W	11-14411	**$2,920.00**
AR6203-122: 25kHz only, 6W	11-14413	**$2,403.00**
AR6203-012: 8.33/25kHz Switchable, 10W	11-14415	**$3,436.00**

FLEXALERT MULTIFUNCTION ANNUNCIATOR



The FlexAlert Multifunction Annunciator is an all-in-one multifunction display that places critical warning and condition annunciations directly in front of the pilot to increase safety and simplify panel layouts. The sunlight-readable & dimmable LED display includes Landing Gear Status for both land and seaplanes as well as warnings for Engine, Oil Pressure, Fuel Pressure, Low Fuel, Pitot Heat, Low Voltage, Over Voltage, Alternator Failure, Doors, Starter Engaged, Vacuum Failure and Autopilot Glideslope Capture. The FlexAlert Multifunction Annunciator can save you over $1,000 compared to individual or customized annunciators and the LED technology is significantly brighter and more reliable than incandescent lamps..... P/N 13-20595.....**$674.00**

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FLIGHT HUB GX WITH HARNESS



Flight Hub GX streamlines avionics by replacing unreliable splices with a simple plug-and-play box paired with a powerful diagnostic tool. Flight Hub GX is revolutionizing avionics wiring by eliminating unreliable splices and disorganized cables. The Flight Hub GX is a passive plug-and-play device that contains a unique diagnostic tool. Instruments are connected to Flight Hub GX with manufacturer provided mil-spec wiring harnesses to provide robust connections and diagnostic capabilities. The integrated patent pending diagnostic tool allows a service technician to easily test signals and find problems to reduce down time and increase TIME TO FLY. Flight Hub GX meets the installation requirements of Garmin, Bendix King, PS Engineering, and Avidyne. Flight Hub GX patent pending. **Specifications**: • Weight: 2 lb. • Length: 10.1 in. • Width: 5.4 in. • Height: 1.7 in. ..... P/N 13-14950....**$4,750.00**

APPROACH SPORT HUB AVIONICS WIRING SYSTEMS



Simply install the appropriate Approach hub for your instrument panel (basic, VFR or IFR), select the appropriate Approach cables for your avionics, and plug it in and your done. Upgrading and replacing avionics only requires a new Approach cable and future maintainability is greatly enhanced eliminating most hand writing and troubleshooting. All cabling is Milspec Tefzel and complies with FAA AC43-13B.

STEP 1: Select the appropriate Approach Hub for your instrument panel configuration.

Basic instrument panel configuration ..... P/N 11-01457... **$199.95**
VFR instrument panel configurations ..... P/N 11-01458... **$372.95**
IFR instrument panel configurations..... P/N 11-01459... **$545.00**
Pro G Hub for Garmin Stacks..... P/N 11-01893... **$489.95**

STEP 2: choose the Approach cables for your specific avionics.

SEE A COMPLETE LISTING OF APPROACH CABLES AT www.aircraftspruce.com

AIRCRAFT CABIN SPEAKERS



Engineered for 10,000 hours of performance, (minimum), these flame retardant speakers sound clearer and last longer. The magnet assemblies are heavier than original equipment, yet the overall speaker depth is only 2". The voice coils are heat-proof to withstand high power levels and the gaskets are treated with a moisture barrier, for unprecedented reliability.

Part No.	Size in inches & Description	Mag. Wt. (oz.)	Imp. (ohms)	Prog. Power Watts)	Depth	Price
11-04649	6 x 4 x 1.878 P.C. Oval	4.8C	3.2	10	1.550	**$41.50**
11-04646	6 x 4 Round	4.8C	3.2	10	2.018	**$38.50**

DITTEL GLIDER COMPUTER



The GCA is one of the most efficient glider computer for the top pilot but also for the glider performance training in the aero club. A display, bright as daylight and even readable in sunlight, leaves nothing to be desired regarding legibility and contrast, an intuitive user guidance and a variety of interfaces, sensors and an integrated competition flight software with surpassing functionality are the result of 4 man-years of software and hardware development. The functionality and therewith the scope of services can always be adapted to the training level of the pilot. By inserting the SD-card into the front, the GCA is automatically tuned to the desired configuration of each pilot. Remote Unit The remote unit of the GCA is a second control unit for double seat gliders. This device is built exactly the same as the main unit, but without sensors and GPS. The GCA Remote is connected to the central unit via a high speed data bus (CAN bus). All sensor and GPS data are available to the remote unit and allow the co-pilot to fly according to the provided data or to define a new and independent strategic planning during the flight.

P/N 11-13923.....**$3,450.00**

MICROAIR 760 COM REVISION P



Designed and manufactured in Australia, the Micro Air 760 VHF transceiver is ideal for aircraft requiring compact size and low power consumption. It has many of the features not found in radios costing much more and includes features not available in any other units. It's compatible with a variety of speaker & microphone combinations including all general aviation microphones. Standard model mounts in a standard 2-1/4" panel hole and weighs only 19.4 oz. It has been proven in high noise environments such as Rotax 2-stroke engines and is excellent for gliders, Ultralights, a general aviation aircraft. A unique LED multifunction annunciator located at the top right of the unit provides several alerts, and an external memory toggle switch allows remote control of the memory frequencies. Transmit output: 4W, Size: 2.56" x 2.44" x 7.779"d, 14V.

Standard 2-1/4" model..... P/N 11-18700..... **$1,225.00**
Boom Mic BM470-E ..... P/N 11-02864..... **$203.95**
Spaker Box SP01 ..... P/N 11-02865..... **$39.95**

MICROAIR ANTENNA AIRKIT FOR M760



Microair Avionics recommends the Airkit GI ground plane independent, for use with the M760 radio, in situations where the aircraft structure does not offer a suitable ground plane. The Airkit is a completely ground independent antenna which is designed to be used in a wide variety of applications, such as kit-build and composite aircraft. This products is not approved as a primary com antenna. Termination is provided to the industry standard BNC female and supplied with 10m of RG58CU coax cable. The Airkit antenna is one of the easiest antenna to install and has a maximum bandwidth of over 3MHz under 1.6 to 1 SWR.

5M Cable..... P/N 10-06021..... **$118.00**
10 Ft. Cable..... P/N 10-06022..... **$109.75**

MICROAIR T2000 TRANSPONDER



The Microair Avionics T2000SFL Transponder is a mode 3A/C aircraft transponder designed to operate in an ATCRBS environment. The T2000SFL has been designed to meet RTCA/DO-144 requirements, and has been tested to DO-160D for environmental and EMC requirements.

The T2000SFL software has been developed and approved under RTCA/DO 178B requirements. The T2000SFL is a small lightweight transponder with low power requirements. The T2000SFL is compatible with any C88a compliant altitude encoder, and offers the following features: * Mode 3 A response (4096 codes) * Mode C altitude response * SPI indent response * Encoder Altitude displayed * Altitude Alert (HI / LO) * Voltage alter (OV / UV) * Security coding of serial number * Option to power encoder only in mode C operation.

T2000 Transponder..... P/N 11-00990..... **$1,171.00**
EC2002 Altitude Encoder..... P/N 11-05105..... **$365.00**
Harness T2000SFL Dynon..... P/N 13-08295..... **$199.95**

MICROAIR T2000UAV-L TRANSPONDERS



A special version of the T2000 Transponder, designed for operation in unmanned aircraft. This product is NOT TSO'd due to the OEM nature of the management software. It can help you to open ATC controlled airspace for your product, by making the UAV visible to ATC controllers. The UAV operator will be able to enter an ID code given by ATC, into the T2000UAV-L, to make the UAV uniquely identifiable. Transponder capability will make your UAV visible to TCAS operators, which affords great safety for commercial aircraft operators. The transponder will reply to all mode A and mode C interrogations, and will accept barometric altitude Gray scale (Gillham Code) data. It was designed for very low power consumption, which permits prolonged operation on battery. Can however still pulse out a 200W signal. Light at only 454g (16oz), and easy to istall. Available with either a standard BNC connector or standard TNC connector loaded on the rear face of the chassis.

T2000UAV-L TNC Connector..... P/N 11-07934.....**$3,805.00**
T2000UAV-L BNC Connector..... P/N 11-07935.....**$3,597.00**

AV

PS ENGINEERING AUDIO PANELS

PMA6000B AUDIO PANEL



PMA6000B Audio Panel w/4-place mono intercom available with or without marker beacon receiver. The PMA6000B holds both FAA TSO as well as EASA ETSO and was designed to be made easier to install because of a single 44-pin Sub-d connector. PS Engineering has revolutionized audio control in general aviation airplanes. At that time, the original PMA6000 took the audio panel from a collection of switches added as an afterthought, to a multi-talented inter-system focal point for cockpit audio.

Capabilities: • Built-in 4 place mono intercom PS Engineering's "Set-it and Forget-it" manual VOX • Optional built-in marker beacon receiver • Split mode for dual audio capability • 2 - Com Capability • 3 - Intercom isolation modes - Pilot Isolate, All, and Crew • 2 - Music inputs with Soft Mute™ • 2 - Unswitched inputs • 6 - Switched inputs • A patented "swap" function allows selection of Com 1 or Com 2 from remote push-button • Fail-safe feature automatically hard-wires the pilot to Com1 in the case of an outage • Uses a single 44-pin connector making installation easier.

Description	Part No.	Price
PMA6000B Audio Panel w/4-place mono intercom with marker beacon receiver	11-08074	**$995.00**
PMA6000B Audio Panel w/4-place mono intercom without marker beacon receiver	11-14363	**$876.00**
PMA 6000 Audio Panel 2 Place Wire Harness	11-13149	**$275.00**
PMA 6000 Audio Panel 4 Place Wire Harness	11-13150	**$295.00**

PMA450A AUDIO PANEL



The PMA450A raises the bar for audio control capabilities with a larger enhanced display and an easy to read white text on black Organic Light Emitting Display (OLED). Since it is bigger, the USB charging port has gotten smaller and more powerful. The USB-C standard connector is non-gendered there is no up or down - making it very easy to connect in the cockpit. The power available also increases from 10 to 15 Watts. Several configurability enhancements have been made. The Bluetooth® audio source is treated as a separate source, and the intercom capabilities have been added to make the already very capable audio panel even better. The PMA450A has an optional PS Streamer™ Bluetooth® module - for streaming selectable cockpit audio signals that can include just the radios or everything the pilot hears, to a device such as a compatible video camera capturing the whole flight experience in sight and sound.

Description	Part No.	Price
PMA 450A 6 Place Enhanced Audio Selector Panel	11-142495	**$2,195.00**
PMA 450A 6 Place Enhanced Audio Selector Panel with PS Streamer	11-16084	**$2,295.00**

PMA450B AUDIO PANEL



The PMA450B is the next step in connectivity, with more Bluetooth® capability than any other audio panel available today. When coupled with PS Engineering's innovative approach to audio control, this user friendly PMA450B gives more of what the pilot wants from their audio panel, the central nervous system of their avionics suite. This 3rd generation PMA450 has two completely independent Bluetooth® modules, giving unprecedented connectivity capabilities. The PMA450B has the ability to work like no other panel available. Stream to a digital video camera, hear Foreflight® alerts, make a phone call to ATC for your IFR clearance, you might even listen to your favorite tunes once in a while. PMA450B also adds flightmate®. This integrated audio alert system gives the pilot the ability to hear alerts related to aircraft conditions.

Description	Part No.	Price
PMA 450B	11-16294	**$2,595.00**
PMA 450B Without BT2	11-16295	**$2,449.00**
PMA 450B Without Marker Beacon	11-16296	**$2,495.00**
PMA 450B Without BT2 or Market Beacon	11-16297	**$2,349.00**

PMA 7000B/7000H/7000M AUDIO PANEL



Note: Plug & Play slide-in replacement for the PMA7000M-S, the PMA 6000M-S, and the KMA28. Pin-compatible with the KMA 24. Nice for upgrading an existing Bendix/King KMA 24 audio panel. KMA 24 pin compatible. None of the existing wires going to the KMA 24 have to be disturb. Renown 6-place IntelliVox® automatic Voice Operated Relay (VOX) intercom system. Provides 3-com capability with the option to easily convert Com 3 to a full duplex cellular telephone interface. Also has the pioneered "Split Mode". Allows the pilot to be on Com 1 while the copilot is on Com 2. Also expandable to accommodate up to 12 places (10 passengers) with the addition of the 11606 IntelliPax. Has four un-switched and un-muted inputs. * Height: 1.3 inches * Width: 6.25 inches * Depth: 6.8 inches * Weight: 1.5 inches * Power Requirements: 12 to 24 VDC * Warranty: 2 Years * Unit is TSO'D.

PMA 7000B Audio Panel..... P/N 11-01635 . **$1,395.00**
PMA 7000 Bluetooth/Marker Beacon..... P/N 11-13663 . **$1,439.00**
6 Place expansion for 7000..... P/N 11-02544 .... **$399.95**
PMA 7000H Audio Panel ..... P/N 11-07001 . **$2,099.00**
PMA 7000M Mono Intellivox Marker ..... P/N 11-13425 . **$1,295.00**
PMA 7000H-CVR ..... P/N 11-14369 . **$2,099.00**
PMA 7000B-OPT2 w/o Marker Beacon ..... P/N 11-14366 . **$1,295.00**
Install Kit For PMA 7000M
(Must be purchased with 11-13425)..... P/N 11-13426 .... **$343.00**
PMA 7000HBT Heli. Bluetooth..... P/N 11-13713 . **$2,395.00**

PAC 24 AUDIO PANEL/INTERCOM

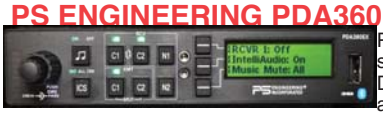


Designed as an upgrade/replacement for the popular KMA24 –71. Many of the enhancements include; a powerful headset audio amplifier, and high-performance IntelliVox® intercom, dual audio capability in a single box, full duplex mode for wireless operations, and expansion capability with stereo IFE input. Can accommodate 5 transceivers. A monaural system, the PAC24 can include a music input. SoftMute™ silences music during radio traffic, but allows music other times. Incorporates a split mode that will allow a single audio panel to separate two pilots on different transceivers. When combined with IntelliPax® expansion system, the dual PAC24 can be a 14-place system. The audio amplifier is capable of providing 120 milliwatts (mW) into general aviation headphones. ..... Horizontal Mounting.
P/N 11-01293 ..... **$1,995.00**
Vertical Mounting..... P/N 11-05507 ..... **$2,195.00**

PS ENGINEERING ACCESSORIES

PS Engineering cellphone cable. ..... P/N 11-04376 ..... **$28.95**
PS Engineering music cable ..... P/N 11-04377 ..... **$28.95**
Digital Recorder Aural Warning System w/ 4 unswitched inputs
P/N 11-05158 ..... **$699.00**
FM Radio Adapter (allows interfacing of non-standard aviation radios)
P/N 11-05159 ..... **$379.00**
4 Channel Summing Amplifier..... P/N 11-05160 ..... **$195.00**

PS ENGINEERING PDA360EX AUDIO PANEL



PS Engineering has taken some of the technology from DSP based PMA450 and built a package that better suites the Homebuilder's needs for avionics. The user interface eliminates the need to open up the Pilot's Guide. Bluetooth®, soft-key buttons and a graphics display. IntelliAudio® True Dimensional Sound. 4 - Place hi-fi stereo IntelliVox® Intercom with Soft Mute™. Bluetooth® enabled. 3 - music mute modes. Cellular telephone input with "DuTel™". Digital aircraft radio recorder (IRS™). USB Charging port. Split mode for dual audio panel capability.. Selectable music distribution for pilot, copilot and passengers. Selectable intercom mode with special "Alternate Intercom Mode". 2-year Pro-Support Warranty. P/N 11-13798..... **$1,345.00**

PS ENGINEERING PAR200A AUDIO PANEL WITH REMOTE VHF RECEIVER



FAA TSO'd for Certified Aircraft • 4-place stereo IntelliVox® intercom, a 10 Watt Speaker Amplifier, and accesses a 2280 channel VHF aviation radio. (Selectable 8.33KHZ) • Bluetooth capable. Pairing of phones or Bluetooth® enable audio devices is easily achieved for wireless entertainment. • Features automatic radio squelch which assures that the radio trip level is always optimally set. • Two different inputs and two types music distribution. The standard configuration allows music 1 (or Bluetooth® to go to the crew while the passengers hear music 2. The other selection allows music 1 (or Bluetooth) to go to all headsets. • Monitor Mode allows the pilot to hear the Active and Standby frequencies at the same time. • Up to 5 discrete radio frequencies can be stored in non-volatile memory for quick dial up. • Features fully independent power supplies so you can power up the radio or audio panel individually. • The PAR200A uses the same tray and connector as the GMA240, GMA340, PMA8000 series. However, there is additional wiring that is required to interface the Com Radio to the audio panel. P/N 11-13036..... **$2,595.00**

AV

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PS ENGINEERING AUDIO PANELS

PMA 8000B AUDIO PANEL



Front-mounted, 2.5mm multi-purpose jack give pilots unprecedented access to their audio panel, allowing connections to cell phones, portable music devices, or audio announcements directly into the audio panel. 6 user configurations that are front panel selectable. Original Karaoke Mode™ can be activated by pressing the front panel "Mute" button, allowing the music to be placed in the background while interruptions to the music will be eliminated. Pilot can receive and transmit on the selected VHF COM with ATC as well, for seamless integration in the cockpit. (Cellular telephone use in flight is not permitted, but remains a convenient and safe way to contact air-traffic control or a weather briefer while on the ground.) Six different configurations can be selected from the front panel. Internal Recording System (IRS) is now standard equipment. Backward compatible with the PMA 8000. Note: Use of the front panel jack is restricted to advisory information only, from portable systems. Signals required for certified equipment must be interface in accordance with their specific installation manuals. Specifications: Height: 1.3 inches, Weight: 6.25 inches, Depth: 7.15 inches, Weight: 1.34 pounds, Power Required: 12 to 24 VDC, Warranty: 3 Years, Unit is TSO'D.

PMA 8000B Hor. Mount Audio Panel ..... P/N 11-04354.....**$1,295.00**
PMA 8000BT Hor. Mount/Bluetooth ..... P/N 11-08537.....**$1,495.00**
PMA 8000 Hor. Mount/NVG..... P/N 11-13660.....**$2,095.00**
PMA 8000 Vertical Mount ..... P/N 11-13658.....**$1,795.00**
PMA 8000Vertical Mount/Bluetooth ..... P/N 11-13659.....**$1,895.00**
Music Cable..... P/N 11-04377.....**$28.95**
Cell Phone Cable 2.5 mm to 2.5 mm..... P/N 11-04376.....**$28.95**
3.5 mm 4 conductor to 2.5 mm (Phone only, no music)
P/N 11-13661 .....**$39.95**

PS ENGINEERING PMA8000C AUDIO PANEL



The front-mounted, 2.5mm multipurpose jack give pilots unprecedented access to their audio panel. Connect any Bluetooth® enabled phone into the audio panel for unprecedented amount of flexibility, both for phone calls as well as music streaming. It may also be possible to connect two different Bluetooth® devices at the same time. Three different configurations can be selected from the front panel, such as how the music is distributed, the way the intercom functions, and selecting the new Monitor Function. Monitor mode allows the pilot to designate one com radio as primary, while having the second com as the secondary audio source. When there is radio activity on the primary radio, the secondary com radio will temporarily mute. The Monitor mode will change your IFR approach environment, eliminating having to try to decipher two simultaneous radio receptions. P/N 11-10773 ..... **$1,895.00**

PS Engineering audio panels and intercoms can be sold over the counter but must have a PS Engineering dealer make the harness or the warranty on the unit is void. Harnesses can be ordered from PS Engineering direct or when ordering from Aircraft Spruce.

MB 10 MARKER BEACON RECEIVER



MB 10-is a 3-light 75 MHz Marker Beacon receiver and indicator. This provides the necessary Marker Beacon lights and audio indications necessary for an Instrument Landing System (ILS) approach. A switch labeled Hi/Lo/TST allows the pilot select high or low sensitivity as well as test and mute modes. * Height: .95 inches * Width: 2.80 inches * Depth: 4.85 inches * Warranty: 1 year * Unit is TSO'D

Standard ..... P/N 11-05621 ..... **$1,095.00**
Remote Mount ..... P/N 11-10014 ..... **$1,095.00**

PS ENGINEERING PMA8000E DUAL AUDIO PANELS



The unit is designed for outstanding ergonomics with visually defined mode annunciation and selections.

The PMA8000E is specifically designed to be used in a dual audio panel environment; where the pilot and copilot positions have independent control over the radio audio control. A pair of PMA8000E units share information between the units to make the operation logical and utilitarian, and avoid operations that are inconsistent with radio and cockpit communications practices.

With digital interface control, the pilot is always in control while allowing the copilot to off load radio communications as well allow access to the passengers without interrupting the pilot.

If the aircraft owner chooses, Bluetooth® can be enabled, allowing unprecedented capabilities for the crew or passengers to distribute phone calls or music. With two independent Bluetooth® interfaces, any one of a number of configurations will allow distribution of telephone and music.

And like all of our PMA8000 series, there are front panel configuration that allows both the pilot and copilot to configure the intercom to best suit the needs of the cockpit crew and passengers.

Part No.	Description	Price
11-14373	PMA 8000E-OPT2 Dual Audio Panel 14/28 VDC No Marker	**$7,695.00**
11-14375	PMA 8000E-OPT2 Dual Audio Panel with Cover 5 No Marker	**$7,695.00**
11-14376	PMA 8000E Dual Audio Panel with Cover 14/28 VDC with Marker	**$7,995.00**
11-14377	PMA 8000E Dual Audio Panel with Cover 5 With Marker	**$7,995.00**
11-14380	PMA 8000E-OPT2 Dual Audio Panel 14/28 VDC No Marker Gray	**$7,795.00**
11-14381	PMA 8000E-OPT2 Dual Audio Panel Vb No Marker Gray	**$7,795.00**
11-14382	PMA 8000E Dual Audio Panel with Cover Vb Gray	**$8,095.00**

PS ENGINEERING PMA 8000G FLIGHTMATE® AUDIO PANEL



Flightmate® is one of several noticeable enhancements to the latest in a series of upgrades to the PMA8000 series audio panel. This upgrade makes the operation of the PMA8000G much easier and more intuitive.

Flightmate® has 2 ½ minutes of recording time to store flight briefs, checklists or information that the pilot would like to have easily at their disposal. These recordings are played back at the push of a button labeled "PLAY." It is just that easy. Because the pilot stores the information, it is completely airplane or mission specific.

Additionally, it allows the pilot to record alert messages that can be triggered by some event or switch in the aircraft, like a stall warning or autopilot disconnect. Four logic inputs trigger specific messages prerecorded by the pilot.

The PMA8000G can be equipped with the optional PS Streamer Bluetooth® module to stream cockpit audio to a device such as a compatible GoPro® video camera and other devices that can record streaming audio. The pilot can select all audio or just the Coms.

Description	Part No.	Price
PMA8000G Advanced 6 Place Audio Panel with PS Streamer	11-14513	**$1,895.00**

INTELLIPAX INTERCOM EXPANSION UNIT FOR PMA8000D



The IntelliPAX is an intercom expansion unit with intercom volume control for the passengers. This unit is designed to work in combination with the PMA8000D Audio Panel. It contains PS Engineering's proprietary intercom protocol, IntelliVox®. This system uses digital processing on each of the six individual microphones to eliminate manual squelch adjustments. This unit is for expanding the PMA8000D system to 6 or 12 places. Only available as a remote unit.

P/N 11-14372.....**$399.95**

AV

BLUE SKY NETWORK

ACH1000 ADVANCED CONTROL HEAD TRANSCEIVER



Blue Sky Network's Advanced Control Head (ACH1000) aviation transceiver is the perfect tool for pilots, operators, and fleet managers around the globe. Working in conjunction with our D1000-series Iridium transceivers, it is the ideal upgrade to add voice and messaging capability to and from the cockpit. The ACH1000 control head integrates with the on-board intercom system, allowing the pilot or co-pilot to easily dial or receive calls directly through the headset. Users can pre-program up to 10 speed-dial numbers, delay, route diversion and weather requests. The crew can also easily receive and read email messages from the iridium transceiver display. Moreover, with the simple push of a Quick Position (QPOS) button located on the ACH1000 display, a message is quickly sent to the SkyRouter portal, key email addresses, and mobile phones. P/N 11-15233.....**$2,893.00**

HAWKEYE PT PORTABLE TRACKER



The HawkEye Portable Tracker (HEPT) is a GPS personal tracking device that makes ensuring the safety and keeping track of workers in remote locations easy. HawkEye Portable Trackers are rugged, handheld Iridium-based personal satellite tracking devices, tapping the complete network of Iridium low-earth-orbit satellites. No matter where personnel may be—walking oil lines in Alaska, doing geologic surveys in the desert, etc.—you can locate them and ensure their safety. It's an essential tool for every lone worker in your enterprise. The HawkEye PT transmits all data to SkyRouter, Blue Sky Network's interactive web portal that enables immediate access to tracking data on—and communication with—every person and asset around the globe.

P/N 11-15238.....**$1,275.00**

HAWKEYE PT PLUS PORTABLE TRACKER



Blue Sky Network's HawkEye Portable Tracker Plus (HEPT+) provides dual-mode connectivity and harnesses the power of the Iridium Satellite network and GSM tracking to ensure the safety and constant communication of fleets dispersed in remote locations while providing cost-efficient data service. When used in combination with the New SkyRouter, the HawkEye PT Plus offers portable tracking and fleet management of any aviation, land and marine asset – in real-time from anywhere in the world with pole-to-pole coverage. The HawkEye PT Plus (HEPT+) utilizes GPS tracking to locate the exact position of fleets and two-way SMS and free form messaging to allow users to remain in constant contact with command centers. Device control is now made easy with the integration of a new touchscreen interface. P/N 11-15237.....**$1,650.00**

HAWKEYE 7200 GPS TRACKING DEVICE



The portable HawkEye 7200 (HE7200) is packed with advanced features that make it the perfect Iridium SATCOM solution for on-the-go global asset tracking and communication even from your iPhone or iPad with built-in Bluetooth. Fly with it, take it with you in your vehicle, or jump on-board your ship; the HE7200 is the perfect portable companion for pinpoint tracking, reliable communication and maximum personal security. A true multi-national GNSS receiver plus Iridium give the HawkEye 7200 (HE7200) a definitive edge in TTFF (time to first fix) and global positioning accuracy. A built-in GNSS chip tracks GPS / GLONASS / GNSS satellites and multiple SBAS systems simultaneously to generate the fastest, most accurate position reports in the industry.

P/N 11-15236.....**$1,445.00**

HAWKEYE 7200A SATCOMM TRACKER



Blue Sky Network's HE7200A and SkyRouter, the industry leading cloud-based web portal, meets or exceeds the International Civil Aviation Organization (ICAO) Global Aeronautical Distress Safety System (GADSS) required performance criteria for Transport Aircraft. Blue Sky Network can provide Operators with a "best-of-breed" complete ICAO GADSS solution to meet the expected requirements. This flexible platform will allow remote seamless upgrades to onboard hardware as the evolution of performance based criteria changes. The uniquely small form factor was designed to allow the unit to replace the required #2 ELT (a pending ICAO proposal), while still taking advantage of the three installed wires to the cockpit. P/N 11-15234.....**$5,795.00**

HAWKEYE 100A DIALER AND BT INTERFACE FOR HE 7200A



The Hawkeye 100A is a companion dialer and Bluetooth Interface for the HE7200A SATCOM Device. The Hawkeye 100A adds voice capability, and connection to Blue Sky Network Bluetooth-enabled iOS Apps for messaging and forms.

P/N 11-15235 .....**$2,725.00**

D1000A IRIDIUM SATCOM TRACKING KIT



Blue Sky Network's D1000A Iridium satcom tracking kit provides efficient, safe, secure, and global coverage for aviation assets. The FAA and Iridium certified D1000A enables optimized fleet utilization through extensive reporting capabilities and backend analysis tools. When paired with the ACH1000, the D1000A offers the ability to make voice calls and have two-way messaging. Fleet managers can login to SkyRouter, cloud-based tracking web portal, to maintain, view and communicate with multiple assets simultaneously on a single map from a centralized command center. SkyRouter also enables over-the-air device parameter configuration, such as the reporting interval, allows for two-way messaging and e-mail, and can eliminate routing mistakes by supporting flight information. Reports such as GPS position, take-off/landing, altitude, and on/off gate make it easy for fleet managers to effectively control their aircraft. The crew can push a Quick Position (QPOS) button on the control head, which immediately sends an alert to SkyRouter notifying fleet managers that an emergency has occurred.

P/N 11-15230.....**$6,564.00**

D1000C IRIDIUM SATCOM TRACKING KIT



Blue Sky Network's D1000C Iridium satcom tracking kit provides efficient, safe, secure, and global coverage for aviation assets. The FAA and Iridium certified D1000C enables optimized fleet utilization through extensive reporting capabilities and backend analysis tools. When paired with the ACH1000, the D1000C offers the ability to make voice calls and have two-way messaging. Fleet managers can login to SkyRouter, cloud-based tracking web portal, to maintain, view and communicate with multiple assets simultaneously on a single map from a centralized command center. SkyRouter also enables over-the-air device parameter configuration, such as the Blue Sky reporting interval, allows for two-way messaging and e-mail, and can eliminate routing mistakes by supporting flight information. Reports such as GPS position, take-off/landing, altitude, and on/off gate make it easy for fleet managers to effectively control their aircraft. The D1000C is a robust Iridium transceiver unit with a built-in GPS sensor for position reporting and real-time tracking. The D1000C aircraft satellite communication system provides near-real time GPS tracking, telemetry data link and an optional voice connection using the ACH1000 control head.

P/N 11-15231.....**$5,405.00**

AV

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RADIORAX THE REVOLUTIONARY AVIONICS RACK SYSTEM



Radiorax provides flexibility and ease of installation for panel mount avionics. The radiorax system consists of anodized slotted rails, stainless nuts, structural strength tray screws that are four times stronger than conventional screws used in aviation, and a stainless capture system that holds each nut where it is needed during assembly. The installer is able to position the nuts in the slot exactly where they are required to install each tray. Once installed, the trays can be easily moved until the screws are fully tightened. Additional nuts can be stored in the slots for future avionics additions. RadioRax provides great strength, ease-of-alignment, easy change and modification, ehanced quality, owner satisfaction, and is very cost effective.

Description	Part No.	Price
Radiorax Kit 1010-8 for Exp. A/C	11-01376	**$195.00**
RK1000 Single Stack STC Kit-Standard Rail	11-01855	**$375.25**
RK1010 Single Stack Kit-STC for Exp. A/C	11-01856	**$375.25**
RK1020 Single Stack STC Kit-STC Exp. A/C	11-01858	**$375.25**
RK1030 Single Stack STC Kit Cirrus/Lancair	11-01860	**$375.25**
RK2000 Dual Stack STC Kit	11-01862	**$467.40**
RK3000 Triple Stack STC Kit	11-01864	**$565.25**
Single Rail - Special Order	11-01866	**$280.25**
RK1005 Cessna Kit	11-02308	**$467.40**
RK1040 Single Stack	11-02309	**$565.25**
RK2010 Kit -18" dual stack,flange,FAA-PMA,STC'd	11-02608	**$467.40**
RK2015 Kit - 18" dual stack, flanged outer,FAA-PMA,STC'd	11-02609	**$467.40**
RK2020 Kit -18" dual stack, reduced outer,FAA-PMA,STC'd	11-02610	**$467.40**
RK2025 Kit -18" dual stack, reduced outer,FAA-PMA,STC'd	11-02611	**$467.40**
RK3010 Kit - 18.0" triple stack, flanged outer + Full Dim. Center Rail Tray Mount Kit - FAA-PMA, STC'd	11-02612	**$565.25**
RK3015 Kit - 18.0" triple stack, flanged outer+reduced dim. Center Rail Tray Mount Kit - FAA-PMA, STC'd	11-02613	**$565.25**
RK3020 Kit - 18.0" triple stack, flanged outer + Full Dim. Center Rail Tray Mount Kit - FAA-PMA, STC'd	11-02614	**$565.25**
RK3025 Kit -18.0" triple stack, reduced outer+reduced dim. Center Rail Tray Mount Kit - FAA-PMA, STC'd	11-02615	**$565.25**
RK4000-12 Kit - Standard Closeout Panel - Chem Film - 12" Kit - FAA-PMA, STC'd	11-02616	**$166.25**
RK4000 - 12A Kit - Standard Closeout Panel - Black Anodized - 12" Kit - FAA-PMA, STC'd	11-02617	**$185.25**

RAM® EZ ROLLER CRADLE FOR THE IPAD PRO 12.9



The RAM® Mounts EZ-Roll'r™ cradle for the iPad Pro secures your device in a form-fit holder that keeps the entire screen visible. Designed for tablets that are not in a case, it features a holder for the Apple Pencil as well. Simply slide the tablet into the bottom cups and then roll the top clip over the top of the device to anchor it into the cradle. Side buttons, charging port and camera lens are conveniently exposed and accessible while in the cradle. Connect the cradle to any RAM components or mounts that contain the universal AMPs hole pattern. P/N 11-14777 .....**$23.99**

RAM UNIVERSAL X GRIP CRADLE FOR 12 INCH TABLETS



The RAM-HOL-UN11U is just what you've been looking for to hold your favorite tablet. Consists of a composite spring loaded cradle, expandable grip arms and additional bottom support keeper. Simple to open and close, it leaves the outside edge of your tablet almost completely free of annoying obstructions. Soft rubber fingers apply just enough force to keep your tablet in safe and secure. Compatible with a wide range of mounting solutions, your tablet is sure to find a home no matter where your travels take you. P/N 11-14778 .....**$63.75**

VAL AVIONICS VOLTAGE STEP DOWN CONVERTOR



This unit is a step down voltage converter that drops 28 volts DC down to 13.8 volts DC. This unit would be required to operate either our COM 760 TSO or INS 422 TSO units in an aircraft or vehicle that are 28 volts DC. Specifications: • Physical Dimensions: L 4.0 " (10.16 cm) x W 4.625" (11.75cm) x H 1.250 (3.18cm)• Weight: 0.75 lbs• Power Requirements: Current 2.0A Continuous with 5.0A Intermittent

P/N 11-02963 .... **$165.00**

VAL AVIONICS NAV INS 429 WITH VOR/LOC/GS/MB



The INS 429 is a high quality, multi-function, fully integrated navigational instrument displaying VOR, LOC, Glide Scope, Marker Beacon, and GPS/NAV inputs. Not only does it sport its own internal receivers, it will also display course deviation information from an external NAV or GPS source. A perfect solution for a crowded panel. **Not TSO'D (for experimental aircraft only).**

P/N 11-05592.....**$1,995.00**

VAL AVIONICS COM 2KR REMOTE VHF TRANSCEIVER



The innovative COM 2KR from VAL Avionics is the first radio to offer complete user interface through the electronic flight instrument system (EFIS) display. This provides full control of transmit and receive frequencies as well as volume and squelch from the EFIS, allowing the COM radio to be removed from the instrument panel.

The COM 2KR is the next step in general aviation communications. As with all Val Avionics products, the COM 2KR is crafted from a solid brick of aluminum for maximum durability and performance for years to come. Supporting both 14- and 28- volt systems, the COM 2KR is outfitted for flexible installation in nearly all light-sport, experimental and type-certificated aircraft. 8 watt transmitter. Size: 8.75"L x 5.9"W x .86"H.

P/N 11-11457.....**$795.00**

VAL AVIONICS NAV 2000 VHF RECEIVER



Turning back to a more traditional design ,the COM 2000 features dual concentric knob controls, displayed active and standby frequency with push button flipflop, 15 memory locations with user defined alphanumeric channel identifiers and a manual squelch control. It's 3/8" character display is easy to read from any angle and in any lighting condition. This mighty little radio's all metal construction is designed to serve all your communication needs well into the future. • Large 3/8" display character • 8 watt transmitter • 1 inch high and 9 inches long • Dual concentric knob controls • 15 memory locations with user-defined alphanumeric channel identifiers • Non-volatile memory • Manual squelch control • All machined aluminum construction • RS232 interface • Photocell dimming.

P/N 11-10569 ..... **$1,295.00**

VAL AVIONICS COM 2000 VHF TRANSCEIVER



COM 2000 continues the tradition of hard working, affordable avionics by Val Avionics. The smallest panel mounted COM radio available today. Features dual concentric knob controls, displayed active and standby frequency with push button flip-flop and a manual squelch control. It's 3/8" character display is easy to read from any angle and in any lighting condition. All metal construction. P/N 11-06411 .....**$1,125.00**

AV

RAM MOUNTING SYSTEMS

RAM MOUNTING SYSTEMS
PATENTED & PATENT PENDING

RAM Mounts are the revolutionary patented ball and socket mounting system that allow you to mount just about anything anywhere in your cockpit. Providing special attachments for yokes, glare shields and more, now you can mount your accessories where you want them. RAM Mounts are up to speed with the latest aviation technology products. Whether you use an iPad, PND, or PC, RAM has you covered. Ordering a custom RAM Mount is easy!

696 on Yoke



iPad on Yoke



X-Grip with Lil Buddy



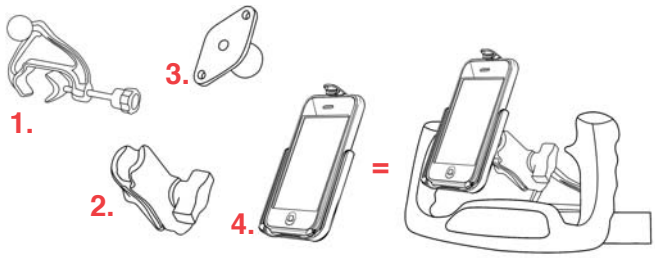
Note: The "U" at the end of each model number means that the unit comes unpackaged.

BUILD YOUR RAM MOUNT SYSTEM ONLINE

Use our simple three-step process below to create your own custom RAM Mounting system. First, select which device you want mounted. Then, the required adapter will be automatically added. Then, choose the required arm for you mount. Next, choose how you would like the system to be mounted to your aircraft. Finally, add all the items to your cart and checkout. You can also add any combination to your cart: half-systems, full-systems, or individual parts. Simply piece them together when you receive your order and you're ready to go!
See www.aircraftspruce.com

BUILDING YOUR RAM MOUNT

Building and ordering your RAM Mount is easy. All you need to know is what you need to mount and where you would like to mount it - we take care of the rest. Building a RAM Mount solution usually consists of four parts: base, arm, adapter, and cradle/holder. Use the example image to the right for reference.



STEP 1: BASES

Model No.	Description	Part No.	Prices
RAM-B-224-1U	RAM 3.3" Dia Suction Cup w/Ball	11-06449	**$16.99**
RAP-B-121BU	RAM Universal Yoke Clamp w/Ball	11-05866	**$19.49**
RAM-B-202U	RAM Round Base w/Ball	11-07069	**$7.49**
RAM-B-231ZU	RAM Rail Base w/ball & Zinc U-bolt, 3/4" - 1-1/4" dia. rails.	11-03460	**$13.99**
RAM-B-108B-STRAP40U	RAM V-Base Rail Yoke Clamp for Breechcraft and Bonanza	11-09763	**$17.00**
RAM-B-259U	RAM 1" Ball Glareshield Base	11-09852	**$20.49**



RAM-B-224-1U
Suction Cup



RAM-B-108B -STRAP40U
V-Base



RAP-B-121BU
Yoke Clamp



RAM-B-202U
Flat Surface Base



RAM-B-231ZU
U-Bolt Rail Base

STEP 2: ARMS



RAM-B-201U-A
2-7/16" LONG



RAM-B-201U
3-11/16" LONG



RAM-B-201U-C
6" LONG

Model No.	Description	Part No.	Prices
RAM-B-201U-A	RAM Double Socket Short Arm for 1" ball bases	11-03458	**$13.50**
RAM-B-201U	RAM Double Socket Med. Arm for 1" ball bases	11-01255	**$12.60**
RAM-B-201U-C	RAM Double Socket Long Arm for 1" ball bases	11-09323	**$18.49**
RAM-201-D	RAM Double Socket Long Arm for 1.5" ball bases	11-05490	**$36.49**

STEP 3: ADAPTER

RAM-B-202U
ROUND ADAPTER

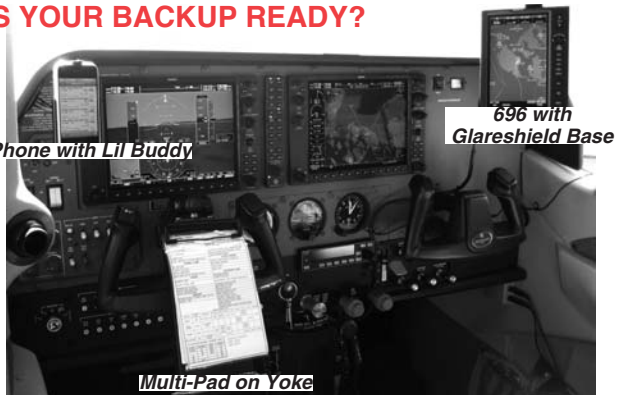




RAM-B-238U
DIAMOND ADAPTER

Model No.	Description	Part No.	Prices
RAM-B-202U	RAM Round Base w/Ball	11-07069	**$7.49**
RAM-B-238U	RAM Diamond Adapter w/Ball	11-00471	**$6.99**
RAM-B-125BU	RAM Curved Yoke Plate	11-14368	**$11.99**

IS YOUR BACKUP READY?



STEP 4: CRADLE/HOLDER

Model No.	Description	Adapter	Part No.	Prices
RAM-HOL-AP9U	RAM Holder for Apple iPhone 4G	Diamond	11-09454	**$8.49**
RAM-HOL-AP10U	RAM Holder for Apple i-Pod Touch 4th Gen	Diamond	11-09764	**$12.99**
RAM-HOL-AP8U	RAM Holder Apple iPad & IPad 2	Round	11-08577	**$17.49**
RAM-HOL-AP8LU	RAM Locking Holder Apple iPad & iPad 2 - cradle with dial combination lock	Round	11-08578	**$55.49**
RAM-HOL-AP7U	RAM Holder Apple iPod Touch 2nd & 3rd Generation	Diamond	11-08583	**$9.60**
RAM-HOL-AP6U	RAM Holder Apple iPhone 3G/s	Diamond	11-08582	**$11.49**
RAM-HOL-AP4U	RAM Holder for Apple i-Pod Touch 1st Gen	Diamond	11-06432	**$9.49**
RAM-HOL-AP5U	RAM Holder for Apple i-Pod Nano Touch & Nano 3rd Gen.	Diamond	11-06433	**$10.99**
RAM-HOL-AP3U	RAM Holder for Apple iPhone 1st Gen.	Diamond	11-06431	**$8.49**
RAM-HOL-AP2U	RAM Holder for Apple i-Pod Nano 1st & 2nd Gen.	Diamond	11-06430	**$9.99**
RAM-HOL-TAB2U	RAM Universal Tablet Holder, Picture on next page	Diamond	11-09766	**$23.50**
RAM-HOL-TAB3U	Ram Holder for Apple iPad 1-4	Diamond	11-09767	**$24.99**
RAM-HOL-TAB4U	RAM Universal Tablet Holder, Picture on next page	Diamond	11-09768	**$23.70**
RAM-HOL-TAB5U	RAM Universal Tablet Holder, Picture on next page	Diamond	11-09887	**$23.50**
RAM-HOL-GA38U	RAM Holder Garmin GPSMAP 695/696	Round	11-08576	**$23.99**
RAM-HOL-GA25U	RAM Holder Garmin Nuvi 200W & 250W, 2xxW & 2xxWT	Diamond	11-06471	**$8.99**
RAM-HOL-GA31U	RAM Holder Garmin Oregon	Diamond	11-08585	**$9.99**
RAM-HOL-GA5U	RAM Holder Garmin E-Trex	Diamond	11-01923	**$14.49**
RAM-HOL-GA7U	RAM Holder Garmin GPSMAP 176, 196, 276, 376, & 496.	Diamond	11-01925	**$9.49**
RAM-HOL-GA14U	RAM Holder Garmin 76C Series	Diamond	11-06477	**$11.99**
RAM-HOL-GA30U	RAM Holder Garmin Nuvi 880 850 860	Diamond	11-06475	**$17.50**
RAM-HOL-GA39U	RAM Holder Garmin Nuvi 3750, 3760T & 3790T	Diamond	11-09769	**$12.99**
RAM-HOL-GA41U	RAM Holder Garmin GPSMAP 62, 62S, &62ST	Diamond	11-09770	**$9.49**
RAM-HOL-SPO1U	RAM Holder Spot Satellite Unit	Diamond	11-07508	**$11.49**
RAM-HOL-SPO2U	RAM Holder Spot 2 Satellite Unit	Diamond	11-08581	**$13.99**
RAM-HOL-BC1U	RAM Holder for Electronics with Belt Clip	Diamond	11-01917	**$13.99**
RAM-HOL-PD3U	RAM Universal PDA Holder	Diamond	11-05488	**$17.49**
RAM-HOL-UN4U	RAM Universal Plastic Radio/GPS Holder	Diamond	11-06450	**$22.99**
RAM-HOL-MP1U	RAM Holder Multi-Pad™ (Note Pad holder)	Diamond	11-08579	**$36.99**
RAM-HOL-UN5U	RAM Spring Loaded Cradle For Iphone And Ipod Touch	Diamond	11-10087	**$11.99**
RAM-HOL-AP11U	RAM Cradle Apple iPhone 5	Diamond	11-11588	**$8.99**
RAP-B-202U-GOP1	RAM Holder with custom GoPro Hero Adapter	---	11-12021	**$12.90**
RAM-HOL-AP17U	RAM EZ-Roll'r Mount for iPad Air	Round	11-12358	**$19.50**
RAM-HOL-TAB12U	RAM iPad Mini Universal Tablet Holder with case	Diamond	11-12269	**$23.99**
RAM-HOL-ROTO1U	RAM Roto View adapter plate for tablets. Holder, Roto Plate, and adapter are needed.	Diamond	11-12452	**$17.99**

VISIT AIRCRAFTSPRUCE.COM FOR MANY MORE RAM MOUNTS!

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RAM MOUNTING SYSTEMS

DEVICE CRADLES / HOLDERS



RAM-HOL-TAB-LGU
Ram Tab-Tite™ Universal Clamping Cradle for 10" screen tablets.
P/N 11-09767



RAM-HOL-TAB-5MU
Universal Small Tab-Tite™ Holder for 7" Screen Tablets.
P/N 11-09887



RAM-HOL-AP17U
RAM EZ-ROLL'R™ Model Specific cradle for the Apple iPad Air without case, skin or sleeve.
P/N 11-12358



RAM-HOL-UN9U
RAM x-Grip® III Universal Clamping Cradle for large tablets.
P/N 11-11239



RAM-HOL-UN8BU
RAM Universal X-Grip® II Tablet Holder with 1" Ball for small Tablets.
P/N 11-11248



RAM-HOL-UN10BU
RAM Universal X-Grip® IV Large Phone Holder with 1" ball.
P/N 11-12987



RAM BALL MOUNT AND RECTANGLE BASE - A double socket arm, 2.5" diameter round base, and 6.25" x 2" rectangle base. Rectangle base contains pre-drilled holes which will match up to many electronic devices and mounts, including Marine GPS, CB Radios, Ham Radios, Gimbal Brackets and more.
P/N 11-05066.....**$31.99**

RAM MOUNT SUCTION CUP WITH 6 INCH FLEX ARM - 3.25" suction cup locking base, 6" flex arm and diamond base end. The suction cup base is designed to have a strong hold on glass and non-porous plastic surfaces, including RAM adhesive disks.
P/N 11-03443..... **$19.49**





RAM BASE BALL & STRAP - 1" diameter rubber ball connected at a right angle to a v-shaped base, double socket arm and 2.5" base that contains the universal AMPs hole pattern. The base will accommodate rails from 1.0" to a maximum of 2.1" in diameter. P/N 11-05073.....**$35.49**

RAM SYSTEM IPAD MINI TO SUCTION MOUNT KIT

Kit contains: RAM Holder for Apple iPad Mini without Case (PN 11-11250), RAM Adapter Round Base with Ball (PN 11-07069), RAM Double Socket Arm for 1" Ball Bases (PN 11-01255), and RAM 3-1/4" Diameter Suction Cup Base with Twist Lock (PN 11-06449)
P/N 11-11519.....**$51.50**

RAM SYSTEM IPAD MINI TO YOKE MOUNT KIT

Kit Contains: RAM Holder for Apple iPad Mini without Case (PN 11-11250), RAM Adapter Round Base with Ball (PN 11-07069), RAM Double Socket Arm for 1" Ball Bases (PN 11-01255), and RAM Yoke Base with 1" Rubber Ball (PN 11-00484).
P/N 11-11520.....**$64.50**

RAM CRADLE FOR IPHONE 6 WITHOUT CASE

The RAM-HOL-AP18U consists of a high strength composite cradle and hole pattern that will allow the attachment to all RAM components or mounts that contain the universal AMPs hole pattern.
P/N 11-13321.....**$9.49**

RAM CRADLE FOR IPHONE 6 PLUS WITHOUT CASE

The RAM-HOL-AP19U consists of a high strength composite cradle and hole pattern that will allow the attachment to all RAM components or mounts that contain the universal AMPs hole pattern.
P/N 11-13319.....**$9.99**



RAM EZ-ROLL'R HOLDER FOR IPAD PRO - EZ-Roll'r™ Cradle is not a complete mounting solution, but contains hardware to attach to any RAM mount that contains the universal AMPs hole pattern. The side buttons, camera and charging port are conveniently exposed and accessible. Included is a set of four nuts and bolts to connect the cradle to any RAM components or mounts that contain the universal AMPs hole pattern. P/N 11-15889.....**$18.95**



RAM DOUBLE SOCKET SWIVEL ARM FOR 1 INCH BALLS - The RAP-B-200-12U, double socket swivel arm, consists of double 1" diameter open ball sockets with a 360° rotation point at the center of the arm. The rubber ball and socket at each end, and a central pivot point provides unsurpassed adjustability. The RAM ball sockets maximize ball coverage for optimal fit. P/N 11-14916.....**$12.99**



RAM EZ ROLLER CRADLE FOR THE IPAD MINI 4 - the most cost effective and simple way to secure the iPad mini 4 in a variety of applications. Included is a set of four nuts and bolts to connect the cradle to any RAM components or mounts that contain the universal AMPs hole pattern. P/N 11-14148.....**$14.49**



RAM DUAL 1 INCH BALL SWIVEL ADAPTER - Consists of dual 1" balls, with a swivel middle connection point, that allow the connection of two 1" socket arms. The swivel feature allows you to articulate your mount in various positions for optimum viewing angles. This mount is ideal if your mount arm is just too short. P/N 11-14483.....**$13.49**

STRAP MOUNT & LITTLE BUDDY

Fast, simple, and cost effective are all things that describe the EZ-Strap and Little Buddy Mounts. Great for small devices like smart phones and PNDs. Simply choose your favorite EZ-Strap or Little Buddy and then choose any cradle/holder that incorporates the Diamond adapter pattern (diamond adapter purchase is not required).



RAP-SB-187U
EZ-Strap



RAP-SB-180U



Little Buddy with X-Grip Little Buddy

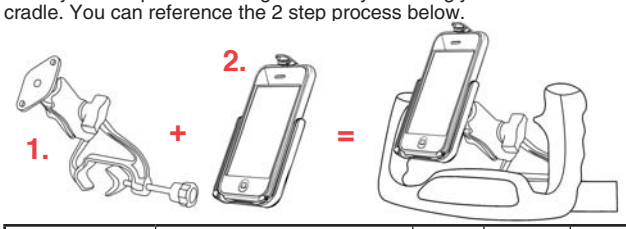
Model No.	Description	Part No.	Prices
RAP-SB-180U	RAM Little Buddy Adhesive Mount	11-08584	$13.99

AV

RAM MOUNTING SYSTEMS

SPECIALTY MOUNTS

Order your complete mounting solution by choosing your mount and then cradle. You can reference the 2 step process below.



Model No.	Description	Adapter	Part No.	Prices
RAM-B-316-1-238U	RAM Universal Floor Mount	Diamond	11-09771	**$38.50**
RAM-B-131-202U	RAM Cessna Aircraft Seat Rail Mount	Round	11-09436	**$118.49**
RAM-B-131-238U	RAM Cessna Aircraft Seat Rail Mount	Diamond	11-09773	**$117.99**
RAM-B-131-G1	RAM Base Seat Rail Mount for GPS	Round	11-08838	**$66.99**
RAM-B-131B	RAM Aircraft Seat Rail Base	---	11-08838	**$66.99**

ACCESSORIES / MISC. MOUNTS



Model No.	Description	Part No.	Prices
RAM-B-132BU	RAM Self Leveling Drink Cup Holder. Requires purchase of base and arm	11-01334	**$18.49**
RAM-MAG-1U	Magnifying Glass for GPS. Intended for use with diamond adapter and cradle	11-04299	**$33.49**
RAM-CIG-LIGHT-8U	RAM 12 Volt Red/White Light Adaptor. Plugs into 12v receiver	11-08580	**$7.49**
RAN-B-202AU	1/4"-20 Camera Adapter Base. Requires purchase of base and arm	11-02080	**$9.65**

RAM TOUGH-RACK™ MOUNT



With the RAM Tough-Track, flat surface mounting possibilities are nearly endless for ATVs, aircraft, cars, combines, motorboats, tractors, trucks, and more. This track mount solution can be drilled to any flat surface and is designed for use with #10 screws for easy installation – hardware not included. The Tough-Track works with a wide variety of RAM track bases to attach devices like action cameras, fishing rods, phones, and tablets. Material: High Strength Composite. Hardware & Track Ball not included.

Description	Part No.	Price
7 Inches	11-14941	**$6.49**
10.75 Inches	11-14942	**$6.99**
14.5 Inches	11-14943	**$7.99**
18.5 Inches	11-14944	**$8.99**

RAM ADAPT-A-POST™ TRACK BASE



For the serious kayak angler, the RAM® Quick Release Track Base is a universal mounting solution for a wide variety of RAM kayak products. The RAM Adapt-A-Post™ Quick Release Track base is available to mount the full line of RAM Post and Spline rod holders, for your heavier fishing rod set-ups. Designed to accommodate most kayak tracks, quickly fasten and adjust the base to your existing track system or add a track system to kayak set up. Popular tracks include Yakattack's GearTrac System, Wilderness Systems SlideTrax and common T-Slot Track Systems. To adjust, simply depress the release buttons and turn the ball counter-clockwise. The base will slide along the track, giving you the ultimate flexibility in repositioning your rod holder or mounted device. The RAM Quick Release Track base can be installed at any point along the track without the need to feed in from one end of the track. A necessity for all fishing enthusiasts, the RAM Quick Release Track Base is certain to create more mounting options on whatever you choose to take to the water. Material: High Strength Composite. P/N 11-14951 ..... **$14.49**

X-GRIP - The NEW RAM X-Grip is perfect for the modern pilot.



Sleek, user friendly, and universal, the RAM X-Grip is the right cradle for the techno savvy pilot. Pats. Pend.

Features:

1. Spring loaded holder expands and contracts for perfect fit of your device.
2. Rubber coated tips will hold device firm and stable
3. Versatility of holder allows for attachment to many RAM-to-RAM ball mounts.
4. Single socket technology allows for multiple adjustment angles and articulation of device.


RAM-HOL-UN7BU


RAP-SB-180-UN7U


RAP-SB-187-UN7U

Model No.	Description	Part No.	Prices
RAP-SB-187-UN7U	RAM X-Grip w/ EZ-Strap Mount	11-09776	**$29.50**
RAM-HOL-UN7BU	X-Grip Cradle w/1" Ball Adapter	11-09777	**$25.50**



RAM DOUBLE SUCTION CUP BASE WITH 2-1/2 ROUND BALL ADAPTER FOR GARMIN AERA

Ram Double Suction Cup Base. 3.3" Diameter Suction Cup with Twist Lock. Note: This does include mounting hardware. P/N 11-14087 ..... **$31.50**

RAM TRACK BALL™ WITH T-BOLT ATTACHMENT



The RAM Track Ball is made up of a B size 1" or a C size 1.5" rubber ball molded to a high strength composite base, a rubber friction washer and a stainless steel T-bolt for sliding into virtually any track system. Simply insert or slide the Track Ball into your track and twist the ball clockwise to tighten in place. Twist counterclockwise to loosen or adjust the ball. Material: High Strength Composite. T-Bolt Dimensions: .48" x .95"

Description	Part No.	Price
1Inch	11-14949	**$8.49**
1.5 Inch	11-14950	**$11.99**

RAM FLEX-ROD™ TRACK MOUNT



The RAM Flex-Rod™ Track Mount is made up of an 18" rigid aluminum rod with a ribbed plastic cover, a track base with T-bolt for virtually any track system, and a B size 1" rubber ball at the top for connecting any RAM ball and socket mounting components. Simply insert or slide the mount into your track and twist clockwise to tighten. Twist counterclockwise to adjust or remove the mount as needed. Material: High Strength Composite.

P/N 11-14952 ..... **$40.49**

MAGICMOUNT MAGNETIC DASH MOUNT



MagicMount™ is the multi-award-winning magnetic mounting system for conveniently mounting smartphones and more. Place the included MagicPlate™ behind your case or battery or directly to its surface, and then simply hover your device near the magnetic to instantly lock it securely in place. This cell phone mount system is sleek and versatile. The cradle-free design uses high-powered magnets to secure your device where you use them most. Place your device at any angle for convenient viewing. In the air, on the road, at home, everywhere. P/N 11-15325 ..... **$16.95**

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Prices Subject to Change Without Notice

RAM INTELLISKIN CHARGERS & DOCKS



RAM INTELLISKIN SNAP-CON™ GDS TO MICRO USB - The Snap-Con™ GDS to Micro USB 2.0 Adaptor is an essential accessory for any IntelliSkin™ or other GDS® compatible device. This accessory enables on the go charging and data connectivity of any GDS® compatible device, including devices wrapped in IntelliSkin™, using an included Micro USB 2.0 cable. P/N 11-15488.....**$27.99**



RAM INTELLISKIN GDS CIGARETTE CHARGER DUAL USB 4.8A - The GDS® 2-Port USB Car Charger will charge two devices at once, including the latest generation Apple and Samsung devices, while on the road. The low-profile design fits easily in your dash without getting in the way of other controls within the vehicle.
P/N 11-15490.....**$12.99**



RAM INTELLISKIN GDS 2 PORT USB WALL CHARGER - The GDS® Dual Port Wall Charger will charge two devices at once, including the latest generation Apple and Samsung devices, in your home or office. The low-profile design plugs easily in a wall socket without getting in the way of other plugs on the wall. The dual 2.4 AMP output (4.8 Amp total) current assures your devices will charge quickly and efficiently.
P/N 11-15491.....**$16.49**



RAM INTELLISKIN GDS 6 PORT USB CHARGER 60W 110V-240V - The GDS® Intelligent 6-Port USB Charger works with the GDS® 6 Gang Desktop Dock to simultaneously charge six unique devices enclosed in IntelliSkin™ cases. Up to six USB cables connect to the back of the Desktop Dock and plug into the USB Charger.
P/N 11-15492.....**$43.49**



RAM INTELLISKIN GDS MICRO B MALE HARDWIRED CAR CHARGER - The GDS® Step Down Converter/ Charger is the ideal solution for providing power to any 5V device in a variety of applications, including fleet vehicles, consumer automobiles, ATVs, motorcycles and more. This charger features a Micro-B USB Male connector that can connect directly to your GDS dock or any USB device. P/N 11-15493.....**$19.99**



RAM INTELLISKIN GDS MICRO A FEMALE HARDWIRED CAR CHARGER - The GDS® Step Down Converter/ Charger is the ideal solution for providing power to any 5V device in a variety of applications, including fleet vehicles, consumer automobiles, ATVs, motorcycles and more. This charger features a Female USB Type-A Female connector that can connect directly to any standard USB cable. P/N 11-15494.....**$19.99**

RAM INTELLISKIN DESKTOP GDS DOCK ADJUSTABLE BACK - The Adjustable GDS® Desktop Charger is a low profile docking station that is ideal for the office, warehouse, class room, exam room or other stationary location. This dock integrates a unique adjustment feature to accommodate a wide range of device thicknesses. P/N 11-15495.....**$89.49**



RAM INTELLISKIN VEHICLE GDS LOCK IPAD PRO 10.5 - The RAM® Locking Vehicle Dock with GDS Technology™ is a spring loaded, quick release cradle with a keyed lock that offers a secure fit with easy access to the mounted tablet. This docking station is compatible with the Apple iPad Pro 10.5 with IntelliSkin™. P/N 11-15496.....**$111.99**



RAM INTELLISKIN VEHICLE GDS LOCK APPLE IPAD MINI 3 - The RAM® vehicle dock with GDS Technology™ is a spring loaded, quick release cradle with a keyed lock that offers a secure fit with easy access to the mounted tablet. This docking station is compatible with the Apple Ipad Mini 2/3 with IntelliSkin™. P/N 11-15497.....**$109.99**



RAM INTELLISKIN VEHICLE GDS LOCK APPLE IPAD MINI 4 - The RAM® vehicle dock with GDS Technology™ is a spring loaded, quick release cradle with a keyed lock that offers a secure fit with easy access to the mounted tablet. This docking station is compatible with the Apple iPad mini 4 with IntelliSkin™. P/N 11-15498.....**$109.99**



RAM INTELLISKIN VEHICLE GDS LOCK APPLE IPAD AIR 2 - The RAM vehicle dock with GDS Technology™ is a spring loaded, quick release cradle with a keyed lock that offers a secure fit with easy access to the mounted tablet. This docking station is compatible with the Apple iPad PRO 9.7, Air 2 and 5th Generation with IntelliSkin™. P/N 11-15499.....**$110.49**



RAM INTELLISKIN GDS TOP CUP VEHICLE DOCK APPLE IPAD MINI 2 - The RAM-GDS-DOCKT-AP6U includes the top docking cup and necessary hardware for converting your existing GDS® Vechicle Dock to support the Apple iPad mini 2 & 3 with IntelliSkin™. Without having to purchase a brand new vehicle dock, this top cup allows you to modify your existing dock to work with your new IntelliSkin™ device. P/N 11-15500.....**$10.80**



RAM INTELLISKIN GDS TOP CUP VEHICLE DOCK APPLE IPAD MINI 4 - The RAM-GDS-DOCKT-AP7U includes the top docking cup and necessary hardware for converting your existing GDS® Vechicle Dock to support the Apple iPad mini 4 with IntelliSkin™. Without having to purchase a brand new vehicle dock, this top cup allows you to modify your existing dock to work with your new IntelliSkin™ device.
P/N 11-15502.....**$11.50**



RAM INTELLISKIN GDS TOP CUP VEHICLE DOCK APPLE IPAD AIR 2 - The RAM-GDS-DOCKT-AP8U includes the top docking cup and necessary hardware for converting your existing GDS® Vechicle Dock to support the Apple iPad Air 2 with IntelliSkin™. Without having to purchase a brand new vehicle dock, this top cup allows you to modify your existing dock to work with your new IntelliSkin™ device. P/N 11-15503.....**$11.55**



RAM INTELLISKIN GDS TOP CUP VEHICLE DOCK IPAD PRO 10.5 - The RAM® Vehicle Dock with GDS Technology™ is a spring loaded, quick release cradle that offers a secure fit with easy access to the mounted tablet. This docking station is compatible with the Apple iPad Pro 10.5 with IntelliSkin™. NOTE: This version of the GDS® vehicle dock is not recommended for light, medium or heavy duty commercial vehicles. P/N 11-15504.....**$74.49**



RAM INTELLISKIN GDS TOP CUP VEHICLE DOCK APPLE IPAD MINI - The RAM® vehicle dock with GDS Technology™ is a spring loaded, quick release cradle that offers a secure fit with easy access to the mounted tablet. This docking station is compatible with the Apple Ipad Mini 2/3 with IntelliSkin™. NOTE: This version of the GDS® vehicle dock is not recommended for light, medium or heavy duty commercial vehicles. P/N 11-15505.....**$72.49**



RAM INTELLISKIN GDS TOP CUP VEHICLE DOCK APPLE IPAD MINI 4 - The RAM® vehicle dock with GDS Technology™ is a spring loaded, quick release cradle that offers a secure fit with easy access to the mounted tablet. This docking station is compatible with the Apple iPad mini 4 with IntelliSkin™. NOTE: This version of the GDS® vehicle dock is not recommended for light, medium or heavy duty commercial vehicles. P/N 11-15506.....**$72.99**



RAM INTELLISKIN GDS TOP CUP VEHICLE DOCK APPLE IPAD AIR 2 - The RAM vehicle dock with GDS Technology™ is a spring loaded, quick release cradle that offers a secure fit with easy access to the mounted tablet. This docking station is compatible with the Apple iPad PRO 9.7, Air 2 and 5th Generation with IntelliSkin™. NOTE: This version of the GDS® vehicle dock is not recommended for light, medium or heavy duty commercial vehicles. P/N 11-15508.....**$72.99**



RAM INTELLISKIN GDS APPLE IPAD PRO 9.7 - The IntelliSkin™ is a protective sleeve for the Apple iPad Pro 9.7 featuring GDS® Technology. The IntelliSkin™ will bring drop protection to your device and features an integrated connector which is molded directly into the skin. This prevents damage to the connector on your device from repetitious docking and un-docking compatible with any GDS® docking station. P/N 11-15509.....**$68.49**



RAM INTELLISKIN GDS APPLE IPAD 9.7 - IntelliSkin™ is a protective sleeve featuring GDS Technology™ for the Apple iPad 5th generation (9.7" screen). The IntelliSkin's integrated GDS® connector is molded directly into the skin, preventing damage to your device's charging port from repetitious docking. Compatible with a variety of GDS Docks. P/N 11-15510.....**$62.99**



RAM INTELLISKIN GDS APPLE IPAD PRO 10.5 - IntelliSkin™ is a protective sleeve featuring GDS Technology™ for the Apple iPad Pro 10.5. The IntelliSkin's integrated GDS® connector is molded directly into the skin, preventing damage to your device's charging port from repetitious docking. Compatible with a variety of GDS Docks.
P/N 11-15511.....**$67.49**



RAM INTELLISKIN GDS APPLE IPAD MINI 3 - The IntelliSkin™ is a protective sleeve for the Apple iPad Mini featuring GDS® Technology. The IntelliSkin™ will bring drop protection to your device and features an integrated connector which is molded directly into the skin. This prevents damage to the connector on your device from repetitious docking and un-docking. P/N 11-15512.....**$52.99**



RAM INTELLISKIN GDS APPLE IPAD MINI 4 - The IntelliSkin™ is a protective sleeve for the Apple iPad mini 4 featuring GDS® Technology. The IntelliSkin™ will bring drop protection to your device and features an integrated connector which is molded directly into the skin. This prevents damage to the connector on your device from repetitious docking and un-docking. P/N 11-11513.....**$53.99**



RAM INTELLISKIN GDS APPLE IPAD AIR 2 - The IntelliSkin™ is a protective sleeve for the Apple iPad Air 2 featuring GDS® Technology. The IntelliSkin™ will bring drop protection to your device and features an integrated connector which is molded directly into the skin. P/N 11-15514.....**$63.99**

AV

ICOM HANDHELD TRANSCEIVERS

ICOM IC-A24 NAV/COM



Simple one-handed operation is the most essential feature of the IC-A24. The large display shows both letters and numbers and is easy to see, making for fast frequency recognition. The display is backlit, and so is the keypad. The light stays on until you turn it off - a very handy feature for flying at night! "Flip-Flop" Channel Recall - The IC-A24 stores the last 10 channels used. You can easily recall those channels by pushing the "flip-flop" recall buttons on the front panel. It is convenient for switching between several channels, such as Nav and Com channels. VOR Navigation - The IC-A24 has VOR navigation functions. The DVOR mode shows the radial to or from a VOR station and the CDI mode shows the course deviation to/from a VOR station. You can also input your intended radial to/from the VOR station and show the course deviation on the display. IC-A24 Nav/Com (110V) - Includes Nicad battery, wall charger, belt clip, carrying case, headset adapter & handstrap. ...P/N 11-02942 .. **$297.95**

ICOM IC-A6 COM



Simple one-handed operation is the most essential feature of the IC-A6. The large display shows both letters and numbers and is easy to see, making for fast frequency recognition. The display is backlit, and so is the keypad. The light stays on until you turn it off. The IC-A6 stores the last 10 channels used. You can easily recall those channels by pushing the "flipflop" recall buttons on the front panel. External DC Power Jack - An external DC power jack allows for operation with the wall charger or the cigarette lighter cable. When the battery pack is installed, simultaneous charging during operation is also possible. Water Resistant Construction - The water resistant construction provides reliable operation in wet conditions. Features: • 200 memory channels (10 banks of 20 channels) allows you to load in up to 10 separate flight plans. 6 character alphanumeric for channel names. • Dedicated 121.5 "emergency" key. • All NOAA weather channels preprogrammed. •Frequency range: Tx/Rx 118.000-136.975MHz • Weather 161.650-163.275MHz • Wt: 15.02oz. • Dims: 2-1/8" x 5-3/32" x 1-13/32"

IC-A6 Com (110V) - Includes Nicad battery, wall charger, belt clip, headset adapter & handstrap. ..... P/N 11-02944 ..... **$249.00**

ACCESSORIES FOR IC-24, A6, A14/S

Model	Description	Part No.	Price
CP20L	Cigarette Lighter adapter. DC-DC Converter. Will charge from 12-24 volts	11-03604	$48.95
OPC-478	Programming Cable	11-18563	$44.50
BP-210N	Icom Battery	11-04385	$63.95
LC-159	Protective Case for A24 or A6	11-05003	$31.95
OPC-656	OPC-656 DC Power Cable. For using the BC-121N with a DC power supply. (12–20 V DC required). Not an aircraft power cable for radios.	11-05022	$9.75
BC-167SA	80AD Wall Charger 117V	11-09311	$33.95
MB-86	Swivel Belt Clip for IC-A24 & IC-A6	11-05002	$8.75
MB-103	Icom Belt Clip	11-03494	$9.95
PTT-SW	Icon Headset PTT Switch for IC-A6, IC-A3, IC-A4, IC-A5, IC-A22, IC-A23, IC-24A	11-18529	$19.95
BC-167SD	Wall Charger 220V	11-10811	$31.60
BC-147SA	AC Adapter for BC-192	11-09317	$12.95
A6/A24	Headset noise modification Ferrite Core	11-09346	$5.35
A23/A5	Headset Adapter Cable for A23/A5	11-08900	$42.50
BC-147SE15	220V AC Adapter Charger	11-10075	$12.80
BC121N & BC-197	Icom 110v Power Supply For BC121n And BC197 Chargers	11-10575	$98.75
BC-119N-02	Desk Top Charger for IC-A4, A14/S, A6, A24	11-07061	$61.50
SP-35	External Speaker	10-05753	$47.50
OPC-871A	OPC-871A Headset Adapter - For connecting a standard aviation headset to the IC-A120/IC-A110.	11-15065	$124.80
BC1199NS-11	Rapid charger with AD110 installed for F70/80/9011/9021 radios; 100-240V with US style plug.	11-15516	$75.00
BP288	Li-ion 7.4V 2350mAh (typical) for A25 Series handhelds.	11-15463	$108.75
HM-231	Waterproof Speaker Microphone for A25	11-15470	$78.75
BC123SA-51	Ac Adapter For Rapid Charger Us Plug	11-15467	$18.75
BC-224	Rapid Charger With BC123SA	11-15468	$49.95
MB96N	Swivel Belt Hanger Use With Standard Belt Clip	11-15466	$27.75
MB133	Alligator Type Belt Clip	11-15464	$12.75
MB96F	Leather Belt Hanger Use With Standard Belt Clip	11-15465	$26.50
CSA25	A25 Programming Software	11-15471	$63.75
OPC478UC	PC To Handheld Programming Cable With USB	11-15472	$52.75
BC123SA	AC Adapter For Rapid Charger	11-16077	$17.95
CBE-232	Battery Eliminator for ICOM A14/F14	11-08252	$23.95

CBE-210N BATTERY ELIMINATOR



The CBE-210 is a DC battery eliminator for ICOM handheld radios such as the IC-V8, F3GT, F4GT, & F21GM. One end plugs into a 12-13.8VDC lighter socket. The coiled cord links the lighter plug to the battery housing, which clips onto the back of the radio. The CBE-210 includes Voltage & Current-limiting circuitry; noise filtering circuitry is also built into the housing. 5A fuse is located in the Cig Plug. P/N 11-08252..... **$23.95**

ICOM A25C VHF AIR BAND COM RADIO



The A25C is a powerful air band handheld with 6 watts of power and an IP57 waterproof rating; weather cannot stop these radios. The handheld includes a large 2350mAh Li-ion battery, providing a long operating time. The easy-to-use interface and large 2.3-inch LCD display combine to provide stress-free programming and in-flight operation. Frequencies: TX (COM); 118.00-136.975MHz. RX (COM) ; 108.00-136.975MHz. RX (Weather); 161.650-163.275MHz. Channel spacing: 8.33/25KhZ. Channels: 200 (20CH x 10 banks). Battery life: 2350mAh Li-ion battery, up to 10.5 hours. Typical operation with Tx:Rx:Stand-by duty ratio = 5:5:90, Power save ON. Version: Communications only.

110V .....P/N 11-15459 ..... **$449.99**
220V .....P/N 11-15460 ..... **$449.99**

ICOM A25N VHF AIR BAND NAV / COM / GPS RADIO WITH BLUETOOTH



The A25N is a powerful air band handheld with 6 watts of power and an IP57 waterproof rating; weather cannot stop these radios. The handheld includes a large 2350mAh Li-ion battery, providing a long operating time. The easy-to-use interface and large 2.3-inch LCD display combine to provide stress-free programming and in-flight operation. This handheld features built-in Bluetooth®, GPS and VOR navigation. Output power: 6W typ. (PEP), 1.8W (CW). Frequencies: TX (COM); 118.00-136.975MHz. RX (COM/NAV) ; 108.00-136.975MHz. RX (Weather) ; 161.650-163.275MHz. Channel spacing: 8.33/25KhZ. Channels: 200 (20CH x 10 banks). Battery life: 2350mAh Li-ion battery, up to 10.5 hours. Typical operation with Tx:Rx:Stand-by duty ratio = 5:5:90, (Bluetooth OFF, GPS ON). Version: Communications plus navigation . Large easy to use LCD. The A25's large 2.3-inch LCD provides user-friendly, graphic screens. The day mode allows pilots to view the screen in direct sunlight and the night mode makes it easy to read in the dark.

110V .....P/N 11-15461 ..... **$549.99**
220V .....P/N 11-15462 ..... **$549.99**



ICOM HM-234 SPEAKER MICROPHONE

HM-234 speaker microphone for the A14, A6 & A24. This is the replacement microphone for the HM-173. L-Style Connector.

P/N 11-15225..... **$79.95**

ICOM A14 HANDHELD COM



700mW* loud audio - The IC-A14/S series employs a BTL amplifier that doubles the audio output, offering loud and clear audio that'll cut through cabin or tarmac noise. (*internal speaker only) **Full keypad type or Simple keypad type -** The IC-A14 full keypad type allows you to input the channel or frequency directly and has an exclusive button for the 121.5MHz emergency channel. The IC-A14 receives NAV and WX channels. The IC-A14S simple keypad type provides simpler operation with a minimum of buttons that is suitable for ground crews. **Compact, light weight and rugged body -** (only 120. mm tall) (approx. 350g including antenna and BP-232N). Water resistant construction. **Large capacity Lithium-Ion battery pack -** Provides stable output power and 18 hours long (approx.) operating time*. The BP-261, battery case takes 6 AA (LR6) alkaline cells for convenient battery backup. * Typical operation, Tx:Rx: Stand-by=5:5:90. **200 channels with memory banks -** With an 8-character channel name for easy recognition. For fast and simple operation, these channels can be grouped into 10 memory banks*. ***IC-A14 only. The IC-A14S has 100 memory channels and memory banks are not available.***

Description	Part No.	Price
ICOM IC-A14 Full Keypad Version 110V	11-05904	$219.00
ICOM IC-A14 Full Keypad Version 220	11-06188	$225.95

Accessories for A14

Description	Model	Part No.	Price
Antenna A4 A5 A6 A23 A24	FAB02AR	11-05031	$29.95
Headset Adapter	PAOPC499	11-18537	$36.50
Alkaline Battery Case (6 - AA Batt. Req.)	BP261	11-06210	$52.95
Desktop rapid Charger for BP230, BP231, BP232 Batteries.	BP160	11-07339	$53.75
AC adptr. 110V - Used with the BP-160, it charges the BP-232N in approx. 3 hours	BC-145SA	11-08672	$19.95
AC adptr. 230V - Used with the BP-160, it charges the BP-232 in approx. 3 hours	BC-145SE	11-08671	$20.75
Belt Clip - Swivel type	MB93	11-06212	$9.75
Belt Clip - Alligator type	MB94	11-06213	$8.50
Cig Lighter Adptr Cbl for BC179 (12-24V)	CP22	11-06215	$57.95
Rapid Charger (BC160-01)	BC160-01	11-06219	$21.95
DC Pwr Cbl for BC119N or BC160	OPC515L	11-18533	$21.50
DC Power Cable for BC121N	OPC656	11-05022	$9.75

AV

Prices Subject to Change Without Notice

HANDHELD TRANSCEIVERS

ICOM IC-R6 HANDHELD RECEIVER



100 kHz – 1309.995 MHz* wideband coverage. Radio provides superior sensitivity and receiver characteristics that is insusceptible to interference. Amateur stations, AM, FM, short wave broadcasts, TV audio* and a variety of utility communications can be caught and listened to. Frequency range depends on version. Analog TV audio only. Cannot decode digital TV audio. With the supplied rechargeable Ni-MH cells (1400mAh × 2), the IC-R6 provides up to 15 hours of continuous receive capability*. At 50 mW output using external speaker. 1300 memory channels with 22 memory banks. The VSC opens the squelch only when a modulated signal is detected and ignores un modulated beat noise. The IC-R6 can be powered by rechargeable Ni-MH cells, or with alkaline batteries. Run the IC-R6 using the AC adapter, BC-196S, or opt for a cigarette lighter cable, CP-18. When used the optional drop-in charger stand BC-194 with the AC adapter or cigarette lighter cable, you can easily start charging the Ni-MH cells, while eliminating the need to connect the power source to the DC power jack of the receiver.

Icom IC Sport R6 Blocked .....P/N 11-12975 .....**$198.75**

ICOM IC-4088A UHF FM TRANSCEIVER



The Icom IC-4088A is a compact, inexpensive transceiver, water resistant and very easy to use. Channel changing is as simple as pushing the up/down keys. The radio can be controlled with only 5 button and a volume control knob. The easy to read LCD shows information at a glance.Other outstanding features includes: Economical AA alkaline batteries (3 not supplied) provide 30+ hrs of use, low battery indicator provides warning of battery condition when using alkaline batteries, rotary type antenna folds down behind radio, optional Ni-Cd battery pack and rapid charger, compact body fits neatly in your hand, and auto power-off timer (two hours). This radio is excellent for use in communicating with friends at airshows.

P/N 11-18608 .....**$121.90**

Accessories for icom IC-A4		
Description	**Part No.**	**Price**
CP-12 Cigarette lighter	11-18594	**$34.50**
OPC-254l DC Power Cable for IC-A4, IC-A5, & IC-A23	11-18607	**$16.85**
BC-133 Trickle Battery Charger	11-05689	**$31.85**
OPC-474 Cloning Cable (hanheld to handheld)	11-02124	**$15.25**
OPC-752 Headset adapter	11-18602	**$52.95**
MB-74N Alligator type belt clip	11-05593	**$9.75**
Nylon Carrying Case	11-18617	**$23.95**
CP12L - Cigarette Lighter adapter (For use with A22, A23, A4, A5) w/ noise filter. Will only charge from 12 volts	11-18604	**$34.75**
FA-801AR - Antenna	11-05031	**$29.95**
OPC-254L - Power cable	11-18607	**$16.85**

YAESU FTA-310 TRANSCEIVER ACCESSORIES



Based on the same design as the extremely popular VXA-300. Now with and improved BNC antenna connection, and a unique 12VDC charging sleeve. Features a more powerful audio amplifier than ANY other handheld airband transceiver and comes supplied with a 1400 mAh nickel metal hydride battery pack that provide almost double the battery capacity of Icom's IC-A23 or IC-A5! **Includes**: FTA-310: 5W Portable VHF Transceiver with VOR, ATV-10: Helical Antenna (Q3000194), CN-3: SMA to BNC adapter, FBA-25A: Alkaline Battery Tray, FNB-83: 1400 mAh Ni-MH battery, CD-28: Charging cradle, E-DC-5B: DC cable with 12v cigarette lighter plug, PA-48B: 110VAC Overnight charger, CT-96: Headset Adapter Cable. Note: The 220v model comes with the PA-48C: 220 VAC Overnight charger.

Description	**Part No.**	**Price**
VXA-300 PILOT III Accessories (Included)		
Description	**Part No.**	**Price**
Yaesu/Vertex Cigarette Charger	11-12177	**$23.95**
ATV-10 - Rubber Duck antenna (included)	11-04343	**$13.95**
CT-96 - Headset Adapter For VXA-300,700, 710	11-02562	**$17.75**
CD-28 - Overnight desktop charger cradle. Requires NC-88 wall charger	11-04346	**$8.95**
Yaesu Vertex 220v Wall Charger For Vxa 220 300 710	11-09915	**$26.95**
FNB-83 - 7.2v 1400mah Ni-MH battery (included)	11-04347	**$29.50**
Clip-14 - Swivel belt clip (included)	11-04340	**$6.95**
VXA-300 PILOT III Accessories (Optional)		
Description	**Part No.**	**Price**
CN-3 SMA to BNC Antenna Adapter - Antenna Adapter For VXA-150, VXA-210, VXA-300, VXA-700, VXA-710	11-16957	**$9.50**
MH-44B4B - Speaker Mic for VXA-700,300,710	11-02381	**$57.95**
Rubber Duck Antenna for VXA-100/150/210	11-00827	**$14.50**
FTA-230/310 Accessories		
Description	**Part No.**	**Price**
BNC Antenna for FTA 230/310	11-11274	**$13.95**
VA 370B 110V Rapid Charger for FTA 230/310	11-11276	**$67.75**
VA 370C 220V Rapid Charger for FTA 230/310	11-11277	**$67.75**
CD 59 DC Sleeve Charge for FTA 230/310	11-11278	**$39.95**

YAESU VERTEX FTA 550 VHF HANDHELD



The YAESU FTA-550 is packed with features, yet very affordable. Boasting an oversize full dot matrix LCD display, the FTA-550 Airband Transceiver provides full communication on the Aircraft communications Band and additionally provides VOR and ILS navigation features on the "NAV" band. The FTA-550 includes NOAA weather band monitoring and the capability of programming up to 200 memory channels with a quick and easy channel recall feature. The brand new easy to operate menu system is icon driven making it simple to navigate through all of the powerful features this transceiver has to offer. Additionally the FTA-550 can easily be reprogrammed in minutes using the optional PC Programming software and the supplied USB programming cable. **Features**: • Easy to Operate Menu system • Huge Dot Matrix Display (160 x 160 dots) • VOR Navigation Display • 200 Memory channels with up to 15 Alphanumeric characters. **Specifications**: • 25kHz & 8.33kHz spacing • 5 Watts TX Output Power (Airband: AM 5W P.E.P. type, 1.5W carrier) • Huge 1.7" x 1.7" Full Dot Matrix display (160 x 160 Dots) • ILS Navigation Display • NOAA Weather Channel receive* • NOAA Weather Alert* • 200 Memory Channels with 15 alphanumeric characters • Back-lit Keypad and display with dimmer • Water Protection -IPX5 Rating • Loud Audio (800 mW).

AA Battery Version.....P/N 11-12461.....**$199.00**
Li Ion Battery Version 110V .....P/N 11-12460.....**$294.95**
Li Ion Battery Version 220V .....P/N 11-12450.....**$294.95**

YAESU VERTEX FTA 750L VHF HANDHELD RADIO/GPS COMBO



The YAESU FTA-750L combines tradition with innovation. Born from a history of high quality communications the FTA-750L now includes a 66 channel GPS receiver for reliable navigation. Boasting an oversize full dot matrix LCD display, the FTA-750L Airband Transceiver / GPS provides full communication on the Aircraft communications Band and additionally provides VOR and ILS navigation features on the "NAV" band, and waypoint navigation with the built in GPS receiver. The FTA-750L includes NOAA weather band monitoring and the capability of programming up to 200 memory channels with a quick and easy channel recall feature. The brand new easy to operate menu system is icon driven making it simple to navigate through all of the powerful features this transceiver / GPS has to offer. Additionally the FTA-750L can easily be reprogrammed in minutes using the optional PC Programming software and the supplied USB programming cable. **Features**: • Integrated 66 Channel WAAS GPS receiver • GPS Position Logging operation • ILS (Localizer & Glide Slope) and VOR Navigation • Easy to operate menu system • Huge Dot Matrix LCD display • 200 Channel Memory bank • PC Programmable. **Specifications**: • 25kHz & 8.33kHz spacing • 5 Watts TX Output Power • Huge 1.7" x 1.7" Full-Dot Matrix Display (160 x 160 dots) • ILS Navigation Display (Localizer and Glide Slope) • VOR Navigation Display • Easy to operate menu system • Integrated 66 Channel WAAS GPS receiver • Waypoint Navigation • GPS Position Logging • NOAA Weather Channel Receive (U.S.A. Version Only) • NOAA Weather Alert (U.S.A. Version Only) • 200 Memory Channels with 15 alphanumeric characters • Back-lit Keypad and Display • Water Protection – IPX5 Rating • Loud Audio (800 mW) • High-Capacity Li-Ion Battery Pack (7.4 V 1800 mAh) • Alkaline Battery Tray (AA x 6).

110V .....P/N 11-12459.....**$369.00**
220V .....P/N 11-12531.....**$384.00**

YAESU 550/750C ACCESSORIES

Description	**Part No.**	**Price**
Yaesu Vertex BNC Helical Antenna For FTA 550 750	11-12830	**$24.95**
Yaesu Vertex Alkaline Battery Tray For FTA 550 750	11-12831	**$15.95**
Yaesu Vertex 1800 Mah Li-ion Battery FTA 550l 750l	11-12832	**$74.00**
Yaesu Vertex Charging Cradle For FTA 550 750	11-12833	**$49.95**
Yaesu Vertex 110 VAC Overnight Charger For FTA 550 750	11-12835	**$23.95**
Yaesu Vertex 220 VAC Overnight Charger For FTA 550 750	11-12836	**$24.95**
Yaesu Vertex Speaker Microphone For FTA 550 750	11-12837	**$69.95**
Yaesu Vertex Earphone For FTA 550 750	11-12838	**$24.00**
Yaesu Vertex Headset Adapter Cable For FTA 550 750	11-12839	**$25.50**
Yaesu Vertex Programming Cable For FTA 550	11-12840	**$8.95**
Yaesu Vertex Belt Clip For Fta 550	11-12841	**$8.95**
Yaesu Earbud Speaker	11-14906	**$26.95**
Yaesu Belt Clip Hanger Bracket	11-14907	**$9.95**
Nylon Carring Case (750L/550/450)	11-16259	**$24.95**



YAESU STANDARD DC CABLE PLUG AND WIRE ONLY

Yaesu Standard E-DC-6 DC cable; plug and wire only. P/N 11-08490.....**$8.50**



YAESU STANDARD ALKALINE BATTERY TRAY

Yaesu Standard FBA-25A Alkaline Battery Tray
P/N 11-08492.....**$17.95**

AV

HANDHELD RECEIVERS – SCANNERS

YAESU FTA 250L VHF HANDHELD RADIO



The Yaesu FTA-250L is an affordable, compact (COMM ONLY) Airband transceiver. Featuring an extremely rugged Polycarbonate housing with an IPX5 Waterproof rating for use in harsh environments with rain, splash and spray. Loud 700mW audio output guarantees that radio calls will not be missed even in noisy environments. 8.33kHz Narrow Band capable, with a huge programmable 250 channel capacity memory bank. The FTA-250L comes programmed with Yaesu's exclusive E2O Easy to Operate menu system making the radio a pleasure to operate without the use of a manual. The intuitive operating system is further complimented by the high resolution Dot Matrix display and the bright, fully Lit, sunlight viewable backlight. Value packaged with a High Capacity (1950mAh) Li-ion battery, Headset adapter, belt clip, 100-240VAC charger, 12VDC charger / power cable, with drop in charging cradle. The Yaesu FTA-250L is backed by a industry leading 3 year waterproof warranty. P/N 11-15413 ..... **$199.95**

YAESU FTA 450L VHF HANDHELD RADIO



5W TX output. Large 1.7" x 1.7" Dot matrix Display. Back-lit Keypad and Display. 800 mW Audio Output. 200 Memory Channels. 8.33kHz Narrow Band compatible. IPX5 Waterproof rating. Includes High-Capacity 1800mAh Li-ion battery. Includes Alkaline battery tray (6 x AA). NOAA Weather Channels with WX alert. PC programmable.

P/N 11-14905 ..... **$235.00**

AIRBAND SCANNER TSC-100RA



Airband Scanner with NOAA Weather Channels /66-87.495MHz/87.8-108MHz/108.005-135.995MHz/136-174MHz Focused on air band, VHF band, VHF low band (66-88 MHz) and WFM broadcast band, this narrow band receiver has exceptionally high sensitivity and outstanding audio. The simplified functions make this an easy to use handheld, with a large LCD backlit screen and easy to read backlit buttons. 66 - 87.495MHz, 87.5 - 108MHz 108.005 - 135.995MHz, 136-174MHz 200 channel memories Only weighs 5.7 oz Includes: Handheld unit, 3 AA batteries, antenna, belt clip, male SMA to female BNC connector, and operation manual. P/N 11-12164 ..... **$109.95**

CRS AM/FM CLOCK RADIO BASE SCANNER



The BC345CRS is a multi-featured conventional channel scanner. Easily enter and store frequencies for police, fire/emergency, marine, air and more into 500 channels over ten banks. The scanner also features AM/FM clock radio with snooze and NOAA weather broadcasts.

P/N 11-11412 ..... **$174.95**

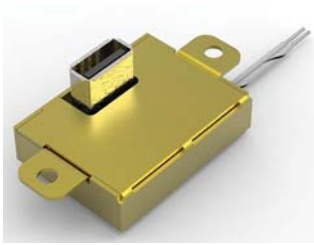
WINDSHIELD ANTENNA KIT FOR HANDHELD RADIOS



This antenna kit attaches to the inside of the windshield & dramatically improves portable nav/com's transmit, receive, and VOR performance based on extensive field testing. It is portable and ideal for those who can't use an ANT-SB. Simply attaches one's own flexible antenna to inside of windshield with BNC, coax, suction cup adapter. Works with any handheld radio using BNC connections.

P/N 11-18603..... **$28.95**

AERO USB CHARGER



This super lightweight AERO USB Charger by INGENIO provides 28V to 5V voltage conversion and 2.4Amps high speed charging for any PED, including latest Apple devices (MFi approved).

Product highlights: • 95% Efficiency rating • Super lightweight: 22 g / 0.049 lb • Revolutionary small size: 1.18 in x 1.57 in x 0.75 in • Ultimate circuit protection with Inteli-Fuse™ technology • Minimum input voltage 10 VDC • Main input voltage 28 VDC • Maximum output current 2.5A • Maximum input current 0.46A at 28 VDC • Wire length 7 in • USB connector locking mechanism • DO-160G qualified • MFi compliant under Apple approved licensing P/N 11-11872 ..... **$459.00**

GLOBALSTAR AVIATION KITS



The GSP-1700 Package is ideal for the "pilot on the go" who wants and needs the convenience of portable satellite communications. Small and lightweight, the GSP-1700 allows you to go from cockpit to car, beach, hangar or wherever your final destination without being tethered to your aircraft.

The GSP-1700 is the ultimate handheld portable satellite phone so you can stay connected beyond cellular. Antenna easily mounts to the outside of an aircraft. With the Globalstar 9600 you have WI-FI enabled devices (smartphones, laptops, tablets) to send and receive email using the fastest data speeds in the MSS industry. Spot Trace Satellite technology that tracks beyond the reach of traditional cellular coverage. Includes Phone.

14V ..... P/N 11-14324 ..... **$1,600.00**

GLOBALSTAR SAT-FI® VOICE AND DATA PACKAGE



The Sat-Fi Package is perfect for pilots who want to provide affordable voice and data services to their passengers. This small and portable Sat-Fi allows up to 8 smart devices to connect to the Globalstar satellite network through Wi-Fi, so your passengers can be productive and run their business even in the air. Package includes: Globalstar Sat-Fi, Aviation Antenna, SPOT TRACE (first year of Basic Service is included) P/N 11-14321 ..... **$1,700.00**

AVIONICS PIN TEST KIT



Technicians can work with a higher degree of safety when using the PIN-TS KIT. This kit contains the correctly sized tools for successful connector pin-testing without the need for improvised testing methods with uninsulated electrical contacts or the wrong size of pins that can result in electric shock to the user or lost/damaged pins. This kit has all of the essentials including insulated test leads, a ground lead, and two sets of four screw-in pins.

P/N 11-13538 ..... **$217.95**

PEREGRINE AIRSPEED SWITCH KIT



Airspeed switch kit for Trig TT31 and King KT74 transponders. Includes: • Airspeed differential pressure switch, qty 1 (PA-111114-821) • Clear Poly-Flo tubing, qty 48 inches (PA-111114-825) Nylon union tee, qty 2 (PA-111114-831) • Nylon insertion stabilizer, qty 6 (PA-111114-833).

P/N 10-05913 ..... **$125.00**

AV

TRUTRAK AUTO PILOTS – ADI / EFIS



SORCERER AS AUTOPILOT

Same features as the TruTrak DFC-250 ATI, plus GPSV and VNAV.

GPS-Slaved solid-state DG • Digital Ground Track Selector • VOR / LOC / ILS • VOR / LOC Reverse • Selected-angle Intercept • GPS Nav Mode • GPS Steering • Solid-state gyroscopically-controlled pitch axis • Selected Vertical Speed climbs and descents • Altitude Hold • Built-in • Digital Altimeter • V-NAV • Vertical GPS Steering • Altitude Selector with 50-ft resoultion for approaches • Selectable airspeed for altitude transitions (in addition to VS) • True Control Wheel Steering* • Simplified User Interface P/N 11-02968 ..... **$5,895.00**

TruTrak Yaw Damper ..... P/N 11-02972 ..... **$725.00**



TRUTRAK YAW DAMPER

The Yaw Damper employs a solid state rate gyro to damp out short term yaw oscillation, and a transverse accelerometer to control rudder position long term, so as to keep the ball centered. The Yaw Damper can be added to the DFC-200 or Sorcerer autopilots.

• 2.05" H x 4.12" W x 1.69" D • 12-28 volts • Standard Weight including servo 3.25lb (Servo Must be Purchased Separately)

P/N 11-02972 ..... **$725.00**



AUTOMATIC TRIM

Failsafe Automatic Pitch Trim can be added to any system with vertical speed select. TruTrak is the only company serving the experimental market to offer Failsafe Automatic Pitch Trim; this ensures that a single failure will not cause runaway trim. Automatic Trim can be added to the Yaw Damper. • 2.05" H x 4.12" W x 1.69" D • 12-28 volts • Weight 4lb P/N 11-02970 ..... **$339.50**

TRUTRAK VIZION MULTI-SERVO AUTOPILOTS WITH HARDWARE



Flat



Round

• Fits Standard 2.25" Round Instrument Hole • Optional Flat Rack Mounting • Built-in Digital Slaved Directional Gyro • Digital Track Selector • GPS Nav Mode • GPS Steering • Altitude Hold • Altitude Select • All Solid-State Sensors • 12-28 Volts • Simple Intuitive User Interface • Climb and Descend on Vertical Speed • Trim Sensing Pitch Servo that Annunciates for Trim. • Vertical GPS Steering (GPSV) • Dims: 2.5"H x 2.5"W x 5.5"D • Flat Dims - 1.6"H x 4.3"W x 5.5"D • Lighter and Smaller then Comparable Systems • True Control Wheel Steering* • Standard weight including servos – 6lb.

VIZION EXPERIMENTAL AUTOPILOTS

Description	Size	Part No.	Price
Vizion 385 2-1/4" Multi Servo Autopilot	2.5"H x 2.5"W x 5.5"D	11-11533	**$2,035.00**
Vizion 385 2-1/4" Multi Servo Autopilot	1.6"H x 4.3"W x 6.1""D	11-11534	**$2,134.00**
Vizion 385 3" Multi Servo Autopilot	3"	11-16284	**$2,035.00**

VIZION STC'D AUTOPILOT

Description	Part No.	Price
Vizion 385 Autopilot STC - 2-1/4"	11-16056	**$4,889.00**
Vizion 385 Autopilot STC - 3-1/8"	11-16057	**$4,889.00**
Vizion 385 Autopilot STC - Flat Pack	11-16058	**$4,889.00**

SPECIFY ROUND OR FLAT MOUNT.



TRUTRAK GX PILOT WITH HARDWARE

Designed to interface with Garmin G3X™ • Fits Standard 2.25" Round Hole • Built-in Ground Track DG • Track Select Mode • Altitude Hold • VS Select Mode • EFIS Mode (Lateral and Vertical Steering) • Control Wheel Steering • Pitch Trim Annunciation • 12-28 Volts • 2.5" H x 2.5" W x 5.5" D

P/N 11-08553 ..... **$76.50**

TRUTRAK ECO AUTOPILOT AUTOMATIC ENVELOPE PROTECTION



AEP is a safety feature that allows the pilot to set a flight envelope (bank angle and pitch angle) that they wish to fly within. When AEP is armed, the autopilot will monitor the bank and pitch angles of the aircraft and if the aircraft angles exceed the preset limit, the autopilot will apply pressure to the controls and move the aircraft back inside the envelope.

Eco Autopilot ..... P/N 11-13818 ..... **$1,199.00**

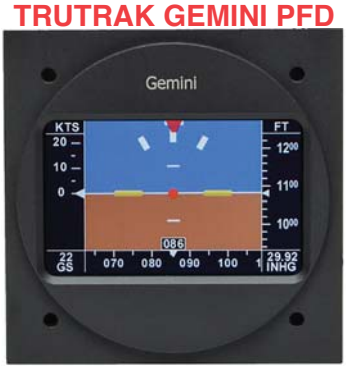
Installation Kit ..... P/N 11-14183 ..... **$85.75**



TRUTRAK GEMINI ADI

The Gemini ADI has a touch screen interface. It is a capacitive touch display and therefore does not require very much pressure on the display to operate. There are several functions of the touch screen with the Gemini ADI; centering the slip indicator, the Low Airspeed warning and displaying the Info page. The Gemini ADI unit is designed to mount in the aircraft instrument panel 8-30 VDC. P/N 11-10451 ..... **$970.00**

TRUTRAK GEMINI PFD



The Gemini PFD incorporates an airspeed indicator and altimeter into the Gemini ADI. • Fits Standard 3.125" Cut-out • Airspeed Indicator • Altimeter • Velocity Vector Display • Bank Angle Display • Vertical Speed Display • Track DG • Slip / Skid Indicator • Standard Rate Turn Indicator • Low Airspeed Warning.

Gemini PDF ..... P/N 11-10776 ..... **$1,255.00**

Back-up Battery ..... P/N 11-10777 ..... **$259.00**

TRUTRAK ADI II 120 KNOT



Gyro / VS pitch display. Bank Angle Display. Built-in Ground Track DG. High Bank Angle Warning. Low Airspeed Warning. Specifications: 2.5" H x 2.5" W x 6.625" D

Without GPS ..... P/N 11-08539 ..... **$1,261.00**

With GPS ..... P/N 11-08540 ..... **$1,406.00**



TRUTRAK GEMINI AUTOPILOT

The Gemini takes simple and intuitive user interfaces and takes it a step further by adding a now industry standard joystick, allowing a clean look without becoming too convoluted. Your Gemini autopilot was created with both the VFR and IFR pilot in mind. The new Emergency Level Mode was designed primarily for the VFR pilot that inadvertently finds himself in IMC. There are three types of control inputs: TOGGLE, ROTATE, PRESS. Fits standard 3-1/8" cutout.

P/N 10-05952 ..... **$2,695.00**



TRUTRAK EFIS GP

12-28 Volts. EFIS GP is available in three bezel types: FM - Front Mount, DC - Diagonal Corner, AS - Avionics Stack. FM: 6" H x 7.25" W x 3.3" D. DC: 5.85" H x 6.45" W x 3.3" D. AS: 5.85" H x 7.05" W x 3.3" D. Features: Airspeed, Altimeter, Artificial Horizon: Attitude, Velocity Vector, Vertical Speed Indicator, Track DG, Current Selected Waypoint, Distance to Waypoint, HSI: GPS CDI, Slip / Skid Ball, Standard Rate Turn Indicator, Bank Angle Indicator, Adjustable Heading Bug, Altitude Bug, Round or Rectangular Airspeed and Altimeter, High Bright / Sunlight Readable LCD.....P/N 11-08463 ..**CALL FOR QUOTE**

2 Axis Autopilot Option .....P/N 11-08563 ..**CALL FOR QUOTE**

GX PRO AUTOPILOT



This pro Pilot autopilot product, the GX PRO, is designed for use with the Garmin G3X EFIS System. It is available in two models:

GX PRO Instrument Mount - It mounts in a standard 3-18" instrument cutout. When driven by a G3X EFIS, it has full GPSS and GPSV capability without the need for an ARNIC 429 data interface, thus lowering the cost substantially. Includes 2 servos and servo installation kit. P/N 11-09714.....**$2,995.00**

GX PRO Stack Mount - This includes a metal sleeve that may be mounted into a radio stack, allowing the unit to be removed from the front. It has the same characteristics as the instrument mount system. Includes 2 servos and servo installation kit.

P/N 11-09715.....**$3,095.00**



EZ PILOT AUTOPILOT - A single axis, gyro stabilized roll control autopilot. It is a modern navigation system designed to accurately track a GPS flight plan or "Go To" course that is entered into a handheld or panel mount GPS receiver. Track, Course (similar to a heading bug), and Intercept modes are available to the pilot. Pilot Command Steering simplifies course changes. Full data display of all GPS input data. Fits standard 3-18" instrument cutout. Length: 3". Weight – Control Head: 6 ounces/ 169 grams Gold Standard Servo: 27 ounces/ 765 grams

P/N 11-06547 .....**$1,795.00**



PRO PILOT AUTOPILOT - A GPS enabled autopilot that provides high-quality 2 axis navigation solutions for Experimental and LSA aircraft. It uses solid-state MEMS gyros for pitch and roll stability. Horizontal and Vertical functions may be individually enabled. Horizontal navigation provides three modes of control – Track, Course and Intercept. Vertical navigation functions offer Altitude Hold, Climb/ Descent with Airspeed Limiting, and Altitude Pre-Select. Multi-color LEDs and a bright PLED display screen provide a clear picture of functions and displayed data (LCD screen available upon request). A slip-skid indicator and a turn rate display duplicate the functions of a standard turn rate coordinator. Advanced Safety Features – "G" force limiting, automatic servo disconnect on takeoff, "intelligent" servos with independent emergency disconnect authority, horizontal Track Offset Positioning, and Trio's "automatic 180 degree turn" feature (for VFR pilots encountering poor weather). Fits a standard 3-1/8" instrument cutout. Length: 6". Weight – Control Head: 12 ounces/ 340 grams Each Servo: 27 ounces/ 765 grams. Fuel Management and Auto trim, included in the price. P/N 11-06548 **$2,995.00**

Auto-Trim option for existing aircraft electric pitch trim system - P/N 11-06549 .....**$225.00**

GPSS/GPSV Option ..... P/N 11-08554 .....**$500.00**

Pro Pilot Rack Mount ..... P/N 11-08556 ..**$3,095.00**

Fuel Management Option Software - Option for the Pro Pilot allows the pilot to view multiple fuel parameters. ..... P/N 11-08557 .....**$199.00**

Wiring Harness ..... P/N 11-13465 **$187.50**



EZ-3 ALTITUDE CONTROL - The EZ-3 incorporates all of the features of the EZ-2 and adds the ability to pre-select a destination altitude. Once engaged, the system will initiate a climb/descent to the target altitude at a vertical speed that the pilot has previously specified. The vertical rates may be adjusted at any time during the climb/descent.

The internal altimeter is easily adjusted to compensate for changes in barometric pressure, using the primary aircraft altimeter as a reference.

Features: • Altitude PreSelect - Set Target Altitude• Fully Adjustable Climb/Descent Rates - Pilots may also use PCS (Pilot Command Steering) to Transition to "Climb-Descent on Airspeed" at any time.• Smooth Intercept of Target Altitudes. P/N 11-06552 **$1,795.00**

Auto-Trim option for existing aircraft electric pitch trim system - P/N 11-06549 .....**$225.00**

All altitude control systems employ the Trio Gold Standard servo.

ACCESSORIES

EZ Pilot Harness Assembly ..... P/N 11-06702 .....**$118.75**

EZ Altitude Control Harness Assembly ..... P/N 11-06703 .....**$125.00**

ProPilot AuoPilot Harness Assembly..... P/N 11-06704 .....**$199.00**

Gold Standard Servo ..... P/N 11-06705 .....**$750.00**



COMMANDER 2900 KLN-900 DOCKING STATION

The Commander 2900K is Lone Star Aviation's Docking Station for BENDIX/ KING/HONEYWELL KLN 900 DZUS-Mounted GPS. The portable docking station is designed to let you explore the KLN 900 features in a non-flying environment...in the comfort of your home or office. Operation is simple and fast, just slide your KLN 900 into the Commander's Tray and you are ready to go.

P/N 11-04911 .....**$379.00**

COMMANDER GARMIN GNS-430/530



Lone Star Aviation's Docking Station for Garmin's GNS 430/530 Flight Management System. The Commander is a portable Docking Station designed to let you explore the Garmin GNS 430/530 features in a non.

Features:•Simulate your route of flight and published approaches. •Access sids and stars. •Program and store flight plans. •Simulate approaches. •Enter and store waypoints. •Reduce your learning curve. •Operating your GNS430/530 in flight will become automatic.

GNS-430..... P/N 11-04864.....**$258.95**

GNS -430 INT..... P/N 11-04865.....**$268.95**

GNS-530..... P/N 11-04866.....**$269.00**

GNS-530 INT..... P/N 11-04867.....**$279.00**

COMMANDER 2900 TRIMBLE 2101 24VOLT



Lone Star Aviation's Docking Station for the Commander 2900 2101/CUGR GPS System is designed to allow you to explore the FreeFlight Systems 2101/CUGR features in a non-flying environment. Ideal for Guard Units, EMS, Law Enforcement, DEA, Boarder Patrol, etc. staff training. Unit does not include cable.

P/N 11-04926 .....**$379.00**

COMMANDER 2900 AVIDYNE EX-500 DOCKING STATION



This Commander 2900 Docking Station is a training station for the Avidyne EX-500 GPS receiver used in general aviation, business and military aircraft. The Commander Docking Station is a desktop trainer that allows the pilot to review basic, intermediate to advanced GPS functionality in a non flying environment.

P/N 11-04931 .....**$349.00**

COMMANDER 2900 KMD 150 & 250



Lone Star Aviation's 2900 Station has been designed for the KMD 150, KMD 250 equipment so that the user can practice their GPS, Display and all of it's functions in a non flying environment. The 1 port cooling fan (LS03-02013) plugs into the rear accessory panel and provides 6-8 CFM of cooling to the KMD 150/250 receiver. The KMD connectors plug into the rear panel of the Commander Station for an easy set-up so you can get right into the training mode. P/N 11-04922 .....**$279.00**

COMMANDER STATION FOR C-5000



Lone Star Aviation's Commander Station has been designed for the Wulfsberg C-5000 Control Head equipment so that the pilot can practice GPS, control head functionality at his or her own pace in a non flying environment. The 1 port cooling fan (LS03-02013) plugs into the rear accessory panel and provides 6-8 CFM of cooling to the C-5000 receiver.

P/N 11-04928.....**$379.00**

AV

Prices Subject to Change Without Notice



COMMANDER GMA-350 DOCKING STATION

Brand New from Lone Star, Commander GMA-350 Docking station designed for one of Garmins new exciting products. Designed to show off Garmin's new 3D audio capabilities. Comes with everything you will need to run your GMA-350.

P/N 11-10595 ..... **$398.75**



COMMANDER GTN-650 DOCKING STATION

Brand New from Lone Star, Commander GTN-650 Docking station designed for one of Garmin's new exciting products. Comes with everything you will need to run your GTN-650, including a chassis mounted avionics cooling fan.P/N 11-10593..... **$348.75**



COMMANDER GTN-750 DOCKING STATION

Brand New from Lone Star, Commander GTN-750 Docking station designed for one of Garmin's new exciting products. Comes with everything you will need to run your GTN-750, including a chassis mounted avionics cooling fan.P/N 11-10594..... **$348.75**



COMMANDER 2000K

Pre-wired in the "take home" mode. Simply slide your KLN90A/B, KLN89/B, KLN35 Series, and KLX-135 Series GPS or GPS-COM, into the tray and explore your GPS receiver as if you were flying. Practice actual flight or approach at home, store flight plans, and learn all of your units functions. Update your units database via the internet using a desktop or laptop computer & save up to $300/year. Appropriate connector is shipped free via UPS Blue Label from the factory. Additional connectors, cooling fan, Argus and moving map interface available.

2000K Station..... P/N 11-18478 ..... **$240.95**
2000K 220VAC..... P/N 11-04876 ..... **$269.00**

LONESTAR ACCESSORIES

Description	Part No.	Price
1 Port Dock Station Cool Fan	11-04859	**$59.85**
Multi-Signal Coverter	11-04892	
KA-20 Mounting Bracket	11-04873	**$59.95**
USB to Serial Converter	11-04884	**$58.95**
150, 155, 165 Garmin Connector	11-04899	**$38.95**
CNX-80 Power / Simulation Harness	11-04918	**$86.75**
KLN-89B-94 Data Cable	11-04882	**$59.95**
KLN-88-Power Cable	11-04881	**$48.95**
KLN-35A Power Cable	11-04880	**$48.95**
KLN-89B 94 Power Cable	11-04879	**$48.95**
KLN-90A/B Power Cable	11-04878	**$58.95**
KLX-135 Power Cable	11-04874	**$58.95**
KLN-900 & A/C Panel	11-04913	**$89.95**
KLN-900 Power Cable	11-04912	**$86.75**
SD Converter TSO 24-13.8 VDC	11-04894	**$497.00**
DC Converter TSO 24-16 VDC	11-04895	**$499.95**
DC Converter 24-19VDC TSO	11-04898	**$499.95**
6 Port Cable Kit 36"	11-04914	**$39.95**
6 Port Cable Kit 60"	11-04915	**$49.95**
Power Simulation Cable for Trimble 2101, CUGR MS 3747	11-04927	**$125.00**
Power Simulation Cable for EX-500, EX-800	11-04932	**$99.95**
Plastic Connector Kit for DC Step Down Converter	11-06001	**$59.95**
Nylon 5/8" Y adapter for splitting airflow from one avionics cooling fan to two units.	11-08622	**$16.95**
LoneStar Ventilation Blower Kit 12 Volt	11-08627	**$389.95**
LoneStar Ventilation Blower Kit 24 Volt	11-08640	**$389.95**
LoneStar Ventilation Blower Speed Controller	11-08631	**$89.95**
Lonestar Y Adapter Kit	11-08629	**$114.95**
Metal Connector Kit for DC Step Down Converter	11-08636	**$53.65**
Connector Kit DC Step Down Converter with Cigarette Lighter Receptacle. Connect directly to one of the Down Converters. Cable length is 36 inches.	11-08637	**$128.75**
Fan Failure Module	11-10591	**$239.75**



TRANS-CAL ATS-400 ALTITUDE DIGITIZER

The Trans-Cal Model ATS-400 is designed to test, display and simulate the output of Altitude Reporting Equipment, which conform to the ICAO Standard for SSR Pressure Altitude Transmission. In accordance with the U.S. National Standards for I.F.F. Mark X (SIF)/Air Traffic Control Radar Beacon System SIF/ ATCRBS. The ATS-400 will also display the output of altitude reporting equipment which transmit serial data in either RS232, RS422, RS485 or ARINC 429 Label 203. The ATS-400 may be used in the aircraft or on the bench making this an extremely versatile piece of test equipment.

P/N 11-09607 ..... **$1,437.00**



TRANS-CAL EET-200 ENCODER EMULATOR TESTER

The EET-200 provides the avionics technician a clean, quick and reasonably priced method of emulating an altitude encoder output by providing a known good altitude code source to aide in isolating each data bit D2 through C4. Simply unplug the altitude encoder and substitute the EET-200; rotating the knob will move the transponder through a variety of preprogrammed altitudes testing each data bit in sequence.

P/N 11-09606 ..... **$319.00**

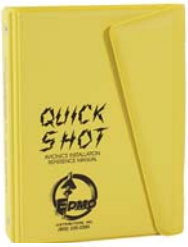


NC 2210A NAV/COM RAMP TESTER

The NC 2210 Tester is optimized for ramp testing of navigation and communication equipment. The unit provides test signals for marker beacon, communication, localizer, glide slope, and VOR. Also included, is a wide band comm receiver to permit evaluation of comm transmitter AM fidelity. The TKM NC 2210 is a NAV-COMM Ramp Tester. The unit has improvements over the 2200, which it replaces. The improvements include the following: Higher •RF power • Precise localizer and glide slope deflection • Calibrated VOR bearings at 10 degree increments • Crystal controlled modulation frequencies • Longer battery life • Internal antenna with adjustable length • Smaller size. Specifications: •Size: 3.8 x 7.4 x 2.3" •Weight: 1.3 lbs. •Power: Internal battery with over 2 hours running time (110VAC charger included) •Warranty: 2-year from date of purchase.

P/N 11-01813 ..... **$2,477.00**

QUICK SHOT AVIONICS REFERENCE MANUAL



Quick Shot is a compact, rugged binder type manual which shows detailed wire pin-outs for a wide variety of general aviation avionics equipment. Each page is removable and very durable. The wiring diagrams in Quick Shot Volume 1 include Apollo/UPS, Bendix, Garmin, Icom, Sandel Mid-Continent Instruments and Avionics, Sigtronics, United, Telex, David Clark, PS Engineering, Narco, Val, and many more.

P/N 11-01623 ..... **$56.50**



PRO HUB

A revolutionary product that allows you to easily install and connect avionics into an existing aircraft or one you are building. Designed to accept and connect most NAV/GPS/COM, modern audio panels, intercoms, VOR indicators, moving map displays, HSI's, RMI's, ADF's, annunciators, mode control and almost any "send and receive" RS-232 formatted device. Approach's custom cables are made to connect with the Fast Stack Pro Hub and associated avionics and come with connectors installed. Virtually No Hand wiring •Lower Upgrade Costs •Single Point Grounding

P/N 11-01459..... **$545.00**

ELTS

EBC ELTS



ELT installed in the cabin or cockpit. Automatically activated. Transmits on both 121.5 & 243.0MHz. The model EBC 102A is the smallest cabin mounted Emergency Locator Transmitter in existence. It, like all EBC ELTs, is designed to stay with the pilot in the event of a crash or unplanned but safe landing. Whether impact activated or turned on manually, the EBC 102A transmits a satellite compatible signal on both the civilian and military international emergency frequencies for up to 3 days. The 102A is built to withstand up to 1000 G's of impact. Its solid state circuitry is encapsulated in closed cell polyurethane - an exclusive EBC manufacturing technique. This is what allows the unit to be completely submerged in salt water for twenty or more hours and still operate effectively as long as the antenna is above water. The EBC 102A incorporates a permanently attached integral, unbreakable antenna, a nylon lanyard to enhance its portability, and is mounted in a quick-release bracket in the cabin within easy reach of the pilot. Operating the toggle switch at the top of the unit allows for manual activation or pre-flight testing. The standard built-in test lamp is used in monitoring power output, modulation, and battery strength. Historically, the EBC 102A has been the ELT of choice for a majority of small aircraft owners in the United States since 1970.

EBC-102A Signal only ELT ..... P/N 11-02575..... **$557.00**
EBC-502 Portable Cabin Mount ELT ..... P/N 11-02576..... **$510.00**
EBC GS21 ELT Battery..... P/N 11-04771..... **$35.50**

POINTER 3000 SERIES ELTS



The Model 3000 (AF/AP) and 3000 (AF) which have been in production for twenty years are now revised to incorporate the upgrades of RTCA DO-183 for emergency locator transmitters.The new models, designated 3000-10 (AF/AP) and 3000-11 (AF) are interchangeable with existing units in form, fit and function. The 3000-10 and 3000-11 transmitters incorporate an alkaline battery pack specifically designed to endure the short term extreme thermal variations and mechanical shock requirements of RTCA DO-183. Installed weight is 2.0 lbs. Emergency voice transmission is provided on the 3000-10 transmitter if desired. Size: 3 Size: 3 1/2"W x 7 5/8"H x 2-3/4"D.

P/N 3000-10 ..... **$514.00**
P/N 3000-11 ..... **$511.00**

Accessories: Merl Battery pack, 2-year Alkaline
P/N 11-17950..... **$23.75**
Pointer Battery Pack ..... P/N 2020 ..... **$47.75**
Mounting bracket assembly..... P/N 2017 ..... **$63.75**
Master switch guard kit ..... P/N 2021 ..... **$16.80**
Remote panel switch kit ..... P/N 2019 ..... **$85.75**
2019-10 Remote switch kit..... P/N 11-05889..... **$85.75**
Fixed (remote whip) antenna ... P/N 3001 ..... **$78.75**
Coaxial antenna cable..... P/N 3002 ..... **$44.50**
Telescopic antenna w/tether .... P/N 2006 ..... **$46.50**

ACK 406/121.5 MHZ E-04 ELT



The all new E-04 ELT is a direct replacement for the more than 62,000 model E-01 ELT's (by ACK) on the market today. The new E-04 fits directly into the current E-01 mounting trays and uses the same remote control panel indicator. The E-04 external antenna will utilize your current antenna mounting and wiring installations.

Features: * Accepts GPS position imput data from Bendix/King. Garmin, Nema 0183 GPS * New antenna is swept back 20 degrees, and features a molded plastic base. * 5 watts @ 406MHz for 24 hours, and 100 Mw @ 121.5 MHz for 48 hours. * New simple plug in audible alert indicator. * New lithium battery pack offers a 5 year battery life, and makes it substantially lighter. * Can use Ameri-king remote panel indicator.

Retrofit Kit does not include remote

Description	Part No.	Price
ACK E-04 406MHZ ELT Kit	11-06395	$527.00
ACK E-04 406MHZ ELT Kit INTL.	11-09582	$505.00
ACK E-04 406MHZ ELT Kit Canada	11-14186	$527.00
ACK E-04 Retrofit from E-01 Kit Canada	11-14185	$499.00
ACK E-01 TO E-04 Retro FIT Kit	11-06396	$499.00
ACK E-01 TO E-04 Retro FIT Kit INTL.	11-09231	$499.00
E-04 Whip Antenna	11-10465	$106.75
RCPI Cable For ACK 406/121.5 MHZ ELT	11-09971	$16.90
E-04RC Retrofit to Complete ELT Kit	11-15078	$53.75
Straight throught ACK to Ameriking Cable for ACk ELT	11-14707	$4.95

ACK E-04 COMMERCIAL ELT KIT



GPS capable ELT accepts Garmin aviation, Bendix/King aviation, NMEA 0183 and Arinc 429 data. Retains GPS coordinates after power is removed. Remote fits Artex and Kannad panel cut-outs. ELT certified to the new TSO-C126B standard battery certified to TSO-C142A lithium batteries UN/DOT 8.3 lithium batteries.

Description	Part No.	Price
ACK E-04 Commercial ELT Kit w/ 350K Antenna (USA)	11-13590	$917.00
ACK E-04 Commercial ELT Kit w/ 350K Antenna (Intl)	11-13591	$868.00
ACK E-04 Commercial ELT Kit W/ Mach 1 Blade Antenna USA	11-13003	$2,017.00
ACK E-04 Commercial ELT Kit W/ Whip Antenna USA	11-13004	$918.00
ACK E-04 Commercial ELT Kit W/o Antenna USA	11-13005	$876.00
ACK E-04 Complete ELT With 350 Knot Rod Antenna USA	11-13590	$917.00
ACK E-04 Commercial ELT Kit With AV-300-1 Rod Antenna	11-13594	$1,189.00
ACK E-04 Commercial ELT Kit (Canada) with whip Antenna	11-14947	$918.00
Ack A30 4ft Interface Cable Assembly	11-13605	$15.95
Ack A30 Add On Wire Kit	11-13606	$4.95
Ack E-04 25 Ft Remote Cable	11-13636	$26.50
Ack A-04 Coax Cable	11-13637	$19.95
Ack E-04 Standard Remote Cable	11-09971	$16.90
Ack E-04 Hardware Placard Din Plug Audio Alert Cable	11-13639	$15.95
Ack E-04 Mounting Tray Assembly Includes Straps	11-13641	$36.95
Ack E-04 Audio Alert Indicator	11-13643	$34.75
Ack Pointer Antenna Adapter	11-13644	$62.95
Ack E-04 Mini Din Connector	11-13647	$9.95
Ack E-04 Audio Cable	11-13649	$5.95
Ack E-04 Warning Horn	11-13651	$23.95
Ack E-04c Remote Control	11-13652	$439.95
Ack Portable Antenna	11-13653	$19.95

ACCESSORIES FOR E01 ELT

Ack E-01 / E-04 Remote Switch ..... P/N 11-05262.... **$39.85**
ACK E-04 Replacement Battery..... P/N 11-10012.. **$166.75**

POINTER ELT 8000 SERIES



The COSPAS/SARSAT search and rescue network will discontinue monitoring the current 121.5/243.0 MHz frequencies as of Feb. 1, 2009. The 121.5/243.0 MHz frequencies will continue to be monitored on a voluntary basis by overflying aircraft and utilized by the current search and rescue organizations. After this date, the COSPAS/SARSAT will monitor only 406 MHz. The 406 MHz aircraft ELT, defined by COSPAS/SARSAT operational specifications, incorporates many new features and improvements for search and rescue.

To comply with the new requirements, Pointer, Inc is pleased to announce the Model 8000 series ELT. The transmitter design incorporates the functional and programming requirements of COSPAS/SARSAT specification CST.001, FAA RTCA DO-204 and TSO-C126. The Pointer ELT Model 8000 series transmits phase modulated aircraft identification data on the 406 MHz frequency to quickly identify an emergency . The unit also transmits 121.5 MHz frequency for airborne and ground search operations. Optional features include factory or field programming of the microprocessor as a separate module and internal GPS. The approval program is in process and have completed COSPAS/SARSAT testing. FAA testing has begun.

Model No.	Description	Part No.	Price
8000-1	New Install	11-07543	$915.00
8000-1P	Complete Pyle Plug	11-15451	$1,039.00
8000-1B	Bare Wires Plug	11-15452	$1,019.00
8000-1A	AMP Type Plug	11-15454	$1,023.00

International Version

Description	Part No.	Price
Model 8000-1(AF) Complete Unit	11-07545	$915.00

Accessories

Description	Part No.	Price
Battery Pack	11-07548	$134.95
Mounting Bracket	11-07549	$59.95
Remote Switch	11-07550	$76.75
Remote Antenna 3000-15	11-07551	$108.95
Pointer Remote Antenna Cable	3002	$44.50
Bare Wire Remote Panel Switch Kit	11-15455	$89.00

ELT REPLACEMENT BATTERIES



P/N 11-04758

We now offer the complete line of ELT replacement battery packs. These top quality battery packs are factory new & meet or exceed FAA TSO-C91a and are also Transport Canada approved. Request current price on any ELT replacement battery or ELT, not shown here. ***NOTE: ELT Replacement Batteries are non-returnable due to shelf-life.***

Application	Part No.	Price
BP-1020 Dorne & M. (2 yr.)	11-17920	$33.50
BP-1045 EBC102/302 (2 yr.) - GS-21	11-17925	$23.75
BP-1035 Garrett R88 (2 yr.)	11-17930	$33.65
Garrett: Rescu/88L or Rescu/88C 2 Year	11-17937	$49.95
BP-1005 Merl/Larago (2 yr.)	11-17935	$43.75
BP-1026 CIR-11	11-17910	$49.90
BP-1030 Pointer (2 yr.)	11-17950	$23.75

Application	Part No.	Price
Narco (2 yr.) (ELT10) Bp-1010 Approved for Canadian use.	11-17945	$32.85
BP-1015 Sharc-7 (2 yr.)	11-17955	$28.65
452-0130 Artex 110-4	11-17957	$197.95
EBC 502 - GS-52	11-02577	$59.95
452-3063 ELT-200	11-14935	$118.75

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EBC 406-SERIES ELT'S



All EBC 406 ELT's have a built-in self test feature that allows the pilot to check 406 power and the antenna-coax connection. Both cabin and tail mount ELT's use an external antenna. ***Features:*** • Operating Freqs: 406.028 MHz and 121.5 MHz • Output Power on 406 MHz: 5W for 24 Hours at -20C • Output Power on 121.5 MHz: 50mW min for 50 Hours at -20C • Operating Temperature: -20C to +55C • Useful Battery Life: 5 Years or 1 Hour of Cumulative Use • Modulation 406 MHz: Biphase L (16KOG1D) • Modulation 121.5 MHz: Swept Tone 1600Hz to 300 Hz, 2-4 • Times/Second • Automatic Activation: Velocity Change of 4.5 feet per Second • Altitude: 50,000 feet • Decompression: 8000 feet to 40,000 feet • High Pressure: -15,000 feet • Humidity: 95% for 50 Hours • Shock Performance: Withstands 500G's on 6 axes • Vibration: Withstands 10 G's • Immersion: Withstands 24 hours in Salt Water • Warranty: 2 Years, Made in the USA.

Model	Description	Part No.	Price
EBC 406AP	For fixed wing aircraft. Includes transmitter, survival antenna, mounting bracket, external whip antenna with cable & battery pack. For cabin/cockpit installation.	11-05917	$1,049.00
EBC 406AF	For fixed wing aircraft. Includes transmitter, survival antenna, mounting bracket, external whip antenna with cable, remote control monitor with connector kit & battery pack. For aircraft tail installation.	11-05918	$1,295.00
EBC 406APH	Same as AP system but with omni-directional helicopter activation system. For helicopter use only.	11-05919	$1,295.00
EBC 406AFH	Same as AF system but with omni-directional helicopter activation system. For helicopter use only.	11-05920	$1,639.95
EBC 406AFH	Same as AF system but with omni-directional helicopter activation system. For helicopter use only. (International Version)	11-10009	$1,639.95
EBC 406HM	Cabin mounted tri-frequency ELT (406.028, 121.5 and 243.0 MHz) Non-reflective flat black for night vision equipment contractility. With integral antenna, omni-directional helicopter activation system and battery pack.	11-05921	$1,239.00
EBC-406HM-INT		11-07240 Intl	$1,239.00
EBC 406APM	Same as EBC 406AP but finished in non-reflective flat black for night vision equipment compatibility. Tri-frequency signal. Comes with external rod antenna.	11-05922	$1,829.95
EBC 406AFM	Same as EBC 406AF but finished in non-reflective flat black for night vision equipment compatibility. Tri-frequency signal. Comes with external rod antenna.	11-05923	$2,004.00
EBC 406APHM	Same as EBC 406APM but with the addition of an omidirectional helicopter activation system. For cabin mounting. Comes with external rod antenna.	11-05924	$1,915.00
EBC 406AFHM	Same as EBC 406AFM but with the addition of an omi-directional helicopter activation system. For tail mounting. Comes with external rod antenna.	11-05925	$2,157.00

Model	Accessories	Part No.	Price
GS-46	5 year lithium battery pack for any of EBC's 406 ELTs	11-05926	$164.75
BB-12	Mounting bracket for EBC 406AP series ELTs	11-05927	$159.95
BB-12M	Mounting bracket for EBC 406HM, APM and APHM	11-05928	$159.95
BB-14	Mounting bracket for EBC 406AF series ELTs	11-05929	$129.95
RCM-1	Remote Control Monitor for EBC 406AF series ELTs with connector kit	11-05930	$269.95
ANT-406W	External whip antenna for both EBC 406AP and AF series ELTs. Two frequencies	11-05931	$169.95
ANT-406T	Survival tape antenna for all EBC 406 ELTs. Three frequencies.	11-05932	$108.75
ANT-406R	External rod antenna for helicopter or high speed use. For use with three frequencies 406 ELTs.	11-05933	$1,095.00
ANT-406B	Blade antenna for high speed use. Three frequencies	11-05934	$1,650.00
CB-1	6ft. cable between ELT and antenna	11-05935	$56.75
Manual	Operation and Installation Manuals	11-05936	$49.00

KANNAD INTEGRA 406AF ELTS



Weighing in at just 1.873lb and measuring just 6.89 x 3.90 x 3.40 inches the INTEGRA boasts a number of new and innovative features in a very small easy to install package. The INTEGRA transmits on both the international 406MHz satellite search and rescue system and on 121.5MHz for local direction finding. The minimum operating temperature of the unit is -20°C. The internal battery life of the INTEGRA is 6 years.

406 ELT AF U.S. ..... P/N 11-09325 ..... **$838.00**
406 ELT AFH (Heli.) U.S. ..... P/N 11-09327 ..... **$959.00**

KANNAD INTEGRA 406AF-H ELT FOR HELICOPTERS



The new INTEGRA 406 GPS ELT is a major step forward in the development of ELT technology and aircraft safety equipment. The INTEGRA is the only ELT in the world which operates on the international 406MHz satellite search and rescue system and includes an internal GPS and 406MHz antenna, plus an internal battery. As a result of this technological breakthrough the INTEGRA offers the international flying community a number of major benefits over the standard ELT models available on the market today.

USA ..... P/N 11-09931 ..... **$1,343.00**
Canada ..... P/N 11-15264 ..... **$1,343.00**

KANNAD INTEGRA AP-H THREE FREQUENCY ELT FOR HELICOPTERS



The McMurdo Kannad Integra AP-H is the helicopter-specific version of the 3-frequency commercial aircraft portable McMurdo Kannad Integra AP. It is designed for fixed installation, but can be used as a portable by deploying the supplied portable antenna. The McMurdo Kannad Integra AP-H has all the features of the compact plus GPS and internal 406MHz antenna. Sending a distress message with GPS coordinates enables rescuers to come directly to you, rather than search the area. P/N 11-15224... **$2,995.00**

KANNAD AMERI-FIT AMERI-KING RETROFIT ELT



The Kannad Ameri-Fit is a complete Quick & Easy retrofit from Ameri-King to Kannad ELTs, to allow existing Ameri-King ELT owners to keep flying safely. The Ameri-Fit pack includes the Integra AF emergency locator transmitter for fixed-wing aircraft or the Integra AF-H for rotary wing aircraft, a universal mounting bracket, RC103 remote control panel, and DIN12/RJ11 adapter cable and coupler.

Fixed Wing USA ..... P/N 11-16086 ..... **$899.95**
Fixed Wing International ..... P/N 11-16087 ..... **$899.95**
Rotocraft Wing USA ..... P/N 11-16088 ..... **$959.95**
Rotocraft Wing International ..... P/N 11-16089 ..... **$959.95**

KANNAD INTEGRA EASY ELTS



It is the world's only ELT equipped with a 406 MHz back-up antenna, which enables the ELT to transmit the 406 MHz distress signal independently from the aircraft, in case the external antenna is broken or damaged. Its embedded GPS improves location accuracy to hundreds meters while avoiding the cost of a GPS interface installation. Save long-term costs with the Integra ELT's 10-year warranty, the longest warranty period in the industry. Trusted partners such as Airbus, Embraer, Honda Jet, Cub Crafters, Robinson Helicopters and others rely on the Kannad Integra ELT. All aircraft. Straight replacement for ARTEX RCPs to ensure easy replacement of your old two frequency ELT.

Description	Part No.	Price
Integra ELT with Whip Antenna	11-14860	$949.95
Integra ELT with Rod Antenna	11-14861	$1,225.00
Integra ELT with Whip Antenna(International)	11-14886	$1,047.00
Integra ELT with Rod Antenna (International)	11-14887	$1,324.00
Integra ELT with Whip Antenna(Canada)	11-15242	$948.00

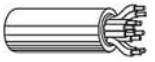
KANNAD INTEGRA ARINC E-NAV



Provides a fail safe GPS data acquisition for the INTEGRA ELT system providing redundancy in the system with: 1) Integra internal GPS and 2) Aircraft Onboard GPS acquisition. Compatible with ARINC 429/743 databus. Size 205*100*86mm for the overall ELT system.

Description	Part No.	Price
Kannad Integra Arinc E-NAV	11-12326	$1,536.00
Kannad Integra Arinc E-NAV ELT AP Mnt Bracket	11-12327	$315.00
Kannad Integra Arinc E-NAV ELT AF Mnt Bracket	11-12328	$215.95

10 CONDUCTOR GRAY CODE TEFZEL WIRE



Excellent for carrying gray code information from the encoder to other devices that take gray code input. Instead of running individual 24AWG wirs and running them in a bundle, use this handy all in one, color coded, 10 conductor cable. Sold in 1' increments. P/N 11-04479 ..... **$5.40**

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KANNAD 406 ELT'S



KANNAD 406 AF-COMPACT ELT KIT - Designed for all light aircraft requiring a very compact automatic fixed ELT that is fully FAA TSO-C126 approved. The robust and reliable shock sensor will automatically activate the ELT in the event of a crash, the pilot can also manually activate the ELT in case of emergency. Features: * Ultra small size and light weight ideal for any general aviation aircraft. * Six year lithium manganese battery. * Complete kit with install manual.. * Two frequency transmitter (121.5 / 406 MHz) * Weight (Including batteries): 1.87 lbs

ELT Only		Price	W/ Whip Antenna	Price	With Rod Antenna	Price
USA	11-05786	**$849.00**	11-09525	**$1,046.00**	11-09526	**$1,233.00**
Canada	11-05786	**$849.00**	11-09670	**$1,046.00**	11-09671	**$1,233.00**
International	11-06314	**$974.00**	11-09527	**$1,046.00**	11-09528	**$1,233.00**



KANNAD 406 AF - Designed to be installed near the tail and to be connected to an outside antenna. A sophisticated "shock sensor" system will activate the ELT automatically in the event of a crash. Its small size and light weight make it ideal for general aviation. The "Mounting Bracket, 1 Strap" is not included. Features: * Optional Navigation Interface transmits GPS coordinates significantly shortening Search and Rescue response time. * Operates without aircraft power and incorporates an internal alarm/buzzer avoiding costly installation procedures. * Six year lithium manganese battery. * Three frequency transmitter (121.5 / 243 / 406 MHz) * Weight: (Including batteries) 2.44 lbs (1110 g) / max 2.60 lbs (1180g).. P/N 11-06285 ..... **$2,945.00**
406 AF ELT International..... P/N 11-06987 ..... **$2,910.00**
406AF Compact Inspection Kit ..... P/N 11-08063 ..... **$66.75**



KANNAD 406 AF-H - Can be installed on board helicopter in flat position Features: * Optional Navigation Interface transmits GPS coordinates significantly shortening Search and Rescue response time. * Operates without aircraft power and incorporates an internal alarm/buzzer avoiding costly installation procedures. * Six year lithium manganese battery. * Rod (ANT300) or Blade (ANT650) ELT antennas sold separately. * Three frequency transmitter (121.5 / 243 / 406 MHz) * Weight: (Including batteries) 2.44 lbs (1110 g) / max 2.60 lbs (1180g)..... P/N 11-05790 ..... **$3,010.00**
406 AF-H ELT International..... P/N 11-07559 ..... **$3,010.00**



KANNAD 406 AS - The KANNAD 406 AS is a aeronautical survival beacon. Fits easily inside a liferaft. It is supplied with a floating collar. Features: * Battery replacement is only every 6 years. * Precise pinpointing (<1NM) due to the unparalleled frequency accuracy of the 406 transmitter. * Three frequency transmitter (121.5 / 243 / 406 MHz) * Weight (including battery, auxiliary antenna and floating collar) 2.53 lbs (1150 g) ..... P/N 11-05787 ..... **$2,958.00**
Wall Mount Bracket ..... P/N 11-07718 ..... **$258.95**
Replacement Pin for Wall Mount ..... P/N 11-07719 ..... **$44.50**



KANNAD 406 SURVIVAL - Fitted with a water switch sensor. It is automatically activated when in contact with water. Emergency locator transmitter of type (S), the survival is supplied with a floating collar. Features: * Six year lithium battery. * Includes water sensor switch and is automatically activated when in water. * Three frequency transmitter (121.5 / 243 / 406 MHz) * Weight: (including battery, auxiliary antenna and floating collar) 3.031 lbs (1375 g) ..... P/N 11-06287 ..... **$2,540.00**



KANNAD 406 AP - Installed near the tail and connected to an outside antenna. A sophisticated "shock sensor" system will activate the ELT automatically in the event of a crash. When removed from the bracket and connected to the auxiliary antenna, the Kannad 406 AP becomes an autonomous survival beacon operating on 3 frequencies (121,5/243/406 MHz). Features: Operates without aircraft power and incorporates an internal alarm/buzzer * Six year lithium manganese battery. * Three frequency transmitter (121.5 / 243 / 406 MHz) * Weight: (With battery, bracket, and auxiliary antenna) 2.84 lbs (1290 g) ..... P/N 11-06284 ..... **$2,655.00**
406 AP ELT International ..... P/N 11-07558 ..... **$2,953.00**



KANNAD 406 AP-H - Installed on board helicopter in a flat position. When removed from its bracket and connected to the auxiliary antenna, the Kannad 406 AP-H becomes an autonomous survival beacon operaing on 3 frequencies. (121.5/243.0/406 MHz). The "Mounting Bracket, 1 Strap" is not included. Features: * Ultra small size and light weight ideal for any helicopter installation. * Optional Navigation Interface transmits GPS coordinates. * Operates without aircraft power and incorporates an internal alarm/buzzer. * Six year lithium manganese battery. * Three frequency transmitter (121.5 / 243 / 406 MHz) * Weight: (With battery, bracket, and auxiliary antenna) 2.84 lbs (1290 g) ..... P/N 11-05788 ..... **$3,120.00**
406 AP-H ELT International..... P/N 11-07557 ..... **$3,202.00**



KANNAD 406 AF (6D) - Designed to be installed near the tail and to be connected to an outside antenna. A sophisticated 6 way "shock sensor" system will activate the ELT automatically in the event of a crash. Its small size and light weight makes it ideal for any helicopter. The "Mounting Bracket, 1 Strap" is not included. Features: * Automatic Fixed ELT * Specifically designed for aircraft or helicopters * Fitted with 6 G-switches * Three frequency transmitter (121,5 / 243,0 / 406 MHz) * 6 year battery life-time * Short circuit protection * Weight: 1260 gr (max) P/N 11-05786 ..... **$849.00**

KANNAD ANTENNAS

ANT100 - AUXILIARY ANTENNA (BNC) - Auxilary Whip antenna. Turns any Kannad ELT into a portable survival unit. Stores under the velcro strap of the mounting tray. P/N 11-06288 ..... **$227.95**

ANT650 - BLADE ANTENNA - Developed by RAYAN. Three frequency antenna (121.5 / 243 / 406 MHz) High performance low profile outside antenna designed for Corporate jets and airliners **Applications**: AF, AF-H, AS, AS-H * "High Speed" Aircraft * JTSO and TSO
P/N 11-06294 ..... **$3,425.00**

KANNAD ACCESSORIES

NEMA INTEGRA E-NAV - Provides back-up GPS position data taken from the aircraft's own panel mounted GPS P/N 11-10751 ..... **$390.00**

BAT200 BATTERY REPLACEMENT - 6-year battery replacement kit for the 406AF compact or Integra ELTs. Includes 2 cell battery pack, replacement O-ring, desiccant pack and replacement self locking nuts. ***Attention: This Replacement Battery is 2-cell and will ONLY work with the 406-AF Compact unit.***
BAT-200..... P/N 11-06297 ..... **$320.00**

BAT300 BATTERY REPLACEMENT - For Kannad 406 ELTs. Comes with 3 cell battery pack, replacement o-ring, desiccant pack and replacement self locking nuts. ***Attention: This Replacement Battery is for the 406 AF, AF-H, AP, AP-H, AS, SURVIVAL series ONLY & will NOT work with the "AF-Compact", see Alternate Items for the Compact Replacement.*** ..... P/N 11-06296 ..... **$1,025.00**

RC102 - REMOTE CONTROL - Replacement control panel for ACK, AMERIKING plus Narco two wire switches and challenging locations . Front panel included in RC102 & RC100 P/N 11-07901 ..... **$105.75**

RC200 - REMOTE CONTROL - Outline Dimensions: 1.3 x 1.97 x 1.69 in (33 x 50 x 43 mm). 3-position red switch (ON, ARMED, TEST/RESET). D-SUB 9 pin connector with threaded locking device (UNC 4-40) .The Kit includes mating SUB-D9 connector for easier installation. **Applications**: AF- Compact, AF, AF-H, AP, AP-H ***Switch is not waterproof. Cannot be installed flat.*** P/N 11-06302 ..... **$143.75**

DIN12 CONNECTOR - For connection to Remote Control Panel, CSI44 interface module, dongle or programming equipment. **Compatible** with all KANNAD 406 ELTs P/N 11-06303 ..... **$33.50**

MOUNTING BRACKET 1 STRAP- Designed to fix the ELT with a retaining strap for quick removal in an emergency Qualified to maintain the ELT into place during 500 G shocks for 4 ms. **Applications**: AF, AF-H, AP, AP-H P/N 11-06301 ..... **$113.75**

UNIVERSAL COMPACT MOUNTING BRACKET - Compatible with the drilling on all 121.5 Mhz beacons. P/N 11-07900 ..... **$76.90**

PROGRAMMING DONGLE, ASSY - Din 12 connector with serial memory module (SMM) for programming operations. Fitted with a female DIN12 connector on RCP side. **Compatible** with all KANNAD 406 ELTs
P/N 11-06304 ..... **$316.00**

KANNAD PROGRAMMING DONGLE - Identical to the DIN12 that is used to store aircraft programming information. Allows fleet operators to move any ELT to any other aircraft. The stored aircraft data will be automatically downloaded into the ELT. Required for Navigation Interface connection.
USA ..... P/N 11-07088 ..... **$342.00**
International ..... P/N 11-13562 ..... **$226.95**

KANNAD PROGRAMMING DONGLE INT - Can be use with the following Kannad ELT models: (AF-COMPACT, AF, AF-H, AP, AP-H, AS, SURVIVAL) P/N 11-06990 ..... **$299.95**

KANNAD PROGRAMMING DONGLE INTEGRA/SA -
P/N 11-12330 ..... **$819.00**

KANNAD PROGRAMMING DONGLE INTEGRA LONG RANGE -
P/N 11-12331 ..... **$636.00**

KANNAD 406 PR600 ELT PROGRAMMING TRAINER - Replaces the former PR550 Programming Equipment kit. P/N 11-07102 ..... **$2,888.00**

KANNAD 406 AS CARRY OFF BAG - P/N 11-07716 ..... **$291.95**

KANNAD 406 AS CARRY OFF BAG SHORT - P/N 11-07717 ..... **$291.95**

KANNAD 406 AS MOUNTING BRACKET - P/N 11-07718 ..... **$258.95**

AF COMPACT INSPECTION KIT - P/N 11-08063 ..... **$66.75**

KANNAD 406 AS LOCKING PIN - P/N 11-07719 ..... **$44.50**

KANNAD ACK RETRO-FIT INSTALLATION KIT - Contains everything you need to ensure a simple swap-over. P/N 11-10007 ..... **$208.95**

KANNAD AMERI-KING RETRO-FIT INSTALLATION KIT - Contains everything you need to ensure a simple swap-over
P/N 11-10008 ..... **$181.95**

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ARTEX ME406 ELT



The Artex ME-406 is a single output ELT. Two emergency frequencies (121.5 and 406.028 MHz) utilize the same RF output, requiring only one coax cable to connect to the new series of Artex single input antennas. The ELT automatically activates during a crash and transmits the standard swept tone on 121.5 MHz. Every 50 seconds for 440 milliseconds the 406 MHz transmitter turns on and transmits an encoded digital message to the Cospas/Sarsat satellite system.The mounting hardware for the ME-406 Series is compatible with all previous models of Artex 406 MHz, as well as the ELT200 Series, ACK, Pointer Model 3000 ELT and Narco ELT's. Current owners of Artex 2-frequency ELT can re-use the remote switch in the cockpit as well as the wiring harness from the cockpit to the ELT thus greatly reducing installation costs.

USA PROGRAMMED ELTS

Artex No.	Part No.	Description	Price
ME406	11-03492	Artex ME406 ELT w/ whip antenna.	$1,360.00
ME406	11-03493	Artex ME406 ELT w/ rod antenna.	$1,943.00
ME406	11-14462	Artex ME406 ELT w/ Portable antenna.	$1,940.00

INTERNATIONAL PROGRAMMED ELTS

Artex No.	Part No.	Description	Price
ME406	11-04652	Artex ME406 ELT w/ whip antenna. Can be programmed for international registered aircraft (Specify when ordering).	$1,367.00
ME406	11-06370	Artex ME406 ELT w/ rod antenna. Can be programmed for international registered aircraft (Specify when ordering).	$1,911.00

ACCESSORIES

Description	Part No.	Price
ME406 ELT Transmitter/Battery Box Only	11-14187	$942.00
Artex ME406 whip antenna	11-06978	$343.00
Artex ME 406 Rod Antenna	11-08597	$841.00
5-Conductor AWG 22 Shielded Wiring for ELT to Remote Switch Installation. Recommended by Artex. Per Ft.	11-06580	$2.42
Artex ME406 Replacement Battery Kit	11-05277	$185.00
Artex ME406 Mounting Tray	11-07191	$48.95
Artex NAV Remote Switch Kit	11-08542	$133.85

ARTEX ME406 HM ELT



The Artex ME-406 HM is a single output ELT. Two emergency frequencies (121.5 and 406.028 MHz) utilize the same RF output, requiring only one coax cable to connect to the new series of Artex single input antennas. The ELT automatically activates during a crash and transmits the standard swept tone on 121.5 MHz. Every 50 seconds for 440 milliseconds the 406 MHz transmitter turns on and transmits an encoded digital message to the Cospas/Sarsat satellite system.The mounting hardware for the ME-406 Series is compatible with all previous models of Artex 406 MHz, as well as the ELT200 Series, ACK, Pointer Model 3000 ELT and Narco ELT's. Current owners of Artex 2-frequency ELT can re-use the remote switch in the cockpit as well as the wiring harness from the cockpit to the ELT thus greatly reducing installation costs.

USA PROGRAMMED ELTS

Artex No.	Part No.	Description	Price
ME406 HM	11-04966	Artex ME406 HM ELT w/ rod antenna.	$2,273.00

INTERNATIONAL PROGRAMMED ELTS

Artex No.	Part No.	Description	Price
ME406 HM	11-05670	Artex MA406 HM ELT w/ rod antenna. Can be programmed for international registered aircraft (specify when ordering).	$2,308.00

ACCESSORIES

Description	Part No.	Price
5-Conductor AWG 22 Shielded Wiring for ELT to Remote Switch Installation. Recommended by Artex. Per Ft.	11-06580	$2.42
Artex ME406 replacement battery kit	11-05277	$185.00

ARTEX ME406/P ELT



Uses the proven technology of the ME406 and attaching a removable wrap-around auxilliary flex antenna. Allows the disconnection of the ELT from the installed aerial antenna, removal of the transmitter from a downed aircraft and after attaching the flexible antenna the distress call is again transmitted with full signal strength. Although Search and Rescue authoritiese recommend to remain in close proximity to the aircraft, using the ME406/P in it's portable version enables to wait for the Search and Rescue crews in areas sheltered better from the environment.

USA Programmed .....P/N 11-05671 .....**$2,415.00**
International Programed.....P/N 11-06985 .....**$2,756.00**
Portable Antenna for ME406P .....P/N 11-16244 .....**$169.95**

ARTEX C406 ELT



Operates on the latest SAR frequency of 406.025 MHz & 121.5 243 MHz. Ready to connect to the Artex ELT NAV interface. Includes ELT transmitter, LiMnO2 5-year battery pack, mounting bracket, remote switch, horn/buzzer, coax cables, high speed blade antenna, installation hardware, and installation and operation manual. The C406-1 is approved for aircraft operating speeds up to Mach 1, and C406-2 is approved for speeds up to 350 knots. COSPAS/SARSAT, FAA TSO C126 & JTSO-2C126 Approved.

C406-1 ELT with 110-340 Blade Ant. U.S. ...P/N 11-02984 ... **$4,102.00**
C406-1 ELT with 110-340 Blade Ant. Intl.....P/N 11-09320 ... **$4,102.00**
CC2 ELT with Rod Antenna .....P/N 11-02985 ... **$3,762.00**

EMERGING LIFESAVING TECHNOLOGIES 406 ELTS WITH INTERNAL GPS.



Along with the 406MHz emergency signal, Copas/ Sarsat satellites will read your specific GPS location during a crash. The GPS automatically updates every 15 seconds and upon activation bursts a 5 watt signal within 25 meters every 50 seconds to the Global Satellite System. Search and Rescue will be notified of your location within minutes. The ELT406GPS mounts with most standard ELT configurations from previous manufacturers. GPS data comes from the internal module in the ELT- 406GPS. There is no need to install expensive interface modules and retrieve GPS information from existing systems. The antenna houses both 406 MHz and GPS passive antenna in a sleek blade configuration. A replaceable 5 year battery pack is easily installed by the owner/operator. • Battery: 5-Year Lithium (LiMn02). • Weight: ELT Transmitter - 2.5 lbs Mounting Tray - 0.3 lbs. • Total Weight: 2.8 lbs. • Dimensions: 7.715" L x 3.660" H x 4.200"

In the Box: • ELT • Coax Cables • Antenna • Remote Switch • Install Kit.

Description	Part No.	Price
E.L.T. 406 with internal GPS USA	11-08053	$989.00
E.L.T. 406 with internall. GPS International	11-08456	$979.00
E.L.T. 406 Helicopter 6G with internal GPS USA	11-08150	$1,279.00
E.L.T. 406 Helicopter 6G w/ internal GPS Intl.	11-08457	$1,279.00
Accessories	**Part No.**	**Price**
8-Conductor Shilded Wire, 22 Gauge	11-09782	$2.90
E.L.T. 406 ELT Battery Pack	11-08152	$212.50
Universal Mounting Tray	11-08153	$78.75
406 GPS Dual Mid Speed Antenna. 250 KTAS at 35k feet	11-08155	$339.15
406 GPS Dual High Speed Antenna. 600 KTAS at 50K feet	11-08156	$594.15
Remote switch with Aural Alert	11-08164	$84.15
GPS Coaxial Cable SMA to SMA	11-08160	$33.15
Antenna Install Kit: Mounting Template, 8 Washers, 8 nuts	11-08163	$18.50
ELT Install Kit	11-08162	$63.75

ARTEX 406 MHZ ELTS 1000



The ARTEX ELT 1000 is a value-priced upgrade to standard 121.5 MHz transmitters, which are no longer monitored by the Cospas-Sarsat system. The 406 MHz transmitter produces a much more accurate position, typically 3 kilometers as compared with 15 to 20 kilometers for 121.5 MHz transmitters. When coupled to the aircraft navigation system via a navigation interface, the ELT 1000's accuracy improves to approximately 100 meters.

Description	Part No.	Price
406 Mhz ELT 1000 Base Pack W/o Antenna Usa	11-13018	$857.00
406 Mhz ELT 1000 Base Pack W/ Whip Antenna Usa	11-13020	$1,060.00
406 Mhz ELT 1000 Base Pack W/ Whip Antenna Int	11-13021	$1,025.00
406 Mhz ELT 1000 Base Pack W/ Rod Antenna Usa	11-13022	$1,609.00
406 Mhz ELT 1000 Base Pack W/ Rod Antenna Int	11-13023	$1,608.00
ELT 1000 Ace Base Pack W/ Whip Antenna Usa	11-13024	$1,225.00
ELT 1000 Ace Base Pack W/ Whip Antenna Int	11-13025	$1,225.00
ELT 1000 Ace Base Pack W/ Rod Antenna Usa	11-13026	$1,335.00
ELT 1000 Ace Base Pack W/ Rod Antenna Int	11-13027	$1,335.00
ELT 1000 Replacement Battery	11-13028	$195.85
ELT 1000 Replacement Mounting Strap And Tray	11-13029	$49.80
ELT 1000 Replacement 2 Wire Remote Switch	11-13030	$114.75
ELT 1000 Dual Band Rod Antenna	11-13031	$485.00

ARTEX REPLACEMENT BATTERY ELT 110-6



Battery Pack - 110-6, 100 HM. Artex 110-6, ELT 100 HM, 2-year Alkaline Pack. TSO C91a Approval.

P/N 11-17958 ..... **$194.00**

ARTEX 2-WIRE REMOTE INTERFACE SYSTEM



This product allows an upgrade to an Artex 5-Wire 406 MHz ELT using an existing 2-wire configuration. The 2-Wire Remote Interface allows two wires from the existing wiring harness to connect the cockpit remote switch to the ELT for simplified, cost-efficient installation.

P/N 11-07776 ..... **$1,305.00**

ARTEX ACCESSORIES



ARTEX WIRE WHIP ANTENNA - Black whip antenna with inductor. For use with 121.5 and 243 MHz. Designed for speeds up to 200 knots TAS.

P/N 110-324..... **$84.80**



ARTEX BNC CABLE - 15 ft female BNC to BNC coax cable for use with 406 ELT series.

P/N 11-08130..... **$101.75**

ARTEX ELT 345



The ELT 345 boasts an industry low price for an ELT providing the same quality and performance on which the ARTEX brand was built. GPS data is embedded within the first emergency transmission and provides Search and Rescue personnel with the aircraft location, within 100 meters, in less than a minute. Transmits on 406 MHz and 121.5 MHz frequencies while providing position accuracy thanks to the built-in GPS navigational interface. GPS data is embedded within the first emergency transmission and provides Search and Rescue personnel with the aircraft location, within 100 meters, in less than a minute. FAA approved.

USA.....P/N 11-13989 ..... **$525.00**

AV

PERSONAL LOCATOR BEACONS

ARTEX ELT 4000 GPS / 406 / 121.5



The ARTEX ELT 4000 is a transport-grade Emergency Locator Transmitter (ELT) that utilizes alkaline batteries. This innovative power source means that the ELT 4000 is completely exempt from FAA special condition requirements. ARTEX ELT 4000 cost of ownership benefits include a lower battery expense per cycle, no hazmat shipping and easy disposal. An integrated NAV interface (ARINC429) omits the requirement and expense of installing a separate NAV interface unit. The ARTEX ELT 4000 provides a quick-and-easy retrofit opportunity with flexible installation options such as a two-wire remote switch that does not require any aircraft power. ELT 4000 is TSO approved with Legacy Switch and Antenna Systems to facilitate retrofit. Because it is a single output ELT, the ARTEX ELT 4000 utilizes the same RF output and only one coax cable to transmit both 406 MHz and 121.5 MHz signals. The built-in navigation interface reduces the need to mount a secondary external interface, greatly reducing the cost of installation. The mounting tray assembly matches the legacy ARTEX C and B Series ELT installation and thereby further reduces engineering costs.

Base Pack ..... P/N 11-16253 ..... **$3,874.00**
With Alkaline Battery Only ..... P/N 11-16255 ..... **$3,280.00**
With Blade Antenna/Remote ..... P/N 11-16257 ..... **$5,324.00**

ACR AQUALINK PLB



The AquaLink™ broadcasts a unique registered distress signal that not only tells rescuers where you are, but who you are. The onboard GPS can fix your position to within 100 meters and then utilizes a powerful 406 MHz signal to relay your distress call to orbiting satellites. As local Search and Rescue is deployed, a separate homing signal and integrated LED strobe light guide rescuers to your exact location.

USA ..... P/N 11-09693 ..... **$359.00**
Canada ..... P/N 11-10404 ..... **$359.00**

ACR AQUALINK VIEW



The AquaLink™ View broadcasts a unique registered distress signal that not only tells rescuers where you are, but who you are. The onboard GPS can fix your position to within 100 meters and then utilizes a powerful 406 MHz signal to relay your distress call to orbiting satellites. As local Search and Rescue is deployed, a separate homing signal and integrated LED strobe light guide rescuers to your exact location. Features: 3 levels of integrated signal technology — internal GPS, powerful 406 MHz satellite signal and 121.5 MHz homing beacon Super bright integrated strobe. No float pouch required – Self Buoyant. Allows for multiple testing/display of GPS coordinates. Typical Performance 35 Hours. On Board 66 Channel GPS Reflective Keypad. Made in the U.S.A

USA ..... P/N 11-09241 ..... **$425.00**
Canada ..... P/N 11-10405 ..... **$425.00**

ACR RESQLINK 406 PLB WITH GPS



At 4.6 oz, the ResQLink™ weighs less than a couple of energy bars. And topping just 3.9 inches, it's smaller than the cell phone in your pocket. Full-powered, GPS-enabled rescue beacon designed for anglers, pilots and back country sportsmen. With three levels of integrated signal technology - GPS positioning, a powerful 406 MHz signal, and 121.5 MHz homing capability - the ResQLink™ quickly and accurately relays your position to a worldwide network of search and rescue satellites. A built-in strobe light provides visibility during night rescues.

Usa Version ..... P/N 11-10005 ..... **$289.95**
Canada Version ..... P/N 11-11357 ..... **$275.95**

ACR RESQLINK PLUS BUOYANT PLB-375



At 5.4 oz and topping just 4.5 inches, the ResQLink+ is the smallest buoyant Personal Locator Beacon available today. Small enough to easily be carried in a pocket, clipped to a backpack or stored inside an inflatable life jacket. With three levels of integrated signal technology - GPS positioning, a powerful 406 MHz signal, and 121.5 MHz homing capability - the ResQLink+™ quickly and accurately relays your position to a worldwide network of search and rescue satellites. A built-in strobe light provides visibility during night rescues. P/N 11-10825 ..... **$288.95**

BENDIX KING AEROWAVE TEXT & TRACK



AeroWave Text and Track is a compact and robust two-way texting, global tracking, SOS, and text weather device. It is the ideal solution for industrial, enterprise, maritime, aviation, and security environments where remote workforces and individuals need robust and reliable communication. The Personal Tracker's 2-way messaging and tracking capabilities offer peace of mind in a portable design. P/N 11-16289 ..... **$399.95**

MCMURDO FASTFIND 220 PLB WITH GPS USA



The FAST FIND 220A PLB is a simple, lightweight, and floatable distress beacon that comes with a buoyancy pouch. This device relies on the 406 MHz frequency to transmit the user's unique ID and precise GPS location to the global satellite network. Within minutes search and rescue services (SAR) are alerted and continue to receive regular position updates. Once within range, rescuers can then home in on the beacon's second signal, a 121.5 MHz transmission, and find the user. ..... P/N 11-11997 ..... **$249.95**
Canada Version ..... P/N 11-11884 ..... **$237.95**

ARTEX PLB



The ARTEX PLB features an industry-leading small size and lightweight design—easily fitting into a pocket or life vest without impeding activity and taking up minimal space—ensuring it is readily accessible in an emergency. Effortlessly operated with one hand even under the most challenging conditions, the ARTEX PLB is activated by extending the antenna and flipping up the spring-loaded protective cover, designed to prevent unintentional activation, and then pressing the ON button. The ARTEX PLB (8110) features a unique mounting clip, flotation pouch, and lanyard. P/N 11-16306 ..... **$269.00**

FASTFIND PLUS 406 PLB WITH BUILT-IN GPS



Features a built-in GPS receiver combined with a 406 MHz transmitter and 121.5 MHz homing signal. In the event of an emergency, an alert signal is transmitted to COSPAS-SARSAT satellites and forwarded to a rescue coordination center within typically 3 minutes. **NOT APPROVED FOR USE IN AUSTRALIA & NEW ZEALAND**

P/N 11-02256 ..... **$487.00**

SPOT 3 SATELLITE GPS MESSENGER



SPOT Gen3 - The latest in the line of SPOT rugged satellite GPS messengers, the SPOT Gen3 keeps you connected even when you're off-the-grid. Using the power of satellite technology SPOT works virtually anywhere in the world. Check in with your personal and professional networks, send custom messages and let others track your location in real-time via Google Maps™. In an emergency, transmit an SOS with your location to GEOS International Emergency Response Coordination Center. Key Differences: SPOT 3 vs SPOT 2: Longer battery life - more reliable, Smaller size - easier to travel with, Internal vibration sensor to only send tracking messages while moving - more efficient, Vibration sensor also enables us to provide the new Unlimited Tracking service - ability to transmit indefinitely, New Movement Messaging - theft alerting capability, Variable rates in Track Mode (30 min, 15, 10, 5, 2) - more customizable, and much more. P/N 11-11503 ..... **$149.95**

SPOT TRACE THEFT-ALERT TRACKING DEVICE



Using 100% satellite technology, SPOT Trace tracks your most valuable assets beyond the reach of cellular coverage, using your smart phone or computer. With SPOT Trace, receive text/email messages when movement is detected and select from 2 ½, 5, 10, 30 or 60 minute tracking intervals. SPOT Trace includes: multiple mounting and power options (including rechargeable batteries and line power) and a compact, durable, lightweight design. SPOT Trace is waterproof rated IPX7 and includes a dock mode option that is designed specifically for monitoring assets typically stored on the water. Affordable and easy to use, SPOT Trace is the ultimate theft-alert tracking device for your aircraft, watercrafts, automobiles, and other valuables. P/N 11-12224 ..... **$99.95**

SPOT X 2-WAY SATELLITE MESSENGER



SPOT X provides 2-way satellite messaging so you can stay connected to family, friends, and colleagues whenever you're outside of cellular range, including direct communication with Search & Rescue services in case of life-threatening emergency. SPOT X even provides you with your own personal mobile U.S. number so others can message you directly from their cell phone or other SMS devices at any time.

P/N 11-16361 ..... **$249.99**

RESCUEME PLB1 PERSONAL LOCATOR BEACON



The rescueMe PLB1 can be operated with a single hand in even the most challenging situations. There are NO CHARGES to use the service. When activated the rescueME PLB1 transmits your position and your ID to a Rescue Coordination Center.

USA ..... P/N 13-15036 ..... **$249.00**
Canada ..... P/N 13-15492 ..... **$255.00**
Replacement Battery ..... P/N 13-20227 ..... **$74.92**

AV

SHADIN AMS 2000 ALTITUDE MANAGEMENT AND ALERT SYSTEM



With a range of feature previously unavailable in general aviation, the Shadin Avionics AMS-2000 Altitude Management and Alert System brings advanced instrumentation to new levels of function and affordability. The Shadin Avionics AMS-2000 uses information from Mode-C altitude encoder to deliver: •Time-based Altitude Alerting, rather than fixed altitude buffers. •Automatic calculation and display of Density Altitude. • Real-time display of IVS without the inherent lag of your aircraft's static system. •Calculation and display of Aircraft and Engine Performance • Percentage, at your demand. • Made in the U.S.A., the AMS-2000 features a 12-month warranty.

The AMS-2000 coupled with the Falcon Altitude Encoder provides all advanced altitude alert functions previously noted, plus the following high-resolution altitude management functions: • Time-based level-off warning sounded and displayed 15 seconds from target altitude--smooth capture is assured regardless of climb or descent rate. • Digital display of altitude from -1000 to +62,000 feet in high resolution, 10-foot increments. • Digital reading of Instantaneous Vertical Speed (IVS). • Deviation envelope is adjustable in 10 foot increments

P/N 10-03711 ..... **$3,573.00**

Falcon Altitude Encoder .....P/N 11-12035 ..... **$1,323.00**

SPIDER S6 PORTABLE GLOBAL TRACKING SOLUTION



The next small thing in aircraft tracking. The Spider S6 is for any operator who wants to know more than just where an aircraft is. With the Spider S6, you can find out how an aircraft is being flown. Portable, Iridium Satellite Network, SOS, Actively Watch the aircraft, Mark Button & Notifications, Geofence, Spidertracks AFF/API, and Altitude Events.

P/N 11-13791..... **$1,495.00**

SPIDER 7 PORTABLE GLOBAL TRACKING SOLUTION



The Spider 7 builds on the trusted and reliable platform of previous Spiders to deliver a simple flight tracking solution for operators of more complex aircraft. With two versions, the external antenna Spider gives operators the ability to attach an external antenna directly into the Spider. The external antenna Spider 7 comes with a 1/4" SMA connector and can be mounted in more discrete locations away from anti-icing features that can cause issues for GPS signals.

Internal Antenna.....P/N 11-14567 ... **$1,495.00**

External Antenna ....P/N 11-14568 ... **$1,995.00**

STRIKEFINDER® DIGITAL WEATHER AVOIDANCE SYSTEM



Detects and analyzes the electrical activity emanating from thunderstorms within a 200 nautical mile (nm) radius of the aircraft. A unique graphic display plots an accurate, reliable and easily-interpreted picture of electrical activity, that you can use to circumnavigate the hazards associated with thunderstorms. Determines the bearing, range and severity of the activity. Strike data is plotted on the display as single orange dots by range and azimuth, in relation to the aircraft symbol ("heads up"). Must be installed by Advantage Avionics or another approved StrikeFinder dealer except for experimental aircraft.

Description	Part No.	Price
Strike Finder Standard System	11-00348	$3,589.00
Strike Finder with Ultra Bright Display	11-00348	$3,589.00
Strike Finder with LED Round Display	11-11283	$3,580.00
Strike Finder with LED 3ATI Display and clamp	11-11285	$3,699.00
Strike Finder with LED Round Display with Gyro	11-11286	$4,375.00
Strike Finder with LED 3ATI Display with Gyro	11-11287	$4,375.00
Strike Finder with LED 3ATI Display with Gyro and Clamp	11-11288	$4,489.00
Strike Finder Upgrade	11-00349	$1,195.00
Strike Finder with Round Display Unit Only	11-14921	$2,624.75
Strike Finder Display 3ATI Hole Rear Mount Unit Only	11-14922	$2,624.75
Strike Finder Display 3ATI Front Mount Unit Only	11-14923	$2,624.75
Sensor Unit with Mounting Kit	11-14924	$1,749.75
Gyro Heading Stablization Unit Upgrade Only	11-14926	$1,312.75

MONROY ATD-300 AIR TRAFFIC ALERT



The Monroy ATD-300 provides that continuous traffic awareness in a compact size. Detects all transponder type replies from nearby traffic and displays their proximity and their altitude on a bright 8-character dot matrix display. Simultaneously, a clear female voice provides voice alerts in relation to traffic proximity. It even has a test mode to verify onboard transponder opeation. All of this and more in the size of an alumminum box (2.75"w x 0.75"h x 5"d) no bigger than your intercom. With the Plug N' Fly feature you jut plug the ATD-300 into the cigarette lighter (for power) and the aircraft headphone jack (for voice feedback) and you are ready to fly. No panel space or installation is required. Velcro and mounting brackets are provided for location on top or bottom of the instrument panel and in the panel. The unit comes with a detachable antenna, cigarette lighter power cord, and headphone cable for Plug N' Fly setup. The ATD-300 Traffic-Watch provides multiple capabilities that enhance the safety of flight, such as: • Traffic Range up to 5nm • High/Low Voltage alarm • Traffic MSL Altitude • Auto Mode Display • Voltage Indication • ATD-200 Interchangeable • Traffic relative altitude readout • Host transponder altitude/code readout • Bright LED 8 character dot matrix display Specifications: Weight: 10 oz.; Frequency: 1090 MHz; Max Range: 5nm..... P/N 11-02449..... **$685.00**

ANT-300 Antenna 5"x3"x1" single BNC .... P/N 11-08481..... **$347.00**

PROXALERT R5 - COLLISION AVOIDANCE SYSTEM



The R5 is a passive collision avoidance system. It detects transponder replies of aircraft flying in your vicinity and displays simultaneously both squawk code, altitude, vertical trend and estimated distance of the 3 closest threats. The R5 will increase your ability to visually locate threat aircraft and better apply the FAA 'See and Avoid' concept. The R5 has been designed to be very robust against interference coming from DME equipment and other sources of disturbance. Offers significant operational improvements over previous generation products at a very attractive price. The R5 comes with a 3 year manufacturer warranty. P/N 11-02782....**$779.00**

INSIGHT TAS 1000 AIR DATA COMPUTER WITH WINDICATOR



Today's modern avionics integrate many functions with your GPS, but standard installations leave many important features untapped. The TAS 1000 Multi-Function Data Source was specifically designed to supply all the information needed to fill in the missing pieces of your GPS or MFD display in real-time. TAS 1000 provides the pilot with a wealth of useful information all based on real time measurements of airspeed, altitude, temperature, fuel flow, heading, ground speed and track. Designed to interface with many brands of GPS, TAS 1000 unlock many previously hidden data pages in most GPS navigators, In addition to TAS 1000s in flight advisory function, TAS 1000 can also serve as a backup altimeter, airspeed indicator or fuel flow meter. The TAS 1000 is designed for use in any piston, turboprop, or jet aircraft and provides a full compliment of features when interfaced to a slaved compass system or HSI, fuel transducers, and compatible GPS system. TAS 1000 will deliver a useful subset of features even if all the interfaces are not available.

The Windicator is an integral part of the TAS1000 system. It presents a previously unavailable graphical display of the winds aloft in real time. The Windicator information alone is so useful that it makes the TAS 1000 installation worthwhile. TAS 1000 system options include an altitude encoder to provide altitude information to a transponder or GPS unit as well as alerting the pilot with overspeed, altitude, approach & altitude difference alerts.

MUST BE DEALER INSTALLED.

Part No.	Insight No.	Description	Price
11-00626	1000-001-P	TAS1000 Sys. for Piston Engine Aircraft (Incl. 1 Windicator) 18,000ft. Alt- 250kt max. Front Mount.	$2,850.00
11-00627	1000-001-T	TAS1000 for turbo-charged Piston & Turboprop aircraft (Incl.1 Windicator) 55,000ft. Alt-500kt max.	$4,275.00
11-11535	1000-002-B	Windicator (replacement) Rear Mount.	$725.00
11-00629	1000-003	Expansion Module (Alt. encoder, Alt. Serializer, & Overspeed warn.)	$495.00
Fuel Injection - Fuel flow smart sensors for Piston Engine aircraft			
11-00630	1000-004-1	Spine Mount, 201, Fuel Injected	$475.00
11-10414	1000-004-4	Spine Mount, 231, Gravity Fed	$515.00
11-10412	1000-004-2	Firewall Mount, 201, Fuel Injected	$475.00
11-10415	1000-004-5	Firewall Mount, 231, Gravity Fed	$515.00
11-10413	1000-004-3	Inline Mount, 201, Fuel Injected	$475.00
11-10416	1000-004-6	Inline Mount, 231, Gravity Fed	$515.00

AV

DYNON EFIS-D10A



Dynon's EFIS-D10A is a full-featured Electronic Flight Information System in a small package. This instrument fits into a standard 3-1/8" panel hole, making it an ideal candidate for replacing vacuum and electric attitude indicators. In addition to a full complement of flight instruments, the EFIS-D10A also has a built-in HSI and autopilot capability. EFIS-D10A features and options: • Sunlight-readable, 4" color display with full dimming control • Attitude Indicator, Heading, Altimeter, ASI, VSI, Turn Coordinator / Slip/Skid Ball, HSI, OAT, TAS, Angle of Attack, Voltmeter • Altitude encoder output • Dual-axis autopilot • Backup battery • 25 User-defined checklists • Dynon three-year factory limited warranty. This EFIS-D10 is now a STC'd replacement for Attitude Gyros in some Cessna & Piper Aircraft.

EFIS-D10A Instrument (with out battery). ..... P/N 10-00844 ..... **$2,089.00**
EFIS-D10A EAA Kit ..... P/N 10-06242 ..... **$2,494.00**

EFIS-D10A OPTIONS

Description	Part No.	Price
Internal Li-Ion Backup Battery	10-00755	$125.00
Remote Compass (EDC-D10A)	10-01046	$95.00
OAT Probe (requires EDC-D10A)	10-01823	$64.50
Mounting Bracket for AOA Pitot Tube	10-06246	0
D10 Flush Mount Bracket	10-00757	$19.95
Optional AP74 Vertical	10-03565	$450.00
Optional AP74 Horizontal	10-03566	$449.00
AOA/Pitot Probe (unheated)	10-01157	$195.00

Description	Part No.	Price
Wiring Harness	10-01158	$79.50
STC EFIS Wiring Harness	10-06267	$207.95
GPS/Antenna Module	10-06240	$285.95
Encoder Converter Module (serial to parallel convertor for gray code transponders)	10-01159	$79.85
USB-Serial Converter	10-01824	$21.50
Roll Servo Kit RV10	10-04076	$795.00
EFIS D10A EAA Kit	10-06242	$2,494.00

DYNON EFIS-D100



Dynon's EFIS-D100 includes all of the instruments and features of the EFIS-D10A, but on a brilliant 7" wide-screen display with full dimming control. The larger size allows for multiple information pages to be displayed side-by-side in a split-screen format, enabling you to have full PFD while also displaying HSI, timers, or engine monitoring information from your Dynon EMS. Additionally, the EFIS-D100 is available in an optional Super-Bright Screen format, improving its readability and overall performance in all light conditions. Dimensions: 6.95" W x 4.90" H x 4.51" D. Includes Dynon three-year factory limited warranty

EFIS-D100 System with Super Bright Screen ..... P/N 10-02155 ..... **$2,763.00**
EFIS-D100 EAA Kit ..... P/N 10-06243 ..... **$3,553.00**

EFIS-D100 OPTIONS

Description	Part No.	Price
Internal Li-Ion Backup Battery	10-00755	$125.00
OAT Probe	10-01823	$64.50
AOA/Pitot Probe (unheated)	10-01157	$195.00
Roll Servo Kit RV10	10-04076	$795.00

Description	Part No.	Price
Wiring Harness	10-01158	$79.50
Encoder Converter Module (serial to parallel converter for gray code transponders)	10-01159	$79.85
STC EFIS Wiring Harness	10-06267	$207.95
GPS/Antenna Module	10-06240	$285.95

DYNON EFIS-D6 / EFIS-D60



Because some like to keep it simple, Dynon offers the EFIS-D6 and EFIS-D60 as basic, even more affordable Electronic Flight Information System (EFIS) solutions. Perfect for pilots who want to save panel weight, space, and installation time compared to a conventional analog gauges, the EFIS-D6 and EFIS-D60 feature all the amenities of a traditional six-pack while also adding a voltmeter and altitude encoder. The EFIS-D6 fits into a standard 3-1/8" panel hole, making it an ideal candidate for replacing vacuum and electric attitude indicators. The EFIS-D60 maintains the same profile and 7" screen as the EFIS-D100, and is available in the Super-Bright screen version only. EFIS-D6 / EFIS-D60 features and options: • Sunlight-readable, color display with full dimming control • Attitude Indicator, Heading, Altimeter, ASI, VSI, Turn Coordinator / Slip/Skid Ball, Angle of Attack, Voltmeter • Altitude encoder output • Backup battery • Dynon three-year factory limited warranty.

Description	Part No.	Price
EFIS-D6	10-03865	$1,545.00
EFIS-D60 With Super Bright Screen	10-03866	$1,845.00
EFIS Wiring Harness	10-01158	$79.50

Accessories	Part No.	Price
EFIS/FLDEK Wiring Harness	10-01158	$79.50
EFIS Backup Battery D180 D100 D60	10-00755	$125.00
OAT Probe D180 D100 D60 D10A D6	10-01823	$64.50
Flush Mount Bracket D10A D10 D6	10-00757	$19.95

DYNON HS34 HSI EXPANSION MODEL



The HS34 HSI Expansion Module was designed to enhance the capability of Dynon's best-selling EFIS products. The panel-mounted HS34 not only expands the HSI functionality of your EFIS-D10A, EFIS-D100, or FlightDEK-D180, but also enables several new features for any Dynon instrument to which it is networked: • Allows Dynon EFIS to interface with multiple radios and GPS devices simultaneously • Includes multiple interfaces to accommodate analog, ARINC-429 and RS-232 inputs • Accepts signals from marker beacon receivers and DME devices • Backlit to facilitate night flight conditions • Designated control knobs for adjusting Heading, Course (OBS), or general purpose values such as barometer. • Designated NAV and Bearing Source selection buttons • Simple 2-wire connection to Dynon EFIS instruments. • Dimensions: 1.639" W 4.903" H 4.951" D • Dynon three-year factory limited warranty

Dynon HS34 HSI Expansion Model - Vertical ..... P/N 10-02590 ..... **$645.00**
Dynon HS34 HSI Expansion Model - Horizontal ..... P/N 10-02773 ..... **$646.00**

AV

DYNON AVIONICS SKYVIEW ENGINE MONITOR MODULE FOR ROTAX 912IS



Dynon Avionics announces SkyView support for the Rotax 912iS engine. Engine parameters available from the 912iS engine computer include RPM, manifold pressure, oil pressure, oil temperature, coolant temperature, EGT for all four cylinders, ECU voltage, and engine hours. All the other normal SkyView SV-engine functions are still available using the SV-EMS-221, such as fuel level, trim position, battery voltage, and contacts. A 912iS-specific engine sensor kit that includes the engine wiring harness, a Kavlico fuel pressure sensor, and an amps shunt are also available. See Accessories.

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Enginge Monitor Module ..... P/N 10-04941 ..... **$1,025.00**
Probe Package ..... P/N 10-04942 ..... **$189.95**

DYNON SKYVIEW SV-GPS-2020 GPS / ADS-B RECEIVER



The SV-GPS-2020 GPS Receiver/Antenna from Dynon Avionics allows existing and SkyView and Advanced AF-5000 series customers to add a 2020-compliant GPS position for ADS-B Out. As a drop-in replacement for the existing SVGPS-250 receiver, existing customers do not need to run any additional wires, coax, or install any new boxes in their aircraft. When combined with Dynon's SV-XPNDR-261 Mode-S transponder, SkyView and Advanced Flight Systems customers meet all the transponder and ADS-B Out requirements. Pilots can also add the SVADSB-470 Traffic and Weather Receiver for the best possible situational awareness in their aircraft. ..... P/N 10-05909 ..... **$569.00**



DYNON EMS-D10 ENGINE MONITORING SYSTEM

The Dynon EMS-D10 offers more engine information in less space then ever before – full engine monitoring with up to 27 separate inputs on a highly readable 4" display, installed in your standard 3-1/8" panel hole. A designated Fuel Computer page allows the pilot to see fuel levels for up to 4 tanks, fuel pressure, fuel flow, fuel used, fuel remaining, time remaining and fuel required to destination all on one optimized display. To keep the classic look and feel of the Dynon product family, the EMS-D10 utilizes the same highly-visible display, keypad, and bezel as the best-selling EFIS-D10A – and will provide engine information to your Dynon EFIS through a simple 2-wire connection. As an added safety feature, the EMS-D10 also features programmable alarms which can be displayed on screen, through a separately mounted indicator light, or by an audible annunciation through your intercom. EMS-D10 features and options: • Sunlight-readable, 4" color display with full dimming control • Replaces up to 16 different types of gauges • Individual displays for up to 6 EGT and 6 CHT inputs • Customizable displays for Tachometer, Fuel Pressure, Oil Pressure, Oil Temp, Manifold Pressure, Volts/Amps, Carb Temp, OAT, Coolant Temp /Pressure, Hobbs/Tach Time • Fuel level display for up to 4 tanks • Fuel flow measurement with fuel computer display • Customizable settings for Green/Yellow/Red parameters on all inputs• Inputs for flaps/trim position sensors and contacts • Programmable visual and audio alarms • 25 User-defined checklists • Dynon three-year factory limited warranty P/N 10-01160 ..... **$1,665.00**

COMPLETE ENGINE PACKAGES

(EMS-D10 Engine Monitor, engine sensors and 2 wiring harnesses)

Description	Part No.	Price
EMSKIT-L4C, 4Cyl Lycoming/Continental Package (Carbureted)	10-01161	**$2,363.00**
EMSKIT-L4F, 4Cyl Lycoming/Continental Package (Fuel Injected)	10-01162	**$2,343.00**
EMSKIT-L6C, 6Cyl Lycoming/Continental Package (Carbureted)	10-01163	**$2,513.00**
EMSKIT-L6F, 6Cyl Lycoming/Continental Package (Fuel Injected)	10-01164	**$2,492.00**
EMSKIT-RTX, 4Cyl Rotax 912/914 Package	10-01830	**$1,995.00**
EMSKIT-J22, 4Cyl Jabiru 2200 Package	10-01832	**$2,143.00**
EMSKIT-J33, 6Cyl Jabiru 3300 Package	10-01834	**$2,263.00**

EMS OPTIONS

Description	Part No.	Price
Capacitance to Volt Converter	10-02159	**$49.95**
Fuel Flow Sensor	10-01165	**$259.00**
USB-Serial Converter	10-01824	**$21.50**
D10 Flush Mount Bracket	10-00757	**$19.95**
EGT Thermcouple Ext Wire	10-01167	**$0.99**
CHT Thermcouple Ext Wire	10-01168	**$0.99**



DYNON EMS-D120 ENGINE MONITORING SYSTEM

Featuring all of the same inputs and features of the EMS-D10, the Dynon EMS-D120 brings full engine monitoring to your panel on a stunning 7" wide-screen display. The larger size allows for multiple information pages to be displayed side-by-side in a split-screen format, enabling you to have full view of your primary engine inputs while also viewing your fuel computer, engine timers, or flight information from a Dynon EFIS. Additionally, the EMS-D120 is available in an optional Super-Bright Screen format, improving its readability and overall performance in all light conditions. Dimensions: 6.95" W x 4.90" H x 4.51" D. Includes Dynon three-year factory limited warranty

EMS-D120 w/ Superbright Screen ..... P/N 10-02156 ..... **$2,175.00**

SENSOR INPUTS

6 - EGT (Type K Thermocouple)
6 - CHT (Type J Thermocouple)
2 - Fuel Level (Resistive [0-1 K ohm] or Capacitance [0-5 volt])
2 - RPM (Frequency)2 - Contacts
1 - Manifold Pressure (Voltage)
1 - Oil Temperature (Resistive)
1 - Oil Pressure (Resistive)
1 - Fuel Pressure (Resistive)
1 - Fuel Flow (Frequency)
1 - Amps (Shunt)
1 - Volts
1 - Turbine Inlet Temperature (Type K Thermocouple)
3 - General Purpose (Either resistive or voltage for OAT, Fuel Tanks 3 & 4, Coolant Temp/Press, Carb Temp)

EMS OPTIONS

Description	Part No.	Price
Capacitance to Voltage Converter	10-02159	**$49.95**
Fuel Flow Sensor	10-01165	**$259.00**
USB-Serial Converter	10-01824	**$21.50**
EGT Thermcouple Ext Wire	10-01167	**$0.99**
CHT Thermcouple Ext Wire	10-01168	**$0.99**

COMPLETE ENGINE PACKAGES

(EMS-D120 Engine Monitor, engine sensors and 2 wiring harnesses)

Description	Part No.	Price
EMSKIT-L4C, wirh Super Bright Screen	10-02201	**$2,873.00**
EMSKIT-L4F, 4Cyl Lycoming/Continental Package (Fuel Injected)	10-01827	**$2,853.00**
EMSKIT-L4F, wirh Super Bright Screen	10-02203	**$2,853.00**
EMSKIT-L6C, 6Cyl Lycoming/Continental Package (Carbureted)	10-01828	**$2,598.00**
EMSKIT-L6C, wirh Super Bright Screen	10-02197	**$3,023.00**
EMSKIT-L6F, 6Cyl Lycoming/Continental Package (Fuel Injected)	10-01829	**$2,885.00**
EMSKIT-L6F, wirh Super Bright Screen	10-02196	**$3,002.00**
EMSKIT-RTX, 4Cyl Rotax 912/914 Package	10-01831	**$2,422.00**
EMSKIT-RTX, wirh Super Bright Screen	10-02166	**$2,520.00**
EMSKIT-J22, 4Cyl Jabiru 2200 Package	10-01833	**$3,431.00**
EMSKIT-J22, wirh Super Bright Screen	10-02193	**$2,653.00**
EMSKIT-J33, 6Cyl Jabiru 3300 Package	10-01835	**$2,457.00**
EMSKIT-J33, wirh Super Bright Screen	10-02194	**$2,773.00**



DYNON FLIGHTDEK-D180

The FlightDEK-D180 combines Dynon's best-selling EFIS and EMS (Engine Monitor System) instruments into one brilliant 7" sunlight readable display, giving you an unparalleled assortment of functions in one easy-to-use, very powerful instrument. Pilots may elect to display both EFIS and engine monitor functions simultaneously in split-screen format or switch over to a full screen EFIS or EMS via simple hotkey commands – allowing for full monitoring of any combination of PFD, engine sensors, fuel computer, HSI, and timers. Like all other Dynon instruments, the FlightDEK-D180 comes with a 3-year warranty and free lifetime software updates. Additionally, the FlightDEK-D180 is available in an optional Super-Bright Screen format, improving its readability and overall performance in all light conditions.
Dimensions: 6.95" W x 4.90" H x 4.51" D Includes Dynon three-year factory limited warranty

DEK-D180 w/ Superbright Screen..... P/N 10-02157 ..... **$3,315.00**

COMPLETE ENGINE PACKAGES

(FlightDEK-D180, engine sensors and 2 wiring harnesses)

Description	Part No.	Price
EMSKIT-L4C, 4Cyl Lycoming/Continental Package (Carbureted)	10-01837	**$4,013.00**
EMSKIT-L4C, with Super Bright Screen	10-02198	**$4,013.00**
EMSKIT-L4F, 4Cyl Lycoming/Continental Package (Fuel Injected)	10-01838	**$3,993.00**
EMSKIT-L4F, with Super Bright Screen	10-02199	**$3,993.00**
EMSKIT-L6C, 6Cyl Lycoming/Continental Package (Carbureted)	10-01839	**$4,163.00**
EMSKIT-L6C, with Super Bright Screen	10-02190	**$4,050.00**
EMSKIT-L6F, 6Cyl Lycoming/Continental Package (Fuel Injected)	10-01840	**$4,142.00**
EMSKIT-L6F, with Super Bright Screen	10-02191	**$4,142.00**
EMSKIT-RTX, 4Cyl Rotax 912/914 Package	10-01841	**$3,660.00**
EMSKIT-RTX, with Super Bright Screen	10-02168	**$3,660.00**
EMSKIT-J22, 4Cyl Jabiru 2200 Package	10-01842	**$3,793.00**
EMSKIT-J22, with Super Bright Screen	10-02192	**$3,793.00**
EMSKIT-J33, 6Cyl Jabiru 3300 Package	10-01843	**$3,913.00**
EMSKIT-J33, with Super Bright Screen	10-02195	**$3,913.00**

FLIGHTDEK OPTIONS

Description	Part No.	Price
Battery	10-00755	**$125.00**
OAT Probe	10-01823	**$64.50**
AOA/Pitot Probe (unheated)	10-01157	**$195.00**
AOA/Pitot Probe (heated)	10-02158	**$438.00**
Encoder Converter Module	10-01159	**$79.85**
Fuel Flow Sensor	10-01165	**$259.00**
EGT Thermcouple Ext Wire	10-01167	**$0.99**
CHT Thermcouple Ext Wire	10-01168	**$0.99**
OAT	10-01176	**$36.95**
HS34 HSI Expan. Mdl. Vert.	10-02590	**$645.00**
HS34 HSI Expan. Mdl.Hor.	10-02773	**$646.00**
Capacitance to Volt Converter	10-02159	**$49.95**
Wiring Harness LSA/E-AB	10-01158	**$79.50**
Roll Servo Kit RV10	10-04076	**$795.00**
AOA/Pitot Unheated Boom	10-02789	**$197.00**
Mounting Hardware (L Tube Only)	10-01820	**$109.75**
EGT, 0.75-1.25" Hose Clamp	10-01844	**$36.65**
EGT, 1-2.25" Hose Clamp	10-01169	**$36.65**
EGT, 1-1.75" Hose Clamp	10-05079	**$36.00**

Description	Part No.	Price
CHT Adj. Bayonet, 3/8-24 UNF	10-01170	**$38.85**
CHT, Ring Terminal 12mm	10-01845	**$25.75**
Manifold Press. 0-60" Hg, 1/8" Hose	10-01171	**$64.85**
Oil Press. Kavlico 1/8-27 NPT 150 PSI	10-04823	**$87.00**
Oil Temp 5/8-18 UNF 100-240 F	10-01173	**$19.95**
Carb Fuel Press Kavlico 1/8-27 NPT, 15 PSI	10-04820	**$87.00**
Injected Fuel Press Kavlico 1/8-27 NPT, 50 PSI	10-04825	**$87.00**
Carb. Air Temp. 1/4-28 UNF, -50 to 150F	10-01846	**$36.95**
AMPS Shunt 0-60	10-01178	**$15.65**
EGT 2 Cylinder 6 ft	10-01847	**$49.85**
EGT/CHT 4 Cylinder 6 ft	10-01179	**$81.75**
EGT/CHT 6 Cylinder 6 ft	10-01180	**$92.50**
Engine Sensor Main Wire Harness 6 ft	10-01181	**$128.95**

SEE WWW.AIRCRAFTSPRUCE.COM FOR LISTING OF ALL ENGINE SENSORS, HARNESSES, & PACKAGES



Skyview 10" Display

DYNON SKYVIEW EFIS / EMS / GPS / AUTOPILOT SYSTEM



Skyview 7" Display

SkyView is the latest glass-panel solution from Dynon Avionics, featuring a full PFD with synthetic vision, moving map with terrain and obstacles, engine monitor, and autopilot. Very bright, high-resolution screens with full dimming control provide excellent visibility in all conditions, while two multi-position control knobs allow easy user input. The full-color PFD features a full set of flight instruments over a highly-detailed 3D synthetic vision display, while your aircraft's position is shown on a moving map with color-coded terrain, obstacles, and airport/airspace information. In addition, the SkyView will accommodate full engine monitor display and a dual-axis autopilot through the addition of optional Dynon hardware. SkyView systems come standard with Dynon's three-year factory limited warranty. **Dimensions**: • 10" display: 10.32" W x 7.06" H x 2.14" D • 7" display: 7.64" W x 5.51" H x 2.14" D

Product Group	Dynon PN	Description	Spruce PN	Price
Screens	SV-D700	Skyview 7 inch Display Includes main wiring harness	10-03933	**$2,549.00**
--	SV-D1000	Skyview 10 inch Display Includes main wiring harness	10-03932	**$3,389.00**
--	SV-D600	Skyview 7" Doisplay Only	10-06060	**$1,715.00**
--	SV-D600/B	Skyview SE 7" Display Bundle With Harness	10-06058	**$1,795.00**
--	SV-D1000T/B	10" SkyView Touch Display, bundle Includes SV-D1000T/A 10" SkyView Touch Display, SV-HARNESS-D37, and SV-SYNVIS-280 Synthetic Vision	10-05607	**$3,975.00**
--	SV-D900	Skyview Se 10" Display Only	10-06059	**$2,925.00**
--	SV-D900/B	Skyview Se 10" Display Bundle With Harness	10-06057	**$3,395.00**
--	SV-D1000T/A	10" SkyView Touch Display only, (no harness) Includes SV-SYN-VIS-280 Synthetic Vision	10-05608	**$3,895.00**
EFIS/ EMS/GPS Compo-nents	SV-ADAHRS-200	SkyView ADAHRS - First	10-03936	**$1,175.00**
--	SV-ADAHRS-200 & 201	SkyView ADAHRS - Dual	10-04018	**$1,960.00**
--	101293-00	SkyView Secondary ADAHRS - Requires Primary	10-03937	**$785.00**
--	SV-EMS-220	SkyView Engine Monitoring Module	10-03938	**$579.00**
--	SV-GPS-250	SkyView GPS 5Hz Receiver Module	10-03939	**$198.50**
--	SV-BAT-320	SkyView Backup Battery	10-03940	**$175.00**
--	SV-ETHERNET-3CC	Dynon Ethernet Cable	10-04679	**$24.95**
--	SV-HARNESS-D37	Dynon Display Harness with Wiring	10-03941	**$93.50**
--	101406-000	Skyview ARINC Adapter	10-04520	**$469.95**
--	SV-VPX-290	SkyView Vertical Power Unlock Code	10-04810	**$275.00**
--	SV-NET-1.5CC	Network Cable – Both ends with connectors, 1.5' long Aircraft Grade Tefzel® Wiring	10-05615	**$48.65**
--	SV-NET-3CC	Network Cable - Both ends with connectors, 3' long	10-03942	**$48.65**
--	SV-NET-6CC	Network Cable - Both ends with connectors, 6' long	10-03943	**$52.65**
--	SV-NET-10CP	Network Cable - 1 end with connector, 1 end with pins only, 10'	10-03944	**$56.75**
--	SV-NET-15CP	Network Cable - 1 end with connector, 1 end with pins only, 15'	10-03945	**$62.85**
--	SV-NET-20CP	Network Cable - 1 end with connector, 1 end with pins only, 20'	10-03946	**$71.75**
--	SV-NET-25CP	Network Cable - 1 end with connector, 1 end with pins only, 25'	10-04619	**$64.95**
--	SV-NET-30CP	Network Cable - 1 end with connector, 1 end with pins only, 30'	10-04620	**$69.95**
--	SV-NET-HUB	Network Hub	10-04904	**$49.00**
--	SV-NET-SPL	Network Splitter	10-03948	**$52.65**
--	SV-NET-SERVO	Network Autopilot Servo Wiring Kit Includes 20	10-04491	**$54.00**
Control Knobs	SV-KNOB-PANEL/H	SkyView Knob Control Panel (Horizontal)	10-05614	**$245.00**
--	SV-KNOB-PANEL/V	SkyView Knob Control Panel (Vertical)	10-05613	**$245.00**
--	--	Dynon SkyView ADS-B with 4 Ft Harness	11-11938	**$836.00**
--	--	Dynon SkyView ADS-B with Custom Harness	11-11939	**$1,063.00**
Transpon-ders	101409-000	SkyView SV-XPNDR-261 Mode S Class 1	10-04518	**$2,079.00**
--	--	SkyView Mode S Class 1 Transponder with 4 ft Harness	11-11953	**$2,167.00**
--	--	SkyView Mode S Class 1 Transponder with Custom Harness	11-11954	**$2,274.00**
--	101410-000	SkyView SV-XPNDR-262 Mode S Class 2	10-04519	**$1,695.00**
--	--	SkyView Mode S Class 2 Transponder with 4 ft Harness	11-11948	**$1,761.00**
--	--	SkyView Mode S Class 2 Transponder with Custom Harness	11-11949	**$1,797.00**
	102388-000	Dynon Skyview Remote Magnetometer	10-05884	**$139.95**
	102532-000	Dynon Dual ADAHRS Mounting Kit	11-14152	**$23.95**

Product Group	Dynon PN	Description	Spruce PN	Price
Probes and Sensors	101711-000	Dynon Kavlico Lyc. / Cont. 4 Cyl Carb Probe Package	10-04827	**$698.00**
--	101711-003	Dynon Kavlico Lyc. / Cont. 4 Cyl Fuel Probe Package	10-04830	**$678.00**
--	101711-001	Dynon Kavlico Lyc. / Cont. 6 Cyl Carb Probe Package	10-04828	**$848.00**
--	101711-004	Dynon Kavlico Lyc. / Cont. 6 Cyl Fuel Probe Package	10-04831	**$827.00**
--	101711-002	Dynon Kavlico Rotax 912 Probe Package	10-04829	**$345.00**
--	101711-005	4 Cyl. Jabiru Probe Package	10-04832	**$478.00**
--	101711-006	6 Cyl Jabiru Probe Package	10-04833	**$598.00**
--	100403-003	Dynon EMS Fuel Flow Sensor 1/4" NPT Female	10-01165	**$259.00**
--	101690-000	Kavlico Carb Fuel Pressure Sensor	10-04820	**$87.00**
--	101692-000	Dynon Kavlico Oil Pressure Sensor 75PSI	10-04822	**$86.50**
--	101693-000	Dynon Kavlico Oil Pressure Sensor 150 PSI	10-04823	**$87.00**
--	101715-000	Dynon Kavlico Gravity Fed Pressure Sensor 5 PSI	10-04824	**$88.50**
--	100654-000	Dynon Capacitance to Volt Converter	10-02159	**$49.95**
A/P Control	SV-AP-PANEL/H	SkyView Autopilot Control Panel (Horizontal)	10-05612	**$545.00**
--	SV-AP-PANEL/V	SkyView Autopilot Control Panel (Vertical)	10-05611	**$539.00**
Servos	SV32	Standard output arm, Retail Includes SV32:100754-000,Limiting Braket Kit: 101025-000	10-03561	**$725.00**
--	SV32C	Capstan, Includes SV32C: 100754-002, Capstan Accessory Kit: 101116-000	10-03950	**$725.00**
--	SV32L	Long Output Arm, Includes SV32L: 100754-001, Limiting Bracket Kit: 101025-000	10-03562	**$725.00**
--	SV42C	Capstan, Includes SV42C: 101008-002, Capstan Accessory Kit: 101116-000	10-03951	**$725.00**
--	SV42	Standard output arm, Includes SV42: 101008-000, Limiting Bracket Kit: 101025-000	10-03563	**$725.00**
--	SV42L	Long Output Arm, Includes SV42L: 101008-001, Limiting Bracket Kit: 101025-000	10-03564	**$725.00**
--	SV52	Standard Output Arm, Includes SV52: 101021-000, Limiting Bracket Kit: 101025-000	10-04492	**$725.00**
--	SV52C	Capstan, Includes SV52C: 101021-002, Capstan Accessory Kit: 101116-000	10-04493	**$725.00**
Servo + Mounting Kit Pack-ages	--	RV-6 Roll Servo + Mounting Kit: Includes Servo mounting kit RV-6 roll(fuselage):101020-001, pkg SV32L (long output arm): 100854-001	10-03555	**$795.00**
--	--	RV-7/8 Roll Servo + Mounting Kit: Includes Servo Mounting kit- RV-7/8 roll (R wing): 101020-003, pkg SV32 (std. output arm): 100854-000	10-03556	**$795.00**
--	--	RV-9 Roll Servo + Mounting Kit: Includes Servo Mounting kit-RV-9 roll (R wing): 101020-004, pkg SV32 (std. output arm): 100854-000	10-03557	**$795.00**
--	--	RV- 4/8 Pitch Servo + Mounting Kit: Includes Servo Mounting kit- RV-4/8 Pitch: 101020-002, pkg SV32 (std. output arm): 100854-000	10-03560	**$795.00**
--	--	RV-6/7/9 Pitch Servo + Mounting Kit: Includes Servo Mounting Kit-RV-6/7/9 Pitch: 101020-005, pkg SV32 (std. output arm): 100854-000	10-03559	**$795.00**
--	--	RV-10 Roll Servo + Mounting Kit Package: Includes servo mounting kit RV-10 roll (right wing): 101020-003, SV42 (std output arm): 101058-000	10-04076	**$795.00**
--	--	RV-10 Pitch Servo + Mounting Kit: Includes servo mountign kit RV-10 pitch (fuselage): 101020-006, pkg SV42 (std output arm): 101058-000	10-03893	**$795.00**
Servo Push Rod Kits	--	Servo Push Rod Kit- Generic (Push-Pull)	10-03567	**$24.95**
Wifi Adapter	102405-00	Dynon Skyview Wifi Adapter	10-05867	**$34.50**

AV

Prices Subject to Change Without Notice

DYNON SKYVIEW COM RADIOS



Integrating deeply with your Dynon SkyView system, the SV-COM-C25 tunes frequencies by airport and station type - rather than by spinning in a number - at the touch of a button. Dual concentric knob lets you spin in frequencies "the old fashioned way." SkyView will identify the airport and station type as you tune. Available in both horizontal and vertical versions. The control panel is only 1.27" deep.

Vertical Mount ..... P/N 10-05251 . **$1,295.00**
Horizontal Mount . P/N 10-05252 . **$1,295.00**

DYNON SV INTERCOMS



For ALL experimental and light sport aircraft. Ample inputs for EFIS systems, stereo music, and all the other technology in your panel. High-Fidelity Audio Circuitry, Dual Radio Support, Fail-safe between the pilot headset, Horizontal and Vertical faceplates are both included; headset jack kits also included. Selectable Auto Mute, and Independent intercom Voice Activation.
Vertical or Horizontal Mount..... P/N 10-05254..... **$285.00**

DYNON SKYVIEW ADS-B



Dynon's dual band ADS-B receiver receives weather & traffic on both 978 MHz and 1090 MHz frequencies. The dual band SV-ADSB-472 receives ADS-B traffic via 978 MHz (UAT) and 1090 MHz. In the US, it also receives free text and graphical weather from the FAA's network of ADS-B ground stations. Unlike portable ADS-B receivers, you get FULL ADS-B and radar traffic when you pair this with our Mode-S transponder. The remote mounted receiver utilizes an externally mounted antenna for superior ADS-B reception. P/N 10-06419..... **$775.00**

DYNON SKYVIEW DISPLAY / ENGINE PACKAGES



We have put together these avionics packages using only the latest in Dynon technology. All Dynon bundles are for experimental application. These bundles do include some cost savings versus buying each item individually so take advantage and get your panel set up in one quick order.
Easy Ordering:
Step 1: Select your preferred Dynon display package based on number and size of screens you need.
Step 2: Select your engine probe package based on your engine application.
Step 3: Select optional Unlock Code (Sold separately)

Note: We can create a custom package with any combination of avionics units we carry so please contact our sales department if one of the combinations above is not exactly what you need.

Package	Contents	Part No.	Price
Skyview Display Package A	7" Screen with Wire Harness Primary ADAHRS Air Data Altitude Heading Back Up Battery GPS Antenna	10-05527	**$4,095.00**
Skyview Display Package B	Dual 7" Screens with Wire Harness Primary ADAHRS Air Data Altitude Heading Back Up Battery GPS Antenna	10-05528	**$6,671.00**
Skyview Display Package C	10" Screen with Wire Harness Primary ADAHRS Air Data Altitude Heading Back Up Battery GPS Antenna	10-05529	**$4,901.00**
Skyview Display Package D	Dual 10" Screens with Wire Harness Primary ADAHRS Air Data Altitude Heading Back Up Battery GPS Antenna	10-05530	**$8,301.00**
Skyview Display Package E	7" Screen with Wire Harness 10" Screen with Wire Harness Primary ADAHRS Air Data Altitude Heading Back Up Battery GPS Antenna	10-05531	**$7,498.00**
Skyview Lycoming / Continental 4 Cyl Carbureted Engine Pack	Engine Monitor Module Without Probes Kavlico Probe Package - 4 Cyl. Lyc / Cont Carbureted	10-05532	**$1,264.00**
Skyview Lycoming / Continental 4 Cyl Fuel Injected Engine Pack	Engine Monitor Module Without Probes Kavlico Probe Package - 4 Cyl. Lyc / Cont Fuel Injected	10-05533	**$1,250.00**
Skyview Lycoming / Continental 6 Cyl Carbureted Engine Pack	Engine Monitor Module Without Probes Kavlico Probe Package - 6 Cyl. Lyc / Cont Carbureted	10-05534	**$1,404.00**
Skyview Lycoming / Continental 6 Cyl Fuel Injected Engine Pack	Engine Monitor Module Without Probes Kavlico Probe Package - 6 Cyl. Lyc / Cont Fuel Injected	10-05535	**$1,384.00**
Skyview Rotax 912 Engine Pack	Engine Monitor Module Without Probes Kavlico Probe Package - Rotax 912	10-05536	**$914.00**
Skyview Jabiru 4 Cyl Engine Pack	Engine Monitor Module Without Probes Kavlico Probe Package - 4 Cyl. Jabiru 2200	10-05537	**$1,049.00**
Skyview Jabiru 6 Cyl Engine Pack	Engine Monitor Module Without Probes Kavlico Probe Package - 6 Cyl. Jabiru 3300	10-05538	**$1,164.00**

DYNON SKYVIEW HDX SYSTEMS



SkyView HDX features improved displays, beautiful design, unrivaled control ergonomics, and an upgraded touch interface. SkyView HDX displays are compatible with all existing SkyView components and feature identical mounting profiles and electrical connections.

Description	Part No.	Price
10" SkyView HDX Display, bundle (Includes SV-HDX1100/A 10" SkyView HDX Display, SV-HARNESS-D37, SV-SYNVIS-280 Synthetic Vision, SV-MAP-270 Navigation Mapping)	10-06254	**$4,385.00**
10" SkyView HDX Display only, (no harness) (Includes SV-SYNVIS-280 Synthetic Vision, SV-MAP-270 Navigation Mapping)	10-06236	**$4,295.00**
7" SkyView HDX Display, bundle (Includes SV-HDX800/A 7" SkyView HDX Display, SV-HARNESS-D37, SV-SYNVIS-280 Synthetic Vision, SV-MAP-270 Navigation Mapping)	10-06255	**$3,138.00**
7" SkyView HDX Display only (no harness) (Includes SV-SYNVIS-280 Synthetic Vision, SV-MAP-270 Navigation Mapping)	10-06237	**$3,052.00**

DYNON AUTOPILOT SERVO + MOUNTING KIT PACKAGES



Dynon Avionics servos are dimensionally identical to other leading servos for drop-in upgradability. Behind the scenes, though, the SV line of servos are all-new. A lightweight aluminum case houses a stainless steel gear train to optimize weight while not sacrificing strength. The servo control arm is captured by a castellated nut and secured by a cotter pin, just like other critical interfaces in your aircraft. Each servo is managed by its own microprocessor, making the servo an active, smart extension of the autopilot. This simplifies the control-surface-to-servo calibration, and prevents the servo from driving itself endlessly like other servos can. As an ultimate mechanical failsafe, a simple and effective shear pin is employed to let you break the servo free of the aircraft control surface in an emergency.

Description	Part No.	Price
RV-6 Roll Servo + Mounting Kit (Includes Servo mounting kit RV-6 roll (fuselage):101020-001, pkg SV32L (long output arm): 100854-001	10-03555	**$795.00**
RV-7/8/10 Roll Servo + Mounting Kit (Includes Servo Mounting kit-RV-7/8/10 roll (R wing): 101020-003, pkg SV32 (std. output arm): 100854-000	10-03556	**$795.00**
RV-9 Roll Servo + Mounting Kit (Includes Servo Mounting kit-RV-9 roll (R Wing):101020-004, pkg SV32 (std. output arm): 100854-000	10-03557	**$795.00**

Description	Part No.	Price
RV-6/7/9 Pitch Servo + Mounting Kit (Includes Servo Mounting Kit-RV-6/7/9 Pitch: 101020-005, pkg SV32 (std. output arm): 100854-000)	10-03559	**$795.00**
RV- 4/8 Pitch Servo + Mounting Kit(Includes Servo Mounting kit- RV-4/8 Pitch : 101020-002, pkg SV32 (std. output arm): 100854-000	10-03560	**$795.00**
RV-10 Pitch Servo + Mounting Kit: (Includes servo mounting kit RV-10 pitch (fuselage):101020-006, pkg SV42 (std output arm): 101058-000	10-03893	**$795.00**

SEE WWW.AIRCRAFTSPRUCE.COM FOR LISTING OF ALL ENGINE SENSORS, HARNESSES, & PACKAGES

GRT EFIS SYSTEMS



GRT AVIONICS SPORT SX EFIS SYSTEM

Evaluating your own avionics needs is not always easy. The Sport SX series provides the low-cost solution that starts big on capability and provides upgrade paths for the future. Its internal high-integrity AHRS provides the perfect balance of simplicity and precision for light aerobatics. The Sport SX is a great option for kitplane builders desiring a lightweight, simple EFIS with unmatched capability and reliability. Purchase EIS engine monitor package for complete graphical engine display.

Model	Part No.	Description	Price
S200SX6	11-11768	Single 6.5" EFIS System Package with Upgraded CPU, Internal AHRS & GPS, and all wiring harnesses	$2,595.00
S200SX8	11-11769	Single 8.4" EFIS System Package with Upgraded CPU, Internal AHRS & GPS, and all wiring harnesses	$2,795.00
S100SX6	11-11770	6.5" Multi-Function Display with Upgraded CPU and wiring harnesses. No internal AHRS or GPS (slave unit only)	$1,595.00
S100SX8	11-11771	8.4" Multi-Function Display with Upgraded CPU and wiring harnesses. No internal AHRS or GPS (slave unit only)	$1,795.00
Sport Options- Specify at time of order.			
Model	**Part No.**	**Description**	**Price**
SX-OPT-SYN	11-08484	Synthetic Vision Software	$398.75
SX-OPT-GPSV	11-09548	Vertical Commands autopilot software	$398.00
SX-OPT-429	11-11772	Remote ARINC 429 module	$449.95
SX-OPT-AOA	11-16019	GRT Sport SX EFIS AOA Option	$249.95



GRT AVIONICS HORIZON HX EFIS SYSTEM

" The HX line is a no-compromise solution, including features you might expect to find only in business jet or airline avionics. We go beyond the typical synthetic vision EFIS with terrain optimized to convey a sense of depth perception unmatched by other EFIS systems. Primary Flight Data, Moving Map, and Graphical Engine Data (with optional EIS engine monitor), Airspeed, Sensitive Altimeter, VSI, Attitude, True Airspeed, Ground Speed, Heading, Course, GPS Track, Slip/Skid, Airspeed limits & V-speeds. Full horizontal and vertical autopilot functionality with coupled precision approaches (with IFR GPS/NAV and optional GRT servos); Video PFD overlay for optional FLIR night vision; built-in angle of attack and G-meter; Open compatibility with a variety of avionics, ADS-B receivers, autopilots; Bluetooth communication with GRT Remote App for Android; Precision AHRS does not require GPS or airspeed aiding and is directly wired to Display Units for true redundancy.

"

Model	Part No.	Description	Price
HX6A1-PKG	11-11773	Single 6.5" HX EFIS system package with single AHRS and wiring harnesses	$3,795.00
HX8A1-PKG	11-11774	Single 8.4" HX EFIS system package with single AHRS and wiring harnesses	$3,995.00
HXR8A1-PKG	11-16013	GRT Single 8.4 Horizon Hx EFIS Package with AHRS Harness	$3,995.00
HX6A2-PKG	11-11775	Dual 6.5" HX EFIS system package with single AHRS and wiring harnesses	$6,399.00
HX8A2-PKG	11-11776	Dual 8.4" HX EFIS system package with single AHRS and wiring harnesses	$6,795.00
HXR8A2-PKG	11-16015	GRT Dual 8.4 Horizon Hx EFIS Package with AHRS Harness	$6,795.00
HXR8A1-PKG HX Package Options & Accessories			
Model	**Part No.**	**Description**	**Price**
HX6-PKG-ADD	11-11777	Additional 6.5" HX display unit with wiring harness	$2,899.00
HX8-PKG-ADD	11-11778	Additional 8.4" HX display unit with wiring harness	$3,095.00
HXR8DU-PKG-ADD	11-16017	GRT Additional 8.4 Horizon Hx Display With Harness	$3,095.00
AHRS-2-PKG	11-11779	Substitute Single AHRS in any above package with Dual AHRS	$449.75
GPS-EXT-WAAS	11-11780	GPS Module, External VFR WAAS for HX, HXr or Sport	$274.00
EFIS-USB-EXT	11-16028	GRT EFIS USB Extension Cable	$13.95
RM-SC-01	11-16031	GRT EFIS Serial Port Combiner Expander	$294.95
EX7-HORIZON	11-16044	GRT Horizon EX EFIS Display Unit	$2,395.00
ADAPTIVE-AHRS	11-16068	GRT Horizon Series EFIS Adaptive AHRS Option	$2,495.00
AHRS-OPT-GPS	11-16069	GRT Horizon Series EFIS GPS Option	$274.95
AHRS-OPT-AOA	11-16070	GRT Horizon Series EFIS AOA Option	$249.95
AHRS-GF	11-16071	GRT Horizon Series EFIS AHRS High Speed Option	$149.95
EFIS-28V	11-16072	GRT Horizon Series EFIS 28V Option	$149.95
FLIR-01	11-16073	GRT Horizon Series EFIS Infrared Video Overlay Option	$4,495.00
USB-VIDEO	11-16074	GRT Horizon Series EFIS USB Video Option	$149.75



GRT AVIONICS HORIZON HXR EFIS SYSTEM

"HXr offers GRT Avionics' largest screen sizes and a simplifed pilot interface built on the well-proven HX processor. Dedicated remote avionics control panel allows for remote mounting of the radio stack to make room for the large 10.4"" or 12.1"" LCD screen. Primary Flight Data, Moving Map, and Graphical Engine Data (with optional EIS engine monitor), Airspeed, Sensitive Altimeter, VSI, Attitude, True Airspeed, Ground Speed, Heading, Course, GPS Track, Slip/Skid, Airspeed limits & V-speeds. Full horizontal and vertical autopilot functionality with coupled precision approaches (with IFR GPS/NAV and optional GRT servos); Video PFD overlay for optional FLIR night vision; built-in angle of attack and G-meter; Open compatibility with a variety of avionics, ADS-B receivers, autopilots; Bluetooth communication with GRT Remote App for Android; Precision AHRS does not require GPS or airspeed aiding and is directly wired to Display Units for true redundancy.

Model	Part No.	Description	Price
HXR10A1-PKG	11-11781	Single 10.4" HXr EFIS system package with single AHRS and wiring harnesses	$4,625.00
HXR12A1-PKG	11-11782	Single 12.1" HXr EFIS system package with single AHRS and wiring harnesses	$5,225.00
HXR10A2-PKG	11-11783	Dual 10.4" HXr EFIS system package with single AHRS and wiring harnesses	$7,725.00
HXR12A2-PKG	11-11784	Dual 12.1" HX EFIS system package with single AHRS and wiring harnesses	$8,925.00
HXr Package Options & Accessories			
Model	**Part No.**	**Description**	**Price**
HXR10-PKG-ADD	11-11785	Additional 10.4" HXr display unit with wiring harness	$3,495.00
HXR12-PKG-ADD	11-11786	Additional 12.1" HXr display unit with wiring harness	$4,095.00
AHRS-2-PKG	11-11779	Substitute Single AHRS in any above package with Dual AHRS	$449.75
GPS-EXT-WAAS	11-11780	GPS Module, External VFR WAAS for HX, HXr or Sport	$274.00

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GRT EFIS SYSTEMS

GRT EIS SYSTEMS



For over 22 years, Grand Rapids Technologies' EIS engine monitor has proven itself in most every aircraft engine installation from the most basic 2-stroke engines to turbines. It can be used as a stand-alone system in aircraft without an EFIS display, or an integral part of a GRT Avionics "glass cockpit" EFIS graphical engine display. EIS provides critical engine data and warnings that could save your life. Basic packages come with wiring harnesses and engine probes recommended by the engine manufacturer, including CHT, EGT, and oil pressure/temperature if sensors do not normally come with the engine. Advanced packages include all of the Basic probes plus fuel flow, current sensor, and manifold pressure. Visit www.aircraftspruce.com for more information on packages and probes. Lifetime warranty for manufacturer defects.

Description	Model	Part No.	Price
Lyc/Cont. Package, 4-cylinder, Basic	EIS-4K-LYC-BAS-PKG	11-11745	**$1,035.00**
Lyc/Cont Package, 4-cylinder, Advanced	EIS-4K-LYC-ADV-PKG	11-11746	**$1,595.00**
Lyc/Cont Package, 4-cylinder, Advanced, Long-Life EGT	EIS-4K-LYC-ADVLL-PKG	11-11747	**$1,695.00**
Lyc/Cont. Package, 6-cylinder, Basic	EIS-6K-LYC-BAS-PKG	11-11748	**$1,225.00**
Lyc/Cont Package, 6-cylinder, Advanced	EIS-6K-LYC-ADV-PKG	11-11749	**$1,750.00**
Lyc/Cont Package, 6-cylinder, Advanced, Long-Life EGT	EIS-6K-LYC-ADVLL-PKG	11-11750	**$1,850.00**
Jabiru 2200 Package, Basic	EIS-4K-JAB-BAS-PKG	11-11751	**$875.00**
Jabiru 2200 Package, Advanced	EIS-4K-JAB-ADV-PKG	11-11752	**$1,275.00**
Jabiru 3300 Package, Basic	EIS-6K-JAB-BAS-PKG	11-11753	**$995.00**
Jabiru 3300 Package, Advanced	EIS-6K-JAB-ADV-PKG	11-11754	**$1,395.00**
Rotax 912/914 Package, Basic	EIS-4K-RTX-BAS-PKG	11-11755	**$875.00**
Rotax 912/914 Package, Advanced	EIS-4K-RTX-ADV-PKG	11-11756	**$1,275.00**
Viking Package, Basic	EIS-4K-VIK-BAS-PKG	11-11757	**$785.00**
Viking Package, Advanced	EIS-4K-VIK-ADV-PKG	11-11758	**$1,085.00**
UL Power Package, Basic	EIS-4K-ULP-BAS-PKG	11-11759	**$1,099.00**
UL Power Package, Advanced	EIS-4K-ULP-ADV-PKG	11-11760	**$1,350.00**
UL Advanced Package, 6 cylinder (Includes Basic + pulse FF)	EIS-6K-ULP-ADV-PKG0	11-16025	**$1,525.00**
UL Basic Package, 6 cylinder (6 bayonet CHT, 4 EGT, 50-amp CS, OP, FP)	EIS-6K-ULP-BAS-PKG	11-16026	**$1,315.00**
Corvair Package, Basic	EIS-6K-CORV-BAS-PKG	11-11761	**$1,115.00**
Corvair Package, Advanced	EIS-6K-CORV-ADV-PKG	11-11762	**$1,595.00**
Corvair Package, Simple (6 CHT, 6 EGT, OT, OP, FP)	EIS-2K-CORV-SIM-PKG	11-16055	**$675.00**

GRT AVIONICS AUTOPILOT SERVOS



Digital CNC machined servos add autopilot functionality to any GRT Avionics EFIS System. Heading select, VOR/GPS tracking, ILS and GPS precision approach coupling*, climb/descent to selected altitude using preset IAS or VS*, automatic approach capture. Pitch servo torque sensing provides Trim Up/Trim Down indication. Clutchless design with shearble output arm provides fail-safe mechanical method of freeing flight controls in the unlikely event of servo jam. 12-29V. Standard torque suitable for RV & most 2-place kitplanes. High torque for 4-place aircraft. Specify aircraft type when ordering. *Standard a/p features on HX and HXr. Sport requires Vertical Commands software.

Description	Part No.	Price
Roll servo, standard torque, 1.0 Amp, 2.25 lbs	11-09791	**$749.75**
Pitch servo, standard torque, 1.0 Amp, 2.25 lbs	11-09792	**$749.75**
Roll servo, high torque, 2.0 Amp, 2.25 lbs	11-11763	**$845.00**
Pitch servo, high torque 2.0 Amp, 2.25 lbs	11-11764	**$845.00**
Roll servo wiring harness	11-11766	**$20.65**
Pitch servo wiring harness	11-11765	**$20.65**
Servo Mount Kit- Specify type of aircraft.	11-11767	**$64.95**

GRT SENSORS AND PROBES & ACESSORIES

Description	Model	Part No.	Price
Small EGT probe fits exhaust pipesfrom 1-2" diameter	EGT-HCS-01	11-09535	**$43.85**
Large EGT probe fits exhaust pipesfrom 1.5-2.5" diameter	EGT-HC-01	11-09533	**$44.50**
Long Life EGT Probe small, for 1-2" pipes	EGT-HC-SLL-01	11-11844	**$69.75**
8 mm compression-style EGT probe. Includes compression fitting.	EGT-CF-01	11-09534	**$44.85**
Long life EGT probe small clamp fits pipes 1-2" diameter.	EGT-HC-SLL-01	11-11844	**$69.75**
Current sensor, +/- 100 AMP. Suitable for aicraft with 60 amp alternators.	CS-01	11-06276	**$74.75**
Current Sensor +/- 50AMP. Suitable for aicraft with Rotax, Jabiru, and others with light duty charging systems.	CS-02	11-07224	**$63.75**
Manifold pressure sensor, 0-31 in. Hg. For normally-aspirated engines.	MAP-01	11-06274	**$74.85**
Manifold pressure sensor, 0-51 in. Hg. For turbocharged engines.	MAP-02	11-09542	**$72.95**
CNC Machined, Black Powdercoat to match EFIS	EIS-BEXEL	11-11467	**$92.75**
Bayonet-style CHT probe. Used mostly with Lycoming and Continental engines.	CHT-BAY-01	11-09538	**$38.50**
Replacement threaded adapter for bayonet style CHT probes.	BHT-ADP-01	11-09539	**$5.95**
Ring style CHT probe with 4 mm ring. Suitable for some Rotax installations.	CHT-04-01	11-11468	**$15.75**
Ring style CHT probe with 10 mm ring. Suitable for Rotax 912/914 installations.	CHT-10-01	15-06432	**$18.95**
Ring style CHT probe with 12 mm ring. Suitable for Jabiru installations.	CHT-12-01	11-11469	**$15.75**
Ring style CHT probe with 14 mm ring. Suitable for many 2-stroke engines including Rotax & Zenoah	CHT-14-01	11-09537	**$15.75**
Ring style CHT probe with 18 mm ring. Suitable for Continental engines without Bayonet CHT ports.	CHT-18-01	11-09536	**$17.75**
Pressure Senders for oil & coolant Ranges from 0-80 psi to 0-150 psi	HPS-01	11-11470	**$41.55**
Pressure Senders for oil & coolant Ranges from 0-80 psi to 0-150 psi	HPS-02	11-06423	**$41.55**
Coolant pressure sender 0-28 psi	LPS-02	11-09543	**$47.95**
Fluid Temperature Probe - 1/8-27 threads	FT-1827-02	11-09540	**$22.75**
Oil Temperature Probe - Lycoming & Continental. For use with older GRT EIS models.	FT-LC-01	11-09541	**$37.95**
EIS Outside air temp probe. Wire to either EIS or EFIS.	OAT-02	15-05248	**$24.95**
Oil Temperature Probe. Wire to either EIS or EIFS. Included with the EIFS system.	OAT-03	11-11227	**$84.75**
Coolant pressure sender 0-28 psi. Recommended for Carbureted Engines.	LPS-02	11-09543	**$47.95**
0-100 psi fuel pressure sender. Recommended for fuel injected engines.	HPS-SS-01	11-09545	**$139.95**
Machined brass probe works with most carburetors except Bing.	CARB-01	11-06273	**$33.85**
Princeton capacitive fuel level probe with 2 set points. For rectangular or airfoil shaped tanks with linear interpolation between the set points.	FL-PE-01	11-09544	**$89.95**
Princeton capacitive fuel level probe with 5 set points. For irregularly-shaped tanks. Works with Van's capacitive plates.	FL-PE-ADV	11-11848	**$135.99**
Capacitive Fuel Level Probe - Srandard, 5 set point, PF or FM mounting	---	10-00258	**$139.95**

GRAND RAPIDS MINI-GA PORTABLE EFIS



The Mini is not a compromised instrument. It is a complete EFIS capable of synthetic vision, with a GPS navigator, and incorporating the same technology that made GRT famous for its high-integrity AHRS. It is completely suitable as the primary instrument in your panel or as a backup.

The Mini includes an electronic attitude source (AHRS) that is not dependent on GPS and/or air data. IFR certifiable altitude, vertical speed, and airspeed are boldly shown with tapes and smoothly rotating drum-style digital displays that instinctively convey value and trend. Internal or external GPS navigation and steering data is provided on the PFD, and the -X and -AP variations include highway-in-the sky guidance to any runway in the database. The addition of the external magnetometer adds heading and winds.

The primary flight display screen terrain showing relative height. In the upper left the autopilot/flight director mode is shown as synthetic approach to runway 35. The flight director is commanding a slight pitch down in the center of the screen. The airspeed and altimeter drums move smoothly and the high-contrast digits make them highly readable. Extending up from the runway is the way-point balloon.

Features: • Primary or Backup for Attitude / Heading / Track / Airspeed / Altitude / VSI • 1200 nit sun-readable display. Dimmable to less than 10 nits for night flying. • Highly readable airspeed/altimeter tapes and rotating drum-style digital display. • Free database updates for all US territory. Jeppesen databases available worldwide. • Simple installation. Power, ground and mount GPS antenna on your dash. • Incorporates a full AHRS solution that does not require GPS or air data to provide attitude data. • Provides automatic cross-checking of attitude data when connected to a GRT EFIS. • High accuracy pitot static sensors allows accurate airspeed readings to less than 20 mph, making the Mini suitable for any airplane, helicopter, or ultralight. • Includes voltmeter, true airspeed, slip ball, and more • Includes Trig TT22 transponder control head functions. Saves up to $500 over separate control head. • Fully functional from -10 to +160° F. • 9-30Vdc input power. 0.25 amps max (0.7 amps while charging). • Case CNC machined from aluminum billet.

P/N 11-14250 ..... **$1,685.00**

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GRT EFIS – EFIS SYSTEMS

GRAND RAPIDS MINI BACKUP EFIS



A small, lightweight, economical VFR EFIS system for LSA and light kitplanes. An affordable, high-quality backup to our larger EFIS systems for IFR operations. A stand-alone autopilot and backup flight instrument all in one. As an IFR backup flight instrument, the Mini-X and Mini-AP can do what no other brand of backup display can do for GRT Horizon and Sport users: Serve as an auxiliary autopilot control head for GRT servos that maintains an independent source of control if the main display unit should fail. Utilize the same pilot interface as the popular Horizon and Sport series, meaning you will not have to remember a different brand's "buttonology" in an emergency. Now taking orders. No deposit required! Shipment of Mini-B anticipated in January 2014, with Mini-X and Mini-AP to follow.

Description	Part No.	Price
GRT Mini-B Backup EFIS	11-12236	**$1,189.00**
GRT Mini-X EFIS	11-12237	**$1,395.00**
GRT Mini AP EFIS	11-14251	**$2,095.00**
GRT Mini X & GA Efis Remote Magnetometer Option	11-14254	**$259.95**
GRT Mini X Moving Map HSI Software	11-14255	**$259.00**
GRT Mini EFIS Series Internal Back Up Battery Option	11-14256	**$179.95**
GRT Mini EFIS Series Oat Option	11-14257	**$84.75**
GRT Mini AP Arnic 429 Adapter	11-14258	**$449.00**
GRT Mini EFIS Series Aoa Option	11-14259	**$249.95**
GRT Mini X & AP Efis Feature Set Option	11-14264	**$249.95**
GRT Mini Ef EFIS is Usb Extension Cable	11-16029	**$19.99**

GRT EFIS 2020 ADS-B COMPLIANT GPS



The GRT Safe-Fly is a 2020 ADS-B compliant GPS, allowing it to be used as the navigation source for your compatible ADS-B output. This full compliance with FAR 91.227 allows your ADS-B output to trigger the return of traffic data. This demanding standard requires a GPS that is reliable to better than one undetected failure per million hours, making it a natural as your navigation source for your GRT EFIS. Other benefits include triple isolated power inputs, making it easy to power it with primary, back up, and even a third power source. GRT designed the module to tolerate very high levels of electromagnetic interference (EMI), large power fluctuations, and vibration. No standby power is required. Even the case is machined from solid aluminum, protecting the Safe-Fly from further EMI and physical damage. P/N 11-16027..... **$495.00**

GRAND RAPIDS ENGINE INFORMATION SYSTEM (EIS) FOR M14 9 CYLINDER RADIAL



A complete engine monitoring system at an affordable price. The EIS Model 4000 starts with the most comprehensive EGT/CHT monitor available anywhere, and then adds every other engine monitoring function you need, and more! Utilizing a back-lit, sunlight readable display, the EIS provides user-programmable graphical and digital displays in a compact package. A host of other useful features and the scrutiny of the 62 alarms, add the final touches to make your flying a safe, satisfying, and enjoyable experience. M14 9 Cylinder Radial. (9 EGT, 3 CHT, OT, OP, FP, FF, 0-51" MAP, 100A CS) P/N 11-16060..... **$1,775.00**

GRAND RAPIDS SPORT EX EFIS



The Sport EX puts a Primary Flight Display EFIS in your panel at an unbeatable price. Software options let you purchase what you need now, and expand later, without removing the EX from your panel. Built on more than two decades of avionics experience, and using the industry's only AHRS that can operate unaided, the base model provides primary flight functions and engine pages which can be driven by any GRT EIS engine monitor. The base model even includes synthetic approach to any runway, and depiction of obstacles on the PFD screen.

Model No.	Description	Part No.	Price
EX7-SPORT-BAS-PKG3	Basic Pkg	11-16021	**$1,995.00**
EX7-SPORT-ADV-PKG	Advanced Pkg	11-16023	**$2,395.00**
EX7-SPORT-ADV-TOUCH-PKG	Advanced Touch Pkg	11-16024	**$2,865.00**
EX7-SPORT	Display Only	11-16033	**$1,495.00**
EX7-OPT-MAP	Moving Map Option	11-16034	**$199.95**
EX7-OPT-SYN	Synthetic Vision Option	11-16035	**$399.95**
EX7-OPT-ADS-B	Ads-B Display Option	11-16036	**$199.95**
EX7-OPT-BT	Bluetooth Interface Option	11-16037	**$39.99**
EX7-OPT-3SERIAL	Additional 3 Serial Ports Option	11-16038	**$199.95**
EX7-OPT-MAG	Digital Magnetometer Option	11-16039	**$259.95**
EX7-OPT-ANALOG	Analog Input Option	11-16040	**$199.95**
EX7-OPT-IFR-AP	IFR Autopilot Commands Option	11-16041	**$399.95**
EX7-OPT-TOUCH	EFIS Touch Screen Option	11-16043	**$274.95**

GRAND RAPIDS EIS ENGINE MONITORS



A complete engine monitoring system at an affordable price. The EIS Model 4000 starts with the most comprehensive EGT/CHT monitor available anywhere, and then adds every other engine monitoring function you need, and more! Utilizing a back-lit, sunlight readable display, the EIS provides user-programmable graphical and digital displays in a compact package. A host of other useful features and the scrutiny of the 62 alarms, add the final touches to make your flying a safe, satisfying, and enjoyable experience.

Description	PN	Price
M2000 2 Stroke Basic Monitoring Instrument Only	11-16045	**$369.95**
M2004 4 Stroke Basic Monitoring Instrument Only	11-16046	**$449.95**
M4000 4 Cyl Full Engine Monitoring Instrument Only	11-16047	**$699.95**
M6000 6 Cyl Full Engine Monitoring Instrument Only	11-16048	**$749.95**
M9000 9 Cyl Full Engine Monitoring Instrument Only	11-16049	**$919.95**
M2000 For Powered Parachutes With 2 Stroke Engine	11-16051	**$510.95**
M4000 For Powered Parachutes With 4 Stroke Engines	11-16052	**$589.95**
M4000 For Powered Parachutes With Rotax 912/914 Engine	11-16054	**$589.95**

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Prices Subject to Change Without Notice

ADVANCED FLIGHT SYSTEMS AF3400


AF-4500EF 8.4"


AF-3500EF 8.4"


AF-3400 6.5"

Can be configured as an EFIS (EF), Engine Monitor (EM), or Combination (EE) or both with the appropriate hardware modules installed. Utilize the Advanced Avionics Bus allowing the pilot and copilot displays to exchange screens. Powered by a state-of-the-art certified Crossbow AHRS engine. LCD display is 50% brighter than any competitor. EFIS — Unlike other systems the horizon display is generated from an internal Crossbow AHRS that is based on certified boards and software. The display features a clear and easy to read airspeed indication with user adjustable color ranges, the altimeter is set using a familiar and convenient adjustment knob. Heading display is generated from a remote mounted magnetometer. The heading can be displayed on a tape across the top or with our new EFIS DG©. Other flight instruments functions include a slip ball and user-configurable g-meter. Aircraft Monitoring and Data Acquisition System — The system continuously monitors and displays not only all aircraft engine data but any of the standard instruments can be eliminated or added to the screen. Mapping — An optional feature, your AF-3400s/3500s can now be configured with onboard mapping. Position is derived from an outboard GPS signal and displayed on the screen. Several display page options can be selected.

Model	Part No.	Description	Price
		Single Screen Systems	
AF-5500	11-11833	AF-5000 EFIS, Basic Map, EMS, AHRS	**$5,695.00**
AF-5600	11-11835		**$6,295.00**
		Dual Screen Systems	
AF-5500	11-11837	Dual (2) AF-5000 EFIS, Basic Map, EMS, AHRS	**$8,795.00**
AF-5600	11-11838		**$9,949.00**
AF-5800	11-11839		**$11,110.00**
		EFIS Screens	
AF-5200	11-11787	Display	**$2,874.00**
AF-5500	11-10556	Display	**$3,866.00**
AF-5600	11-10557	Display	**$4,251.00**
AF-5800	11-11788	Display	**$4,830.00**
		EFIS Screen Options	
AF-Touch	11-11789	Touch Screen Option	**$966.00**
72010	11-11790	AHRS AFS	**$1,449.00**
71300	11-11791	Engine Board	**$495.00**
AF-MAP	11-05963	Advanced Mapping Software	**$495.00**
20530	11-07181	EFIS AOA Option	**$593.00**
AF-VPX-Key	11-11792	Vertical Power Interface Software	**$272.95**
AF-WX-Key	11-11793	Weather Interface Software (Free with 74110)	**$247.95**
AF-XPDR-Key	11-11794	Transponder Interface Software (Free with 74109)	**$247.95**
		EFIS Optional Equipment	
71703	11-11795	AF-5000 Back-up Battery	**$281.95**
73101	11-08324	AF-GPS Moule	**$289.95**
74120	11-11796	Comm Radio	**$1,245.00**
74110	11-11797	ADS-B Receiver Module	**$772.00**
74109	11-11798	Mode S ES Class 1 Transponder	**$2,308.00**
71400	11-05964	ARINC Adaptor	**$495.95**
74103	11-08325	XM Weather Module with GPS	**$988.00**
74125	11-11799	Audio Panel	**$1,445.00**
		Autopilot System Parts	
80012	11-11801	AF-Pilot Autopilot System (STD Servos)	**$2,395.00**
		Advanced AOA Systems	
20521	11-11813	AOA Sport System Aluminum Wing	**$840.00**
20511	11-11823	AOA Pro System Aluminum Wing	**$1,375.00**

LAVERSAB AUTOMATED PITOT STATIC TESTER (FOR LIGHT JETS)



The Model 6250 is used to perform leak-checks and accuracy checks on the Pitot Static systems of RVSM aircraft. Accuracy checks are typically performed on altimeters, airspeed indicators and VSI's. The high accuracy of the Static output is fully compliant with RVSM requirements. The high accuracy of the Pitot output is ideally suited for checks at low airspeeds. The Model 6250 is equipped with a Remote unit which has a large sunlight-readable display and a keypad. An internal 8-hour battery (optional) makes the tester completely portable. The wide operating temperature (optional) makes it usable in any environment. The "Profiles" feature makes it very easy to use. Calibration is required only once a year. The 6250 is also WiFi-enabled. With these distinctive features, the Model 6250 is the ideal Pitot Static tester for light RVSM Jets. P/N 12-04748 .....**$13,900.00**

LAVERSAB RVSM AUTOMATED PITOT STATIC TESTER - ALL AIRCRAFT



The Model 6270 is used to perform leak-checks and accuracy checks on the Pitot Static systems of RVSM aircraft. Accuracy checks are typically performed on altimeters, airspeed indicators and VSI's. The high accuracy of the Static output is fully compliant with RVSM requirements. The Model 6270 is equipped with a Remote unit which has a large sun light-readable display and touch-screen. A redundant keypad is also included. An internal battery (optional) makes the tester completely portable. The wide operating temperature (optional) makes it usable in any environment. The "Profiles" feature makes it very easy to use. Calibration is required only once a year. The 6270 is also WiFi-enabled. With these distinctive features, the Model 6270 is the ideal Pitot Static tester for RVSM-compliant aircraft.
P/N 12-04749 .....**$17,000.00**



LAVERSAB UNIVERSAL PITOT STATIC ADAPTER

Laversab Universal Adapter for Pitot Static Testers. For most aircraft and helicopters. Customized adapters. Full adapter-kits for specific aircraft.
P/N 12-04751.....**$3,500.00**



LAVERSAB PITOT STATIC TESTER (NON-RVSM)

The Model 6200 is used to perform leak-checks and accuracy checks on the Pitot Static systems of non-RVSM aircraft. Accuracy checks are typically performed on altimeters, airspeed indicators and VSI's. The high accuracy of the Pitot output is ideally suited for checks at low airspeeds. The Model 6200 is equipped with a Remote unit which has a large sunlight-readable display and touch-screen. A redundant keypad is also included. An internal 8-hour battery (optional) makes the tester completely portable. The wide operating temperature (optional) makes it usable in any environment. The "Profiles" feature makes it very easy to use. Calibration is required only once a year. The 6200 is also WiFi-enabled. With these distinctive features, the Model 6200 is the ideal Pitot Static tester for helicopters and non-RVSM aircraft. P/N 12-04747 .....**$11,900.00**

LAVERSAB PITOT STATIC HOSE KIT 2



Laversab Pitot Static Hose Kit 2. For connecting Models 6150, 6200, 6300 (all models) to aircraft with relatively small airframes.
Includes the following: • 4 each, #4 Hoses, 20 ft. length with #4 AN-female fittings on each end • 2 each, #3 Hoses, 2 ft. length with #3 AN-female fittings on each end • 2 each, Reducer #4 AN-male to #3 AN-male.
P/N 12-04752 .....**$790.00**

AV

MGL V6/V6R VHF AVIATION RADIO TRANSCEIVER



Based on the digital technology intruduced in the V10, the V6 provides the same powerful 6W transmitter and modulation system. Designed for 25Khz spacing with 8.33Khz compatible operation selectable. 100 channel storage and channel operating mode compatible with the V10. Four place, dual circuit intercom system with full isolate. Each intercom microphone input has its own level control and VOGAD noise suppression system. Dual PTT inputs. Black box flight recorder audio output. The intercom outputs are fully stereo with a dedicated stereo music input plus two auxiliary channels for mobile phone and EFIS annunciators. The V6 radio fits a standard 2 1/4" round instrument hole from the rear and provides simple mounting due to captive nuts. Wide Operating voltage range: 12V to 28V DC.

VHF-6 Transceiver ..... P/N 11-10464 ..... **$1,195.00**
V6R Remote Transceiver ..... P/N 11-12014 ..... **$1,150.00**

MGL AVIONICS E3 ENGINE MANAGEMENT SYSTEM



A compact 3 1/8" format instrument all that is needed to monitor most smaller aircraft engines from two-stroke ultralight engines to medium sized four strokes such as from Rotax, Continental and Lycoming. Most automotive engine conversions can benefit from the use of the E3 engine monitor. • 66 different engine setup configurations possible • Universal, programmable rev counter (engine RPM) with digital and analog readout, with a programmable high alarm limit • Programmable engine Hobbs meter (password protected) and running timer (flight timer) with automatic flight log • Can monitor up to four programmable thermocouple channels • Special Rotax 912/914 engine monitor mode utilizing the standard built in Rotax NTC CHT probes • Supports the new Rotax 912/914 4-20mA oil pressure sender. P/N 11-05578 ..... **$345.00**

MGL AVIONICS XTREME MINI EFIS



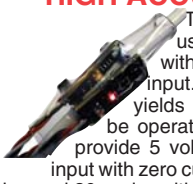
The XTreme EFIS is a mini-EFIS unit based on a 4.3" sunlight readable, wide viewing angle, high resolution LCD display. It integrates an SD card reader (for software updates and for flight data recorder), 5 function buttons, a rotary control and a basic GPS navigator (functions available in future firmware release). It can be connected to standard MGL Avionics AHRS sensors and RDAC (engine monitor) boxes. It also integrates a CAN Aerospace compatible communications interface that will be used with future versions of MGL Avionics sensors. Standard RS-232 ports are also available. The XTreme is designed to fit a standard 3 1/8" round instrument hole. P/N 11-08757 ..... **$1,295.00**

MGL MAGNETIC CURRENT MEASUREMENT SENSOR



This sensor can be used to measure DC currents in aircraft power systems in a wide range from less than 4A to as high as 120A depending on installation and configuration. The sensor connects to an EFIS system via spare RDAC inputs. G1 and G2 EFIS systems can support up to 4 of these sensors while Enigma can support 2. P/N 11-10422 ..... **$50.00**

HIGH ACCURACY CURRENT SENSORS



The ME CS-6AB & ME CS-6CB is easy to install using just shrink tubing and zip-ties, and is compatible with any display device expecting 0-5v current sensor input. It is easy to calibrate using a simple process that yields exceptional accuracy. Basic version designed to be operated with Engine or Flight monitoring systems that provide 5 volts to supply external sensors and accept a 0-5v input with zero current being at 2.5 volts. No input voltage protection beyond 30v, wire with caution. 5V ..... P/N 11-13991 ..... **$59.00**
7-30V ..... P/N 11-13992 ..... **$59.00**

MGL ELECTRONIC CIRCUIT BREAKER MODULE ECB



The ECB module provides 8 electronic circuit breakers. All breakers have the same characteristics: DC current up to 10A (programmable via dipswitch profile selection) or via an external device. Suitable for 12V or 24V DC aircraft power systems. Highly reliable, fault tolerant design – continues to operate even in case of total internal electronics failure.

Electronic Circuit Breaker Module ECB..... P/N 11-13634 ..... **$420.00**
Electronic Circuit Breaker Light & Switch Kit .... P/N 11-13635 ..... **$128.75**

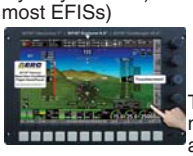
MGL AVIONICS VOYAGER - EFIS/EMS/GPS



8.4" Perfect Fit

The Voyager is IDENTICAL in PRICE and FUNCTION to the Odyssey. The only difference is the size. The Voyager is a comprehensive flight, engine and navigation instrument designed for Experimental and Light Sport aircraft. Like the Enigma, the Odyssey/Voyager is a hardware and software concept that promotes a flexible, powerful EFIS platform together with a software application system that is highly user-modifiable. The Voyager shares all software features with the Enigma, but differs in the following ways: Larger screen (8.4" diagonal). High resolution full VGA active TFT display - one of the best we have found! Faster processor for future functionality. 2 user-configurable rotary knobs and 7 function keys. ARINC 429 interface for communication with traffic alert systems (TIS and ZAON XRX) and for communicating with high-end digital autopilots (GPS Steer and Vertical Nav). CAN (automotive bus) for reading the ECU of automotive engine conversions. Analog +/- 150mA NAV inputs to display CDI/LOC/GS when connected to older analog Nav radios Low... Weight: Under 4 lbs. Current Draw: Only 1.5 Amps @ 12 Volts High... Screen brightness (800-1000 nits). Reliability. Flexibility (any screen layout you want!). Feature count (more instrument options available than most EFISs) P/N 11-06963 ..... **$3,900.00**

MGL IEFIS CHALLENGER 10.4 INCH TOUCHSCREEN



The iEFIS is a comprehensive flight, engine and navigation instrument designed for Experimental and Light Sport aircraft. Pressure sensitive, sunlight readable touchscreen that can also be operated using gloves. The pressure sensitive 10.4" touchscreen operates much like a tactile button preventing false activation when touching the screen in turbulent conditions. A simple but highly effective solution. The large amount of flexibility built into the base system allows the adaptation of the iEFIS to almost any mission and aircraft. The iEFIS screens can be completely edited by the user using a simple PC program to create any display the user desires. This makes the system absolutely the most customizable EFIS on the market today! Due to low system cost, the iEFIS is equally suited to light aircraft, gliders and rotorcraft, while providing enough flexibility to be utilized by multi-engine aircraft with up to 4 engines monitored, and by turbine aircraft and even spacecraft. P/N 11-12044 ..... **$2,995.00**

MGL XTREME EMS



The XTreme EMS is based on a 4.3" sunlight readable, wide viewing angle, high resolution LCD display. It integrates an SD card reader (for software updates and for engine data recorder), 5 function buttons, a rotary control. It can be connected to standard MGL Avionics RDAC (engine monitor) boxes (required). The XTreme EMS is designed to fit a standard 3 1/8" round instrument hole. The body is located off-center allowing the unit to replace instruments on the right side of a standard 6-pack configuration or any other location that currently occupies two instruments. Due to the light weight and very low mounting depth no complicated mounting brackets or trays are needed. Power use is low and operation from much less than 12V to around 28V is fully supported..... P/N 11-10393 ..... **$950.00**

MGL AVIONICS GENERATION 2 ODYSSEY - EFIS/EMS/GPS



The Odyssey is a comprehensive flight, engine and navigation instrument designed for Experimental and Light Sport aircraft. Like the Enigma, the Odyssey is a hardware and software concept that promotes a flexible, powerful EFIS platform together with a software application system that is highly user-modifiable. As an EFIS hardware platform, the Odyssey provides state of the art multi-processor based processing utilizing components chosen for absolute robustness in radiation intense environments such as found at high altitudes. This is coupled with intense low power design methods to further maximize overall system application and reliability. The large amount of flexibility built into the base system allows the adaptation of the Odyssey to almost any mission and aircraft. Due to low system cost, the Odyssey is equally suited to very light aircraft, gliders and rotorcraft, while providing enough flexibility to be utilized by even twin-engine aircraft with full dual engine monitoring..... P/N 11-05835 .. **$2,499.00**

To complete these systems: Select a RDAC engine Unit, Select Sensors, Order Attitude/Heading Sensor (SP-28, SP-4), Select accessories.

E3 UNIVERSAL ENGINE MONITOR



The E3 universal engine monitor combines in one compact 2.25" format instrument all that is needed to monitor most smaller aircraft engines from two-stroke ultralight engines to medium sized four strokes such as from Rotax, Continental and Lycoming. Also most automotive engine conversions can benefit from the use of the E3 engine monitor. P/N 11-06442 ..... **$309.00**

AV

Prices Subject to Change Without Notice

MGL STRATOMASTER EFIS



The Stratomaster is a comprehensive flight, engine and navigation instrument designed for Experimental and Light Sport aircraft. The large amount of flexibility built into the base system allows the adaptation of the Stratomaster to almost any mission and aircraft. Due to low system cost, Stratomaster is equally suited to very light aircraft, gliders and rotorcraft, while providing enough flexibility to be utilized by even twin-engine aircraft with full dual engine monitoring. ***Please note: Select RDAC model and engine senders for engine* functions, and select Attitude/Heading sensors (SP-4 and SP-2) for AHRS funtions.**

STRATOMASTER EFIS SYSTEMS			
Model	**Description**	**Part No.**	**Price**
Odyssey	Odyssey 10-.4", including GPS and antenna	11-05835	**$2,499.00**
Voyager	Voyager 8.4", including GPS and antenna	11-06963	**$3,900.00**
SENDERS			
Model	**Description**	**Part No.**	**Price**
CHT10	Type-K CHT Thermocouple,10mm spark plug	11-05561	**$35.00**
CHT12	Type-K CHT Thermocouple, 12mm spark plug	11-05562	**$35.00**
CHT14	Type-K CHT Thermocouple, 14mm spark plug	11-05563	**$35.00**
CHT18	Type-K CHT Thermocouple, 18mm spark plug	11-05564	**$35.00**
CHT Bayo	Type-K CHT Therm, bayonet-style 3/8"-24	11-05565	**$35.00**
EGT	Type-K EGT Thermocouple, M8 x 1 thread	11-05567	**$45.00**
EGT Clamp Lg	Type-K EGT Therm., Clamp-Type Lg. (<1.5" dia)	11-05568	**$50.00**
EGT Clamp Sm	Type-K EGT Therm., Clamp-Type Sm. (>1.5" dia)	11-07842	**$50.00**
Water temp.	Water Temperature Sender	11-05566	**$18.00**
Prec. Sender	Precision Water/Oil Temperature Probe	11-05570	**$35.00**
Oil Temp	Oil Temp, 5/8-18 UNF thread (Lyc/Cont)	11-08070	**$63.75**
OP-VDO	Oil Pressure 150 PSI, VDO 360-004	11-08066	**$57.95**
FT-60	Fuel Flow Sensor (Fuel Pump)	10-01196	**$259.00**
FT-90	Fuel Flow Sensor (Gravity Fed)	10-01224	**$259.00**
201B-6	Floscan 201B-6 Fuel Flow Sensor 60 GPH "B"	11-08072	**$210.00**
FP-100 UMA	Fuel Pressure 100 PSI (fuel injected engines)	11-08067	**$142.75**
FP-35 UMA	Fuel Pressure 35 PSI (carbureted engines)	11-08068	**$110.00**
N1EU07G-M	Fuel Pressure Sender 7 PSI (for MGL System)	10-04939	**$140.75**
FP 7 PSI UMA	Fuel Pressure 7 PSI (Rotax/Jabiru engines)	11-08337	**$140.75**
CNV-AT	Serial to Parallel Converter - Ultra/Infinity Sngl	11-05723	**$145.00**
GT1	Gear Tooth Speed Sensor	11-05725	**$85.00**
MNEA Cab	NMEA to Airtalk Cable for fuel computer	11-08331	**$35.00**
Ferrite	EMI Ferrite Bead Intereference Suppresor	11-08064	**$6.00**
Ferrite - Clip	EMI Ferrite Bead Intereference Suppresor Clip-on	11-08332	**$12.50**
Batt 12v 1.2Ah	12V 1.2Ah Backup Btty - Sealed Lead-Acid	11-08065	**$30.00**
Batt 12v 2.5Ah	12V 2.5Ah Backup Btty - Sealed Lead-Acid	11-08065	**$30.00**
Tach-Slick	UMA Tach Pickup for Slick Mags	11-08334	**$119.75**
Tach-Bendix	UMA Tach Pickup for Bendix Mags	11-08335	**$119.75**
SD 1GB	1GB SD Card with North American Databases	11-05569	**$50.00**
Shunt	50mV Shunt - 50 Amp	11-08330	**$20.00**
CAP	10,000uF / 25V Electrolytic Capacitor	11-05724	**$6.50**
Transorb	33V High Speed transorb	11-05727	**$6.00**

MGL ENIGMA MKIII

The "Enigma MKIII" is based on the iEFIS Discovery and shares its housing and large 7" high resolution screen. It has about the same outside dimensions as the original Enigma, but it is a completely different system.

It will be fully self-contained (no iBox) and features a built-in Attitude Gyro. It provides two RS232 ports and a CAN-interface for connection to RDAC, compass and other devices. It contains a built-in GPS and full pitot/static sensors. The software is based on a simplified version of the iEFIS and is aimed at providing simple installation and simple operation. Only GPS navigation is supported. The Autopilot is included.

The Engima MKIII effectively fits between the XTreme mini EFIS and the iEFIS Discovery.

CALL OR VISIT OUR WEBSITE FOR DETAILS.



MGL AVIONICS SERVO

MGL Avionics Servo with a generic hardware and pushrod kit.

P/N 11-10423 .....**$950.00**



MGF SPORT MOUNT PANEL TILT & SWIVEL - FLUSH

The Sport Mount - Panel Flush is for pilots who want to mount any size iPad or Tablet in any size or type of case on their panel in an open instrument spot or other smooth surface. This mount comes with a Sport™ Adapter mounting system. P/N 13-12429 .....**$138.99**

MGL IEFIS EXPLORER



The Explorer EFIS introduces a custom developed touch pressure sensitive LCD screen aimed exclusively at the small aircraft application. With the ability to accurately measure contact force in all conditions, it becomes possible to utilize the user interface advantages of a touch screen even in turbulent flight.

Unlike conventional touch screen technology, MGL's "tap screen" can be used with gloves, is completely unaffected by sunlight and even uses a polarized anti reflective and anti glare film. The tap screen uses only high quality optical glass in its construction and thus has no negative effects on the image quality, even in difficult light conditions. The tap screen is further qualified for zero pressure conditions such as experienced in space and is not affected by sudden, large pressure changes.

Recognizing that some operations can never be fully replaced by a touch screen, the Explorer adds no less than 5 "clickable" rotary controls which assume functions depending on current need plus adds conventional, tactile buttons for quick access to often used functions regardless of what appears on the screen.

Description	**Part No.**	**Price**
MGL IEFIS Explorer 8.5" Touchscreen	11-10816	**$2,500.00**
Accessories		
Description	**Part No.**	**Price**
MGL IBOX	11-10826	**$1,150.00**
MGL IEFIS Explorer Harness Kit	11-10827	**$359.90**
Ibox Harness for SP-6/SP-7	11-11230	**$270.00**
Servo Harness for Two Devices	11-11231	**$190.00**
RDAC XF with Can Bus Harness	11-11232	**$90.00**
EI FT 60 Fuel Flow Transducer For < 350hp / Fuel Pump	10-01196	**$259.00**
Westach Temp Probe 5/8-18 THD 1" Tip 4 Lead 399s9 Non Tso	10-01236	**$63.75**
MGL CHT Bayonet 3/8"-24 TYPE K	11-05565	**$35.00**
MGL EGT Thermocouple Clamp Small	11-07842	**$50.00**
VDO Oil Pressure Sender 150PSI	11-08066	**$57.95**
MGL Tach Pick Up For Slick Mag	11-08334	**$119.75**
MGL SP-7 Stnd Atttitude Sensor	11-09743	**$700.00**
MGL SP-6 Magnetometer Sensor	11-09744	**$260.00**
MGL RDAC XF MAP 12 Thermocouple Channels With Map	11-10676	**$375.00**

MGL RDAC OPTIONS			
RDAC-XF	MGL RDAC XF 12 Thermocouple Cannels	11-10674	**$315.00**
RDAC-XF MAP	MGL RDAC XF 12 Thermocouple Cannels with Map	11-10676	**$375.00**
RDAC-CAN	MGL RDAC for Rotax 912IS Engine	11-11296	**$215.00**
IOX	In/Out Extender	11-08336	**$209.95**
AHRS ATTITUDE / HEADING SENSORS			
SP-5	SP-5 Advanced Attitude Sensor (Horizon)	11-06554	**$2,150.00**
SP-6	SP-6 Magnetometer Sensor (Compass)	11-09744	**$260.00**
SP-7	SP-7 Standard Attitude Sensor (Horizon)	11-09743	**$700.00**
STRATOMASTER 2-1/4" INFINITY SINGLES			
ALT-1	Encoding Altimeter	11-05702	**$340.00**
ALT-2	Encoding RS232 Altimeter	11-05703	**$350.00**
ASI-1	Airspeed Indicator	11-05704	**$310.00**
ASX-1	Encoding Altimeter / Airspeed Indicator	11-05705	**$385.00**
AV-1	AHRS Display	11-05706	**$235.00**
BAT-1	Battery Voltage / Current Monitor Inc 50 Amp Shunt	11-05707	**$270.00**
E3 EMS	Engine Monitoring System	11-06442	**$309.00**
FF-1	Fuel Computer	11-05713	**$290.00**
GF-1	G-Force Indicator	11-05715	**$265.00**
MAP-1	Universal Pressure Indicator	11-05716	**$300.00**
RTC-2	Aviation Real Time Clock	11-06443	**$250.00**
RV-1	Universal RPM Indicator	11-05717	**$245.00**
RV-2	Turbine RPM Indicator	11-05718	**$245.00**
TC-1	4-Channel Thermocouple Temp	11-05719	**$275.00**
TP-1	Universal Temp/Press Display	11-05720	**$235.00**
STRATOMASTER 3-1/8" VELOCITY SINGLES			
ALT-3	Altimeter	11-05572	**$360.00**
ALT-4	Encoding Altimeter (Gillman Code)	11-05684	**$385.00**
ASI-3	Airspeed Indicator	11-05573	**$330.00**
ASX-2	Altimeter / Airspeed Indicator	11-05687	**$390.00**
AV-2	AHRS Display (Requires SP-2 & SP-4)	11-05690	**$260.00**
E1-EMS	Engine Monitor System	11-05578	**$345.00**
FF-3	Fuel Computer	11-05576	**$300.00**
Flight-2	Primary Flight Display	11-05575	**$460.00**
GF-2	G-Force Indicator	11-05693	**$285.00**
MAP-2	Manifold Pressure / RPM	11-05695	**$315.00**
ROTOR-1	Rotor / Engine Tach	11-07812	**$280.00**
RTC-1	Aviation Real Time Clock	11-05696	**$240.00**
RV-3	Universal RPM Indicator	11-05697	**$250.00**
TC-2	4-Channel Thermocouple Temp	11-05698	**$280.00**
TC-3	12-Channel Thermocouple Temp	11-05699	**$375.00**
TP-2	Universal Temp/ Press Display	11-05701	**$245.00**

LEVIL – CAMERA SYSTEMS

LEVIL ILEVIL 2 PORTABLE ATTITUDE INDICATORS



ILEVIL 2 SW - The next generation of iLevil is here! and it brings exciting new features and capabilities. This portable tool combines the latest in GPS, AHRS and ADS-B technology to bring pilots an affordable backup solution that is both Android and iOS compatible. The internal GPS and AHRS provides all the navigation information you need to turn your tablet into a real glass panel. The new embedded dual band ADS-B receiver allows you to monitor weather radar, METARS, etc in addition to traffic information all at your fingertips AND without any subscription. The iLevil2 SW adds a larger solar panel, outstanding ADS-B reception, enhanced GPS sensitivity and new compatibility with your favorite apps making it our most popular product for General Aviation.



ILEVIL 2 AW - A more advanced system designed for experimental and Light Sport aviation. The 2-AW provides dual band ADS-B weather and traffic information, GPS navigation and AD-AHRS technology. Unlike the SW version, the iLevil AW can be used as a portable OR permanent-mount instrument. It integrates static and dynamic pressure transducers which generate indicated airspeed and pressure altitude obtained from the pitot-static system, ultimately offering a "six-pack" solution displayed on a tablet. The iLevil AW facilitates installation with remote GPS and ADS-B antennas and power inputs for 12V and 28V systems. Compatibility with mobile devices makes the AW the ideal all-in-one solution for Light Sport aircraft where weight and space are an issue.

ILEVIL 2 SW ..... P/N 11-13528 ..... **$795.00**

ILEVIL 3 SW



The next generation of iLevil is here! and it brings exciting features and capabilities. This portable tool combines the latest in GPS, AHRS, ADS-B, and Data Recording technology to bring pilots an affordable backup solution that is both Android and iOS compatible. The internal GPS and AHRS provides all the navigation information you need to turn your tablet into a real glass panel. The embedded dual band ADS-B receiver allows you to monitor weather radar, METARS, etc in addition to traffic information all at your fingertips AND without any subscription. The iLevil3 SW adds the Data Recording feature which allows you to insert a SD Card and record all of your flight data (position, airspeed, altitude, attitude, etc.) and display the information on various platforms. You have to option to preset your desired file recording format, depending on how you wish to use the data (.gpx,.fdr, or .csv). The SW model also has a large solar panel, outstanding ADS-B reception, enhanced GPS sensitivity and compatibility with your favorite apps making it our most popular product for General Aviation.

P/N 11-14492 ..... **$1,095.00**

ILEVIL SPORT PORTABLE AHRS GPS



The Sport combines the latest in GPS and AHRS technology to bring pilots an affordable backup solution that is both Android and iOS compatible. The battery lasts up to 8 hours when fully charged and the solar panels will increase the battery life up to 12 hours on a bright sunny day. The iLevil Sport utilizes WiFi technology to sync as many devices as you want simultaneously! The integrated serial port is designed to relay information from external devices such as the NavWorx ADS600-B ADS-B transceiver, providing certified GPS, Weather and Traffic information to your mobile devices on top of back-up AHRS. Take it from airplane to airplane or leave it installed, the iLevil Sport will provide peace on mind on every flight!

Note: The iLevil Sport does not have an on-board ADS-B receiver.

P/N 11-12462 ..... **$749.95**

LEVIL BOM ALL-IN-ONE AVIONICS SUITE



The BOM (Broadcasting Outer Module) is the first and only aerodynamic pod that mounts under the wing of the aircraft. All components are incorporated into the BOM, making it a fully independent, completely wireless, self-powered, all in one avionics device. Avionics include WAAS GPS, ADSB-in, AOA, Air Data (Altitude, Airspeed), AHRS (Attitude, Directional Gyro, Turn Coordination, rate of turn, VSI) and outside air temperature. Once it is installed, the BOM connect via Wi-Fi to a tablet inside the cockpit and data can be displayed on multiple Apps thanks to its open protocol. The BOM conforms with 14 CFR 21.8(d) as a secondary source of information in certified aircraft.

Without ADS ..... P/N 11-15312 ..... **$1,535.00**
With ADS ..... P/N 11-15311 ..... **$1,872.00**

VIRB® ULTRA 30 AVIATION CAMERA SYSTEM



This best-in-class camera shoots up to 4K/30fps video action to show all your adventures in crisp, brilliant detail. VIRB Ultra 30 contains gyro-based motion sensors to detect camera movements and to help keep your shot steady, and electronic image stabilization[1] reduces camera shake and blur on bumpy flights. The VIRB Ultra 30 Aviation Bundle also includes a prop filter that helps remove the prop blur from your videos, and it features a headset audio cable so you can capture intercom cockpit chatter and ATC radio while flying. Plus, it's Bluetooth-equipped, so it can connect directly to compatible hands-free headsets so you can narrate your videos. And with the GMA 350c and GMA 245 series of audio panels, you can capture intercom and ATC radio wirelessly and in high definition — without the need for the headset audio cable.

North America ..... P/N 11-14839 .. **$499.99**

GARMIN VIRB® X / XE AVIATION BUNDLES



Aviation action camera that's ready to fly out of the box, with professional-quality HD video and gyro-based image stabilization from the aviation experts at Garmin. Includes robust suction mount, 16 GB microSD™ card, headset audio cable and prop filter. Capture your position, attitude, speed and much more and overlay them onto your video; then easily create and share your video using a smart device and VIRB app. Wirelessly record HD audio in flight from Bluetooth®-compatible headsets and audio panels. Enjoy a free trial of Garmin Pilot™

XE Aviation Bundle Americas ..... P/N 11-13810 .... **$499.00**

Description	Features	Part No.	Price
Virb® XE Waterproof with G-Metrix 1080p/60fsp	Video: 1440p/30, 1080p60, 960p100, 720p120, and 480p240	11-13739	$399.99

GARMIN VIRB ACCESSORIES

Description	Part No.	Price
Garmin Virb Headset Audio Cable	11-12660	$49.99
Gamrin Virb Prop Filter	11-12659	$49.99
Pilot Usa Virb To Dual Ga Headset Recording Adapter	11-12270	$45.50
Pilot Usa Virb Video Adapter Usb To Helicopter Ga	11-12271	$59.85
Garmin Pilot App Pro Unlock W/ Safetaxi & Geo Ref Charts	13-11867	$149.99
Garmin Audio Video Cable	10-05797	$26.50
Garmin Virb Headset Audio Recording Cable	11-12916	$39.50
Garmin Virb Usb Power Adapter	10-05785	$24.95
Garmin Lithium Ion Battery Charger	10-05784	$23.95
Garmin Pilot App (1 year)	13-11866	$75.00
Garmin Virb Car Charger	11-14880	$23.95
Garmin Battery for Virb Elite and Aera 660	11-13264	$29.95

GARMIN VIRB X/XE ACCESSORIES

Description	Part No.	Price
Garmin Virb® X / XE Propeller Blur Filter	11-13815	$48.95
Garmin Virb® X / XE Headset Audio Cable	11-13813	$48.95
Garmin Virb® X / XE Remote Control	11-13814	$48.95
Garmin Virb® X / XE Suction Cup Mount	11-13812	$22.95
Garmin Virb® X / XE Large Adhesive Base	11-13817	$23.95
Camera Hood for Drift and Virb Elite	11-15045	$35.95

AV

Prices Subject to Change Without Notice

Important Notes: • GoPro products can only be shipped within the USA and Canada. Cannot ship internationally. • SD Cards not included. See "Accessories" to purchase SD Cards separately • To enable recording of cockpit audio through intercom or radio, part number 11-11565 (Dual GA Headsets) or part number 11-11567 (Helicopter Headsets) must be purchased separately. See "Accessories".



GOPRO HERO 5 BLACK 4K ULTRA HD CAMERA SYSTEM

Stunning 4K video and 12MP photos, in Single, Burst, and Time Lapse modes. RAW photos provide the most flexibility when using advanced photo editing software. WDR photo mode captures added details in both shadows and highlights in the scene. Fine-tune exposure settings with simple on-screen Exposure Control. Advanced audio processing captures left and right stereo audio channels. Captures the location where your photos and videos are taken.

Hero 5 Black.....P/N 11-14719 ..... **$299.99**
Hero 5 Session.....P/N 11-14720 ..... **$226.95**

Accessories	Part No.	Price
Dual Battery Charger & Battery For Hero 5 Black	11-14721	**$49.95**
Hero 5 Rechargeable Battery	11-14722	**$19.95**
Hero 5 Protective Lens Replacement	11-14723	**$19.99**
Hero 5 Super Suit	11-14724	**$49.95**
Hero 5 Black Replacement Side Door	11-14725	**$19.99**
Hero 5 Pro 3.5mm Mic Adapter	11-14726	**$49.99**
Hero 5 Screen Protectors	11-14727	**$19.99**
Hero 5 Session Replacement Door	11-14729	**$19.99**
Hero 5 Session Lens Replacement Kit	11-14730	**$19.99**
Hero 5 Black The Frame	11-14731	**$29.99**
Nflightcam 58mm Propeller Filter For Hero 5 Black	11-14811	**$59.99**
Nflight Gopro Hero 5 Cockpit Kit	11-14899	**$199.99**
Nflight Metal Cage	11-14876	**$59.99**
Nflight Audio Solution	11-14875	**$79.99**
Hero 5 Safe Case with Mount	11-15063	**$88.95**
Hero 5 Safe Case Metal	11-15056	**$68.95**
Crazedpilot Gopro Hero 5 Atc Recording Cable	11-14862	**$86.95**
Crazedpilot Gopro Hero 5 Atc Recording Cable - Heli	11-14863	**$98.75**

MYPILOTPRO MOUNTS FOR GOPRO CAMERAS



PIVOT MOUNT - MyPilotPro is perfect for any private pilot or student pilot who wants to relive their flying experience on a GoPro. The mount will attach to any aircraft's rear or wing tie down. A 3-way pivot arm is included to compensate for the wing dihedral angle. Compatible with all GoPro cameras. Made in the USA. P/N 13-18886 .....**$49.95**



SWIVEL MOUNT - MyPilotPro Swivel teamed up with RAM Mounts to deliver the best and most versatile GoPro aviation mount in the industry! MyPilotPro Swivel allows your GoPro to articulate in any direction or angle. Attaching MyPilotPro Swivel to your airplane tie downs is simple, secure, and doesn't require any tools. It is compatible with all GoPro cameras. Made in the USA.
P/N 13-18888 .....**$69.95**



SPIDER MOUNT - MyPilotPro Spider is a small footprint and effective design allows you to attach it to any non-porous surface inside the cockpit. The Spider mount is perfect for straight forward filming from the windshield! Attaching the Spider mount could not be easier, just simply put it where you want and push on the top of each suction cup. The suction cups are rated to hold more than 7 times the weight of a GoPro camera, GoPro camera case, and the mount combined! Once you mount the Spider, it's there to stay until you release the suction by pulling on the tabs. The Spider is compatible with all GoPro cameras. Made in the USA. P/N 13-18889 .....**$24.95**



SPIDER SWIVEL MOUNT - MyPilotPro Spider Swivel is the ultimate cockpit GoPro mount! It articulates in any angle and direction to record your GoPro aviation footage. It's small footprint and effective design allows you to attach it to any non-porous surface inside the cockpit. Attaching the Spider Swivel mount could not be easier, just simply put it where you want and push on the top of each suction cup. The suction cups are rated to hold 5 times the weight of a GoPro camera, GoPro camera case, and the mount combined! Once you mount the Spider Swivel, it's there to stay until you release the suction by pulling on the tabs. The Spider Swivel is compatible with all GoPro cameras. Made in the USA.
P/N 13-18890 .....**$34.95**

GOPRO ACCESSORIES

Description	Part No.	Price
Hero 3 Chest Mount Harness	11-11397	**$39.99**
Hero 3 Handlebar Mount	11-11398	**$20.50**
Hero 3 WIFI Remote Charging Cable	11-11403	**$19.99**
Hero 3 WiFI Remote Mounting Kit	11-11404	**$19.99**
Hero 3 Wall Charger	11-11407	**$39.99**
Hero 4 Rechargeable Battery	11-13427	**$19.99**
Hero 4 Session Frame Mount	11-13796	**$39.99**
Flat and Curved Adhesive Mounts 6pc	11-11413	**$19.99**
Grab Bag of Mounts for quick-release cameras	11-11964	**$17.95**
Junior Chest Mount Harness	11-12141	**$39.99**
Suction Cup Mount	11-12143	**$39.99**
"Jaws" Flex Clamp Mount	11-12145	**$49.95**
Gear Box 2	11-11580	**$29.99**
Gear Box 3	11-11583	**$31.50**
Gear Box 5	11-11584	**$39.99**
Gear Box 7	11-11585	**$39.85**
POV20 LT Black Soft Case	11-11572	**$34.99**
POV20 Black Incredibly Strong Case	11-11573	**$42.50**
POV20 White Incredibly Strong Case	11-11574	**$44.99**
POV20 Black Deluxe Edition Case	11-11575	**$54.99**
POV20 White Deluxe Edition Case	11-11576	**$54.99**
POV40 Case With Hand Strap	11-12222	**$66.75**
POV60 Black Multi-Camera Case	11-11578	**$159.99**
POV Black PAK Video Lighting System	11-11579	**$399.99**
Pilot USA Gopro Hero 3 to Dual GA Headset Recording Adapter	11-11565	**$44.95**
Nflightcam Hero 3 Plus Propeller Filter	11-12335	**$59.99**
Nflightcam Gopro Billet Mount	11-12336	**$79.99**
Nflightcam Gopro Audio Cables	11-12337	**$39.99**
Nflightcam Suction Cup Mount	11-12339	**$29.95**
Floaty Backdoor	11-12208	**$19.99**
Knob and Nut Kit	11-11830	**$15.50**
Nflight Extreme Gopro Mounting Kit	11-13891	**$89.95**
Gopro Tripod Mount	11-14091	**$19.99**
Gopro Portable Power Pack	11-14833	**$42.85**
Gopro Camera Tethers	11-14832	**$19.99**
Gopro Remo Waterproof Voice Activated Remote and Mic	11-14813	**$79.99**
Gopro Bag(pack of 5)	11-14814	**$19.99**
Gopro Ball Joint Buckle	11-14815	**$14.50**
Gopro Casey(Camera, Mounts, and acc. Case)	11-14816	**$35.75**
Gopro The Handler(Floating Grip Handle)	11-14817	**$21.50**
Gopro Large Tube Mount	11-14818	**$28.60**
Gopro The Strap (Hand/Wrist/Arm/Leg)	11-14819	**$42.90**
Gopro Pro Seat Rail Mount	11-14820	**$28.60**
Gopro The Jam(Adhesive Music Mount)	11-14821	**$35.75**
Gopro Micro SD Card Reader Type C Connection	11-14822	**$19.99**
Gopro Micro SD Card Reader Lightning Connector	11-14823	**$29.99**
Gopro Micro SD Card Reader Micro USB Connector	11-14824	**$19.99**
Gopro Handlebar/Seatpost/Pole Mount	11-14825	**$42.90**
Gopro Removable Instrument Mounts	11-14826	**$14.50**
Gopro 128GB Lexar Pro Micro SDXC Memory Card	11-14827	**$160.75**
Gopro Standard Frame for Hero Session	11-14828	**$19.99**
Hero 4 Session Lens Replacement Kit	11-14829	**$39.99**
Gopro Low Profile Slide Helmet Mount for Hero Session	11-14831	**$21.50**
Nflight Ultimate Action Cockpit Mounting Kit	11-14879	**$99.99**
Nflight Metal Cage and Filter for Session	11-14392	**$79.99**
RAM Gopro Action Camera Adapter	11-14966	**$22.99**
RAM Adapter for Gopro Mounting Bases B Size Ball	11-14965	**$9.99**
Gopro Slim Clamp Mount	11-15049	**$58.90**
Gopro Slim Surface Mount	11-15048	**$58.90**
Hero 3/4 Safe Case with Mount	11-15062	**$98.85**
Gopro Slim Robby Clamp	11-15051	**$58.90**
Gopro Slim Tie Down Mount	11-15050	**$58.95**
Gopro Lens Replacement for Session	11-14830	**$19.99**
Suction Cup Mount	11-15047	**$38.95**

VISIT WWW.AIRCRAFTSPRUCE.COM FOR MORE GOPRO ACCESSORIES.

GOPRO HERO6 BLACK 4K 60FPS ULTRA HD CAMERA SYSTEM



Important Notes: GoPro products can only be shipped within the USA and Canada. Cannot ship internationally. SD Cards not included. See "Accessories" to purchase SD Cards separately

The HERO6 Black transforms your adventures into incredible QuickStories right on your phone. With its all-new GP1 chip, next-level video stabilization and twice the performance, looking good has never been so easy. With voice control and a durable waterproof design, HERO6 Black is the ultimate GoPro for sharing life as you live it. QuikStories makes it easy to go from capture, to create, to share and celebrate:HERO6 cameras are QuikStories-enabled, which means they can send your video and photos straight to your phone where the app transforms them into an awesome edit, automatically. Featuring 5GHz Wi-Fi, footage will come off your camera 3X faster. 2x the Performance: The HERO6 features 4K60 and amazing slow-motion capture at 1080/240p. It has the best-ever image quality with greater dynamic range, richer coolers and vastly improved ability to handle low-light conditions. Rugged + Waterproof: Durable by design, HERO6 Black is waterproof to 33ft (10m) without a housing. 2-Inch Touch Display: Now featuring touch zoom and an updated UI, the 2-inch display makes it easy to frame shots, change settings and play back footage. Next-Level Video Stabilization: HERO6 Black can capture stunningly smooth video handheld, mounted to your favorite gear, and more.

P/N 11-15473.....**$399.99**

GARMIN VIRB® 360 WATERPROOF SPHERICAL CAMERA



Rugged, Waterproof 360-degree Camera with 5.7K/30fps Resolution and 4K Spherical Stabilization

VIRB 360 is the first of its kind, capturing a complete sphere of high-resolution video and audio — even photos. It eliminates the lengthy editing process with unrivaled 1-click video stabilization up to 4K resolution at 30 fps and allows you to instantly livestream5 any adventure. Defining a New Standard for Full-sphere 360 Video and Audio Capture. If it's worth remembering, it's worth a VIRB 360. This rugged, waterproof camera is true to its name. P/N 11-15193.....**$799.99**

ACCESSORIES

Description	Part No.	Price
Garmin Virb 360 Lens Replacement Kit	11-15195	**$39.99**
Garmin Virb 360 Replacement Cradles	11-15197	**$29.99**
Garmin Virb 360 Powered Vehicle Mount	11-15199	**$98.75**
Garmin Virb 360 Tripod Hand Grip	11-15201	**$29.99**
Garmin Virb 360 Rechargeable Battery	11-15202	**$34.99**
Garmin Virb 360 Dual Battery Charger	11-15203	**$34.99**
Garmin Virb 360 Powered Tripod Mount	11-15204	**$49.99**

FLIGHTCAM360 STANDARD NFLIGHTCAM POWER STATION



The Nflight Power station is the ultimate source for extra power in the air. Providing 25,000mAh of with two 2.4 amp ports you can now power your GoPro for up to 20 hours, or charge your iPhone 10 times. This power station has been thoroughly tested in numerous aircraft to insure that it does not interfere with any onboard navigation or communication systems. In addition to powering GoPros, iPads, and iPhones you can charge any USB device. P/N 11-13261.....**$129.99**



FLIGHTCAM360 CABLES

FlightCam360 Cables for Flight Recorders.

6 Feet..... P/N 11-14287 .....**$47.50**
15 Feet..... P/N 11-14288 .....**$47.50**
30 Feet..... P/N 11-14289 .....**$47.50**
45 Feet..... P/N 11-14290 .....**$47.50**

FLIGHTCAM360 4CH VIDEO FLIGHT RECORDER



4ch Digital Video Flight Recorder with Audio and optional GPS, Wifi, or WCDMA. All Audio/Video is captured to an SD card (128Gb max) at D1 max resolution (720x480@30fps). Each camera (4 max) has it's own associated SD card. Audio is captured from the intercom panel with a supplied audio cable. The Flight recorder can output video in single channel or quad style format to any NTSC/PAL type monitor for live viewing. Most EFIS units today accept this type of video format as an input. The flight recorder can be configured to record with aircraft power applied, motion activation, or alarm triggers. This is a compact rugged package that makes it convenient for evidence collection activities, training system, or reliable scenic video capture package.

Standard ..... P/N 11-14283 .....**$865.95**
with GPS..... P/N 11-14284 .....**$962.95**
with WiFi or 3G WCDMA ..... P/N 11-14285 ...**$1,058.00**

FLIGHTCAM360 VIDEO FLIGHT RECORDER POD CAMERA



FlightCam360 Video Flight Recorder Pod Camera. • Sony color ccd 700 scan-line optics • Waterproof • 12v operation (power regulation needed) • Aerodynamic aluminum POD mount • POD mount has internal eyeball style swivel capabilities • Camera features interchangeable lenses to provide different FOV and depth of field..... P/N 11-14286 .....**$337.00**

FLIGHTCAM360 4 CAM HD LIVE VIDEO SYSTEM



Flightcam360 4Cam HD wireless waterproof LIVE Streaming Video System with 4000mAh Li Poly battery (8hrs record time, 15hrs standby). • 1080p60 / 720p120 / 480p240 • 32Gb micro SD card max • 120 degree FOV lens (flat horizon, non-fisheye) • 100ft 5.8ghz wireless video streaming to 7" LCD NON-WIFI (Multiple wireless monitors can be added to system for passenger/copilot live viewing) • 2.4ghz control system for on/off and start/stop recording NON-WIFI • Still frame camera burst mode (12MP) • 4x wireless zoom in/out control • 4 point mounting configuration (1/4-20 universal standard) • Wireless pan base compatible

P/N 11-14120.....**$2,695.00**

VISIT OUR WEBSITE FOR MORE NFLIGHT ACCESSORIES.

360FLY 4K SURROUND VIDEO



The 360fly 4K combines a powerful 16-megapixel image sensor with innovative smart camera features — First-Person POV, Motion/Audio Active, Time-Lapse Mode — that redefine what a camera is and does. Water resistant to 1 atm (around 34'), dustproof and shockproof, the 360fly 4K features 64 GB of internal memory and built-in telemetry sensors, including an e-compass and non-assisted GPS. With its brilliant 360° 4K output, the 360fly 4K adds over 6 million pixels, increasing sharpness and saturation in a full 360° x 240° field of view. It comes with everything you need to start capturing and sharing all of life in incredibly rich detail with ease. P/N 11-14570.....**$399.00**

ACCESSORIES

Description	Part No.	Price
360fly Low Profile Suction Cup Mount Black	11-14664	**$39.99**
360fly Bike Mount Black	11-14665	**$29.99**
360fly Vented Helmet Mount Black	11-14666	**$24.99**
360fly Mobile Vr Headset	11-14668	**$49.99**
360fly Adapter For Quicktwist To 1/4-20	11-14669	**$19.99**
a360fly Action Camera Adapter Black	11-14670	**$29.75**

AV

FLIGHTCAM360 CAMERA SYSTEMS



FLIGHTCAM360 4 CAMERA SHOCKBOX DIGITAL VIDEO RECORDING SYSTEM

Package Contents:
* Sony 550 CCD color camera (4) * 12 foot camera cables (4) * RAM ball and socket camera mounts (4 set) * Stereo audio communication cable (1) * 4Gb SD memory card (1) * Video Editing Software (1) * TV & PC video transfer cables (2) * Charger(1)

PN 11-07112..... **$1,799.95**



FLIGHTCAM360 BLIND SPOT ELIMINATOR

Package Contents: * 4" Color LCD Monitor (1) * 12Volt Input Wire Harness (1) * Sony 550 CCD Color Camera (1) * RAM ball and socket camera mount (2) * Note: Video recording can be added separately.

P/N 11-08138..... **$749.95**



FLIGHTCAM360 VIDEO DATA SYNCH BOX

Package Contents: * Data Acquisition Box (1) * Wire harness (1) * GPS Receiver Puck (1) -Air Speed -Altitude -Heading -Location Option: - Garmin Data Port Cable - GPS receive puck. 12-32v input. Rugged aluminum housing construction. Simple 3 button design. Automatic real-time GPS data overlay on to composite video stream. Less than 1amp power draw. RCA style video input/output Note: The video data synch box can be added to any standard composite video recording system. P/N 11-08137..... **$725.00**



DEOHAKO PROPSHOT SMARTY MOUNT WITH LENS

Deohako PropShot Lens - Filtered lens to remove propeller distortion from in-flight videos and photos. Adjustable Lens Positioning -compatible with most smart phones. Universal Smartphone Grip. Rotating Ball Head - Position smartphone at any angle to capture in amazing flight footage. Quick Release, Strong, Wide, 4" Suction base.

P/N 13-14857..... **$78.95**

STRUT CAMERA MOUNT FOR CESSNA



The W3 Camera Mount by Cloudbase Engineering has been specifically designed to mount industry standard action cameras to the wingstrut on General Aviation aircraft. In addition to aircraft, The W3 Mount can also be reconfigured to attach to tubular structures between 1.13" and 2.80" in diameter. Not FAA Approved.

W3 Cessna Strut Camera Mount with 7" long strap: 140a 150 152 170 172 175 & Glasair Sportsman P/N 13-14981..... **$124.75**

W3 Cessna Strut Camera Mount with 7.5" long strap: 180 &182 P/N 13-14982..... **$124.75**

W3 Cessna Strut Camera Mount with 9.25" long strap: 185 205 206 210 P/N 13-14983..... **$124.75**

WINGIT MOUNT FOR CESSNAS



WingItMounts™ have take photography to a higher level by mounting cameras to wing strut and taking unique and exciting views of flights. Holding up to three Gopro cameras, you will be able to capture your flights form unique and exciting views all at the same time. Milled from Aircraft grade aluminum all WingItMounts™ are made to the highest quality materials. No screws or fasteners are needed to attached the WingItMounts™ WIMGP-01 to your airplane. Applications: Cessna: C-150, C-152, C-170, C-172, C-180 or C-182. Camera not included.

P/N 11-11472..... **$119.95**

NFLIGHTCAM STRUT CLAMP MOUNT



Mount your GoPro, Garmin, or any action camera with a 3-finger (GoPro-style) mount or 1/4"x20 threaded socket to almost any aircraft strut in seconds. This strut clamp will fit anything from a J3 Cub to a Cessna Caravan. Quickly and securely attach your camera by adjusting the clamp to the size of your strut and securing it with the included UV-resistant polyurethane strap. This is not your normal rubber strap; We partnered with long-time outdoor equipment manufacturer, Voile, to produce an extremely tough rubber strap that will not degrade over time. P/N 11-14878 ..... **$149.99**

NFLIGHTCAM COCKPIT KIT FOR DJI OSMO+



Note: DJI Osmo+ depicted not included. Cockpit kit only. Capture amazing gyro-stabilized footage from the cockpit with your DJI Osmo+ and Nflightcam's Cockpit Kit. This Nflightcam cockpit kit for the DJI Osmo+ includes the following: Variable Propeller Filter (ND2-ND400). Audio interface cable. 110mm Vacuum Suction Cup with Magic Arm Mount. P/N 11-15263..... **$229.00**

REMOTE CAMERA SYSTEM



Mounts a traditional camcorder (i.e. Sony) • 360 degrees of rotation • 50 degrees of tilting ability • Optional stick grip with built in hat switch • Remote switch control • Weight - 7lbs • Dash mounted LCD screed to see what the camera is seeing • Vibration dampening built into mounting bracket.

Description	Part No.	Price
Super Deluxe Kit - Includes camera mount system, built in grip switch, & LCD screen	11-04320	**$1,245.00**

SCHIER CLAMP GOPRO ADAPTER



The Schier Clamp (Patent Pending) is a new device that allows users to adjust the angle of their GoPro® in its mount and ensure that, once set, the camera doesn't move due to the effects of wind or minor bumps. No extra tools are required for installation or adjustment.

Color	Part No.	Price
Black	13-19619	**$19.95**
Blue	13-19620	**$19.95**
Red	13-19624	**$19.95**

FLYVIE PRO RECORDER



The Flight Recorder Pro is a patented and portable flight recorder. The unit captures and records high quality video from two small cameras, as well as GPS data and audio from internal and external communications in the cockpit. Captured imagery includes the pilot's view and the instrument panel as well as the pilot's manipulation of the flight controls. The data is saved to a small personal memory card which can then be downloaded and reviewed, analyzed and tagged over the Internet.

Package includes: Netbook, 2 - Webcams, GPS cable and accessories. Features: Video record two views - both instrument panel and external horizon views, Audio record the cockpit and ATC communication, View your flight recording with GPS track overlaid on Google Earth, Share tagged segments of your flight with others - anytime, anywhere

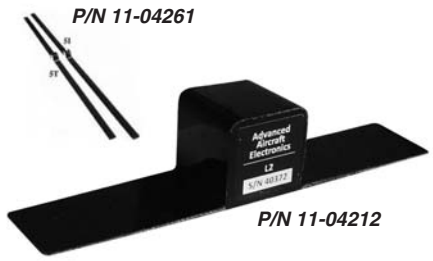
P/N 10-04513..... **$1,795.00**

ROCK STEADY UNIVERSAL WING STRUT MOUNT AND RUBBER STRAP



The Rock Steady GoPro style ball mount is the durable and versatile low profile design that you have been looking for. This quality all metal mount will not move, bend, or fail, unlike plastic mounts. The metal GoPro adapter is compatible with any GoPro style camera. This unique Gopro adapter allows over 180 degrees of adjustment unlike most GoPro fork tripod adapters. The knuckle clamp attaches to any Rock Steady base allowing 360 degrees of adjustment. The knuckle locks your camera into any position with a hex wrench, or by hand with an included T-handle screw. Buy multiple Rock Steady bases to add numerous quick change mounting locations at an affordable price. Compatible with GoPro, Hero 2, Hero 3 & 3+, Hero 4, Hero 5 and Garmin Virb X and Virb XE or any Go Pro style camera. The Rock Steady Universal Strut Base is a quality all metal machined aluminum base. The strut base fits any size aircraft spreader bar, bi-plane strut, or wing strut from a J-3 to a Caravan. The simple clean design straps firmly to your wing strut without using bulky blocks or bolts. The Rubber Strap Kit uses a 19 universal rubber strap that fits most any strut. With adjustment holes every 1.25 inches, you simply start on a hole that gives you just enough strap to reach around the strut and tighten on the end. The temporary strap allows your camera mount to be quickly taken on and off any strut. FAA friendly temporary. P/N 11-15324..... **$109.99**

ADVANCED AIRCRAFT ELECTRONICS HIGH GAIN AIRCRAFT ANTENNA SYSTEMS



Here is a new series of aircraft antennas specifically designed to be used without a ground plane. This means that composite aircraft and fabric covered aircraft can now have their antennas mounted totally within the structure. These antennas are designed using the latest engineering technology. Laboratory measurements show them to have better electrical characteristics than currently available products. The unanimous reports from pilots who have been using them confirm that they out perform everything now available on the market. One antenna model works for communication, navigation, and for ELT (Three antennas in the aircraft, but all the same design), and this design is tolerant to installation errors. They will work in metal airframes when a plastic or fiberglass wing tip or similar plastic component is available to provide the mounting structure. The VHF antennas, 5T and 5I, differ only in the location of the BNC connection. The 5T is configured to allow the coax cable to be routed flat along the mounting surface of the airframe. This antenna model would be appropriate for a composite aircraft where the antenna would be mounted in the fuselage or fin and the coax would be close to the skin and be attached periodically for strain relief. In either case, the antenna can be used as a retrofit on in service aircraft or in new installations. The 5I series has the BNC connection positioned so that the coax cable would route out and away from the antenna mounting surface. This configuration is offered for antenna installations such as wing tips of fabric aircraft. If the antenna is mounted on the inside of the tip, the coax route is directly inward toward the wing root and the BNC connection is located near the spar to provide support for the cable. Both antennas are identical in their electrical performance. Features: Inside mounting. Use with composite skins. Use with fabric covered airframes. Glue or bond to the airframe. Light weight. Wide service temperature, No ground plane corrosion, Mount anywhere inside, Maximum range with low VSWR. Model VHF series designed for comm or nav or ELT. Guaranteed against failure for the life of the airframe. Adapts to existing airframes or to in process construction.

Model 5I (straight BNC connector) NAV/COM Antenna ..... P/N 11-04261 ..... **$118.95**
Model 5T (right angle BNC connector) NAV/COMM Antenna..... P/N 11-04262..... **$118.95**
Model L2 Transponder Antenna ..... P/N 11-04212..... **$98.95**

COMANT GPS ANTENNAS



GPS antenna kits from Comant enable you to install a low profile aerodynamic GPS antenna to the exterior of your aircraft. These antennas are all FAA approved under TSO C129, provide superior GPS signal acquisition, and are resistant to ice build-up in flight. All kits come complete with 10' of coax cable. Call with Comant Part No. for pricing on the Comant C1401, C1405, CI-406, OR CI4510 series antenna you require.

CI 401 ANTENNAS

These antennas are designed for aircraft up to 600 knots and feature a rectangular footprint. Available in active or passive models. Height: 0.75". 50 ohms.

CI 401 ACTIVE ANTENNAS		
APPLICATION	**P/N**	**PRICE**
Magellan w/detachable antennas except 5000A, Garmin 55, 89, 90, 95, 100, 150, 155, 165, 250, Skyforce, and panel GPS requiring 26 dB gain		
Antenna Only	CI-401-220	**$530.00**
CI 401 Passive Antennas (limited to 10' run of RG142 or 6' of RG58)		
Magellan w/detachable antennas incl. 5000A, Garmin 55, 89, 90, 95, 100, 150, 155, 165, 250, Micrologic Super Sport & all other GPS receivers requiring a passive antenna.		



GARMIN GXM USB EXTENSION CABLE

GXM USB extension cable 010-10617-02 for GXM 30 and GXM 40 Satellite WX antennas.
P/N 11-06189..... **$26.50**



BENDIX KING GPS ANTENNA KA92

The KA 92 antenna is a compact, aerodynamically-styled "patch" antenna that mounts on top of the aircraft. Weight: 0.30 lbs. (0.14 kg) Width: 2.70 in. (6.86 cm) Height: 0.70 in. (1.78 cm) Length: 4.30 in. (10.92 cm)

Antenna ..... P/N 11-04036..... **$847.00**
Installation Kit ..... P/N 11-02581..... **$94.75**

COMANT MARKER BEACON ANTENNAS



CI-102 MARKER BEACON - Frequency 75 MHz. For use with the modern, high sensitivity marker beacon receivers. Featuring 4-hole internal mounting for simple installation. Enclosed in an injection molded radome which is impervious to the tough environments typical of the underside of an aircraft. Skydrol and rain erosion resistant. DC grounded to minimize accumulation of precipitation static. P/N 11-17931.....**$158.75**



CI-118 MARKER BEACON - Frequency 75 MHz. Designed specifically for high-performance aircraft applications. Features aerodynamic design in a lightweight package. Antenna is a low profile blade-type encased in a molded polyurethane shell. Skydrol and rain erosion resistant. P/N 11-17932.....**$431.00**



COMANT MARKER BEACON (CI-118-1) - Frequency • 75 MHz. Low-drag, lower profile alternative to the popular CI 102 "boat style" marker beacon antenna. Approved for medium to high performance single, turbo-prop or jet aircraft and provides simple external mounting. Skydrol and rain erosion resistant. DC grounded to minimize accumulation of precipitation static. P/N 11-06847.....**$666.00**

COMANT MARKER BEACON (CI-118-9) - Frequency 75 MHz. Identical to the CI 118 except the mounting configuration allows for "drop-in" replacement to the Honeywell Bendix-King KA 26 Marker Beacon. This Comant design has been tested to the tough DO-160D environmental standards. Skydrol and rain erosion resistant. DC grounded to minimize accumulation of precipitation static. P/N 11-06989.....**$668.00**



COMANT MARKER BEACON (CI-118-10) - Frequency 75 MHz. This Comant marker beacon is identical to the CI 118 except with a 4-hole through mount configuration. This model has been tested to the tough DO-160D environmental standards. Skydrol and rain erosion resistant. DC grounded to minimize accumulation of precipitation static.
P/N 11-06848.....**$638.00**



COMANT MARKER BEACON (CI-164) - Frequency • 75 MHz. Lightweight flush mount provides for dualmarker beacon signal outputsatthe antenna, eliminating theneed fora separate marker beacon splitter. Antenna is housed in a aluminum enclosure with a glass laminate cover. Internal components are potted in place for mechanical integrity. The CI 164 is designed for curved "crown" surface mounting as is currently used on the Cessna Citation I and II. P/N 11-06850..**$1,637.00**



COMANT MARKER BEACON (CI-165) - Frequency • 75 MHz. Lightweight flush mount antenna, provides for dual marker beacon signal outputs at the antenna, eliminating the need for a separate marker beacon splitter. Antenna is housed in a aluminum enclosure with a glass laminate cover. Internal components are potted in place for mechanical integrity. The CI 164 is designed for curved "crown" surface mounting as is currently used on the Cessna Citation I and II. P/N 11-06851..**$1,699.00**

Prices Subject to Change Without Notice

COMANT ANTENNAS

COMANT DME/TRANSPONDER ANTENNAS



CI-101 TRANSPONDER ANTENNA – Frequencies Covered 1030-1090 MHz. Transponder antenna with top loaded stub monopole. Contact points are made from beryllium copper. Mounts through a single 0.600" diameter mounting hole.
P/N 11-17970 ..... **$148.75**



CI-105 TRANSPONDER/DME ANTENNA – A very broadband and rugged antenna which is encased in glass reinforced molded shell. Rated to 400 kts. TAS. Height. 3.25"; Wt. 0.2 lb. Does not include BNC or hardware. P/N 11-17965 ..... **$166.75**



COMANT DME/ TRANSPONDER (CI -105-3) - 960 - 1220 MHz. Antenna configuration specifically designed for external applications using a three hole flange mounting. BNC female connector.
P/N 11-06810.....**$391.00**



COMANT DME/XPDR (CI -105-6 & 105-7) - Frequency • 960-1220 MHz. Comant CI 105-3 DME/Transponder antenna. Ant signed for external applications using a three hole flange mounting. BNC female connector.
CI 105-6 connector - BNC.. P/N 11-06811..**$354.00**
CI 105-7 connector - C..... P/N 11-06817..**$438.00**



COMANT DME/ TRANSPONDER (CI-105-9) - Frequency • 960-1220 MHz. Antenna assembly encased in a glass reinforced polyester molded shell. Comes standard with a 6" extension coax cable and BNC connector. This model offers standard two stud mounting, where the studs are extended to 1 inch in length.
P/N 11-06818.....**$291.95**



COMANT DME/ TRANSPONDER (CI -105-16) - Frequency • 960-1220 MHz. Was designed specifically for the Honeywell Bendix- King™ KA60. This unit offers the extended length two-stud mounting found on the KA60. Tested to the tougher DO-160D environmental requirements, this antenna offers the best in ruggedness and performance.
P/N 11-06819.....**$166.85**



COMANT DME/ XPDR (CI-110-40-30) - Frequency • 960-1220 MHz &1030-1090 MHz. All metal, low profile antenna is designed for business jet and commercial high speed aircraft. With a popular four hole mount and connector with open path to ground, this antenna is ideally suited for those aircraft equipped with standard and Mode S transponders. Tough one piece construction provides 175 lbs. side load capability. Moisture failure is prevented with completely sealed construction.
P/N 11-06820.....**$373.00**



COMANT DME/ TRANSPONDER (CI-110-41-30) - Frequencies Covered 960 -1220 MHz. All metal, low profile antenna is designed for business jet and commercial high speed aircraft. With a popular four hole mount and connector with short path to ground, this antenna is ideally suited for those aircraft equipped with standard and Mode S transponders. Tough one-piece construction provides 175 lbs. side load capability. Moisture failure is prevented with completely sealed construction.
P/N 11-06821.....**$392.00**



COMANT DME/XPDR (CI -110-60-30) - Frequency • 960-1220 MHz & 1030-1090 MHz. All metal, low profile antenna is designed for business jet and commercial high speed aircraft. Six hole mount and connector with open path to ground. Suited for aircraft equipped with standard and Mode S transponders. Provides 175 lbs. side load capability. Moisture failure is prevented with completely sealed construction. P/N 11-06822.....**$392.00**



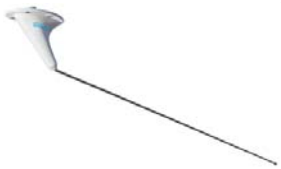
COMANT DME/ XPDR (CI-110-61-30) - Frequency • 960 -1220 MHz. All metal, low profile antenna is designed for business jet and commercial high speed aircraft. Six hole mount and connector with short path to ground. Suited for those aircraft equipped with standard and Mode S transponders. Tough one-piece construction provides175 lbs. side load capability. Moisture failure is prevented with completely sealed construction. P/N 11-06823.....**$402.00**



COMANT DME/ TRANSPONDER (CI-305) - Frequency • 960-1220. Miniature high speed DME/ Transponder - one of the smallest DME/Transponder antennas available from Comant. Less than 2.75 inches high, featuring a very low-drag frontal profile. Strong, lightweight and easy to mount using four external mounting holes through base.
P/N 11-06824.....**$285.95**

COMANT FM BAND & AM/FM ANTENNAS

COMANT AM/ FM RECIEVER (CI-222) - Frequency 88-108 MHz 550-1600 KHz. Offers a unique low profile design using standard 4 hole mounting used on many VHF type antennas. Bent whip configuration is ideally suited for underbelly and helicopter installations.
P/N 11-00412.....**$323.00**



COMANT RADIOPHONE / DME ANTENNAS



COMANT VHF COMMUNICATIONS (CI-291) - Frequencies Covered 118-137 MHz Upgraded to the new RTCA DO-160D environmental requirements and offers the 118 to 137 MHz frequency associated with DO 186A MOPS.
P/N 11-17991 .....**$262.95**



COMANT VHF COMMUNICATIONS (CI-292-1 - Frequencies Covered 118-137 MHz. Designed specifically for top mounting on an aircraft. Upgraded to the new RTCA DO-160D environmental requirements and offers the 118 to 137 MHz frequency associated with DO-186A MOPS.
P/N 11-05093 ..... **$276.95**



COMANT VHF COMMUNICATIONS (CI-292-2) - Upgraded to the new RTCA DO-160D environmental requirements and offers the 118 to 137 MHz frequency associated with DO 186A MOPS.....P/N 11-29202 .....**$291.95**



COMANT VHF COMMUNICATION (CI-248-5 - Frequencies Covered 118-137 MHz. Developed for Cessna 182 and 182T aircraft. The only VHF antenna with a built-in notch filter, that allows installation in close proximity to GPS antennas without co-sight interference.
P/N 11-05585 ..... **$414.00**



COMANT VHF COMMUNICATIONS (CI-108) - Frequencies Covered 450-470 MHz Suitable for either top or bottom mounting. Upgraded to the RTCA DO-160D environmental requirements with DO-186A MOPS. Optional leading edge protection - CI 108-L.

Model	Description	Frequency Range	Part No.	Price
CI-108	Standard	118-137 mHz	11-07079	$1,026.00
CI-108-L	with Leading Edge Protection	118-137 mHz	11-16207	$1,073.00
CI-108-1	Standard	118-153 mHz	11-07080	$1,166.00
CI-108-1-L	with Leading Edge Protection	118-153 mHz	11-15432	$1,317.00

COMANT ADS-B ANTENNA CI 105-17-L

The CI-105-17L broadband antenna is designed for DME or transponder use and covers frequencies from 960 MHz to 1,220 MHz. It has a TNC female connector, a six hole mount and a 50 ohm resistance. Can be used on single and twin engine piston aircraft. Ideal for upcoming ADS-B FAA mandate, this is the only antenna of its kind, capable of both IN and OUT processing.
P/N 11-15574 .....**$455.00**



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COMANT ANTENNAS

COMANT RADIOPHONE / DME ANTENNAS



COMANT UHF (CI-177-20) - 450-470 MHz. A rugged monopole antenna particularly wellsuited to the harsh environments experienced on the underside of an aircraft. Features standard4-hole mounting, diecast metal base and radiator encased in glass laminate housing. P/N 11-06836.....**$483.00**



COMANT UHF (CI-200) - 450-470 MHz. Rugged monopole antenna particularly well-suited to the harsh environments experienced on the underside of an aircraft. Features a very compact 3-hole mounted die-cast aluminum base with the radiator encased in a glass laminate housing.
P/N 11-06837.....**$454.00**



COMANT UHF (CI-271) - 403-512 MHz. Stub antenna designed to withstand the harsh environments associated with the underside of an aircraft. Antenna radiator is mechaniclly captivated and is sealed against leakage. All exposed metal surfaces are nickel-plated for corrosion resistance and long service. Mounts through a single 0.600" hole. BNC connector is standard. P/N 11-06838.....**$185.85**



COMANT UHF (CI-273)- -403-512 MHz. Stub antenna designed to withstand the harsh environments associated with the underside of an aircraft. Antenna radiator is mechaniclly captivated and is sealed against leakage. All exposed metal surfaces are nickel-plated for corrosion resistance and long service. Mounts through a single 0.600" hole. BNC connector is standard.
P/N 11-06839.....**$226.95**

COMANT UHF (CI-275) - Frequency 406-512 MHz. Wide band UHF antenna designed for high-performance aircraft over the full frequency range of 406-512 MHz. Low profile, blade-type antenna is encased in a low drag, low weight molded body to ensure high reliability. The CI 275 comes standard with a BNC connector. Other connectors available. See order option chart.

Connector	Model	Part No.	Price
BNC	CI 275	11-06840	**$673.00**
TNC	CI 275-2	11-06841	**$774.00**
N	CI 275-5	11-06842	**$786.00**



COMANT UHF (CI-285) - Frequency • 400-960 MHz UHF blade antenna design for high performance aircraft over the full range of 400-960 MHz. Features vertically polarized/ omni-directional pattern, extremely wide band/high efficiency electrical performance. DC grounding for lightning protection, 6 hole mounting. P/N 11-06843.....**$876.00**



COMANT UHF (CI-306) - Frequency • 800-870 MHz. Stub-type antenna tuned for the 800- 870 MHz radio telephone band. Intended for use on low-flying aircraft and helicopters. CI 306 available with BNC connector and mounts through a single 0.600" inch diameter hole. P/N 11-06844.....**$377.00**



COMANT CI 310-20 RADIOPHONE - Frequencies Covered 806-960 & 1030-1090 MHz L Band / UHF blade antenna designed for high performance aircraft. Features vertical/ omnidirectional pattern, wide band/high efficiency electrical performance and DC grounding for lightning protection.
P/N 11-06845.....**$466.00**



COMANT CI 310-22 RADIOPHONE ANTENNA- Frequencies Covered 806-960 & 1030-1090 MHz L Band / UHF blade antenna designed for high performance aircraft. Low profile, light weight antenna and is packaged in a molded body with metal mounting base to ensure stable environmental performance and resistance to vibration, rain erosion and cleaning solvents. Features vertical/omnidirectional pattern, wide band/high efficiency electrical performance and DC grounding for lightning protection.
P/N 11-06846.....**$508.00**

COMANT RADIOPHONE / DME ANTENNAS



COMANT VHF COMMUNICATION (CI-121) - Frequencies Covered 118-137 MHz. Similar to the CI 109, the CI 121 is smaller in diameter and lighter at only 0.5 pounds. Upgraded to the new RTCA DO-160D environmental requirements and offers the 118 to 137 MHz frequency associated with DO-186A MOPS.
P/N 11-17921.....**$188.75**



COMANT VHF COMMUNICATIONS (CI-122) - Frequencies Covered 118-137 MHz. Designed specifically for mounting to the underside of an aircraft providing excellent radiation coverage for air-to-ground VHF communications. Bent configuration makes it ideally suited for helicopters and low wing aircraft. Upgraded to the new RTCA DO-160D environmental requirements and offers 118 to 137 MHz frequency associated with the DO-186A MOPS. P/N 11-17922.....**$219.95**



COMANT VHF COMM (CI-211) - Frequencies Covered 118-137 MHz. For large twins and medium jet aircraft. Only 8.25 inches high. Upgraded to the new RTCA DO-160D environmental requirements and offers the 118 to137 MHz frequency associated with DO-186A MOPS.
P/N 11-07082.....**$825.00**

COMANT VOR / LOC / GS ANTENNAS



COMANT VOR/ GS (CI-120G-S) - Frequency • 108-118 MHz (VOR/ LOC) 329-335 MHz (GS) Antenna system qualified for use on single engine, twin, jet, and helicopter aircraft. Provides glideslope reception capability. Complete set includes a pair (2) of blades, each with single BNC connector output, two coax interconnect cables and a signal combiner output providing for a single cable run to the avionics installation. P/N 11-06801.....**$1,488.00**



COMANT VOR/LOC/GS (CI-120-200G/S) - Frequency • 108-118 MHz (VOR/LOC) 329-335 MHz (GS) Antenna system qualified for use on single engine, twin, jet, and helicopter aircraft. Provides glideslope reception capability. Complete set includes a pair (2) of blades, each with single BNC connector output, two coax interconnect cables.Dual output signal combiner providing for separate RF cable runs to the avionics installation for NAV1 and NAV 2 receivers, is included. P/N 11-06802.....**$1,418.00**
CI-120-200G/S-L - Blades have leading edge protection and come with rubber gasket enabling mounting on curved vertical stabilizers.
P/N 11-06803.....**$1,654.00**



COMANT VOR/LOC/GS (CI-120-400) - Frequency • 108-118 MHz (VOR/LOC) 329-335 MHz (GS) Designed for the Cessna 182 Series. Complete kit includes a pair (2) of blades, each with a single BNC output, and two coax interconnect cables. Single BNC output phasing combiner providing for a single RF cable run to the avionics installation... P/N 11-06804 **$1,370.00**



COMANT VOR/LOC/GS (CI-157P) - Frequency 108-118 MHz (VOR/LOC) 329-335 MHz (Glide Slope) "V" dipole VOR/ Glide Slope antenna with fixed elements designed specifically for compatibility with the Piper Aircraft mounting. Radiating elements are not removable. Not approved for helicopter installations.
P/N 11-15700.....**$357.00**



COMANT VOR/LOC/GS (CI-185C) -Frequency • 108-118 MHz (VOR/ LOC) 329-335 MHz (GS) "V" Dipole VOR/LOC/GS antenna with detachable elements mounts on top of the vertical fin stabilizer for most single engine general aviation aircraft. RF design similar to the CI 157P. Integral ferrite balun provides for higher radiation efficiency. Not approved for helicopter installations. Consult your FBO or installation shop for best application information.
P/N -11-17923 .....**$367.00**



COMANT VOR/LOC/GS (CI-158C-2) - Frequency • 108-118 MHz (VOR/LOC) 329-335 MHz (GS) Detachable elements mounts on top of the vertical fin stabilizer offering the four-hole mounting configuration found on many beech aircraft. Detachable elements result in a significantly smaller shipping and storage carton than fixed element versions. Not approved for helicopter installations. P/N 11-06806.....**$394.00**



COMANT VOR/LOC/GS (CI-159C) - Frequency 108-118 MHz (VOR / LOC) 329-335 MHz (Glide Slope) Similar to the CI 158C-3 with the exception of offering 2-hole mount instead of a 4-hole mount. Not approved for helicopter installations.
P/N 11-17924.....**$454.00**

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Prices Subject to Change Without Notice

COMANT ANTENNAS

COMANT VOR / LOC / GS ANTENNAS

COMANT GLIDE SLOPE (CI-193) - Frequencies Covered 329-335 MHz (GS) For interior mounting for GS reception. P/N 11-05200.....**$296.95**



COMANT VOR/GS (CI-205-3) - Frequency 108-118 MHz (VOR/ LOC) 329-335 MHz (Glide Slope) Mounting on the aircraft vertical stabilizer or helicopter tail boom. Set includes a pair (2) of "towel bar" sensor elements each with a single BNC output connector and a one-piece dual coax interconnect signal combiner harness with a single BNC connector output. Provides for a single cable routing to the avionics location. P/N 11-17985.....**$1,664.00**



COMANT VOR/LOC/GS (CI-215) - Frequencies Covered 108-118 MHz (VOR/LOC) , 329-335 MHz (GS) Detachable elements featuring two integrally molded mounting legs or "spacers" for increased strength. P/N 11-17926.....**$543.00**



COMANT VOR/LOC/GS (CI-259E) - Frequencies Covered 108-118 MHz (VOR/LOC), 329-335 MHz (GS) Fixed elements for helicopter aircraft. P/N 11-06809.....**$397.00**

COMANT COMDAT GPS ANTENNAS



COMDAT ANTENNA (CI-401-220) - Frequency • GPS 1575.42 +/- 3 MHz Contains stable amplifier that offers great performance. Gain performance at 26.5 to 31.5 dB minimum. Presents very low noise levels at 3.8 dB maximum. Built-in voltage regulator. P/N 11-04139.....**$530.00**



COMDAT GPS (CI-401-221) - GPS antenna with TNC connector. Meets RTCA DO 160-D operating standards including direct effects lightning. Operate with 26.5 dB panel mount GPS receivers. Certified FAA TSO-C144 for GPS and GPS WAAS Class Gamma 1 equ. Not compliant for GPS WAAS Class Gamma 2 and 3 applications. Not compatible with most portable GPS receiver systems. GPS 1575.42 MHz / 26.5 dB Gain P/N 11-06795.....**$528.00**



COMDAT ANTENNA (CI-420-220) - Stand-alone GPS antenna with TNC connector. Meets RTCA DO 160D operating standards including direct effects lightning. Designed to operate with 26.5 dB panel mount GPS receivers. Certified FAA TSO-C144 for GPS and GPS WAAS Class Gamma 1 equipment. Not compliant for GPS WAAS Class Gamma 2 and 3 applications. Not compatible with most portable GPS receiver systems. GPS 1575.42 MHz - 26.5 db Gain P/N 11-05848.....**$512.00**



COMDAT GPS (CI-420-221) - Stand-alone GPS antenna with TNC connector. Meets RTCA DO 160D operating standards including direct effects lightning. Designed to operate with Garmin 17.0 dB panel mount GPSreceivers. Not compatible with most portable GPS receiver systems. GPS 1575.42 MHz - 17.0 db Gain P/N 11-04291.....**$477.00**

COMANT COMDAT GPS/XM ANTENNAS



COMDAT GPS/XM (CI 420-420) - Frequencies • GPS 1575.42 MHz / 26.5 dB Gain XM 2332.5-2345.0 /30-34 dB Gain. GPS and XM Weather antenna. Designed for compatibility with panel mount 26.5 dB gain GPS receivers. Add XM to an existing GPS antenna location without the need for a completely new installation location. Certified FAA TSO-C144 for GPS and GPS WAAS Class Gamma 1 equipment. Not compliant for GPS WAAS Class Gamma 2 and 3 applications. Not compatible with most portable GPS receiver systems P/N 11-05852.....**$918.00**



TED ADS-B ANTENNA

978MHz TED ADS-B monopole transmissions antenna. The outer shell and element is nickel plate and the center conductor is gold over nickel plate. P/N 11-13561 ..... **$30.50**

COMANT COMDAT VHF/GPS ANTENNAS



COMDAT VHF/GPS (CI-2480-200) - Dual function single engine antenna for VHF/GPS. For popular 26.5 dB gain GPS panel mount systems.Certified FAA TSO-C144 for GPS and GPS WAAS Class Gamma 1 equipment. Not compliant for GPS WAAS Class Gamma 2 and 3 applications. VHF 118-137 MHz GPS 1575.42 MHz / 26.5 dB Gain P/N 11-05850.....**$734.00**



COMDAT ANTENNA (CI-2480-201) - 1575.42 MHz 17.0dB Gain 118 - 137 MHz VHF. Separate connectors for GPS and VHF, GPS is protected from VHF harmonics. Designed for use with Garmin's™ panel mount GPS systems that require 17dB gain. P/N 11-05849.....**$715.00**



COMDAT ANTENNA (CI 2580-200) - 1 The CI 2580-200 is Comant's newest ComDat VHF/GPS antenna designed specifically to meet the GPS WAAS Gamma 3 specifications required by the Garmin G1000 system. The patented technology provides 80 dB of VHF harmonic suppression offering VHF and GPS in one radome without in-line filters. Gamma 3 WAAS allows for primary navigation using GPS for all phases of flight including precision LPV approaches. P/N 11-11545.....**$1,148.00**

COMANT COMDAT VHF/GPS ANTENNAS



COMDAT VHF/GPS (CI-2680-200) - Designed for use with Aircell Broadband Systems (ABS). Single and twin engine piston aircraft for applications of this antenna design. Some light turbine and light jets. Consult your FBO or installation shop for best application information. VHF 118-137 MHz GPS 1575.42 MHz / 26.5 dB Gain. P/N 11-06789.....**$1,083.00**

COMANT COMDAT XM ANTENNAS



COMDAT XM (CI-420-10) - XM 2332.5-2345.0 /25.0 dB Gain. For Garmin GDL 69/69A receivers and Heads Up Technologies (HUT) receivers with short coaxial cable runs. Feature robust TNC female connector. P/N 11-06798.....**$679.00**



COMDAT XM (CI-420-16) - XM 2332.5-2345.0 /26-30 dB Gain. For Heads Up Technologies (HUT) receivers with longer coaxial cable runs . Features robust TNC female connector. P/N 11-06799.....**$687.00**

COMANT ATTENUATOR, SPLITTERS, COUPLERS, & DUPLEXERS

COMANT SPLITTER (CI-5120) DUAL VOR/ LOC/ GS - 108-118 MHz & 329-335 MHz. For use with Garmin GNS 580 and similar systems. Splits single coax antenna input into equally proportioned VOR/ LOC/GS outputs. P/N 11-06826.....**$259.95**

CI-502 Dual VOR Coupler – Allows the simultaneous use of two VOR receivers from one VOR antenna. P/N 11-17975 ..... **$191.75**

CI-503 Dual GS Diplexer – Permits operation of two glide slope receivers from one glide slope antenna. P/N 11-17976 ..... **$174.75**

CI-505 VOR/GS Triplexer – Permits operation of two NAV & one glide slope receiver from 1 VOR/LOC antenna. P/N 11-17977 ..... **$228.95**

CI-507 Single VOR/GS Diplexer – Provides the operation of one VOR and one glide slope receiver from one VOR/GS antenna. P/N 11-17980 ..... **$168.75**

CI-509 COMANT COUPLER MARKER BEACON - Permits the use of two marker beacon receivers from one marker beacon antenna. P/N 11-06852 ..... **$174.90**

CI-1125 VOR/GS Quadraplexer – Permits operation of two NAV & two glide slope receivers from 1 VOR/LOC antenna. P/N 11-03777 ..... **$233.95**

COMANT VHF 259 CONNECTOR - UHF Connector/RG58/SGL Crimp. P/N 11-13087 ..... **$21.75**

MINI CIRCUITS GARMIN COMPATIBLE COAX POWER SPLITTER - Ideal for use in installations of Garmin devices, the ZFSC-2-1B is a coaxial power splitter and/or combiner available at an excellent price point that is identical to Garmin's part #013-00112-00. The ZFSC-2-1B can be used in VHF and UHF applications, instrumentation, and communication systems. P/N 11-13045 ..... **$85.75**

AV

DORNE & MARGOLIN ANTENNAS - ANTENNA TEMPLATES

DM C63-1/A COM ANTENNA



Frequency Range 118-137 MHz The DM C63-Series antennas are VHF communication antennas designed for high mechanical strength with machine tapered aluminum alloy radiating elements. These vertically polarized antennas cover the frequency range of 118-137 MHz for both transmitting and receiving applications. Supplied with a gasket and a doubler plate.

P/N 11-02764.....**$267.95**

DM C63-2 COM ANTENNA



118-137MHz Bent Rod For Bottom Installation, Frequency Range 118-137 MHz The DM C63-Series antennas are VHF communication antennas designed for high mechanical strength with machine tapered aluminum alloy radiating elements. Cover the frequency range of 118-137 MHz. The DM C63-2 is a low profile "bentback" radiating element designed for mounting on the bottom of the fuselage.

P/N 11-02765.....**$320.00**

DM C63-3/A ANTENNA

VHF communication antenna designed for high mechanical strength with machine tapered aluminum alloy radiating elements. These vertically polarized antennas cover the frequency range of 138-174 MHz for both transmitting and receiving applications. Low profile "bentback" radiating element designed for mounting on the bottom of the fuselage. Supplied with a gasket and a doubler plate.

P/N 11-02766.....**$409.00**

DM C70-1/A COM ROD ANTENNA



Designed for top or bottom installation on high-performance, single, twin and turbo engine fixed and rotary wing aircraft. These uniquely designed antennas offer mechanical strength and high-electrical efficiency to provide maximum reliability and full 360/720 channel transceiver operation. Height: 15" Speed Rating: 400 mph. P/N 11-02768.....**$374.00**

DM C70-3 COM ROD ANTENNA



Designed for top or bottom installation on high-performance, single, twin and turbo engine fixed and rotary wing aircraft. Offer mechanical strength and high-electrical efficiency to provide maximum reliability and full 360/720 channel transceiver operation. Height: 20.5". Speed Rating: 250 mph.

P/N 11-02769.....**$420.00**

DM C70-4 COM ANTENNA



Designed for top or bottom installation on high-performance, single, twin and turbo engine fixed and rotary wing aircraft. These uniquely designed antennas offer mechanical strength and high-electrical efficiency to provide maximum reliability and full 360/720 channel transceiver operation. P/N 11-02770.....**$447.00**

DM NI70-2 COM ANTENNA



L-band metal blades with and extended bandwidth for use with both transponders or distance measuring equipment. Sealed and waterproofed for increased reliability.

P/N 11-02767.....**$304.00**

DM N48-1 NAV ANTENNA



Balanced loop design assures an omnidirectional radiation pattern at the horizon to obtain the maximum signal for standard VOR and area navigation systems installed in lightweight aircraft, medium twins, and helicopters operating up to 250 mph. Dual VOR receiver operation is obtained when the antenna is used with the DM H21-1 diplexer. P/N 11-02771.....**$973.00**

DORNE & MARGOLIN -2/L BAND BLADE/ 4HOLE/C CONN



Blades are low profile antennas which incorporate high side load strength, a sealed construction against water and Skydrol, and lightning protection circuits. Reduced maintenance costs. P/N 11-08338.....**$289.95**

DM C70-6 VHF COMM BROADBAND ANTENNA



The C70 Series VHF Communication Antennas are designed to be installed on the top or bottom on high-performance, single, twin and turbo engine fixed and rotary wing aircraft.

P/N 11-15523.....**$725.00**

DORNE & MARGOLIN NAV ANTENNA SPLITTERS



11-02774

DM H21-2 - Dual Market Beacon or Dual VOR
P/N 11-02772.....**$163.75**

DM H22-1 - Single G/S or Single VOR.
P/N 11-02773.....**$189.75**

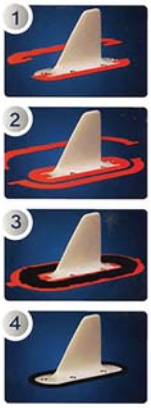
DM H23-1 - Triplexer. Dual VOR & Single G/S
P/N 11-02774.....**$447.00**

DM H69-1 - Quadraplexer. Dual VOR & Dual G/S
P/N 11-02775.....**$274.95**

DM H24-1 - Diplexer, Dual G/S..... P/N 11-02776.....**$222.95**

ANTENNA INSTALLATION TEMPLATES





Custom designed templates improve the antenna sealing process, making it more precise, efficient and cost-effective. Each Sealing Guide template is custom designed to correspond to an individual antenna. They consists of 2 pieces, one inner part and one outer part. The inner template adheres to the base of the antenna, the outer template is placed on the body of the aircraft surrounding the antenna. Sealant is applied to the gap between the templates. Sealant is applied to the gap between the templates. When the templates are removed and discarded, the sealant is left to cure, resulting in a clean, precise and smooth seal.

Each template is custom designed to correspond to an individual antenna. You will no longer need to laboriously cut and paste various lengths of tape, trying to fit them around the irregular antenna shape.

The Sealing Guide template consists of 2 pieces, one inner part and one outer part. Application is simple. The inner template adheres to the base of the antenna, and the outer template is placed on the body of the aircraft surrounding the antenna. Sealant is applied to the gap between the templates. The templates are then removed and discarded. The sealant is left to cure, resulting in a clean, precise and smooth seal.

Incorporating the "Sealing Guide" system into your sealing process will significantly reduce labor time.

For use with the following antennas:	Part No.	Price
CI-100 Series, CI-105-6, CI-105-7, CI-110-40 Series, CI-110-41 Series, CI-110-60 Series, CI-110-61 Series, S65-5366-850L, S65-5366-890L, S65-5366-2L, S65-5366-3L, S65-5366-7L, S65-5366-8L, S65-5366-10L, S65-5366-10LC, S65-5366-11L, S65-5366-116L, S65-5366-119L, S65-5366-144L, S65-5366-145L, S65-5366-168L, S65-5366-4 Series, AV-741, DM N150 Series, DM N170 Series	11-06656	**$25.85**
CI-105-20, CI-105-22, CI-105-24, CI-105-25, CI-150-250-L	11-06666	**$26.95**
CI-121, CI-122, CI-177, CI-177-1, CI-177-13, CI-177-3, CI-177-4, CI-177-20, CI-291, CI-292-1, CI-292-2, CI-292-3, CI-292-4, CI-222, CI-222-1, CI-4510, CI-317, CI-317-1,CI-405 Active Series, CI-405-26 Active, AV-10, AV-14, AV-17	11-06665	**$26.95**
CI-248-5, CI-248-30, CI-248-180, CI-2480-100, CI-2480-101, CI-2480-200, CI-2480-201, CI-2480-204, CI-2480-206, CI-2480-300, CI-2480-301, CI-2480-304, CI-2480-400, CI-2480-401, CI-420-10, CI-420-16, CI-420-220, CI-420-221, CI-420-224, CI-420-230, CI-420-420, CI-420-421, 2.70-4.40, 110-338	11-06666	**$26.95**
CI-401 Series ACT, CI-401 Series PAS, S67-1575-16, S67-1575-52, S67-1575-82, S67-1575-132, S67-1575-133, S67-1575-134, S67-1575-135, S67-1575-145, AV-GPS, DM N1021-1	11-06667	**$26.95**
S67-1575-136, S67-1575-863, S67-1575-109, S67-1575-137	11-06671	**$26.95**

TED 4-70 GPS NOTCH FILTER



Your global positioning system receives its positional information at 1575.42 MHz. The communications radios on-board your aircraft typically broadcast in the 121.5 MHz range. That is a wide separation in frequency bandwidth but it's not the complete picture. Your comm's are also producing harmonics which can produce significant noise at the GPS frequency. Now you can filter that signal and avoid potentially hazardous situations.

A simple low cost way to clean up the receivers frequency environment. The TED 4-70 notch filter installs quickly and easily via standard BNC bayonet couplings, in-line between radios and antenna. The 4-70 rejects in excess of 50dB of 1575.42 signal at the source. Each filter is individually tuned and checked to assure maximum performance. Of course, the 4-70 also passes strenuous environmental criteria so important in aircraft applications. Major GPS manufacturers recognize this problem & recommend using the 4-70 on new and retrofit installation.

P/N 11-02204 .....**$129.75**

AV

RAMI ANTENNAS

ALL LISTED ANTENNA SPECIALISTS HAVE 50 OHM IMPEDANCE. FOR SPEEDS TO 250 MPH AND 25,000' ALTITUDE.



AV-534

VHF COM ANTENNA - Stainless steel bent whip antenna with insulator and mounting hardware. 118-136 MHz. Wt. 3-1/2 oz. Application: Airborne Communications Frequency: 118 to 137 MHz Impedance: 50 Ohms Nominal VSWR: 3.0 to 1 Maximum Polarization: Vertical Pattern: Omni-Directional Connector: N/A Max Weight: 8 oz Max Height: 19-1/2" RF Power Capacity: 50 Watts
P/N AV-534.....**$83.75**
Same antenna as described above but furnished w/96" lead of RG58 A/U cable with BNC and ground strap with lugs. Wt. 7.5 oz.
P/N AV-534L.....**$93.95**
AV-534 Install Kit..... P/N 11-14061.....**$25.50**



VHF "BROAD BAND" COM ANTENNA - Blade type-low drag. Aluminum radiator encapsulated in rigid urethane foam with white fiberglass housing. 118-136 MHz. Power capability: 50 watts. 13-1/2" high. Weight: 20 oz. Application: Airborne Communications Frequency: 118 to 137 MHz Impedance: 50 Ohms Nominal VSWR: 3.0 to 1 Maximum Polarization: Vertical Pattern: Omni-Directional Connector: Type "BNC" Female Max Weight: 20 oz Max Height: 13-1/2" RF Power Capacity: 30 Watts
P/N AVT-4.....**$367.00**



VHF "BROAD BAND" ANTENNA - Rod type. Silver plated braid radiator encapsulated in fiberglass tube with white epoxy finish. Die cast aluminum base. 118-136 MHz. Wt: 8 oz. BNC termination. Supplied with weather sealing rubber pad and mounting hardware. Application: Airborne Communications Frequency: 118 to 136 MHz Impedance: 50 Ohms Nominal VSWR: 1.8 to 1 Maximum Polarization: Vertical Pattern: Omni-Directional Connector: Type "BNC" Female Max Weight: 8 oz Max Height: 20-1/4" RF Power Capacity: 25 Watts
P/N AV-529.....**$178.75**



RAMI VOR ANTENNA - The AV-532 is a VOR/LOC/GS receive only antenna which consists of taper ground high-strength 17-7PH stainless steel elements to reliably withstand vibration and wind loads. The insulators are weather-sealed compression-molded bakelite with the mounting holes provided. The unit may be mounted with the V pointed either forward or aft. The antenna is designed to operate at speeds up to 350 mph and altitudes up to 50,000 ft. It has a drag force of 3.42 lb @ 250 mph. A 30 ft. transmission line with integral balun is also supplied.
P/N AV-532L.....**$215.95**
P/N AV-532 (without Cable) .**$183.75**



TRANSPONDER ANTENNA - Chrome plated, phosphor bronze radiating element mounted in Teflon insulator. Ball tip for low-noise static discharge. May be installed from the outside. Can also be used as an ABS-B Antenna. TSOd. 1030-1090 & 978 MHz. BNC connector. Wt. 1 oz.
P/N AV-22..... **$74.75**



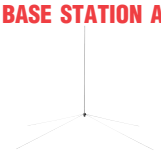
MARKER BEACON ANTENNA - Boat Type Application: Marker Beacon Frequency: 75 MHz Impedance: 50 Ohms Nominal VSWR: 1.6 to 1 Maximum Connector: Type "BNC" Female Max Weight: 6.25 oz Max Height: 2-1/2" RF Power Capacity: Receive only
P/N AV-569.....**$147.75**



RAMI AV-11 TRANSPONDER ANTENNA - The AV-11 is a non-certified transponder antenna for experimental aircraft, similar to the TED 104-12 antenna. This rod style transponder antenna utilizes a BNC connector and requires a smaller mounting hole. The antenna is designed to operate at speeds up to 350 mph and altitudes up to 50,000 feet. It has a drag force of 0.41 lbs. @ 250 mph. Frequency: 1030-1090.
P/N 11-15405.....**$29.95**



VHF DIPLEXER COUPLER - Splits the signal from a single antenna into two NAV receivers; eliminating the need for a second antenna. Application: Navigation Frequency: 108 to 118 MHz Impedance: 50 Ohms Nominal VSWR: 1.4 to 1 Maximum Connector: (3) Type "BNC" Females Max Weight: 3.5 oz Insertion loss: 3 dB Avg / 5 dB Max Isolation: 30 dB Minimum Dimensions: 2" x 1-3/3" x 1-1/8" RF Power Capacity: Receive only P/N AV-547.....**$112.75**



BASE STATION ANTENNA - Ground Plane 118-136 MHz Application: VHF Communications Frequency: 118 to 137 MHz Impedance: 50 Ohms Nominal VSWR: 1.5 to 1 Maximum Polarization: Vertical Pattern: Omni-Directional Connector: Type PL-259 Max Weight: 1.0 lb Max Height: 34" RF Power Capacity: 100 Watts
P/N AV-5..... **$161.75**
Radial Rod for the AV-5 ..... P/N 11-14054.....**$12.80**



AV-10 COMMUNICATIONS ANTENNA - 4-bolt design. Designed for high-performance aircraft applications. Identical in mounting and appearance to Cessna communications antennas. Rated to 250 knots. Equivalent to Comant CI-121 Antenna. Wt. 8 oz. Ht. 17-1/2" Application: Airborne Communications Frequency: 118 to 137 MHz Impedance: 50 Ohms Nominal VSWR: 2.0 to 1 Maximum Polarization: Vertical Pattern: Omni-Directional Connector: Type "BNC" Female Max Weight: 8 oz Max Height: 20-1/4" RF Power Capacity: 25 P/N 11-12500..... **$171.95**



PUBLIC SERVICE AND BUSINESS BAND ANTENNA AV-14- Available in 4-bolt design.Features a tapered glass laminate housing and die-cast aluminum base. Rated to 250 knots. Equivalent to Comant CI-177-1. Wt. 8oz. Ht. 17.5" Application: Airborne Communications Frequency: 138 to 174 MHz Impedance: 50 Ohms Nominal VSWR: 2.0 to 1 Maximum Polarization: Vertical Pattern: Omni-Directional Connector: Type "BNC" Female Max Weight: 8 oz Max Height: 17-1/2" RF Power Capacity: 25 Watts
P/N 11-12600..... **$222.95**



AV-17 COMMUNICATIONS ANTENNA - 4-bolt design for mounting to the underside of an aircraft. Low profile configuration makes it ideal for helicopters and low-wing aircraft. Equivalent to Comant CI-122 antenna. Wt. 8 oz. Ht. 8-3/4" Application: Airborne Communications Frequency: 118 to 137 MHz Impedance: 50 Ohms Nominal VSWR: 3.0 to 1 Maximum Polarization: Vertical Pattern: Omni-Directional Connector: Type "BNC" Female Max Weight: 8 oz Max Height: 8-3/4" RF Power Capacity: 25 Watts P/N 11-12700 ..... **$186.75**



VHF TRIPLEXER SPLITTER - Splits signal from VOR NAV antenna into two NAV receivers and one glide slope receiver. Application: Navigation & Glide Slope Frequency: 108-118 & 328-335 MHz Impedance: 50 Ohms Nominal Connector: (4) Type "BNC" Females Max Weight: 3.5 oz Filtering: 30 dB Min / 40 dB Avg Insertion Loss: 3.75 dB Maximum Isolation: 22 dB Min / 35 dB Avg Dimensions: 2" x 1-3/3" x 1-1/8" RF Power Capacity: Receive only.
P/N AV-571..... **$152.75**



RAMI TRANSPONDER/DME ANTENNA (AV-74) - The AV-74 (.425 Stud Length) & the AV-74-1 (.800 Stud Length) are a broadband blade type antenna for transponders or DME application. The antenna housing is constructed of an acrylonitrile-styrene-acrylic (ASA) shell. The white color allows maximum performance without losses due to color pigments or unseen dirt. The antenna is supplied with cellular neoprene mounting pad and hardware. The antenna is designed to operate at speeds up to 350 mph and altitudes up to 50,000 ft. It has a drag force of 0.09 lbs @ 250 mph. This antenna is a direct replacement for the CI-105. • Application: Transponder/DME • Frequency: 960 - 1220 MHz • Impedance: 50 Ohms Nominal • VSWR: 1.5:1 Maximum • Polarization: Vertical • Pattern: Omni-Directional • Connector: "BNC" Female • Max Height: 3.4" • RF Power Capacity: 2.5 kW Peak • FAA TSO: C66c, C74c.
AV74 (.425 Studs) ..... P/N 11-05846 .....**$127.95**
AV74-1 (.800 Studs) ..... P/N 11-13996 .....**$132.75**



VHF DIPLEXER SPLITTER- Splits the signal from a VOR NAV antenna into NAV and glide slope receivers. Application: Navigation & Glide Slope Frequency: 108-118 & 328-335 MHz Impedance: 50 Ohms Nominal Connector: (3) Type "BNC" Females Max Weight: 3.5 oz Filtering: 30 dB Min / 40 dB Avg Insertion loss: 1 dB Maximum Isolation: 38 dB Min Dimensions: 2" x 1-3/3" x 1-1/8" RF Power Capacity: Receive only
P/N AV-570..... **$121.85**



RAMI AV-801 GPS WAAS ANTENNA - The AV-801 WAAS GPS antenna is designed specifically to meet FAA TSO-C190 specifications. Qualification testing includes meeting the requirements of RTCA DO-301 and DO-160G. The AV-801 fit and function matches the ARINC 743A standard found on many general aviation aircraft up to and including business jets. P/N 11-14354.....**$298.95**

AV

RAMI ANTENNAS

ALL LISTED RAMI ANTENNA SPECIALISTS HAVE 50 OHM IMPEDANCE. FOR SPEEDS TO 250 MPH AND 25,000' ALTITUDE.



ANTENNA AV-1 - is a base station antenna for communications with ground vehicles or aircraft. It has heavy-duty construction with 3/8" diameter aluminum radials, a 1" diameter aluminum tube radiator, and is iridite-treated for durability. It mounts easily to a 1" diameter pipe or a 1-1/4" O.D. tube with locking set screws Application: VHF Communications Frequency: 118 to 137 MHz Impedance: 50 Ohms Nominal VSWR: 2.0 to 1 Maximum Polarization: Vertical Pattern: Omni-Directional Connector: Type PL-259 Max Weight: 2.75 lb Max Height: 34 RF Power Capacity: 1000 Watts
P/N 11-05996.....**$307.95**
Radial Rod for AV-1 ..... P/N 11-14053.....**$18.50**



VEHICLE COM ANTENNA AV-3 - is a low profile snap-in mounting quarterwave antenna for use on surface vehicles. It has a solderless cable connection at the antenna and is supplied with 12 feet of cable and PL-529 connector. Application: VHF Communications Frequency: 118 to 137 MHz Impedance: 50 Ohms Nominal VSWR: 1.5 to 1 Maximum Polarization: Vertical Pattern: Omni-Directional Connector: Type PL-259 Max Weight: 2.50 lb Max Height: 55" Max (field cuttable) RF Power Capacity: 100 Watts P/N AV-3.....**$151.75**
Radiator Whip & Ball for AV-3 Antenna ..... P/N 11-14055.....**$32.95**



ANTENNA AV-12 - is a VOR receive only antenna which uses a highly efficient technique of molding the elements directly into a high-impact thermo-setting bakelite center insulator. A 25 ft cable with integral balun is also supplied. with the AV-12L Application: VOR Receive Only Frequency: 108 to 118 MHz Impedance: 50 Ohms Nominal VSWR: 2.2 to 1 Maximum Connector: N/A Max Weight: 5.5 oz (14 oz with cable) Width Across Tips: 29-1/2" RF Power Capacity: Receive only P/N AV-12 .....**$236.95**
P/N AV-12L.....**$275.95**



COZY ANTENNA KIT - For composite Aircraft Antenna component kit for Canard Aircraft: Includes, copper tape and toroids to fabricate your own inexpensive, flexible antenna set for NAV, COM, MKR, ILS antennae. Antennae can be placed anywhere that they fit on fiberglass aircraft. This kit has the advantage of having all required parts for multiple (up to 8) antennae and are the most inexpensive antennae on the market..... P/N 11-11420.....**$59.25**



QUICKIE ANTENNA KIT - Simple installation procedure produces excellent communications antenna. Order additional kit for navigation antenna.
P/N 11-09800.....**$21.75**
Toroids Only - Used in our quickie antenna kit for composite aircraft. P/N 11-09900.....**$0.75 ea.**

VHF ANTENNA MOUNTING PLATE - Aluminum 2x4 mounting plate for straight 45-90 degree antenna including transponder antenna. The antennas sold separately, 4 clearance for mounting and center hold for antenna. ..... P/N 11-09988.....**$15.50**

AV



ANTENNA DM N4-17/N - VOR/LOC/GS BAL. LOOP SYSTEM (DM N4-17/N) Single Output -- Frequency VOR/LOC 108-118 MHz -- GS 329-335.3 MHz Frequency Range: VOR/LOC 108-118 MHz GS 329-335.3 MHz VSWR: 5.0:1 max Polarization: Horizontal Radiation Pattern: VOR/LOC Omnidirectional GS Forward Pointing Gain: 0 +/- 2 dB Impedance: 50 Ohms Lightning Protection: dc short Weight: 1.32 lbs Connector: BNC Female Cable Length: 27 inches Side Load: 17 psi FAA Approval: C34e, C36e, C40c D0138 ENV. CAT. AA5XXXXXHDXS..... P/N 11-05859.....**$1,571.00**



CABLE ASSEMBLY AV-6 - Cable assembly consisting of 50 foot of RG-58/U low loss transmission line, a PL-259 connector at one end and a BNC male connector at the other. Commonly used with the
P/N 11-06992.....**$94.75**



ANTENNA AV-15 - Used with aviation, land mobile radio and flight phone bands. Chrome-plated ball tip provides low noise static discharge. Designed to operate at speeds up to 350 mph and altitudes of 50,000 ft. It has a drag force of 0.75 lb @ 250 mph. P/N 11-06993.....**$183.75**



ANTENNA AV-64 - Marker beacon antenna designed for very low drag. Supplied with cellular neoprene mounting pad and hardware. Designed to operate at speeds up to 350 mph and altitudes up to 50,000 ft. It has a drag force of 0.22 lbs @ 250 mph.
P/N 11-06994.....**$139.75**



ANTENNA AV-530 - Designed for broadband communications. Has a die-cast aluminum base and a tapered stainless steel whip for less drag at higher airspeeds. Supplied with a weather-sealing gasket and mounting hardware. Designed to operate at speeds up to 350 mph and altitudes up to 50,000 ft. It has a drag force of 1.65 lb @ 250 mph.
P/N 11-06696.....**$174.75**



AV-100 ELT ANTENNA - This FAA/TSO antenna is intended for use with an ELT (Emergency Locator Transmitter) for general aviation. It has a passive two frequency wire whip, designed for low speed aircraft (up to 250 knots). Frequency: 121.5 MHz, 406 MHz.
P/N 11-10839.....**$216.95**



AV-520 VOR/LOC/GS ANTENNA - The AV-520 FAA/TSO is a "V" style VOR/LOC/GS antenna utilizing detachable painted stainless steel elements and internal balun transformer. The antenna is rated at speeds up to 350 mph and altitudes up to 50,000 feet. It is a direct replacement for the CI 159C. Frequency: 108–118 / MHz 329-335 MHz.
AV-520 V Style VOR/LOC/GS TSO ... P/N 11-10840 .....**$285.95**
Whip Element For AV-520 P/N 11-14062 .....**$76.85**



AV-75 FLARM COLLISION AVOIDANCE ANTENNA - The AV-75 is a broadband blade type antenna for FLARM collision avoidance application. The antenna housing is constructed of anancrylonitrile-styrene-acrylic (ASA) shell. The white color allows maximum performance without losses due to color pigments or unseen dirt. The antenna is supplied with cellular neoprene mounting pad and hardware. The antenna is designed to operate at speeds up to 350 mph and altitudes up to 50,000 feet. ..... P/N 11-15367
$145.75



AV-525 VOR/LOC/GS ANTENNA - The AV-525 FAA/TSO is a VOR/LOC/GS antenna similar in style to the AV-12 but utilizes an internal balun transformer. The antenna is rated at speeds up to 350 mph and altitudes up to 50,000 feet. It is a direct replacement for the CI 157P. Frequency: 108-118 MHz (VOR/LOC) / 329-335 MHz (GS) P/N 11-10841.....**$267.95**



AV-535 ANTENNA - The AV-535 is a "Bent Whip" antenna suitable for belly mounting. It is designed to operate in the public service and business bands. The antenna is rated at speeds up to 350 mph and altitudes up to 50,000 feet. It is a direct replacement for the CI 292-3. Frequency: 138-174 MHz.
P/N 11-10845.....**$237.95**



AV-575 ANTENNA DIPLEXER/SPLITTER - The AV-575 FAA/TSO antenna is a marker beacon antenna splitter allowing two receivers to share the same antenna. It is a direct replacement for the CI 509. Frequency: 75 MHz.
P/N 11-10843.....**$126.85**



AV-585 ANTENNA DIPLEXER/SPLITTER - The AV-585 FAA/TSO antenna is a diplexer/splitter providing (2) VOR/LOC and (2) GS outputs from one VOR/LOC/GC antenna. It is a direct replacement for the CI 1125. Frequency: 108-118 MHz / 328-336 MHz. P/N 11-10842.....**$165.75**



AV-925 ELT ANTENNA - The AV-925 antenna was developed to be used with airborne FM transceivers typically used in first responder type aircraft providing a single antenna solution for the multiband transceivers. It has met DO-160G, Section 8, Category U requirements for robust vibration and is qualified for installation on helicopters with unknown related rotor frequencies. It is also qualified to perform as a 406 MHz ELT antenna, and is well suited for this function on higher speed, fixed wing aircraft. P/N 11-10846.....**$1,951.00**



AV-926 TRIPLEXER - The AV-926 triplexer can be used with airborne multiband FM transceivers. The device is designed to provide three separate frequency band ports (typically going to a multiband transceiver) from a single port multiband antenna. P/N 11-10847.....**$490.00**

RAMI WHIP ANTENNA AV-200

The AV-200 ELT antenna is: Whip type, 121.5 and 406 MHz and intended for use with an ELT (Emergency Locator Transmitter) for General Aviation. It is a passive two frequency wire whip, designed for low speed aircraft (up to 250 knots).

Rami whip type ELT Antenna - White .....P/N 11-12892 ..... **$99.95**
Rami whip type ELT Antenna - Black .....P/N 11-14040 ..... **$106.75**



RAMI AV-401 ANTENNA - ROD & WHIP

121.5, 243 & 406 MHz. 50 Ohms, BNC connector.
P/N 11-14041.....**$349.00**

RAMI AV-7M MAGNETIC 5/8 WAVE VEHICULAR COM ANTENNA



ANTENNA/VHF communications, whip type, magnetic base, 118-137 MHz, includes: 12' cable with attached BNC Connector. Antenna with magnetic base; 12' cable with "BNC" connector attached. The AV-7 is a high performance vehicular antenna for use on all surface vehicles where communications on the aircraft VHF COM frequency band is required. Heavy duty constructed with a tapered 17-7PH stainless steel whip and spring mount. All exposed fittings are chrome-plated brass or stainless steel. Mounting is easily achieved on rooftop, cowl, fender or other suitable location via a magnetic base. The antenna comes pre-tuned to operate in the aircraft VHF COM frequency band of 118-137 MHz. .....P/N 11-14036 ..... **$192.75**

RAMI AV-7F FIXED MOUNT 5/8 WAVE VEHICULAR COM ANTENNA



ANTENNA/VHF communications, fixed Mount, 118-137 MHz, spring loaded base, includes: 17' cable with unattached BNC Connector. Antenna with fixed mount base; 17' cable with "BNC" connector not attached. The AV-7 is a high performance vehicular antenna for use on all surface vehicles where communications on the aircraft VHF COM frequency band is required. Heavy duty constructed with a tapered 17-7PH stainless steel whip and spring mount. All exposed fittings are chrome-plated brass or stainless steel. Mounting is easily achieved on rooftop, cowl, fender or other suitable location via a fixed "NMO" base. The antenna comes pre-tuned to operate in the aircraft VHF COM frequency band of 118-137 MHz. .....P/N 11-14035 ..... **$159.75**

RAMI AV-7-1A 5/8 WAVE VEHICULAR COM ANTENNA ONLY AND ACCESSORIES



The AV-7 is a high performance vehicular antenna for use on all surface vehicles where communications on the aircraft VHF COM frequency band are required. Heavy duty constructed with a tapered 17-7PH stainless steel whip and spring mount. All exposed fittings are chrome-plated brass or stainless steel. Mounting is easily achieved on rooftop, cowl, fender or other suitable location via a magnetic or fixed "NMO" base. The antenna comes pre-tuned to operate in the aircraft VHF COM frequency band of 118-137 MHz.

AV-7-1A Antenna Only; 44.5" Length.....P/N 11-14037 ..... **$156.95**
AV-7-3F Fixed base mount only 17' cable with BNC connector not attached.....P/N 11-14038 ..... **$48.75**
AV-7-2M Magnetic base only 12' cable with BNC connector attached.
P/N 11-14039 ..... **$79.95**



RAMI BALUN TRANSMISSION LINE / CABLE & BALUN ASSEMBLY

Rami AV Balun Transimission Line / Cable & Balun assembly.

Description	Part No.	Price
Rami Av-12 Balun Transmission Line	11-14056	$69.95
Rami Av-532 Balun Transmission Line	11-14057	$69.95
Rami Av-6 Balun Transmission Line	11-06992	$94.75



RAMI ANTENNA ROD WHIP TYPE - AV-402

RAMI rod/whip type antenna is intended for use with an ELT (Emergency Locator Transmitter) for general aviation. It is a passive three frequency fiberglass rod whip antenna, designed for low speed aircraft (up to 350 knots).
P/N 11-14043.....**$364.00**



RAMI ANTENNA COUPLER / 50 OHMS - AV-586

The AV-586 antenna coupler is an antenna signal splitter that provides two outputs from a single antenna. The AV-586 is designed to provide the necessary signals to two newer navigational radios that only have one antenna input to receive VOR/LOC/GS signals.
P/N 11-14044.....**$172.90**



RAMI ANTENNA COUPLER / 50 OHMS - AV-587

The AV-587 antenna coupler is an antenna signal splitter/diplexer that provides three outputs for antennas with only a single output port. One output provides a combined VOR/LOC/GS signal, a second provides a VOR/LOC signal, and a third output provides the GS signal. P/N 11-14046.....**$212.95**



RAMI ANTENNA DUPLEXER SWITCH / 50 OHMS - AV-590

The AV-590 duplexer allows two communications radios to share one antenna. In normal, non-switched mode the AV-590 evenly splits the signal between two radio receivers. When the control voltage is activated by a microphone's PTT, the AV-590 switches the antenna to the corresponding radio transmitter and isolates the other receiver.
P/N 11-14047.....**$289.95**

RAMI ANTENNA DIPLEXER / 136-174 & 380-520 MHZ - AV-927



The AV-928 diplexer can be used with airborne multi-band FM transceivers and is deigned to provide two separate frequency band ports from a multi-band antenna with a single output port. AV-928 diplexer frequency outputs: 136 - 174 MHz and 380 - 520 MHz.
P/N 11-14048.....**$487.00**

RAMI ANTENNA DIPLEXER / 136-174 & 760-870 MHZ - AV-928



The AV-928 diplexer can be used with airborne multi-band FM transceivers and is deigned to provide two separate frequency band ports from a multi-band antenna with a single output port. AV-928 diplexer frequency outputs: 136 - 174 MHz and 760 - 870 MHz.
P/N 11-14049.....**$487.00**

RAMI ANTENNA DIPLEXER / 380-520 & 760-870 MHZ - AV-929



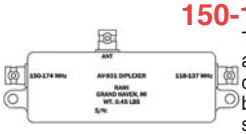
The AV-929 diplexer can be used with airborne multi-band FM transceivers and is deigned to provide two separate frequency band ports from a multi-band antenna with a single output port. AV-929 diplexer frequency outputs: 380 - 520 MHz and 760 - 870 MHz.
P/N 11-14050 .....**$487.00**

RAMI ANTENNA DIPLEXER / 136-174 & 380-870 MHZ - AV-930



The AV-930 diplexer can be used with airborne multi-band FM transceivers and is deigned to provide two separate frequency band ports from a multi-band antenna with a single output port. AV-930 diplexer frequency outputs: 136 - 174 MHz and 380 - 870 MHz
P/N 11-14051.....**$487.00**

RAMI ANTENNA DIPLEXER / 118-137 & 150-14 MHZ - AV-931



The AV-931 diplexer can be used with airborne multi-band FM transceivers and is designed to provide two separate frequency band ports from a multi-band antenna with a single output port. AV-931 diplexer frequency outputs: 118 - 137 MHz and 150 - 174 MHz.
P/N 11-14052.....**$585.00**

AV

ANTENNAS

BOB ARCHER AIRCRAFT ANTENNAS

These antennas have been designed by Bob Archer from Torrance, CA utilizing concepts common to military aircraft and space vehicles. The antenna performance is superior to most in use today in private aircraft. The only requirement for max. performance is that the antennas must be installed in accordance with the installation instructions. These antennas are designed to be installed inside fiberglass or other non-conductive wing tips or tail caps of metal or other conductive material aircraft.

SPORT AIRCRAFT ANTENNAS



MODEL 1A This Wing Tip Com Antenna is designed to fit inside larger fiberglass wing tips on metal (conductive that is) airplanes such as T-18's, RV's Bonanzas etc. But tuned out for the Com Band. The wing tips must have internal dimensions of at least 11"x24" and generally fit better on the bottom surface. The VSWR is normally less than 2.0:1 over a frequency band of 108 to 127 Mhz but could be higher due to installation factors. Offered because of pressure from RV builders. Users report good communications at ranges greater than 50 miles. Should be installed so that the maximum height of the tip is utilized to get the most vertical polarization.

Left Side ..... P/N 11-21016-1 .....**$124.85**
Right Side..... P/N 11-21016-2 .....**$124.85**



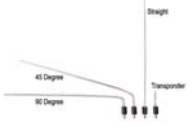
MODEL 2 - Tail cap Com antenna for metal (conductive) airplanes installed inside a tail top fiberglass fairing with inside dimensions of at least 10" high x 12" long. VSWR is normally less than 2.0:1 over a COM frequency band of 118 to 136 Mhz. .. P/N 11-21020.....**$168.75**



MODEL 4 - Wing tip VOR antenna designed for smaller tips with a 10 degree flare on the top portion and a curled aft portion. VSWR less than 2.0:1 over the frequency band of 108 to 118Mhz.
Right Side P/N 11-21025-1 ..... **$124.85**
Left Side .. P/N 11-21025-2 ..... **$124.85**

NOTE: When ordering wing tip antennas, order antennas with -1 suffix if installing on the bottom inside surface of a left hand tip or upper inside surface of a right hand tip. Order antennas with a -2 suffix if installing on the inside lower surface of a right hand tip or the upper inside surface of a left hand tip. Wing tip Com antennas should be installed only on lower inside surfaces.

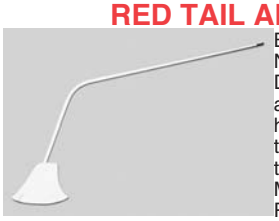
STAINLESS VHF ANTENNAS FOR HOMEBUILTS



These VHF antennas are stainless steel including all hardware. Insulators are made of Delrin, which resists extreme cold or high temperatures and is non-breakable. Antennas are available in straight and 45° or 90° angles. 118–136 mHz range. Weight: 3 oz. Not FAA approved.

Straight ..... P/N 11-04516... **$44.75** 45° .... P/N 11-04517....**$44.75**
Transponder ... P/N 11-02759... **$21.50** 90° .... P/N 11-00648....**$42.95**

RED TAIL AIRBAND ANTENNA



Bent (bottom) Airband Whip Antenna. Non-TSO'd for Experimental aircraft. Delta Pop Aviation Red Tail™ Antennas are the best non-TSO'd antennas we have found, with performance as good as the best TSO'd units. Frequency - 118 to 137 MHZ. VSWR - Less than 2.5:1 Measured with Anritsu Antenna Analyzer. Polarization - Vertical. Impedance - 50 Ohms. Connector - BNC Female. Element - Tapered Aluminum UV Resistant Powder Coated. Configuration - DC Grounded To Reduce "P" Static. Mounting - 8-32 x .437" long threaded studs. Weight - 6.5 oz / 184 grams. Finish - White Polyurethane.

Bent (Bottom) .....P/N 11-13829 ..... **$135.00**
Straight (Top).....P/N 11-13828 ..... **$125.00**

RED TAIL TRANSPONDER ANTENNA



Streamlined Transponder Antenna. Non-TSO'd for Experimental aircraft. The Delta Pop Aviation streamlined transponder Antennas are the best non-TSO'd antennas we have found, and they offer a low drag solution at a good price. Frequency - 1030 to 1090 MHZ. VSWR - Less than 1.2:1 Measured with Anritsu Antenna Analyzer. Polarization - Vertical. Impedance - 50 Ohms. Connector - BNC Female. Mounting - 8-32 x .437" long threaded studs. Weight - 2.6 oz / 74 grams. Finish - White Polyurethane. P/N 11-13830.....**$78.75**

ANTENNAS FOR COMPOSITE AIRCRAFT



MODEL 6 - This com antenna is designed to be installed on the inside surface of the aft fuselage of composite and wood aircraft. It is a dipole that is folded up to minimize the vertical dimension and requires 12" of fore and aft space and 26.5" vertically. It is designed with flexibility so it can match the internal curvature of the fuselage. The VSWR is less than 2:1 across the com frequency band. .....P/N 11-21000 .....**$187.75**



MODELS 7 & 8 - These antennas are essentially the same with the exception of the overall length and the matching devices with the com antenna being installed vertically and the nav antenna being installed horizontally. VSWR is less than 2:1 over their respective frequency bands. The outer ends of these antennas may be swept to +/-30° to facilitate installation in various aircraft types.

NAV Antenna Model 7 ..... P/N 11-21030 ....**$124.85**
COM Antenna Model 8..... P/N 11-21035 ....**$119.95**



ARCHER MARKER BEACON ANTENNA

Marker Beacon antenna kit. Consists of 40 of copper tape (1/4 wave length) and enough coax cable for most installations in fuselage area, plus hardware. Works fine in glass wing tips and fuselages or wing to fuselage gap seals. P/N 11-14517 .....**$52.95**



ACTIVE GPS ANTENNA AV-GPS

The RAMI model AV-GPS is a permanently mounted external aircraft antenna designed for use with GPS receivers which provide +5 volts DC on their antenna connector. It is an active (amplified) antenna providing an average of 26 dB gain over a passive (non-amplified) antenna. Operates at speeds up to 350 mph and altitudes up to 50,000 ft. Drag force of 0.18 lb @ 250 mph. (Not FAA TSO'd) P/N 11-17990...**$229.95**

ANTENNA WIRE

COAXIAL CABLE - RG-58U – Tinned copper conductor, solid polyethelane dielectric. Standard cable for radio installations. For experimental aircraft only. P/N 11-04258.....**$0.74 ft**..... **$51.80/100ft.**

TYPE RG-400U – Tinned copper conductor, PVC Type IIA jacket. FAA approved for certificated aircraft.

P/N 11-09202.....**$2.85/ft**..... **$242.25/100ft.**



BNC COAXIAL ANTENNA CONNECTORS FOR RG-58U CABLE

Male ..... P/N 11-03992.....**$2.85**
Female ..... P/N 11-03993.....**$3.50**

BNC COAXIAL ANTENNA CONNECTORS FOR RG-400U CABLE

Male.....P/N 11-01802 ..... **$3.60** Female ..... P/N 11-01803 .....**$3.95**

ANTENNA INSULATORS



(1) Feed-Thru Insulator for lead-in wire from fixed antenna. Type 4125. 10-32 threads, 3" length tip to tip, 1-9/16" casing. .....P/N 11-10500 .....**$15.65**
(2) Strain Insulator for receiver antenna. .....P/N 463 .....**$10.95**

ANTENNA SEALANT AC236B1/2



Perfect sealant for antenna installations. AC-236 Class B is a two-component, manganese dioxide cured, liquid polysulfide polymer system providing excellent fuselage seals. P/N 09-00532 ..... **$25.50**



WSI WEATHER/SIRIUS RADIO ANTENNA - Operates with all new WSI InFlight® capable receivers. The antenna receives Sirius Satellite Radio broadcasts to enable the WSI weather service. It was designed specifically to suppress interference from ground based signals. Its proprietary design allows for optimum performance while the aircraft is turning. The antenna has been thoroughly tested and meets all of the RTCA DO-160E requirements. P/N 11-05937 ..... **$720.00**



TED TRANSPONDER ANTENNA - This monopole transponder/DME antenna meets the same specifications and is a direct replacement for the CI-101 and AV-22 antennas. Exceptional performance and value. P/N 11-17995 .....**$29.95**

COPPER ANTENNA FOIL TAPE 3/8 INCH



Used as an antenna ground in composite aircraft.
P/N 11-12900.....**$40.50**

TORROIDS (FERRITE BEADS)



Used in our quickie antenna kit for composite aircraft. P/N 11-09900.....**$0.75**

AV

Prices Subject to Change Without Notice

KLEIN WIRE STRIPPERS / CUTTERS



Klein wire strippers and cutters cut, strip, gauge and loop a wide range of wire types and sizes. Made of strong, hardened steel with comfortable handles, these tools are durable and long lasting.

Part No.	Description	Price
12-00234	Strips 16 to 26 AWG stranded wire, easy-to-read wire gauge markings, comfortable handles with cushion ridges.	**$16.50**
12-00236	Solid and Stranded. Double-dipped comfort grips with curved handles, cuts, strips, loops and gauges 20-30 AWG solid wire and 22-32 AWG stranded wire, cleanly shears 6-32 & 8-32 screws, coil spring provides fast, self-opening action.	**$20.80**
12-00235	Solid and Stranded. Double-dipped comfort grips with curved handles, cuts, strips, loops and gauges 10-18 AWG solid wire and 12-20 AWG stranded wire, cleanly shears 6-32 & 8-32 screws, coil spring provides fast, self-opening action.	**$21.50**
12-00233	Strips 10 to 18 AWG solid wire, easy-to-read wire gauge markings, comfortable handles with cushion ridges.	**$13.85**



SUPERCHAMP IV CRIMPING TOOL

The professional quality crimping tool. This versatile hand tool has crimping dies for insulated an uninsulated terminals and splices in wire sizes No. 22 to No. 10 AWG. It has a terminal locator to position insulated terminals during crimping and an in-nose cutter for tight locations. This tool is a wire stripper and has a built-in heavy duty bolt cutter. Color coded dies in tool nose correspond to color on terminal insulation sleeve to insure die selection. A stud gauge and wire stripping gauge are important on the tool body. Cushioned handles. Made in the U.S.A.

P/N 604252-1 .....**$19.85**



BANTAM ROTA-CRIMP TOOL

The AMP Bantam Rota-Tool crimps uninsulated terminals and splices for No. 8 to 1/0 sizes. The correct die position is selected by rotating dies to correct AWG number. Dies are fixed in tool to avoid loss. Compact, rugged and easy to handle. 15" long. Wt. 5 lbs. Not for certified Aircraft use. P/N 601075 .....**$1,795.00**

BALLPOINT HEX SOCKET DRIVER

3/32" Ballpoint Hex Socket Driver for use on hex head screws and nuts.



This tool is commonly used with most avionics units like Honeywell Bendix/King and Garmin.

P/N 12-02063..... **$5.35**



QUICK SHOT AVIONICS REFERENCE MANUAL

Quick Shot is a compact, rugged binder type manual which shows detailed wire pin-outs for a wide variety of general aviation avionics equipment. Each page is removable and very durable. The wiring diagrams in Quick Shot Volume 1 include Apollo/UPS, Bendix, Garmin, Icom, Sandel Mid-Continent Instruments and Avionics, Sigtronics, United, Telex, David Clark, PS Engineering, Narco, Val, and many more.

P/N 11-01623 ..... **$56.50**



LITTLE BLUE CRIMPER

The Daniels AFM8 is designed for most of the miniature and sub-miniature connector types that are so widely used in all types of electronic systems. Originally developed for the Air Force, the AFM8 meets the need for a miniature tool accommodating wire sizes 20 thru 32 AWG. The cycle controlled precision ratchet assures consistently accurate crimps every time. The tool has a built-in eight step selector knob for ease in dialing the correct crimp depth setting for the wire being used.

Little Blue Crimper..... P/N 11-04443..... **$379.00**
Adapter K13-1 For Low Density Pins..... P/N 11-12211..... **$63.75**
Adapter K42 For High Density Pins ..... P/N 11-12212..... **$64.90**



BIG BLUE CRIMPER

The Daniels AF8 has virtually limitless application within the specified wire range of 12 thru 26 AWG. Over 1,000 turret heads or positioners are available to adapt the tool frame to your specific military or proprietary contact/wire combination. The eight impression crimp, which is standard in the AF8, assures absolute maximum tensile strength with almost every closed barrel contact. The precision ratchet controls cycling on the tool in both directions of handle movement. This assures the same, accurate crimp every time. It's like having a quality control inspector at every work station.

P/N 11-04442 ..... **$380.00**



AMP PRO CRIMPER II HAND TOOL

The PRO-CRIMPER II Hand Tool provides the versatility of general-purpose service of general-purpose service tools along with the reliability and ease of use of many premium-grade tools For versatility, 75 die sets (available separately) are interchangeable, including those for open-barrel contacts and terminals. Additionally, many of these die sets have multiple cavities for crimping a variety of contact or terminal sizes.

Pro Crimper II 58433-3.....P/N 12-01379 ..... **$179.00**
O-Crimp Die 58435-1 .....P/N 12-01380 ..... **$320.00**
Hex Crimp Die 58436-1.....P/N 12-01381 ..... **$139.95**
Pin & Socket 58495-2 .....P/N 12-01382 ..... **$174.75**



CRIMPING/CUTTING TOOL

This tool is designed to crimp insulated and non-insulated 10 to 20 AWG solderless terminals & connectors. It has easy-to-read tool markings to identify the insulated or noninsulated crimping dies. Its tapered nose design works well in tight places and has specially hardened cutter in th nose for quick, clean cuts. Size: 9.75". Lifetime warranty.....P/N 12-00698..... **$39.60**



CRIMPMASTER CRIMP TOOL FRAME

Crimpmaster Crimp Tool Frame Only. 1.26lb.
30-506 Crimp tool ..... P/N 11-08686. **$94.50**
Die Set Hex for the 30-506 ... P/N 11-08687. **$43.50**



CRIMPMASTER™ CRIMP TOOL

for #22 to #10 AWG (.324mm2 - 5.261mm2) Insulated Ring Tongue Terminals and Splices Features: Provides good and consistent crimp every time, Dies change quickly and easily with a screwdriver, Interchangeable dies provide versatility in a single tool, Cushioned, comfort-grip handles

30-500 Crimp tool..... P/N 11-08688..... **$106.85**



CRIMP TOOL (HX4) CRIMP TOOLS

The DMC HX4 Crimp tool features a system of interchangeable dies which eliminate the need of separate fixed die crimp tools for each and every different application. Many maintenance and manufacturing concerns have standardized on this model, thus eliminating the cost associated with maintainaing and calibrating bulky inventories of single purpose tools. Length: 11" Weight: 11 oz.

H4X Crimp Tool.....P/N 11-08690 ..**$309.00**
Die set 5-24 AWG.....P/N 11-08691 ..**$185.75**



HAND CRIMP TOOL GMT232

The GMT232 Hand Crimp Tool crimps low profile environmental splices. The GMT232 is the most popular tool to cover the range of 12 (yellow), 16 (blue), and 20 (red) splices for low profile environmental splice applications. The GMT232 has a locator which is configured to hold the splice in the correct location while either wire is being terminated. This tool is comparable to the popular Tyco AD1377.

P/N 11-08692 ..... **$187.75**

AVCOMM AC-2EX PORTABLE INTERCOM



Measuring a mere 5.1" by 2.85", it is designed to produce powerful communications you can depend on. The compact design makes it easy to carry in your flight bag, a feature pilots who rent aircraft will especially appreciate. Need 4 positions? Simply add the AC-2XM module to accommodate additional passengers. FEATURES: • AVCOMM's Expandable Portable: 2 to 4 place • Rugged compact design • Two 9V batteries with quick access or 12-28V DC power • Stuck mic' indicator & Power-transmit LED • For use with mono or stereo headsets • Pilot priority PTT • Fail safe feature • Wt: 14.1 oz. • Full 3 year factory warranty.....P/N 11-02264 .....**$227.26**

DRE D-205E INTERCOM



Two place portable/built-in expandable intercom with outstanding, clean stereo sound. Individual squelch circuits and PTT jacks. Stuck mic warning (visual and audio alarm). Automatic failsafe pilot communication to radio with loss of power to the intercom. Accessory inputs for Stall Warning, Altimeter Alert, Collision Avoidance & Engine Monitor, etc. (for built-in use). Standard cell phone interface. No deterioration of sound as battery weakens Powered by two 9V batteries. Auxiliary power input (on the side). Automatically compatible with mono or stereo headsets or a mix. Optional mounting flanges allow installation in ultralights and LSA. Anodized aluminum case. Additional features include Mil-Spec quality cabling, music input for MP3 players, CD, etc. and auto music muting with manual override. 3-year warranty.

DRE Stero Intercom ..... P/N 11-09576.....**$349.00**
DRE-205E Aux. Power Cord ..... P/N 11-09585.....**$14.75**
DRE-205E Mounting Brackets..... P/N 11-09577.....**$13.85**

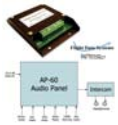
AVCOMM DX-AC6PA INTERCOM



Designed to provide the highest level of audio performance. The Quick Install Kit makes it a snap for almost anyone to install without the task of soldering individual connectors. Compact aluminum case that fits virtually anywhere on the panel. 2~6 place panel mount intercom. Quick Install Kit included. Rugged construction. Solid extrudedaluminum frame. Compact size fits virtually anywhere. Power transmit LED. 12~28 volt compatible. Pilot priority PTT. Full three-year factory warranty

P/N 11-02267 .....**$355.00**

FLIGHT DATA SYSTEMS AP-60 AUDIO MIXER



An Audio Mixer is Required any time there is more than one Audio Source. This unit mixes and amplifies six audio inputs. Mounts behind the instrument panel. ***For Example:*** * Communications Radio Audio * Navigation Radio Audio * EFIS Warning Audio * Music Player Audio * Traffic Warning Audio ***Specifications*** * Aux. Audio Input * Compact (2.5" X 3.4 X .6"), Lightweight (2.1 oz) * 12-28 Volt Compatible * No Special Tools Required For Installation

P/N 10-03427 .....**$85.95**

NAV-DATA 4 PLACE INTERCOM



Our Four place intercom is packed with features only found in much more expensive units. Failsafe feature for pilot in the event of power loss. Pilot isolate switch. Oprates on one 9 volt battery. Adjustable squelch (mute). Voice activated (VOX). Built in push to talk switch. Music in / Record out jacks. P/N 13-06088 .....**$106.75**

FLIGHTTECH ITC-2004 ENRI 4-PLACE INTERCOM



4 place portable intercom with pilot isolate capability. Features: Exclusive Electronic Noise Reduction circuits. Up to 110db of Noise Reduction. Continues Audio, No missed Syllables or Words. Built-in Cellular Phone Interface, includes patch cable. Pilot/All Switch. 9 Volt Battery or External DC Operation, Cigarette Lighter Adaptor included. Auxiliary Stereo Audio Input with Radio Mute and Intercom Audio Mute. Light weight, 10 oz. Push-to-Talk Button for Keying the Comm Radio. Pilot and CoPilot Radio PTT Jacks. Small Size: 5.5" x 1.5" x 3.2" Three Year Warranty .....P/N 11-17669 ..... **$260.95**

FLIGHTTECH ITC-401SJ INTERCOM



• Exclusive Background Noise Reduction Technology • Continuous Audio, No Missed Syllables or Words • Up to 110db of Noise Reduction • Single Volume Control • Built-In Cell Phone/Aux Audio Interface • 9 Volt Battery Operation • External DC Power Jack and Power Cord • PTT for Keying Comm Radio • Small Size: 4" x 2.5" x 1.5' • Compatible with headsets with Electret Microphones • Three Year Warranty.

P/N 11-09736 .....**$169.95**

AIRCRAFT SPRUCE SKYCOM 200 PORTABLE INTERCOMS



200- 2 PLACE - Measures just 2.25"x1.38"x 2.75". Portable & Compact. Pilot/Co-Pilot Volume Controls. Adjustable Squelch Circuit. Fail Safe Mode. Easy Battery Access. Powered by 9V Battery. 25-30 Hours Battery Life

200E- 4 PLACE - Measures just 2.25"x1.38"x 2.75". The Skycom 200E 4-Place comes with a 2-Place intercom and a 5-foot extension cable that connects to another 2-Place remote intercom for passengers in the backseat. Portable & Compact. Pilot/Co-Pilot Volume Controls. Adjustable Squelch Circuit. Fail Safe Mode. Easy Battery Access. Powered by 9V Battery. 25-30 Hours Battery Life

SkyCom 200E 2-Place Intercom ..... P/N 11-11860 ..... **$89.95**
SkyCom 200E 4-Place Intercom ..... P/N 11-11865 ..... **$118.95**

COMTRONICS ULTRA-COM II INTERCOM



Comtronics very popular two-place portable intercom was designed for pilot/copilot communication in high noise environments. Separate volume controls are adjustable by either pilot or passenger to meet individual hearing needs. This intercom can be used as an intercom only or a complete package with the addition of a single transceiver using a matching Comtronics radio interface cable with push-to-talk switch. The ULTRA-COM II integrates directly with all Comtronics headsets and helmets providing air-to-air and air-to-ground communication. This intercom includes a 3-foot adapter cord connecting to various external inputs such as a radio interface cable with push-to-talk switch for a single transceiver. P/N 11-07430.....**$239.95**

PS ENGINEERING PM 1000II 4 PLACE MONO PANEL MOUNT INTERCOMS



PS Engineering's renowned voice activated intercom (VOX) eliminates clipped words and shouting. Other features include individual volume and squelch controls for the pilot and copilot. Music can be added to the intercom for in-flight entertainment. Automatic muting when the intercom is active, or intercom and radio (PM 1000II-series) ensures uninterrupted communications. PS Engineering's "SoftMute" gradually returns the music to the original level when conversation stops. PM 1000 is an effective 2-place intercom, with individual volume and squelch controls, while the 4-place PM 1000II adds a transmit indicator lamp, and music muting during radio traffic. The PM 1000II, 11-11922, has pilot isolate mode that allows the pilot to concentrate on flying, while the passengers enjoy music and conversation. The PM 1000II with CREW mode (P/N 11-11920) allows for separate intercom for the pilot and copilot positions, as well as separate music sources for front and back. On all PS Engineering intercoms a wire harness must be done by PS Engineering or a PS Engineering dealer or warranty is void. For a quote on 11-11922 PM 1000II with out crew wire harness , on 11-11920 PM 1000II with crew wire harness, or on 11-02553 please call 800-826-3160. Warranty: 1 year.

PM1000II 4-Place Intercom ..... P/N 11-11922.....**$359.95**
PM1000II-w/Digital Recorder ..... P/N 11-11906.....**$469.95**
6-pl. for expansion module..... P/N 11-02555.....**$400.00**
PM1000II-w/ Internal Crew ..... P/N 11-11920.....**$494.00**
PM1000II-w/Crew & Recorder ..... P/N 11-11908.....**$529.95**
PM1000 2-pl. for dual audio panels..... P/N 11-02553.....**$799.95**
Jack Kit (4-Place)..... P/N 11-11910.....**$35.00**
2-1/4" Mounting Plate with Crew..... P/N 11-14383.....**$19.95**
2-1/4" Mounting Plate with out Crew..... P/N 11-14360.....**$19.95**

XCOM INTERCOM



Digitally controlled, intercom system suitable for nearly every 2 or 4 place aircraft. Features a full VOX (Voice Activated) intercom with second com ability, music input with muting and the ability to use different branded headsets without compatibility issues. Successfully mated to the leading handhelds as well as panel-mounted Icom, Narco, King and the like. Measuring only 2-1/8 x 1 x 3-7/8" or (53 x 24 x 100mm) and with a panel size of only 1 x 2 1/8 (53 x 24mm), it's one of the smallest and lightest intercoms in the world and only draws 60 ma (at 14 V) during operation. Mount horizontally or vertically. No voice clipping. Monitors and reduces background noise when the voice circuit is open. One simple DB15 connector is all thats needed, RS-232 port for future software updates. 2 com inputs cater for a primary airband com and a secondary VHF, UHF or Marine band transceiver. Additional input for CD player, FM Radio or MP3 player is available with auto muting to enable seamless communication in the cockpit. Voltage: 10-30 VDC. 2 yr warranty.

P/N 11-02207 ..... **$447.00**

PS ENGINEERING AEROCOM III



The Aerocom III is a 2-place stereo portable intercom with IntelliVox™, a completely automatic VOX squelch. Each microphone computes the difference between speech and cabin noise. It opens instantly when somebody talks and only the microphone spoken into is active. This prevents unwanted background noise from entering the audio system. Powered by a 9V battery (10 hrs of use) or aircraft power. Features low battery alert. By using external push-to-talk buttons (not included), both the pilot and copilot positions have the ability to transmit over the aircraft radio. The aerocom III will route stereo music to the headsets through the optional music cable. The music automatically mutes when there is intercom activity or radio traffic.There are two modes controlled by a top-mounted switch. In "ALL" mode, both positions hear radio communications, music, and have intercom capability. In the "ISO" mode, only the pilot side is connected to the aircraft radios, without intercom or music distractions. The copilot position continues to have music, and intercom communications with an expansion unit if installed.The aerocom III is expandable to 4-places with the Aerocom EX expansion unit available by special order. This contains separate music input and dedicated IntelliVox™ processors. Specifications: Size: 4.375"l x 3.250"w x 1.500"h; Wt: 10 Oz.; Power: 9V batt. or 12/24V aircraft power Battery Life: Approx. 10 hrs.; Headphone output: 40m w/channel into 150Ω, < 1% THD; ±3dB mic frequency range: 180Hz–15,000Hz P/N 11-00427 ..... **$449.95**
Expansion Unit (adds 2-places) ..... P/N 11-01108 ..... **$139.95**

PM 3000 PANEL MOUNT STEREO INTERCOM



The world's first stereo intercom to be FAA-TSO approved. Available in 4- & 6-place versions. The 4-pl. PM 3000 (P/N 11-11931) features pilot isolate and "All" reception modes. The PM 3000 6-place (P/N 11-00851) intercom includes a "CREW" mode. In CREW mode, the pilot & copilot are on one intercom channel, while passengers have conversation on another. Constant squelch adjustments are eliminated with the PM 3000. A single squelch knob controls multiple circuits making the intercom one of the quietest to use, even in the noisiest airplanes. The 6-place PM 3000 provides for two independent stereo entertainment inputs. This gives the passengers and the crew each the option to listen to their music device. The PM 3000 has an automatic fail-safe interconnect to the aircraft systems. If power to the intercom is disrupted, the pilot's headset is automatically connected to the aircraft radio. With the PM 3000 installed, both pilot and copilot have transmit capability over the aircraft radio. A 2-color LED shows green when power is on, and red during radio transmissions. This feature acts as a stuck microphone indication. On On all PS Engineering intercoms a wire harness must be done by PS Engineering or a PS Engineering dealer or warranty is void. For a quote on the PM 3000 4 place or 6 place please call.

PM 3000 4-Pl. Stereo Intercom (w/o digital recorder) – single music input. Installation hardware includes four sets of headset jacks, a music jack and reversible (horizontal and vertical) metal mounting plate.
P/N 11-04843 ... **$479.95**
PM 3000 4-Pl.w/ digital recorder w/o Crew ..... P/N 11-02556 ... **$539.95**
PMA 3000 6 Pl with Crew ..... P/N 11-13662 ... **$649.95**
2-1/4" Mounting plate (w/o crew)..... P/N 11-00394 ..... **$19.95**

PM 3000 6-Pl. Stereo Intercom (w/o digital recorder) – dual music input. Installation hardware includes six sets of headset jacks, two music jacks and reversible (horizontal and vertical) metal mounting plate.
P/N 11-00851 ... **$605.00**
2-1/4" Mounting plate (with out crew)..... P/N 11-00394 ..... **$19.95**
2-1/4" Mounting plate (with crew)..... P/N 11-00393 ..... **$19.95**

PM501 PANEL MOUNT INTERCOM



For the pilot who is interested in the basics and then some, the PM501 panel mount inter- com provides the pilot with standard features along with a few features found in more expensive systems.This four channel intercom features individual power output amplifiers for each headset, true pilot isolate for uninterrupted radio communications, music input w/ unprecedented high monaural music input, music muting during ICS communications w/ "soft mute" for easy listening entertainment, & PS Engineering's top quality squelch circuit. *The PM 501 does not come with jacks. For a quote on the wiring harness please call. Specifications: Height: .90 inches, Width: 2.60 inches, Depth: 4.85 inches, Weight: 8.5 ounces, Power Requirement: 12-24 VDC, Unit is not TSO'D P/N 11-11800 .... **$296.95**

PMA 4000 PANEL MOUNTED AUDIO PANEL/INTERCOM



Offers the simplicity of IntelliVox˙- automatic intercom squelch. Designed with the kit and homebuilt in mind, the PMA 4000 has 2 Com and 2 Nav inputs, along with 4 additional unswitched inputs. The PMA 4000 is a monaural 4-place intercom. A speaker amplifier is included. The copilot volume control can also be remote controlled, for tandem aircraft. On all PS Engineering intercoms a wire harness must be done by PS Engineering or a PS Engineering dealer or warranty is void. For a quote on the PMA 4000 harness please call.
PMA 4000 w/o Recorder ...P/N 11-01634 ..... **$845.00**
2-1/4" Mounting plate .....P/N 11-00395 ..... **$19.95**

PS ENGINEERING PM 1200 2 PLACE MONO HIGH NOISE PANEL MOUNT INTERCOM



The PM 1200 is a 2-place panel mount intercom designed for the loudest of aircraft. If you fly Warbirds or other extremely noisy aircraft, PM 1200 is perfect. Incorporating IntelliVox with our new Active Mic Processor (AMP), the PM 1200 dynamically reduces noise inadvertently picked up by the Mic. It also supplies up to 120mW of headset audio. On all PS Engineering intercoms a wire harness must be done by PS Engineering or a PS Engineering dealer or warranty is void. For a quote on the PM 1200, or the PM 1200 blind mount click here. Specifications: Height: 1.25 inches, Width: 3.0 inches, Depth: 5.50 inches, Weight: 12 ounces, Power Required: 12-24 VDC, Warranty: 1 Year, Unit is not TSO'D P/N 11-01671 ..... **$472.00**

SIGTRONICS SCI-4 INTERCOM



The SCI-4 from Sigtronics features dual squelch indicator lights and dual volume and squelch controls to control volume and squelch independently for front and back seats, crew/pilot isolate and pre-wired harness for easy installation. The SCI-4 is RFI and EMI immune and measures only 1"x 2.5". Includes all hardware and jacks needed for installation. SCI-S4/S6 Intercoms have the same features as SCI-4/6 Intercoms plus music inputs. 5-yr warranty. Made in USA.
SCI-4 4-place ..... P/N 11-00027 ..... **$323.75**
SCI-6 6-place ..... P/N 11-00028 ..... **$349.95**
SCI-S6 Stereo 6-place ..... P/N 11-00425 ..... **$459.95**
SCI-S4 Stereo 4-place ..... P/N 11-00424 ..... **$419.95**

SIGTRONICS BATTERY POWERED PORTABLE INTERCOMS



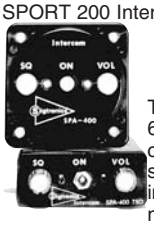
5-year warranty and a sure-fit for all students, instructors and aircraft renters. All have a music input and Aux output for recording lessons and radio communications. Both pilot and co-pilot positions have PTT jacks. Powered by an internal 9V battery (included), good for 40 hours of operation in airplanes lacking a cigarette lighter socket. A 4' Aux power adapter is included. When using the power cord, the battery is by-passed, preserving the life of the battery. The 2-place SPO-22, 4-place SPO-42 and 6-place SPO-62 are compatible with all standard aircraft headsets. The 4-place and 6-place models have a satellite box for rear seat positions to keep unwanted headset cords out of the pilot's way. A special HIGH-NOISE model, perfect for Ultra-lights and Kit aircraft, is available in all configurations. It filters out background noise, lowers the input level at mic amp, increases output signal, and mic interface can be modified to interface with Icom radios. Also features a sidetone modification. Made in USA.
For 2 People (Standard) ..... P/N 11-02794 ..... **$198.00**
For 2 People (High Noise) ..... P/N 11-02793 ..... **$195.00**
For Up To 4 People ..... P/N 10-19115 ..... **$221.25**
For Up To 4 People (High Noise) ..... P/N 11-01799 ..... **$245.00**
For Up To 6 People ..... P/N 11-02798 ..... **$274.75**

SIGTRONICS SPORT 200/200S INTERCOM



Optimized for the High Noise Environment. Sigtronics 2-place Sport 200 & Sport 200S Intercoms are designed specifically for Light-Sport and Ultralight aircraft. Tested at ambient noise levels of up to 120dB, their Sport series intercoms will outperform all other intercoms on the market. modes of operation, voice activated squelch and push to intercom — perfect for open cockpit aircraft, give the Sport 200 intercoms maximum flexibility and performance. To this they added special internal circuitry to optimize the intercoms for the most demanding high noise environments. Use Satellite Radio, MP3 or CD players as your audio source with stereo headsets for true stereo sound. With full or partial music muting for intercom and full mute for radio reception and transmission, you will be able to enjoy your music and never miss a radio call. Size: 1" x 2.5" x 4"deep. For even more convenience you can mount the intercoms horizontally or vertically. All hardware including headphone and microphone jacks are included with these easy to install intercoms. Weight: 4.5 oz., Jacks & wiring harness: 5.5 oz.; Input power: 11VDC - 32VDC; Current: 0.06 am
SPORT 200S Stereo panel mount int. ..... P/N 11-02885 ..... **$259.95**
SPORT 200 Intercom ..... P/N 11-02884 ..... **$184.95**

SIGTRONICS FACE-PLATE OPTION FOR INTERCOMS



This new faceplate fits the Sigtronics SPA-400, SPA-600 and SBD-800 voice-activated panel mount intercoms. Designed to adapt these compact units to the standard 2-1/4" instrument hole, the new printed bezel increases mounting flexibility and customer convenience. Made of durable and lightweight ABS plastic.
P/N 11-08500 ..... **$7.95 Ea.**

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SIGTRONICS MINIATURE PANEL-MOUNTED INTERCOMS



Measuring only 1" x 2-1/2" x 4" deep, only 4.5 oz, the SPA-400 and 6-place SPA-600 are FAA TSO'd and can be mounted either horizontally or vertically. Also available in special "HIGH-NOISE" model SPA-400N for Ultra-lights, and open cockpit aircraft, kit aircraft and warbirds. The se intercoms allow you to put "push-to-intercom" buttons in the aircraft to eliminate VOX mode when desired. This is especially good for open-cockpits where wind noise can be a problem. The SPA-400N simulates side-tone because some radios that are currently used in these markets do not have it. The SAS-440 and SAS-640 intercoms feature Sigtronics' exclusive "Auto-Squelch". One touch of the squelch button and the intercom perfectly sets the squelch level to your headsets and the aircraft noise level. All Sigtronics intercoms are voice activated with a 5-year warranty and operate on any voltage from 12V to 24V. Made in USA.

2 Thru 4 Way (Standard SPA-400 ..... P/N 11-02791 ..... **$199.95**
6 Way (Standard) SPA-600 ..... P/N 11-02801 ..... **$235.00**
4 Way (High Noise) SPA-400N ..... P/N 11-02792 ..... **$219.95**
2 Thru 4 Way (Auto Squelch) SAS-440 P/N 11-02804 ..... **$299.95**
6 Way (Auto Squelch) SAS-640 ..... P/N 11-02816 ..... **$334.95**
Retrofit stereo switcher-use with previously installed
SPA-400 intercom - RES-401 ..... P/N 11-02796 ..... **$119.95**

SIGTRONICS SPA-4S STEREO INTERCOM



The SPA-4S is a 2 or 4 place voice activated intercom with inputs for stereo music. It is a small, compact system that allows it to fit in space critical panels. The SPA-4S uses the industry standard Sigtronics squelch, fast on slow off for hands free communication. The music will full mute during ATC communication and partial mute during intercom communication. Each intercom comes complete with all necessary mounting hardware, jacks, and two 4-foot pre-wired harnesses. The SPA-4S only requires 1" X 2.5" of panel space, mounts horizontal or vertically, is 4" deep, and weights 5.5 oz. The SPA-4S intercom can easily upgrade the SPA-400. The SPA-4S uses the same panel hole pattern and interface cable as the SPA-400. A second cable is provided for the music inputs and headphone outputs. The SPA-4SN is available for the high noise amateur built aircraft. As with all of Sigtronics products, the SPA-4S is RFI and EMI immune. Power: 11-32 VDC.

Standard SPA-4S ..... P/N 11-00567 ..... **$306.00**
High Noise SPA-4SN ..... P/N 11-00568 ..... **$289.95**

PILOT USA PA200 SERIES INTERCOM



PA200 World's Smallest Portable Intercom. A solid VOX intercom offering clear communications. Adjustable volume control and squelch control allows for easy adjustment for all ambient noise levels. 2 push-to-talk switches can be used with the intercom allowing transmission through the radio. Unit is ideal for rental aircraft. PA 200R is also available for motorsports. FEATURES: •On/Off volume control •Adjustable squelch circuitry •Fail-safe capability •Y-adapter for 2 push-to-talk switches •Powered by one 9V battery (24 hours) •Size: 2.25" x 1.38" x 2.75" •3-yr unconditional warranty •Wt: 8 oz. (227 grams)

PA-200T ..... 11-02712 ....**$115.00** PA-200IK .....11-11530 ....**$130.00**
PA-200IC ..... 11-03544 ....**$130.00** PA-200V .....11-03545 ....**$130.00**
PA-200TA24 . 11-03542 ....**$140.00** PA-200TA23 11-03543 .....**$140.00**

PILOT USA PA400 SERIES INTERCOM



The stereo version PA-400ST intercom is a portable design that has been used successfully in general aviation for over 18 years. No other intercom on the market has the features and capabilities of the PA-400ST intercom. This particular series has been recently modified to include a cell phone jack for your safety and convenience. Before using in an aircraft we recommend that you take a check-ride in your living room and become familiar with all the features of your new intercom. A hook-up diagram is included in this guide along with brief description of each function and each control setting.

PA400ST P/N 11-03548..... **$175.00**

FLIGHTCOM IISX PORTABLE INTERCOM



The IIsx is the world's most popular 2-place, portable intercom. The modular design offers expansion capability to the backseat if needed. * Expandable to 4-place portable with optional SR-4 expansion module * Auxiliary inputs and outputs for music or recording flight information * Low-battery indicator and pilot isolate * Uses aircraft power or 9-volt battery Flightcom IISX 2 place includes: • IISX Intercom • Cigarette lighter adapter • Co-pilot transmit cable Flightcom IISX 4 place includes: • All parts in the 2 place • SR-4 expansion module

Flightcom IISX 2 Place ..... P/N 11-08700 .... **$119.00**
Flightcom IISX 4 Place ..... P/N 11-08710 .... **$144.95**
SR-4 Remote Expansion module ..... P/N 11-04260 ..... **$46.75**

FLIGHTCOM 403D PANEL MOUNT STEREO INTERCOM



Stereo intercom features include 6-place capability, instant music muting, and pilot isolate so you could focus on your flight and eliminate backseat chatter.

* 3-place transmit capability * Easy to adjust squelch and volume controls * Instant music muting, pilot isolate Specifications: * Weight: 5 oz * Length: 5" * Width: 2.4" * Height: 1.2 in * Not TSO'D * Two-year warranty Flightcom 403 intercom includes * 403 Intercom * Connector kit * 6 place stereo jack kit * 2-1/4" hole face plate & vertical/horizontal face plates

Switches are provided in installation kit to allow individual headphone positions to select either stereo or mono mode, allowing the use of monaural headsets

403 w/o recorder w/ jack kit ..... P/N 11-17605 ..... **$269.00**
Stereo input and output jack kit..... P/N 11-18755 ..... **$124.75**

FLIGHTCOM 403MC PANEL MOUNT INTERCOM



The 403 is a 6-place panel mount, voice-activated mono intercom. This easy to use intercom is designed to fit almost anywhere in the panel. Includes:* 403MC Intercom * Connector kit * 4 place mono jack kit. Features: * 3-position transmit capability * Selectable muting and pilot isolate * Auxiliary input for music or alerts * Rectangular faceplate can be mounted horizontally or vertically Specifications: * Weight: 3.6 oz * Length: 2.62 in * Width: 2.37 in * Height: 1 in * Not TSO'D * Power requirement: 12-28 VDC * Two-year warranty ..... P/N 11-08755..... **$149.00**

FLIGHTCOM 403LSA INTERCOM



2-place stereo activated intercom enhances the fun of flying, as well as safety, by optimizing communication clarity. Features include 2-place capability, instant music muting, and pilot isolate so you can focus on your flight. Easy to use and designed to fit almost anywhere in the panel. Switches provided in installation kit allow individual headphone positions to select either stereo or mono mode. Weight: 5.0 oz. Size: 5 in. L X 2.4 in. W X 1.2 in. H Power Requirements: 0.16 amp, 12-28 VDC

P/N 11-07871 ..... **$189.00**

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Prices Subject to Change Without Notice

FLIGHTTECH ITC-401-ENRI PORTABLE INTERCOM



The ITC-401-ENRI 2-place intercom features the Enhanced Noise Reduction Intercoms circuit in a basic, small package. With ENRI, the problems common with voice activated intercoms are eliminated. There are no squelch controls to adjust, no automatic squelch circuits that keep changing levels, only one single volume control. ENRI continuously monitors background noise picked up by the headset microphone and eliminates it, even while talking. Excellent for open cockpit aircraft. 9V Battery Operation • Pilot/All Switch • Available with cable and standard plugs or ICOM A-22, A3 and A4 Cable & Plug • 3 year warranty • 4"L x 2.5"W x 1.5"D. P/N 11-00544 .....**$169.95**

ITC-401-23 - Plugs directly into Icom A5 & 23 with out the need for additional cables P/N 11-01005 .....**$169.95**

ITC-401/1-ENRI - Plugs into Icom A22, A3, A4 with out need for additional cables P/N 11-00825 .....**$169.95**

FLIGHTTECH ITC-2003-ENRI REMOTE PANEL MOUNT INTERCOM



The ITC-2003-ENRI features ENRI technology, a unique design, a small panel control unit and a remote intercom unit. The small control panel consisting of a Volume control and a Pilot/All switch measures only 1"w x 1.3"d x 1"h. The second part, the intercom unit is only 4.6"x 3.1"x 1.7" and included mounting tabs. Because of D.C. switching and control between the panel control and the intercom, the mounting location is not critical. Simply mount the intercom unit in an easy to reach location, run cables to the headphone jacks, power and a small six conductor cable to the panel control unit. The Electronic Noise Reduction feature is exclusive to FlightTech Intercoms and allows for quiet communications without the background noise common to Voice Operated Squelch controlled intercom. With ENRI, the microphones are active at all times, ENRI monitors the background noise and eliminates it allowing only the headset user's voice to pass.
Power: 12V or 24V P/N 11-00172 .....**$365.95**
With preassembled 2-place cable .....P/N 11-00822 .....**$365.95**

FLIGHTTECH ITC-401TC INTERCOM



ITC-401TC is different from the rest of the ITC-401 series in that the "Noise Reduction" control is located on the front of the intercom, rather then an internal "Set and Forget" adjustment The ITC-401TC is available in versions with cables and plugs for panel mount jacks as well as handheld radios and they include the following: ITC-401TC, Standard cable and plugs for panel jacks P/N 11-03201.....**$169.95**
ITC-401TC-1, Cable and plugs for the ICOM, A22, A3, A24, & A
P/N 11-03202.....**$169.95**
ITC-401TC-23, Cable & plug for the ICOM A23 & A5
P/N 11-03203.....**$169.95**

FLIGHTTECH ITC-2001-ENRI 2PLACE PORTABLE STEREO INTERCOM



ITC-2001-ENRI

Ideal for the renter pilot or as a permanent intercom without the installations concerns associated with a panel mount intercom. Features: Exclusive Electronic Noise Reduction circuits. Up to 110db of Noise Reduction. Continues Audio, No missed Syllables or Words. Built-in Cellular Phone Interface, includes patch cable. Pilot/All Switch. Specifications: 9 Volt Battery or External DC Operation, Cigarette Lighter Adaptor included. Auxiliary Stereo Audio Input with Radio Mute and Intercom Audio Mute. Light weight, 10 oz. Push-to-Talk Button for Keying the Comm Radio. Pilot and CoPilot Radio PTT Jacks. Small Size: 5.5" x 1.5" x 3.2" Three Year Warranty.

Model	Description	Part No.	Price
	Electronic Noise Reduction Intercoms		
ITC-2001-ENRI	2-place portable intercom w/ENRI	11-17668	**$232.95**
ITC-402P-ENRI	Full feature panel mount intercom designed for the pilot with a two place aircraft.	11-00926	**$219.95**
ITC-404SP-ENRI	4-place stereo intercom panel mount	11-01354	**$279.95**
ITC-2001-I	2 Place Intercom for use with (ICOM A22, A24 AND A6 Radios)	11-07010	**$234.95**
Model	**Description**	**Part No.**	**Price**
	Pre-Assembled Cables		
ITC-404S-P	2-place Cable	11-01377	**$130.95**
ITC-404S-P	4-place Cable	11-01378	**$138.95**
ITC-2003	2-place Cable	11-01379	**$130.95**
ITC-2003	4-place Cable	11-01380	**$138.95**
ITC-404S-P	Interface Cable	11-01381	**$29.95**

SOFTCOMM PANEL MOUNT INTERCOMS



ATC-2P (2-passenger), ATC-4P (4-passenger) & ATC-6P (6-passenger) panel-mounted intercoms are so compact that they fit most anywhere in the aircraft's panel. Designed to mount either horizontally or vertically, these panel-mounted intercoms will fit in any homebuilt, business aircraft, or general aviation aircraft in production today, and offer stereo or mono sound. The panel-mounted intercom has an exclusive Softcomm feature of a back-up battery (9V) that affords power to the Intercom when the aircraft's master power is shut off or fails in flight. The battery is automatically switched off when aircraft power is present and on when absent. The panel-mounted intercom offers SoftComm's features of Recorder-In and Recorder-Out. A miniature remote audio panel houses this feature and can be located anywhere the pilot prefers. This allows recording of clearances, flight lessons, enroute weather and flight events. The ATC-2P, ATC-4P, & ATC-6P panel-mounted intercoms come complete with mounting instructions, wiring diagrams, all required microphone and headphone jacks, audio recorder jacks, and bi-directional mounted nomenclature plates. These intercoms are supplied with pre-tested 8 ft. cable assembly terminated into a DB25 pin connector. Size: 1"hx2.5"wx6"d. Power 12Vdc. Wt:6.25oz., 3yr warranty.

ATC-2P ..... 2-Place Intercom (mono) ..... P/N 11-11812.....**$212.95**
ATC-2PS .... 2-Place Intercom (stereo) ..... P/N 11-02216.....**$194.75**
ATC-4P ..... 4-Place Intercom (mono) ..... P/N 11-11822.....**$219.95**
ATC-4PS .... 4-Place Intercom (stereo) ..... P/N 11-05313.....**$259.95**
ATC-6P ..... 6-Place Intercom (mono) ..... P/N 11-11824.....**$242.95**
ATC-6PS .... 6-Place Intercom (stereo) ..... P/N 11-11807.....**$298.95**

ITC-402P/404S-P PANEL MOUNT INTERCOMS WITH ENRI



The ITC-402P Enhanced Noise Reduction Intercom is a small,easy to install intercom designed for the pilot who flies a two or four place aircraft. Featuring single control volume control operation,the pilot and passenger can enjoy quiet communications on those long cross country trips. The ITC-402P includes a stereo auxiliary audio input.To prevent missing ATC communications, the music is muted when either audio from the communication radio is present or there is intercom audio. The new ITC-404S-P has full auxiliary Stereo in and Stereo out, with dual function muting. Features: • Enhanced Noise Reduction Technology • No Squelch circuits or controls • Size: 2.1"w x 1.2"h x 3.1"l • Single Volume Control Operation • Pilot/All Isolation Switch • Pilot and Copilot Push-to-Talk Switch Inputs • Stereo Music Input w/Muting • 12 to 28VDC operation.•Cellular Phone interface, include phone cable.

Model	Description	Part No.	Price
	Electronic Noise Reduction Intercoms		
ITC-404SP	4-place stereo intercom panel mount ***Note: Will not work w/ the unamplified dynamic mic.***	11-01354	**$279.95**

SOFTCOMM PORTABLE INTERCOMS



These top quality, economical intercom systems are perfect for any type aircraft and are compatible with any standard headset. Features include automatic on/off power, panel controls for volume and gain and a pilot isolate switch (ATC-4 only). The intercoms are 9V DC portable or panel mountable with pilot and copilot transmit as a standard feature. These intercoms can be used with other equipment to record instructions or play cassette music. The new model of the ATC-2 has reduced size and weight, and a front-panel mounted PTT switch. The improved ATC-4 and ATC-6 also have a new dual transmit design. All units have aux power cord and stereo cable. With pilot isolate and push-to-talk switch. Model ATC-2T is a 2-place portable intercom designed for the student pilot. It has a recording feature that allows all CFI and ATC instruction to be recorded on a standard cassette player for future study. It is 9V battery powered and is compatible with all general aviation headsets and radios.

2-Place Portable (mono) ATC-2Y .....P/N 11-05818 ..... **$199.95**
4-Place Portable (stereo)ATC-4S .....P/N 11-05905 ..... **$225.95**

SOFTCOMM INTERCOMS FOR ULTRALIGHTS



These Softcomm Intercoms are specially designed to operate with today's transceivers in mind. The ATC-2I models are full featured intercoms with Record-In and Record-out, a PTT switch mounted in the face place and a "AUX power" input for using aircraft power instead of the 9 VDC battery(S), Listen to CB's, CD players and AM/FM radios while in flight. Features music "MUTE" circuit, volume control and "squelch" adjustment. Housed in a rugged ABS case with a space for 2 batteries, these intercoms are compact and fully portable.

Model	Description	P/N	Price
ATC-2I-A23	Icom, IC-A23, IC-A5	11-02217	**$188.75**
ATC-2I-A20	Icom, Delcom and Bendix King radios	11-07700	**$186.75**
ATC-2I-A22	Icom's A-22 compact transceiver	11-07710	**$186.75**

AV

BOSE® A20® HEADSET/ PROFLIGHT HEADSET



Improved noise reduction. Greater comfort. Bluetooth® connectivity.

The most technologically advanced Bose® headset ever. **Bose® Acoustic Noise Cancelling® headset technology -** Sound is monitored outside the earcups and at the ears, unwanted noise is identified, and a correction signal is created to cancel the unwanted noise. **TriPort® acoustic headset design -** Proprietary Bose® technology uses acoustically tuned ports to optimize the low-frequency output of the system. **Adjustable boom microphone -** Provides the means of communication for pilots and passengers. **Proprietary ear cushion design** - Provides an important acoustic seal between the headset and the head. **Replaceable ear cushions -** Provide an important acoustic seal between the headset and the head. **Redesigned earcup architecture -** Provides more room for customers' ears without compromising overall headset size. **Magnesium alloy headband** - Provides strong, lightweight structural frame to support the headset and distribute the necessary clamping force. **Adjustable headband sliders** - Offer up to three inches of adjustment in headband length, using high-strength, aerospace-grade composite material. **Detachable sheepskin headband cushion** - Evenly distributes the headset weight across the user's head. **Center torsion spring -** Mechanical support for the headband joint, allowing it to be opened or closed to fit different head sizes. **Auxiliary audio input -** Input jack for external audio sources such as GPS systems and music players. **Male-to-male audio cable** - Provides the means to connect an external audio source to the headset. **Independent, receded L/R volume controls with midrange detent and visual volume level indicator** - Adjust the headset audio volume level for left and right channels. **Power LED and battery-life indicators** - Indicates when the noise reduction is turned on. Indicates the remaining hours of battery life (green: healthy batteries, yellow: 2-8 hours, red: less than 2 hours). **FAA/JAA TSO-certified** - Meets or exceeds requirements for headset performance. **Limited 5-year transferable warranty** - Limited warranty coverage for parts, labor and second-day return shipping expenses of non-abusive malfunction. Made in the U.S.A.

Description	Part No.	Price
Bose® A20® Aviation Headset™ with Bluetooth® Connectivity		
Battery Powered. Electret microphone. Straight Cord, twin plug	11-08724	$1,095.95
Aircraft powered. Electret microphone. Straight Cord, 6 pin connector	11-08725	$1,095.95
Battery Powered. Electret microphone. Straight Cord, U-174 plug	11-08726	$1,095.95
Battery Powered U174 Helicopter Plug - coiled cord	11-13725	$1.95
Aircraft Powered 6 Pin Lemo, Robinson Plug	11-13771	$1,095.95
Aircraft Powered 6 in Lemo Plug, Coiled Cord	11-13776	$1,095.95
5 Pin LXR Flex Power	11-14326	$1,095.95
Bose® A20® Aviation Headset™ Without Bluetooth® Connectivity		
Battery Powered. Electret microphone. Twin Plug, Straight Cord	11-08728	$995.95
Aircraft powered. Electret microphone. Straight Cord, 6 pin connector	11-08729	$995.95
Battery Powered. 5-ohm dynamic microphone. Straight Cord, U-174 plug	11-08731	$995.00
Battery Powered, Electret Mic, Coiled Cord	11-13772	$995.95
Aircraft Powered, 6 Pin Lemo Robinson Plug	11-13771	$1,095.95
5 Pin LXR Flex Power	11-14330	$995.95
Bose® A20® Aviation Headset™ - No cable		
Headset Assembly	11-08732	$800.00
Bose® A20® Aviation Headset™ Cable Assemblies with Bluetooth® Connectivity		
Battery Powered. Electret microphone. Straight Cord, twin plug	11-08733	$295.95
Aircraft powered. Electret microphone. Straight Cord, 6 pin connector	11-08734	$295.95
Battery Powered. Electret microphone. straight Cord, U-174 plug	11-08736	$295.95
Bose® A20® Aviation Headset™ Cable Assemblies without Bluetooth® Connectivity		
Aircraft powered. Electret microphone. Straight Cord, 6 pin connector	11-08738	$195.00
Battery Powered. 5-ohm dynamic microphone. straight Cord, U-174 plug	11-08739	$195.95
Battery Powered. 150-ohm dynamic microphone. straight Cord, U-174 plug	11-08754	$195.95
Lemo 6 Pin To Helicopter U174 Plug Adapter	11-10057	$109.95
Dual Ga Plugs Straight Cord Electret Mic - Without Bluetooth	11-13778	$195.00
U174 Heli Plug Straight Cord Electret Mic - Without Bluetooth	11-13779	$195.00
8 Pin Fischer Plug Straight Cord Dynamic Mic - Without Bluetooth	11-13780	$295.95
8 Pin Fischer Plug Coiled Cord Electret Mic - With Bluetooth	11-13782	$395.95
5 Pin Xlr Airbus Plug Straight Cable Electret Mic - With Bluetooth	11-13783	$295.95
6 Pin Robinson Plug Electret Mic - With Bluetooth	11-13785	$295.95
Dual Ga Plugs Coiled Cord Electret Mic - Without Bluetooth	11-13786	$195.95
U174 Heli Plug Coiled Cord Electret Mic - Without Bluetooth	11-13787	$195.95
U174 Heli Plug Coiled Cord Dynamic Mic - Without Bluetooth	11-13789	$195.95
6 Pin Lemo Plug Coiled Cord Electret Mic - With Bluetooth	11-13790	$295.95

Description	Part No.	Price
Bose® A20® Aviation Headset™ Accessories		
6-pin to Twin Plug Adapter	11-08741	$64.95
Aircraft power Installation Kit	11-01846	$55.75
Ear Cushion Kit	11-08743	$28.50
Headband Cushion Kit	11-08744	$16.50
Boom Microphone Windscreen (Electret)	11-04846	$6.75
Boom Microphone Windscreen (Dynamic)	11-08747	$11.80
Service Accessory Kit (ear cushions, headband cushion, mic windscreen)	11-08748	$38.85
Carry Case	11-08749	$24.95
Auxiliary Input Cable Adapter	11-08751	$13.75
Clothing Clip	11-08752	$6.50
Earcup Down-cable Cover	11-08753	$9.95
Bose X Service Accessory Kit	11-13760	$49.95

BOSE PROFLIGHT AVIATION HEADSET



Lightweight, in-ear active noise cancellation for long-term comfort over extended flights, with many new features designed specifically for airline and corporate aircraft flight decks.

The next Bose headset to earn its stripes.
Pilots of moderately noisy aircraft, such as pressurized jets, will now experience the Bose clarity they expect, along with reliable, individualized performance and a new level of comfort for extended flights. The ProFlight is specifically designed with airline and professional pilots in mind.

30 years of Bose research and innovation.
The ProFlight features three levels of active noise cancellation and a unique feature called tap control for talk-through communication in a compact, banded, in-ear design. It's decades of Bose research engineered into a form factor unlike any other aviation headset.

Description	Part No.	Price
Bose Proflight Bluetooth Headset Only	11-16372	$699.95
Bose Proflight Bluetooth Headset Straight Cord Dl Ga Plug	11-16373	$995.95
Bose Proflight Bluetooth Headset Straight Cord 6 Pin	11-16374	$995.95
Bose Proflight Bluetooth Headset Straight Cord 5 Pin Xlr	11-16375	$995.95
Bose Proflight Bluetooth Cable Assy Dl Ga Plug	11-16376	$295.95
Bose Proflight Bluetooth Cable Assy Straight Cord 6 Pin	11-16377	$295.95
Bose Proflight Bluetooth Cable Assy Straight Cord 5 Pin Xlr	11-16378	$295.95

Description	Part No.	Price
Bose Proflight Stay Hear Tip Kit Small 2 Pair	11-16379	$9.95
Bose Proflight Stay Hear Tip Kit Medium 2 Pair	11-16380	$9.95
Bose Proflight Stay Hear Tip Kit Large 2 Pair	11-16381	$9.95
Bose Proflight Side Pad Pack	11-16382	$9.95
Bose Proflight Windscreen	11-16383	$9.95
Bose Proflight Carry Case	11-16384	$24.95
Bose Proflight Headband Cushion	11-16385	$12.95
Bose Proflight Termination Cap	11-16386	$4.95
Bose Proflight Accessory Pack	11-16387	$27.50
Bose Proflight Lanyard Control Module	11-16388	$4.95

LIGHTSPEED ANR HEADSETS

LIGHTSPEED®

EVERY LIGHTSPEED HEADSET COMES WITH A LONG LIST OF INNOVATIONS:

Finely tuned ANR — Streaming Quiet™ ANR has firmly established Lightspeed as the leader in noise reduction technology, but every Lightspeed headset incorporates finely tuned ANR for exceptional quieting.

Full Bluetooth® integration — Every Lightspeed headset delivers excellent wireless call clarity, music fidelity, and access to critical audio alerts from aviation apps on mobile devices.

Engineered for comfort — All Lightspeed headsets feature comfort-designed headbands and plush ear seals with larger openings, 20% more surface area, and up to 50% more space inside the ear cup than our closest competitor. The result is superior distribution of weight and side pressure for maximum comfort.

FlightLink compatibility — Lightspeed's free, proprietary app turns your iPad® or iPhone® into an in-cockpit recorder, seamlessly capturing incoming and outgoing communications for instant playback or later retrieval.

ComPriority™ — Never miss important radio communications with patented ComPriority, which lowers the volume of any auxiliary device automatically during radio or intercom transmissions.

Auto Shutoff™ — Saves battery life by automatically shutting down the headset power when not in use.

5-Year Lightspeed warranty.

LIGHTSPEED ZULU 3



The most comfortable, most durable headset Lightspeed has ever made.

More comfortable

Performance ear seals are tapered to provide a more natural fit, for greater comfort and stability. Plush ear seals provide 20% more surface area than competitors, for a better seal around glasses frames and a more comfortable distribution of side pressure. Larger cup cavity provides 50% more space for your ears, allowing the entire ear to fit comfortably inside

More durable

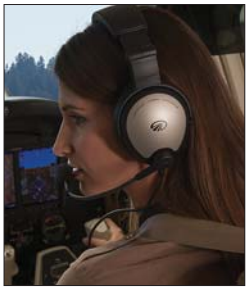
Rugged cables built around a Kevlar core deliver more strength and flexibility. Nearly 100% of the headset is made from stainless steel and magnesium. Magnesium ear cups are both strong and light.

More clarity

The Dual Aperture Disc™ microphone provides greater noise cancellation. Exclusive, user-adjustable mic gain helps balance loud and soft voices in a multi-headset environment. Front Row Center™ (FRC), stereo cross-feed technology, and redesigned speakers deliver crisp, rich audio and unparalleled music delity .

Bluetooth Dual GA Plugs	P/N 11-14868	**$850.00**
Bluetooth Lemo Plugs	P/N 11-14870	**$850.00**
Bluetooth U-174 Heli Plugs	P/N 11-14871	**$850.00**

LIGHTSPEED SIERRA®



Step up to the world of premium ANR headsets with the value-priced Sierra. Picked as the "hands-down favorite" in Aviation Consumer's real-world test of budget ANR headsets, Sierra delivers the comfort, quiet, and advanced features you've come to expect from Lightspeed. A reversible headband allows microphone placement on the right or left side.

Included: Carrying case, music patch cord, cord clip, two AA batteries.

Weight: 16 oz.

Sierra Headset	P/N 11-08588	**$650.00**

AIRCRAFT SPRUCE - LIGHTSPEED AVIATION TRADE UP PROGRAM

SEE OUR WEBSITE FOR DETAILS

NEW! LIGHTSPEED TANGO® WIRELESS ANR HEADSET



The first premium wireless aviation headset, Tango blends outstanding noise cancelation, renowned Lightspeed comfort, and cable-free convenience.

Lightspeed Link™ — Not Bluetooth or WiFi, Lightspeed Link incorporates existing technologies chosen for both signal reliability and audio quality for the aviation environment.

21st century power — Tango is the first aviation headset powered by rechargeable lithium ion batteries, which can be charged using the included dual-port wall charger, charged while the headset is in use or easily replaced on the go.

Built-in redundancy — A backup cable is instantly available for uninterrupted communication, in the event of battery depletion.

Included: Custom molded carrying case, cellphone/music patch cord, cord clip, two lithium ion batteries (only one included with LEMO panel power headsets), two charging cables, dual-port wall charger.

Weight: 18 oz.

Tango Wireless Headset

Dual GA Plugs, Battery Power, Americas/AU	P/N 11-14066	**$800.00**
Dual GA Plugs, Batty Power, Europe/S Africa	P/N 11-14069	**$800.00**
LEMO, Panel Power, Americas/AU	P/N 11-14067	**$800.00**
LEMO, Panel Power, Europe/S Africa	P/N 11-14070	**$800.00**
U-174, Battery Power, Americas/AU	P/N 11-14068	**$800.00**
U-174, Battery Power, Europe/S Africa	P/N 11-14071	**$800.00**
Tango Headset withput Panel Interface	P/N 11-14717	**$550.00**

Tango Accessories

Tango lithium ion battery	P/N 11-14075	**$34.95**
Tango single battery charger	P/N 11-14076	**$34.95**
Tango Panel Interface GA Dual Plug	P/N 11-14710	**$325.00**
Tango Panel Interface Panel Power	P/N 11-14711	**$325.00**
Tango Panel Iterface U-174 Plug	P/N 11-14712	**$325.00**
Tango Universal Outlet Adapter	P/N 11-14713	**$10.00**
Tango Universal Outler Adapter and Charger	P/N 11-14716	**$45.00**

LIGHTSPEED ZULU PFX®



The winner of the 2014 Flying magazine Editors' Choice Award, Zulu PFX is quietest aviation headset available and creates a personalized flying experience by actively conforming to your ears, your environment, and your preferences.

Acoustic response mapping measures your unique auditory landscape, optimizing the audio response for your ear shape and size.

Streaming Quiet™ ANR continuously adapts to your environment, extending the amount and frequency range of noise cancellation.

Personal preferences can be set using the enhanced capabilities in FlightLink, Lightspeed's free app.

Upgradeable firmware — With updates a download away, Zulu PFX can evolve with new software innovations.

Included: Custom molded carrying case, cellphone/music patch cord, USB cord, steel CPU clip, cord clip, four AA batteries.

Weight: 13.9 oz.

Zulu PFX Headset

Dual GA Plugs, Battery Power	P/N 11-12007	**$1,050.00**
Dual GA Plugs, Panel Power	P/N 11-12008	**$1,050.00**
Helicopter LEMO, Panel Power	P/N 11-12009	**$1,050.00**

LIGHTSPEED HEADSET ACCESSORIES

Description	Part No.	Price
Zulu Head Pad	11-08723	**$14.95**
Sierra / Tango Replacement Head Pad	11-10662	**$13.50**
QFR/Skycom Zippered Comfort Head Pad	11-07555	**$10.75**
Zulu / Sierra / Tango Ear Seals	11-08043	**$29.95**
3G Series 1" Soft Leather Seals	11-01987	**$26.60**
XL Series 1.5" Soft Seals	11-01988	**$26.50**
QFR/Skycom Series 0.75" Comfort Seals	11-01284	**$26.65**
QFR/Skycom Replacement Stock Seals	11-01995	**$26.50**
Zulu, Sierra, Tango, 3G, QFRc, XLC Wind Screen	11-08575	**$3.35**
Mach 1 Wind Screen, sold each	11-00358	**$3.75**
Zulu Shirt Clip	11-10661	**$3.95**
Cell Patch Cord	11-01990	**$5.35**

AV

SIGTRONICS HEADSETS

AIRCRAFT SPRUCE SKYCOM & SKYPRO HEADSETS



SKYCOM H-40A AVIATION HEADSET - Features Foam Ear Seals and Air-Foam Headpad for exceptional comfort and fit. The Skycom H-40A Headset provides 24 dB Passive Attenuation. It Features a high quality Noise Cancelling Electret Microphone specially designed to match the frequency of the human voice to provide sound clarity, best intelligibility, and background noise reduction. The Unique ball-joint articulating boom rotates laterally for precise lip-angle alignment, and swivels for placement on either side of the mouth. Independent built-in volume control permits pilot and co-pilot to separate sound levels. The Cables are shielded and the speakers are wired in parallel for greatest reliability. Fully adjustable headband fits all sizes. Navy Blue Earcups are fabricated from high impact ABS plastic. ..... P/N 11-09099 ..... **$89.95**



SKYCOM H-80A AVIATION HEADSET - The Skycom H-80A is the top-of-the-line Passive headset manufactured for Aircraft Spruce. It incorporates all of the quality features of the economy SkyCom H-40A above, plus many more. The Skycom H-80A Headset features Leatherette Ear Seals and Super Cushion Headpad for exceptional comfort and fit. The Skycom H-80A Headset provides 24 dB Passive Attenuation. It Features a high quality Noise Cancelling Electret Microphone. It has Dual volume controls and a Mono/Stereo Selector Switch. All this in a premium, lightweight headset with attractive dark navy blue ear cups. ..... P/N 11-09098..... **$129.95**



SKYCOM ANR HEADSET - Available exclusively from Aircraft Spruce, The Skycom ANR Headset features Soft Leatherette/Memory Foam Ear Seals for exceptional comfort and fit. Ultra-soft Pillow-Top Headpad remains comfortable during long flights. The Skycom ANR provides 24 dB Passive Attenuation, and 16-19 dB Active Attenuation. It Features a high quality Noise Cancelling Electret Microphone for crisp communications, full flex boom. The required battery for this headset is 9 volt. NOW UPDATED with Auto Shut-Off circuitry and Cell Phone/Music Input. Includes carrying case. This Skycom headset delivers excellent ANR performance at an economical price!

P/N 11-02214..... **$239.00**

REPLACEMENT EAR SEALS

These seals fit SKYCOM H-40A, SKYCOM ANR, and SKYPRO H-80A headsets.

Replacement Gel Ear Seals..... P/N 11-04680..... **$24.95**/pr.
Replacement Foam Ear Seals. ..... .P/N11-04681..... **$11.95**/pr.

HEADSET/INTERCOM PACKAGES

AIRCRAFT SPRUCE SKYCOM PACKAGE #1

• 2 Skycom H-40A Headsets • 1 Skycom 400 Intercom (portable) • Headset Bag • Push-To-Talk Switch..... P/N 11-11885..... **$493.95**

SIGTRONICS S-AR HEADSET



The S-AR headset protects your hearing switched on or off. With S-AR switched on you hear a major reduction in low frequency noise. Radio transmissions that are weak and garbled on passive headsets will sound strong and clear with an S-AR headset. Features up to 19 db of active noise reduction, air foam head pad cushion that virtually eliminates "Hot Spots", ultra-deep gel ear seals for comfort and ease of use and custom flex boom for perfect mic placement. Sigtronics exclusive "Stop-Break" high flex cord and RFI and EMI free electronics make the S-AR ideal for pilots who want a high performance mono/stereo headset. A battery power module (9V) with belt clip and custom headset bag are included with all S-AR headsets. P/N 11-00859 ..... **$432.95**

SIGTRONICS HIGH PERFORMANCE HEADSETS



All Sigtronics headsets and intercoms are specifically designed for high-noise environments and are RFI and EMI immune, giving you clear, interference-free transmission even in fabric or composite aircraft or in use with handheld radios.

SERIES 8 HEADSETS

"8 Series" superlight headsets are full-size quality headsets available at just 11.9 oz., delivering comfort, and performance. A new lightweight, custom flex boom stays where you put it, even in the roughest conditions.

S-58 features new, durable, non-glare "powder-coated" black hardware and Sigtronics "sky-blue" earcups. The new ergonomic headpad and custom fit gel seals deliver comfort and eliminate "hot-spots". A new microphone configuration cancels unwanted noise before it can get into the system. Sigtronics' 5-year warranty, custom padded bag, easy-grab volume controls, ultra foam windscreen & exclusive clothing clip are included. Wt. 11.9 oz. Flex boom.

Mono..... P/N 11-19105 ..... **$219.95**
Stereo..... P/N 11-02803 ..... **$247.50**
Helicopter ..... P/N 11-02813 ..... **$235.00**

S-68 headsets include all of the S-58 features plus high-performance black earcups and 14K Gold Plated hardware. P/N 11-19125 .. **$235.00**
Stereo .....P/N 11-02805 ..... **$261.25**
Helicopter.....P/N 11-02815 ..... **$247.50**



S-45 series headsets are the same as the S-40 headset, except they have airflow headpads and gel earseals for maximum comfort. ..... P/N 11-02797..... **$182.75**
Helicopter ..... P/N 11-02810..... **$199.95**
Stereo..... P/N 11-02811..... **$212.50**



S-20 incorporates the M-80 microphone, designed specifically for use in high noise environments with its excellent noise canceling properties. The microphone gain is set to operate over a wider range of aircraft radios, even handheld - the ultimate test.

S-20 Headset ..... P/N 11-02799..... **$134.95**



SIGTRONICS S-8 HEADSET

Eliminate scratching the top of your canopy by using the Sigtronics S-8 headset. features a behind the head headband with quick adjust hook-n-loop strap that fits the shape of your head, a flex boom and gel ear seals. The S-8 has a passive noise reduction rating of 24 dB. 5 Year warranty. P/N 11-00645 .....**$241.25**

SIGTRONICS HEADSET ACCESSORIES



P/N 11-04368

Electret Mic Muff ..... P/N 900084 .....**$1.95**
Foam Ear Seals..... P/N 100369 .....**$7.90**
Oval Gel Ear Seeals ..... P/N 11-15888.....**$21.95**
Shirt Clip ..... P/N 11-04368.....**$3.25**
S-AR Ear Seals Gel / Foam Filled ..... P/N 11-12533.....**$36.90**
Windscreen MIC 8 Series ..... P/N 11-12534.....**$2.95**

SIGTRONICS HEADSET/INTERCOM COMBOS

SIGTRONICS 2-PLACE COMBOS - Includes 2 Sigtronics S-58 headsets, 1 SPO-22 (2)place intercom, push-to-talk switch, & comfort covers for headsets.

Combo #1A w/S-58 Headsets..... P/N 11-00037 ..... **$679.95**

SIGTRONICS 4-PLACE COMBOS - Includes two Sigtronics S-58 headsets, SPO-42 (4)place intercom, push-to-talk switch, & comfort covers for headsets.

Combo #2A w/S-58 Headsets..... P/N 11-00038 ..... **$706.85**

SIGTRONICS PANEL MOUNT COMBOS - Same as Combo #2 except substitute SPA-400 panel mount intercom for SPO-42 portable intercom.

Combo #3A w/S-58 Headsets..... P/N 11-00039 ..... **$712.85**

SIGTRONICS SPORT 200 PANEL MOUNT INTERCOM COMBOS

Combo #5 includes 2 S-20 Headsets, Sport 200 Panel Mount Intercoms and Headset/Intercom bag. P/N 11-04653 ..... **$335.00**

CALL FOR SPECIAL PRICES!

AV

DAVID CLARK HEADSETS



DAVID CLARK DC ONE-X HEADSET

The DC ONE-X headset features the perfect combination of comfort, technology and durability. From the moment you put it on, you'll notice the difference. The feel of plush, leatherette ear seals that enclose your ears in comfort. The soft, Outlast® fabric, vented head pad that actually absorbs heat buildup to keep you cool during long flights. The advanced, Hybrid Electronic Noise Cancellation technology that delivers extraordinary ANR performance. The rugged, yet lightweight alloy suspension system with adjustable headband and swivel hinge stirrups to ensure a personalized fit.

OneX Dual Plug Battery Powered.....P/N 11-14296.....**$895.00**
OneX 6 Pin Plug Aircraft Powered.....P/N 11-14297.....**$895.00**
OneXH for Helicopters .....P/N 11-14901 .....**$875.00**
Leatherette Ear Seals.....P/N 11-15265 .....**$37.90**



DAVID CLARK H10-13.4 HEADSET

Provides David Clark quality without the hot spots, clamping, or weight discomfort. Features a certified noise reduction rating of 23 dB and weighs only 13.4 oz. Drastically reduced headband force, new soft air-flow pillow headpad, flo-fit gel ear seals, M-7A noise cancelling electret mic, and low profile volume controls with detect settings. 5 yr warranty. P/N H10-13.4 .....**$336.42**
P/N H10-13.4S (stereo) **$342.47**
P/N H10-13H (Helicopter, 5ft. coiled cord)..... **$356.42**



DAVID CLARK H10-13Y YOUTH HEADSET

Same features as the popular H10-13.4 Headset and has been especially designed to comfortably fit a child. Extremely lightweight and has a new headband assembly which allows you to adjust the headset to your child's head for a perfect fit every time. The new Super Soft Foam-filled Headpad and Flo-Fit Gel Ear Seals, also add to the headset's long-term wearing comfort. When your child grows, a conversion kit is available, to convert your H10-13Y to a David Clark

Model H10-13.4.....P/N H10-13Y **$336.42**
Conversion kit.....P/N 11-11950 .....**$29.75**



DAVID CLARK DC PRO-X HEADSET

Superior technology. Super comfort. Superior performance. All in a sleek, new, supra-aural design. The new DC PRO-X from David Clark Company offers best-in-class Hybrid electronic noise cancellation and Bluetooth® wireless technology. Digital Signal Processing (DSP) provides high fidelity audio for superior communications and music listening. Dual voice coil ear phone drivers ensure fail-safe operation. And push, leatherette ear seals and head pad to cradle you in comfort. All supported by a rugged, yet feather-light magnesium alloy suspension.

PRO (Passive) Dual GA Plugs.....P/N 11-11599.....**$365.00**
PRO-X (Active) Dual GA Plugs.....P/N 11-11603.....**$695.00**
PRO XP Panel Mount .....P/N 11-12538.....**$735.00**
PRO A Passive Airbus .....P/N 11-12539.....**$365.00**
PRO XA BNC Airbis .....P/N 11-12530.....**$294.95**
Inline Belt Clip .....P/N 11-13583.....**$5.75**



DAVID CLARK PRO S SINGLE SIDE HEADSET

The DC PRO-S passive headset incorporates the same outstanding comfort features as the DC PRO-X design (excluding Hybrid Electronic Noise Cancellation and Bluetooth wireless technology). Note: As with any passive headset featuring a supra-aural design, the DC PRO-S is not recommended for fixed wing, piston engine aircraft. This DC PRO-S was designed for use in the commercial/transport jet aircraft market. Dual GA Plugs.
P/N 11-13091.....**$310.00**



DAVID CLARK H10-56HXL HELICOPTER HEADSETS

New Comfort gel, undercut ear seals. Battery Power Module - One 9 volt battery for up to 25 hours of operation. Pilot Selectable Automatic-Shut Off Feature. Five foot (extended) coil cord terminating with a 10 pin quick release connector. Coiled cord assembly connects Battery Power Module to panel intercom/radio. Same headset can be used with optional panel mount. (H10-56HXP) Super soft foam filled pillow headpad. NRR - 27 dB passive noise reduction rating plus 17 dB to 22 dB when ENC is turned on. Weight (without cord assembly): 22 oz.

Description	Part No.	Price
MODEL H10-56HXL	11-03828	**$813.51**
MODEL H10-56HXP	11-03829	**$740.28**
MODEL H10-56 - Hinged wire boom with the M-101 amplified Dynamic microphone. Conforms to MIL-M-27291A. Coil Cord (5' extended) with U-174/U Plug. FAA TSO Approved C57 Cat. B and C58a. Exceeds RTCA/DO-214 Standards. Weight (without cord assembly): 20 oz.	11-03827	**$368.74**



DAVID CLARK H10-76 LOW IMPEDANCE HEADSET

Undercut Comfort-Gel Ear Seal for Improved Comfort. Low Impedance Most popular noise attenuating headset ever produced for use with military radios. Standard headset of the U.S. Air Force, NATO and most airborne command centers. AWAC's, under command of NATO and the United States, use the H10-76 both in the cockpit and the communication operations. Headset of choice of M.A.T.S. pilots. Also used in ground support operations. Coiled cord terminates into a U-174/U plug. P/N 11-02226.....**$296.67**



DAVID CLARK 10S/DC HEADSET

The only consumer stereo headset having an independently certified Noise Reduction Rating (NRR). Stunning stereo output. Newest Undercut, Comfort Gel Ear Seals Super-Soft, Double-Foam Headpad. Dual volume controls. Lightweight, 6 ft. extended coil cord. Terminated with commonly-used 3.5mm stereo plug. Both 1/4-inch plug adapters (mono & stereo) included. Earphone elements are hi-fidelity, dynamic with a range of 10-20,000 Hz.. NRR 23dB. P/N 11-02238.....**$220.64**



DAVID CLARK H10-13X ANR HEADSETS

The H10-13X aviation headset has the most advanced Electronic Noise Canceling (ENC) technology assuring an amazingly quiet flight. Available in the most popular and comfortable headset style. H10-13X Features: Quiet Performance —You'll hear and feel the difference immediately. When ENC is turned ON, noise cancellation actually improves by an additional 12-17 dB. That's better total protection than any other headset available today. 5 year warranty.
Outstanding Comfort - Lightweight at just 17oz. w/advanced comfort features. Super soft gel ear seals with new exclusive Velvet Fleece surface, combined with reduced headband pressure and a soft foam-filled pillow headpad create a comfort level never before experienced.
Superior Communication Intelligibility - The ENC system and the exclusive M-7A noise cancellation electret mic provide unsurpassed performance and clear, crisp transmission and reception. Stereo compatible for use with stereo intercom and cabin entertainment systems.

Model	Description	Part No.	Price
H10-13X	Fixed wing headset (ENC) with straight, 5ft. cord to Battery Power Module to straight 5ft. cord with A/C Panel-Intercom Plugs (hardwired)	11-03819	**$698.89**
H10-13XL	Fixed wing Headset (ENC) with straight, 5ft. cord, Snap Lock-Quick Release Connector/Battery Power Module with mating Headset and Cord Assy Connectors/Coil Cord Assembly with mating battery connector and Panel-Intercom Plugs	11-03820	**$794.68**
H10-13XP	Fixed wing Headset (ENC) with straight, 5ft. cord, Snap lock-Quick Release Connector and Panel Mount Module with mating Headset Connector, on/off Toggle Switch	11-03821	**$756.09**
H10-13HXL	Helicopter Headset (ENC) with coiled, 5ft. (extended) cord, Snap Lock-Quick Release Connector/Battery Power Module with mating Headset and Cord Assy Connectors/Coil Cord Assembly with mating battery connector and Panel-Intercom Plug	11-03817	**$807.00**
H10-13HXP	Helicopter Headset (ENC) with coiled, 5ft. (extended) cord, Snap Lock-Quick Release Connector and Panel Mount Module with mating Headset Connector, on/off Toggle Switch.	11-03818	**$762.36**



DAVID CLARK H10-13X CIGARETTE POWER CABLE

The David Clark H10-13XP Cigarette Power for the H10-13XP Headset. P/N 11-04790.....**$42.70**



DAVID CLARK XL XP TO BOSE PANEL ADAPTER

Allows David Clark ENC headsets (XL or XP models) to be used, battery free, in an aircraft using a six connector female socket (Bose Panel socket).
P/N 11-08811.....**$162.85**

AV

DAVID CLARK HEADSETS

DAVID CLARK HEADSET H10-66LX & H10-76XL



Pilots have trusted the green domes of David Clark Company headsets for over 25 years. Their high-performance products are now equipped with several new features to enhance pilot comfort: super-soft, double-foam headpads, comfort-gel, 'undercut' ear seals, and a smaller, lighter battery pack with auto shutoff for ENC models. Find out for yourself why quality conscious pilots will accept nothing less than the #1 Headset in Aviation.

Description	Part No.	Price
H10-66XL DUAL IMPEDANCE ENC HEADSET Designed for use with both high and low impedance systems. Select switch on dome matches headset to system impedance. Ideal for fleet operations. Certified Noise Reduction Rating (NRR): 27: dB. Built in ENC technology and enhanced comfort features.	11-05427	**$857.46**
H10-76XL PORTABLE LOW IMPEDANCE ENC HEADSET Feature ENC technology and designed for use with low impedance systems. Coil cord with single plug connects the battery-powered module to aircraft radio or intercom. Additional 17-22 dB noise attenuation with ENC activated.	11-05428	**$883.28**
H10-76XP PANEL-MOUNT LOW IMPEDANCE ENC HEADSET Same as H10-76XL but with permanent panel-mount module for utilizing the aircraft's power source.	11-05429	**$789.57**

H10-20 HEADSET



8 new headset design advances make the David Clark H10-20 a must see. The completely flexible boom assembly can be adjusted for perfect microphone placement. The M7A microphone is the most advance noise-cancelling amplified electret mike available. Features a redesigned air-flow headband with liquid-filled ear seals for optimum comfort. Comes with volume control and a 5yr warranty. Made in the U.S.

Straight Cord.....P/N H10-20.....**$370.14**
Coiled Cord.....P/N H10-21.....**$361.30**
Helicopter.....P/N H10-26.....**$350.14**

DAVID CLARK H10-30 HEADSET



This dual headset, used by the Air Force, features foam filled ear cushions with an M-1/DC amplified dynamic noise cancelling mike. With 6 feet straight cord, PJ-055B headphone plug and PJ-068 mike. plug. P/N H10-30 ..... **$279.00**

DAVID CLARK H10-36 HEADSET

The H10-36 headset features the M-1/DC dynamic mic and coil cord which extends to 5 ft., with U-174/U plug for helicopter installations.

P/N H10-36.....**$298.99**

DAVID CLARK H10-60 HEADSET



Features unique foam/air-flow headpad, low-pressure headband, Flo Fit Gel ear seals, and dual volume controls. Also features the M-7A advanced noise cancelling amplified electret mic. Customize your H10-60 with 3-position headset pressure adjustment, boom guide lock, headband size adjustment, and cord selection.

P/N H10-60 ..... **$385.25**

DAVID CLARK H10-66 HEADSET



A unique dual impedance headset for use in civilian and military style aircraft. The Model H10-66 features include new comfort gel, undercut ear seals, hinged wire boom with the M-101 amplified Dynamic microphone, and a Noise Reduction Rating (NRR) of 27 dB. P/N H10-66 ..... **$408.27**

DAVID CLARK H10-76 HEADSET



Undercut Comfort-Gel Ear Seal for Improved Comfort. Low Impedance. Most popular noise attenuating headset ever produced for use with military radios. Standard headset of the U.S. Air Force, NATO and most airborne command centers.Coiled cord terminates into a U-174/U plug.

P/N 11-02226 ..... **$296.67**

DAVID CLARK H20-10 HEADSET



H20-10 headset features the Custom Comfort System which is a whole new concept in headset in comfort. Includes a headband suspension assembly that can be adjusted to a perfect comfort level, a pillow soft "floating" headpad for maximum cushioning with no hot spots, and a larger contoured Flo-Fit gel ear seals which mold softly to your head. P/N H20-10 ..... **$361.30**

DAVID CLARK 6AA BATTERY PACK



Accepts 6 AA batteries. The protective cover keeps battery terminals from accidental contact with conducting surfaces while stored. Having a Spare Battery Cartridge, loaded and ready, will minimize time without electronic noise cancellation when batteries drain. P/N 11-02019 ..... **$16.50**

9V BATTERY PACK FOR ENR HEADSETS



This new XL-9V 9V battery pack is easier to operate, wear and store. It is 50% smaller and 50% lighter than previous battery packs. It runs off a single 9V alkaline battery to provide power to the headset ENC system. The XL-9V features an Auto Shut Off function to save the battery if the power switch is left on when the headset is not in use.

P/N 11-01783 ..... **$102.85**

DAVID CLARK UNDERCUT COMFORT-GEL EAR SEALS



Ear Seals have redesigned to be softer, more supple and form fitting, with a unique "undercut" shape that provides more room for your ears. This exclusive design makes for a larger, yet lighter ear seal. This new ear seal is now standard on the entire line of DC aviation headsets. New Ear Seal Features: • 26% lighter • 60% more surface area in contact with your head provides greater comfort by dissipation of necessary headband pressure • 30% more interior volume creates more room for your ear P/N 11-01782 ..... **$23.50**

DAVID CLARK GROUND SUPPORT HEADSETS

Ground Support Headsets are designed to facilitate communication when background noise or distance makes it extremely difficult to communicate. During ground-support operations, communication is critical to ensure the safety of everyone in the vicinity as well as the protection of the aircraft from accidental damage.



MODEL H7010 - Noise Attenuating Headset * M-101 Noise-Cancelling Microphone * 30-inch straight cord with U174/U plug * Noise-shielded microphone (muff) with On/Off switch * Soft headpad and ear seals guarantee exceptional comfort * Snap-fastened nylon straps secure microphone muff to mouth * Corrosion-resistant, chrome plated headpad/stirrup assembly * Extremely durable and reliable * NRR 26dB

P/N 11-07116 ..... **$309.00**

DAVID CLARK SERIES K HELMET



Series K Helmet provides the ability to convert all David Clark Over-The-Head style (Except H20-10 & H10-80) headsets into a Helmet/ Headset assembly. The Kit and a David Clark headset gives both impact and hearing protection in addition to clear, normal conversation in high noise environments. The Series K Helmet Kit consists of a helmet shell with nape pad and a helmet liner. Lightweight, the combined weight of the Helmet/Headset assembly is 42 oz.

Helmet Kit .....P/N K10.....**$400.36**

DAVID CLARK HEADSET BAG



This ballistic Nylon Carry Bag is black on black, with the DC logo subtly embroidered in the lower right corner. This bag has been carefully chosen for its simplicity, quality and workmanship and is a fitting complement to any David Clark Headset.

P/N 11-00642.....**$19.90**

AV

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

AVCOMM – EQ LINK

AVCOMM HEADSETS

A new, intercom-powered hands-free LED flashlight that's built into the headset microphone. Never require batteries. Provides power to the LED's without a battery pack! Has a backup power system that provides 30 minutes of power in case of power failure. Integrated version powered by the aircraft intercom system (No battery pack required)



AVCOMM AC-747FL HEADSET - Comes with GA and Helicopter cords Key Features: Ships Power FLITELite - no battery pack or wires required! Exclusive PNR technology and "plug and fly" design. Full flex boom Ultra-lite micro samarium cobalt speakers. Each ear cup features an independent volume control. M-60 microphone with active filtering chip Deluxe Comfort Package included Full five-year factory warranty Converts easily by plugging in either the general aviation straight cord or the helicopter coil cord (both included with the headset). FACTORY INSTALLED • Stainless steel headband with easy thumbnut adjustment • Deluxe comfort headpad • Acoustic foam earseals ALSO INCLUDED • 100% cotton ear covers • Acoustic mic muff P/N 11-02262 .....**$292.53**



AVCOMM AC-900 FL HEADSET - Exclusive patented PNR™ (passive noise reduction) technology. Key Features: Patented PNR™ audio technology and full spectrum stereo response Ultra-lite Neodymium speakers M65 microphone with "active filtering" chip. Full flex boom Built-in push-to-talk. Mono-stereo switch built into the cord Each ear cup features an independent volume control Deluxe gel ear seals Full five-year warranty. Gold plated mic and headphone plugs

AC-900 with Bluetooth
P/N 11-10870 .....**$368.98**



AVCOMM AC-200 PNR™ HEADSET - Simple and affordable PNR™ performance. Incredible voice clarity. Ultra-lite micro samarium cobalt speakers. Acoustic foam ear seals and acoustic mic muff. M-60 microphone with active filtering chip. Lighter weight; weighs only 13.4 oz. Full five-year factory warranty.

AC-200 PNR™ Standard
P/N 11-02259 .....**$125.46**
AC-200 PNR™ with Bluetooth
P/N 11-10869 .....**$296.95**

AVCOMM AC-900HD PNR DELUXE HEADSET



The AC900HD PNR (Silver) offers enhancements which make the AC900HD PNR the premium choice in the Avcomm headset lineup. Pilots and passengers everywhere are praising the features and benefits, claiming its comfort and performance surpass anything they've used before. The powerful, ultra-lite Neodymium speakers produce a richer, smoother frequency response for both voice and music. The powerful magnetic core and diaphragm provide high sensitivity and optimized response. P/N 11-16079 .....**$153.00**

AVCOMM AC1000 ANR HEADSET



AC1000 Matte Black EditionActive Noise Reduction rated at 52 dB Bluetooth Connectivity for Audio and Communication. Dual GA Plugs. 3-Way Audio Priority Switch: A - Intercom Priority, B - All Audio Sources, C-Intercom Only. 3-Color Power/Battery Status LED. 4-Function Bluetooth Status LED. Deluxe leather Ear Cushions. Dual-Function Auto Shut Off. Auxiliary 3.5mm Audio Input (Cable included). Requires 2 AA batteries (batteries not included). 5-Year Warranty with 30-Day Money Back Guarantee.
P/N 11-16337 .....**$294.95**



AVCOMM PERSONAL HEADSET BAG

These lightweight, tough bags provide protection for an individual headset, charts, or personal items. A zippered compartment on the outside is ideal for accessories.
P/N 11-15412 .....**$14.95**

EQ-LINK WIRELESS HEADSET SYSTEM



The EQ-Link Headset offers wireless freedom in the aviation cockpit. The EQ-Link module plugs into standard general aviation inputs on the aircraft's audio panel and provides a 2.4 GHz frequency hopping link (not Bluetooth®) to the EQ-1 ANR Headset. Now you can enjoy all of the features of a premium ANR headset with none of the wires! Plug and Play operation. No installation required. The EQ-Link Headset plugs into your aircraft's audio panel just like any other conventional wired headset and can be used in combination with other brand of wired headset being used in the aircraft's intercom system. Comes supplied with EQ-1 Headset, EQ-Link wireless module, USB wall charger (with international charging adapters), USB charging cables for EQ-1 Headset and EQ-Link module.

System with Dual GA Plugs ..... P/N 11-11335.....**$989.00**
System with Helicopter Plugs ..... P/N 11-11377.....**$989.00**
Replacement Headset ..... P/N 11-11336.....**$750.00**

EQ REVERSE LINK SYSTEM



The EQ-Reverse/Link system represents a breakthrough in wireless headset communications. Now any aviation headset can have the same wireless freedom as our popular EQ-Link single headset system. The EQ-Reverse/Link system is comprised of the EQ-Link and EQ-Reverse/Link modules. Any standard aviation headset can be plugged into the Reverse/Link while the EQ-Link is plugged in to the aircraft's intercom system. A wireless link is provided by EQ-1's tried and true 2.4 Ghz, TDMA protocol, (not Bluetooth) R.F. link to provide crystal clear and interference free communications up to 30 feet away from the audio panel. ..... P/N 11-12106 .....**$919.00**

EQ LINK 4 PLACE MULTI HEADSET SYSTEM



The EQ-Link module plugs into standard general aviation inputs on the aircraft's audio panel and provides a 2.4 GHz frequency hopping link (not Bluetooth®) to the EQ-1 ANR Headset. Now you can enjoy all of the features of a premium ANR headset with none of the wires! Plug and Play operation. No installation required. The EQ-Link Headset plugs into your aircraft's audio panel just like any other conventional wired headset and can be used in combination with other brand of wired headset being used in the aircraft's intercom system. Comes supplied with EQ-1 Headset, EQ-Link wireless module, USB wall charger (with international charging adapters), USB charging cables for EQ-1 Headset and EQ-Link module. P/N 11-12107 .....**$3,239.00**



EQ-1 BLUETOOTH MOBILE PHONE ADAPTER FOR EQLINK HEADSET

The EQ-1 Mobile phone adapters will allow EQ-Link users to answer and send mobile phone call directly from their EQ-1 Wireless Headset.
P/N 11-12031 .....**$217.00**

AV

HEADSETS INC. HEADSETS

HEADSETS INC.-1001 PNR HEADSET



• 24dB NRR hearing protection • Noise-canceling electret mic • Rugged Mil-Spec cabling • Dual volume control • New Full flex boom • Wide comfort foam ear seals • Cotton cloth ear covers • Available in black or white. • Weight 14.5 oz. • 3 year factory warranty The Headsets Inc.-1001H is available with Foam Ear Seals, Gel Ear Seals, or in a Bundle. **Bundle includes:** Gel Ear Seals, Soft Top Headband, and Cloth Ear Covers.

Headsets Inc.-1001B Black PNR Headset ....P/N 11-06494 ..... **$117.75**
Headsets Inc.-1001BG Black PNR Headset with Gel Seals
P/N 11-09564..... **$135.75**
Headsets Inc.-1001B PLUS Black PNR Headset Bundle
P/N 11-10408..... **$136.75**
Headsets Inc.-1001W White PNR Headset.. P/N 11-09497..... **$114.95**
Headsets Inc.-1001WG White PNR Headset with Gel Seals
P/N 11-09565..... **$119.75**
Headsets Inc.-1001W PLUS White PNR Headset Bundle
P/N 11-10410..... **$136.75**
Headsets Inc.-1001TG Tan PNR Headset ....P/N 11-10086 ..... **$129.00**
Headsets Inc.-1001T PLUS Tan OND Headset with Bundle
P/N 11-10409 ..... **$136.75**
Headsets Inc.-1001H Black Heli. Headset.....P/N 11-08228 ..... **$129.00**
Headsets Inc.-1001HG Black Heli. Headset with Gel Seals
P/N 11-09622 ..... **$137.95**
Headsets Inc.-1001BH PLUS Black Heli. Headset with Bundle
P/N 11-10411 ..... **$139.00**
Headsets Inc.-1001WH White Heli. Headset.....P/N 11-08223 ..... **$140.99**
Headsets Inc.-1001WHG White Heli. Headset with Gel Ear Seals
P/N 11-09620 ..... **$119.75**

HEADSETS INC.-4001 STEREO PNR HEADSET



• 24dB NRR hearing protection • Noise-canceling electret mic • Rugged Mil-Spec cabling • Dual volume control stereo • Pillow top head pad • New Full flex boom design • Gel ear seals • Cotton cloth ear covers • Wind block mic muff • Weight: 15 oz. • 3 year warranty Headsets Inc.-4001 the affordable aviation industry leader.

Headsets Inc. 4001PNR Headset Black.. P/N 11-08093..... **$139.00**
Headsets Inc. 4001 PNR Headset White P/N 11-09566..... **$139.00**

HEADSETS INC.-6001 ANR HEADSET



• Powerful ANR performance • Noise-canceling electret mic • Rugged Mil-Spec cabling, chrome plated plugs • Dual volume control stereo • Pillow top head pad • New Full flex boom design • Gel ear seals • Wind block mic muff • Auto shut-off battery pack • Auxiliary power input jack • 20-hour battery life • Weight: 16.5 oz. • 3 year warranty • D3P01 Personal Headset Bag.

Headsets Inc. 6001B ANR Headset Black P/N 11-08094 ..... **$359.00**
Headsets Inc. 6001T ANR Headset Tan . P/N 11-10074..... **$399.00**

ANR KIT FOR SHALLOW CUP HEADSETS



All the components needed for David Clark 13 series headsets and others that have shallow depth ear cups. MX modules (reduced height for shallow cups) containing Audio Speaker, ANR speaker, Sensing microphone and control board. Assembly parts containing wire, solder, tie wraps, shrink tubing and Aramid pads. Pink foam strips for Passive noise attenuation. Power cable 72" long to connect battery box to ANR system. Crossover cable to replace existing cable on headset. Standard Battery box to power ANR system. Uses (1) 9 volt transistor battery.

P/N 11-12165 ..... **$159.00**

ANR KIT M-003-A FOR STANDARD HELMET



All the components needed to install ANR into your flight helmet. Standard modules containing Audio Speaker, ANR speaker, sensing microphone and control board. Assembly parts containing wire, solder, tie wraps, shrink tubing and Aramid pads. Gray foam strips for passive noise attenuation. Power cable 72" long. Helmet Gel ear seals. Crossover cable to replace existing cable on headset. Standard Battery box to power ANR system. Uses (1) 9 volt transistor battery.

P/N 11-12166 ..... **$186.75**

HEADSETS INC. ACCESSORIES



GEL SEALS - Add all-day comfort with a pair of Deluxe silicone gel ear seals with the industry's first double bump design to keep the gel in place. Other gel seals tend to squash out over time. Deluxe gel seal will block out noise for increased noise reduction. Fits Headsets Inc. and other top brand general aviation headsets.

P/N 11-06496 ..... **$19.95**



PILLOW TOP HEADPAD - Enjoy your flight with Pillow Top headpad. 100% sheepskin eliminates the pressure on the top of the head. Made to fit all general aviation, over-the-head headsets with 5/8" headbands.P/N 11-03014 ..... **$28.75**



FOAM EAR SEALS - Fits Headsets Inc. and other top brand general aviation headsets.

P/N 11-07366 ..... **$12.50**



CLOTH EAR COVERS - Great for comfort and hygiene! The cool cotton comfort improves the tactile quality of any ear seal. Easy to install, absorbs perspiration, and completely washable. These covers fit all general aviation headsets.

P/N 11-07367 ..... **$4.95**



MIC MUFF - This mic muff attaches easily, includes the o-ring retainer, improves transmission while eliminating wind noise, and protects the mic from moisture and dust. It is completely washable and fits all general aviation headset microphones.

Mic Muff.....P/N 11-06497 ..... **$3.95**



GENERAL AVIATION TO HELICOPTER ADAPTER - General Aviation to Helicopter Adapter converts general aviation application to helicopter.

P/N 11-09583 ..... **$53.75**

POWER SUPPLY FOR PANEL MOUNT HEADSETS INC. 6000, D800 - Panel-mount power supply for Headsets Inc. 6000: The Panel-Mount Power Supply is for 12V aircraft. Save on batteries by powering the ANR system from aircraft power. Active noise reduction systems require a very stable and clean power supply. This panel-mount power supply has 2 voltage regulators, a DC-DC converter for isolation, and an in-line 1/4 amp fuse.



For use with 11-08094 (6001B) & 11-10074 (6001T)

P/N 11-07180 ..... **$47.85**

NAV-DATA ND-72 FOLDUP HEADSET



The Nav-Data Technologies foldup headset has one of the best passive noise reduction ratings of any headset available at any cost.

There are many reasons to own the Nav-Data Headset:

• Switch selectable stereo or mono operation
• Dual volume controls
• Gel earseals for maximum comfort and noise attenuation
• Foldup design for easy storage in less space (two will fit in one standard headset bag)
• Full flexible mic boom - stays where you put it!
• Noise canceling electret mic
• Weighs less than a pound
• 3.5mm auxiliary audio input jack for music, voice, etc.

P/N 13-18774.....**$98.75**

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Prices Subject to Change Without Notice

FLIGHTCOM HEADSETS

FLIGHTCOM CLASSIC ANR HEADSET



Flightcom's Classic ANR Headset is built with comfort features not found in similar headsets. With overstuffed Confor® foam ear seals and larger than normal headband, the classic aviation style provides extended comfort and performance. Comfort: Classic ANR's Confor® Foam ear seals, and a wide polar fleece headpad ensure comfort. Innovation: A volume control on each dome allows for independent adjustment. Noise reduction: We keep it quiet with our advanced hearing protection technology. Confor® Foam ear seals effectively block out sound. Noise reduction rating is enhanced by 14 to 18 dB at certain key low frequencies. Comes with a durable nylon carry case
• Precision flex boom with noise canceling electret microphone • 9-volt battery • Chrome headband with a washable polar-fleece headpad • Stereo/mono switch ensures audio compatibility • Mic muff and carrying case included • In-line, "drop-and-go" • Provides an additional 14-18dB noise attenuation at key low frequencies • Weight: 17.9 oz. • Dual-volume controls allow for independent volume adjustment in each ear dome • 3-year warranty.....P/N 11-01326.....**$329.00**

FLIGHTCOM DENALI D30SP



At 11 ounces, this fixed-wing headset is the lightest model available. Denali's ComLeather™ ear seals help abate noise and offer a comfortable fit. The sleek ear domes stay securely in place, reducing side force. Passive 21dB NRR rating. P/N 11-10820.....**$259.00**

FLIGHTCOM 5DX CLASSIC



This headset provides supreme comfort and fit through its washable polar fleece headpad, silicone gel ear seals and cloth ear seal covers. Features include noise cancelling electret microphone, precision flex boom, dual volume controls, stereo/ mono switch, 22dB noise reduction rating and all top quality components. Wt 17.9oz. 3-yr factory warranty P/N 11-08760.....**$159.00**

FLIGHTCOM 4DLX CLASSIC



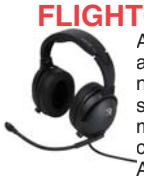
This headset combines the proven performance and affordability of the popular 4DX Classic headset with the comfort of the "air pillow" headpad. Features of the 4DLX Classic include combined foam and liquid ear seals, precision flex boom, noise cancelling electret microphone, stereo/mono switch, cloth ear seal covers, mic cover and 3-yr factory warranty. 24dB noise reduction rating Wt 16.8oz P/N 11-17115.....**$119.00**

FLIGHTCOM E-13 PASSIVE MILITARY HEADSET



For rugged cockpit environments. Standard comfort features include protein leather covered dual density foam ear seals and washable polar fleece headpad • In-line quick disconnect jack on the mic boom for chemical defense suit and boom replacement • Dome-mounted volume control • DO-160D tested ? environmental and explosive proof • Passive noise attenuation 21dB NRR. Two-year warranty.
P/N 11-10395.....**$269.95**

FLIGHTCOM DENALI D50ANR HEADSET



At less than 14oz, this headset is the lightest ANR model available. Denali's ComLeather™ ear seals help abate noise and offer a comfortable fit. The sleek ear domes stay securely in place, reducing side force. This ANR model also has SPS – a digital power management circuit. The SPS conserves battery life by shutting off the ANR circuit when not in use. Full passive performance is maintained when the ANR circuit is off. ANR model achieves additional 18-20dB at certain key low frequencies. P/N 11-10818.....**$359.00**

FLIGHTCOM DENALI D90ANR HEADSET



At less than 14oz, this headset is the lightest ANR model available. Denali's ComLeather™ ear seals help abate noise and offer a comfortable fit. Includes dual inputs that support cell phone and Aux connections for communication and entertainment. Automatic muting ensures that all incoming transmissions are instantly heard. Uses two always available AA-size batteries for up to 50 hours of continuous ANR use. Also has SPS – a digital power management circuit. The SPS conserves battery life by shutting off the ANR circuit when not in use. Full passive performance is maintained when the ANR circuit is off. ANR model achieves additional 18-20dB at certain key low frequencies. P/N 11-10817.....**$449.00**

FLIGHTCOM 4DX CLASSIC



The 4DX Classic is an entry-level headset with classic Flightcom ruggedness. With an easy-to-position wire articulated boom and a ventilated foam rubber headpad and combined liquid and foam ear seals, the 4DX Classic is comfortable and affordable. Noise canceling electret microphone • Single-volume control • Stereo/mono switchable • NRR 24dB • Weighs 16.9 ounces • Mic muff and cloth ear seal covers included • Three-year warranty
P/N 11-17110..... **$109.00**

FLIGHTCOM E-13 ANR MILITARY HEADSET



Newly designed battery box includes SAT/cellphone support, auxiliary input and improved battery monitoring. Active Noise Reduction (ANR) provides an additional 14-18dB noise attenuation. ANR is powered by two "AA" batteries providing up to 50 hours average operation. Approved for use on USAF KC-135, C-5 and C-130 (all types except "J"). USMC approved. Includes carrying case. Two-year warranty P/N 11-10396.....**$729.95**

ACCESSORIES



P/N 11-07371

HEADSET BAG - Padded nylon headset bag with 2 chart-size mesh pocket ..... P/N 11-07371..... **$18.95**
COMFORT SEALS ..... P/N 11-17130..... **$38.75**
GEL-FLO SEALS ..... P/N 11-17135..... **$48.50**
LEATHER EAR SEALS - 103-0019-10 Protein Leather Ear Seals. Fits all Denali headsets. ..... P/N 11-05947..... **$46.75**
CLOTH EAR SEAL COVERS - Fits dome style headsets 4DX, 4LX, 4DLX, & 5DX. ..... P/N 11-08467..... **$15.65**
POLAR FLEECE HEADPAD - Fits 4DX, 4DLX, 5DX & Classic ANR. Velcro closure. ..... P/N 11-08313..... **$25.75**
DENALI HYGIENE KIT - Ear seals, headpad and mic muffs. ..... P/N 11-04855..... **$65.80**



P/N 11-08765

5DX HYGIENE KIT - 2 gel ear seal, 2 cloth ear seal covers, 3 mic muffs and 3 securing o-rings. ..... P/N 11-08592..... **$27.80**
A9 MIC - Eliminates distortion and background noise, provides enhanced voice clarity. ..... P/N 11-08765..... **$53.75**
LARGE MIC MUFF ..... P/N 11-17649..... **$11.95**
SMALL MIC MUFF - With o-ring (3 pk). For use on F20. ..... P/N 11-08591..... **$11.50**
POLAR FLEECE HEADPAD - Fits 4DX, 4DLX, 5DX & Classic ANR. Velcro closure. ..... P/N 11-08313..... **$25.75**
FLIGHTCOM COPILOT TRANSMIT CABLE - Requires separate PTT. (Not compatible with iNova.) ..... P/N 11-08309..... **$11.75**
FLIGHTCOM CIG LIGHTER ADAPTER - Adapter to power intercom from aircraft power. ..... P/N 11-08310..... **$12.60**
PTT SWITCH GOLD - Push-to-talk switch with durable gold contacts. ..... P/N 11-08311..... **$34.75**



P/N 11-08317

FC-06 MIC Y ADAPTER - Allows pilot and copilot to share a single Mic jack. Req. separate PTT for each position. P/N 11-08314..... **$18.50**
COMFORT PAD- For 4DX, 4DXL, & 5DX. ..... P/N 11-08851..... **2.95**
FLIGHTCOM CAP - Black with White logo lettering. ..... P/N 11-08825..... **$14.00**
4 PLACE JACK PACK - Switchcraft mic and stereo headphone jacks & hardware to install up to four positions. ..... P/N 11-08315..... **$79.95**
FLIGHTCOM FC-07 GA TO HELICOPTER ADAPTER - Dual plug to single plug adapter ..... P/N 11-08316..... **$78.95**
OPEN COCKPIT MIC MUFF - High density muff installs over existing muff on Classic headsets to block wind noise. ..... P/N 11-08317..... **$16.95**

FLIGHTCOM COMBO PACKAGES

These combination packages offer extra savings as well as a pre-packaged set which includes two headsets, an intercom and a push to talk switch.

Ask for quote on any unlisted headset/intercom combo.

Combo#	Description (Combo includes:)	Part No.	Price
1A	2 Flightcom 4DX hdsts, (1) IISX 2 pl. intercom & (1) P-T-T switch	11-08705	$297.95
1B	2 Flightcom 4DX hdsts, (1) IISX 4 pl. intercom & (1) P-T-T switch	11-08706	$337.95
3A	2 Flightcom 4DLX hdsts, (1) IISX 2 pl. intercom & (1) P-T-T switch	11-08707	$327.95
3B	2 Flightcom 4DLX hdsts, (1) IISX 4 pl. intercom & (1) P-T-T switch	11-08708	$366.95
3C	2 Flightcom 5DX hdsts, (1) IISX 2 pl. intercom & (1) P-T-T switch	11-08717	$404.95
3D	2 Flightcom 5DX hdsts, (1) IISX 4 pl. intercom & (1) P-T-T switch	11-08718	$443.95

TELEX HEADSETS

TELEX ECHELON 20 AVIATION HEADSET



Designed for students, new pilots, and value-conscious experienced fliers. Offers comfort, excellent hearing protection and value. Provides an impressive 20+ dB of passive noise protection and a top-quality noise canceling electret microphone. A low-profile headband for even weight distribution plus patented ComfortCam™ technology, a three-click tension adjustment system for a custom fit. Special earpieces with foam ear-seals pivot two ways to conform to any wearer while detent sliders adjust the headband.

P/N 11-04564..... **$184.00**

TELEX ECHELON 25XT HEADSET



Includes Telex's innovative cell phone/MP3 adapter that allows you to attach both your cell phone and MP3 player at the same time. Features a plush, thick foam headband pad and newly designed, more comfortable ear cushions. Individual volume controls for each ear cup and a stereo/mono select switch. Impact-Resistant Headband Design. Flight Bag. Weight: 13.6 oz/386 grams

P/N 11-04563 ..... **$335.00**

TELEX STRATUS 30XT



Allows you to power the headset from the aircraft panel, standard alkaline batteries, or rechargeable batteries. A built-in battery recharger that recharges when plugged into a wall socket, the aircraft's panel power or even your car's 12-volt power outlet. Ensures more than 50 hours of battery life. Telex's patented ComfortCam™ to eliminate clamping. A unique headband construction that distributes weight evenly for a perfect fit, plus thick foam headband pad. Telex's innovative cell phone/MP3 adapter which allows you to attach both your cell phone and MP3 player at the same time. Flight Bag. Weight: 14.2 oz/403 grams. Runs on 2 AA batteries

30XT headset.....P/N 11-04561 ..... **$579.00**
AC/DC 30XT Adapter.....P/N 11-04576 ..... **$25.50**

STRATUS™ 50-DIGITAL ANR HEADSET



Cuts noise 3 ways by providing 24dB passive attenuation for high frequency noise outside the ANR range, 15dB of analog ANR for noise reduction below 1000 Hz, and up to 50dB of digital tonal noise reduction. DSP (Digit Signal Processing) allows the Stratus to predict recurring cabin noise and fine tune the Active Noise Reduction for the ultimate in hearing protection. Features • Capable of battery or panel power Stereo/mono switch • Auto shut-off feature saves battery • Dual volume controls • Reversible mic for pilot/copilot operation • 18 oz. • Collapses for ease of portability. • Incl. Deluxe carrying case P/N 11-04560..... **$698.00**

TELEX AIRMAN 7 HEADSET



Sound Quality - High-quality amplified electret microphone. Durability - A strong stainless steel headband with metal pivots. Pre-coiled overhead cord has been added to extend the useful life of the headset. Comfort and Fit- The soft headband pad and lightweight design provides comfort, even on long flights. An added yoke provides enhanced comfort by allowing ear cup movement in all directions.

Dual GA Plugs(1500 ohm) .....P/N 11-15435 ..... **$234.95**
Airbus XLR-5 Plug (600 ohm) .....P/N 11-15436 ..... **$234.95**
Dual GA Plugs(600 ohm) .....P/N 11-15437 ..... **$234.95**
Single Side Dual GA Plugs(300 ohm).....P/N 11-15438 ..... **$221.95**
Headphone Only .....P/N 11-15439 ..... **$129.95**

TELEX AIRMAN 8 ANR HEADSET



Sound Quality - The Airman 8 features a high-quality amplified electret microphone for clear voice transmission. Improved ANR and microphone noise cancellation ensures superior in-flight communication. Active Noise Reduction- The Airman 8 headset features enhanced ANR (Active Noise Reduction) with even more noise reduction. Powered from its microphone system, eliminating the need for batteries or special connectors.

Dual GA Plugs(600 ohm) .....P/N 11-15433 ..... **$409.95**
Airbus XLR-5 Plug (600 ohm) .....P/N 11-15434 ..... **$409.95**

Accesories	Part No.	Price
Telex Airman 7 And 8 Windscreen	11-15440	$9.99
Telex Airman 7 Ear Seal Pair Foam	11-15441	$5.95
Telex Airman 7 Leatherette Ear Seals Pair	11-15442	$19.50
Telex Airman 8 Ear Seals Pair	11-15443	$23.95
Telex Airman 7 & 8 Clothing Clip	11-15444	$6.25
Airman 7 & 8 Carry Case	11-15445	$19.95
Telex Airman 7 & 8 Headband Pad	11-15446	$9.99
Telex Airman 7 Hygeine Cover 10 Pack	11-15447	$28.95
Airman 8 Hygeine Cover 10 Pack	11-15448	$28.95

TELEX STRATUS 30



Combines superior ANR protection, a noise-canceling electret microphone, and fully adjustable boom. Include Telex's patented ComfortCam™ technology that allows you to quickly and easily control the tension of the ear cups. Low profile headband. Utilizes impact-resistant headband design with stainless steel reinforced stress points. Cell Phone/Audio Adapter. Advanced Microphone Technology. Boom Microphone. Flight Bag. Weight: 14.2 oz/403 grams. Runs on 2 AA batteries. P/N 11-04562..... **$485.00**

TELEX AIR 3100 HEADSET



The new Telex AIR 3100 is a medium weight headset (15 oz) which is extremely comfortable because of a unique headband knuckle design that distributes ear cushion pressure evenly over the entire ear circumference with no pressure point. Earcup tension is adjustable for preferred balance between noise reduction and comfort. The electret mic is mounted on a fully adjustable and hinged boom. The AIR 3100 replaces the D950 and E951 Telex headsets, and is collapsible for compact storage.

P/N 11-09440..... **$285.95**

TELEX PRO III 5X5 HEADSET



This headset from Telex features a single side soft ear tip receiver with superior noise cancelling amplifier. The electret microphone is fully adjustable for use on the right or left side. Order push-to-talk switch for aircraft not so equipped. P/N 11-09600.....**$265.00**

TELEX AIRMAN 750 HEADSET



A featherweight headset which is the lightest in the industry (2.5 oz.). Features a miniature noise-cancelling electret microphone that provides superior 400 Hz hum rejection. Microphone pivot arm pivots 310° for use on left or right side. The optional Telex PT-300 push-to-talk switch is recommended for use with the Airman 750. P/N 11-09500.....**$229.00**
Airman 750 Airbus plug P/N 11-09302 .....**$249.95**
Foam Ear Cushions for 750/760.....**$5.50**

TELEX AIRMAN 750 SINGLE-SIDED HEADSET



The Airman® 750SS is 25% lighter than the Airman® 750. Its effective weight (without the cord) is only 2.4 oz. Many pilots prefer the ergonomics of a single sided headset. It eliminates the need to pull off one of the earphones when listening to cockpit conversations.

P/N 11-01123 ..... **$216.95**

TELEX AIRMAN ANR 850



Uses Active Noise Reduction technology to provide up to 12dB of noise attenuation ensuring the clearest in-flight communication. Weighs less than 4 oz. Combines "set and forget" volume control with never worrying about a battery pack. Power to the ANR is provided by mic bias (active intercom) eliminating the need for battery packs or panel power. By drastically reducing wind noise in jet cockpits, the Airman ANR 850 helps to reduce fatigue. The Telex Airman ANR 850 is unsurpassed in clarity, comfort and convenience.....P/N 11-01880.... **$419.00**
Telex Airman ANR 850 (Airbus Application) ...P/N 11-05464.... **$419.00**
Telex 850 Leather Ear Seals.....P/N 11-04332..... **$24.95**

TELEX HEADPHONES



TELEX AIRMAN 760 HEADPHONE - A featherweight headphone unit designed for use with hand-held microphones. For long term comfort, an adjustable clothing clip removes the cord weight from the head of the user.

P/N 11-09300..... **$84.95**

TELEX ACCESSORIES

Windscreen (750,Pro III,ANR500)..... P/N 11-01112 ..... **$7.95**
Cushions (750, 760)..... P/N 11-01113 ..... **$5.50**
Gel cushion-Full cushion headsets ..... P/N 11-01114 ..... **$39.85**
Windscreen-Full cushion headsets ..... P/N 11-01115 ..... **$8.95**
Foam Cushion - Full cushion headset ..... P/N 11-01117 ..... **$24.95**
Mic Muff for Dynamic mic..... P/N HS036.1..... **$3.95**
Air 3000/ ANR 4000/ Echelon 150 ..... P/N 11-09445 ..... **$48.50**
ANR 500 Foam Ear Seals..... P/N 11-04565 ..... **$29.50**
Airman 750/760 Ear Seals ..... P/N 11-01113 ..... **$5.50**

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HEADSETS – CLARITY ALOFT

PLANTRONICS MS260 HEADSET



The Plantronics MS260 commercial aviation headset leverages a proven design to set new standards in comfort and reliability for pilots. The noise-canceling microphones enable clear, uninterrupted communications between air and ground. The over-the-head design offers a stable fit for extended wear, and is available in single or twin ear models..... P/N 11-08904 .....**$199.95**

MS200 PLANTRONICS HEADSET



Combines a unique lightweight design and advanced technology to deliver the ultimate in comfort and reliability. The noise-canceling microphone enables clear, uninterrupted communications between air and ground. Its compact under-the-ear design ensures a secure, comfortable fit for extended wear, yet is convenient to carry and stow. Features: * Hear every word through superior audio quality * 5-foot cord with one each PJ055 and PJ068 plug. * FAA approved
M200 Headset Dual Plugs..... P/N 11-07311 .....**$149.95**
MS200 For Airbus..... P/N 11-08905 .....**$189.75**

PLANTRONICS MS250 SINGLE SIDE HEADSET DUAL GA PLUGS



The Plantronics MS250 commercial aviation headset leverages a proven design to set new standards in comfort and reliability for pilots. The noise-canceling microphones enable clear, uninterrupted communications between air and ground. The over-the-head design offers a stable fit for extended wear, and is available in single or twin ear models..... P/N 11-08903 .....**$179.00**

NAV-DATA ND-71 DELUXE HEADSET



The Nav-Data Technologies deluxe headset has one of the best passive noise reduction ratings of most headsets. Nav-Data Headset : • Switch selectable stereo or mono operation • Dual volume controls • Gel earseals for extra comfort and noise attenuation • Super padded head band for comfort during long flights • Full flexible mic boom - stays where you put it! • Noise canceling electret mic• Weighs only 14.3 ounces. P/N 13-06087 .....**$98.75**

HEADSETS, INC. EM-1 ANR HEADSET



EM-1 features conservative dark green ear cups, an Oregon Aero SoftTop padded headband, gel ear seals, and place-it-anywhere mic boom which makes it ergonomically friendly. Stereo capable with individual volume controls for each ear and a switch on the cord for mono or stereo audio. A separate battery box is used and shares a cord with the mic/phone jacks, eliminating the need to unite 2 separate cords. Cords separate at the end so you can find a convenient place to stow the battery box in the cockpit. Optional power sources allow to be powered by the aircraft's electrical system, a cigarette lighter, or rechargeable battery. Comes with a 3-yr warranty, headset bag, the Oregon Aero SoftTop, & gel ear seals.
P/N 11-00512 ..... **$359.00**

SUPER SOFT TOP FOR HEADSETS



The Super Soft Top headset is the ultimate in comfort. Put this headset on and feel the difference! It contains two layers of foam and one layer of polyester wool that is covered with a 90% cotton fabric for maximum humidity absorption. Easy to install, it fits the following headsets: • All David Clark models, (except DC20-10 series) • All Pilot Avionics models, (except PA-1776, PA-1779,Premier,Concord HNE,& Commander series) • All Marv Golden MG's * All Sigtronics • All ASA's * All Softcom's • All Flightcom models (except F-20 & Eclipse) P/N 13-00358 .....**$20.95**

HEADSET COMFORTOP



Replaces the original head pad with a sheepskin pad providing optimum comfort.
P/N 11-03014 .....**$28.75**

CLARITY ALOFT PRO PLUS HEADSET



The Pro Plus is designed for the discerning professional pilot who needs the ultimate in performance in a TSO certified headset. Robust wiring, exceptionally stable microphone boom, and our legendary comfort combine to make this the best option for the career pilot. The fact that the hearing protection is so good that it can go seamlessly from an airliner to an aerobatic plane just adds to the appeal of the Pro Plus.
Includes: • 6 pairs of medium tips • Sample pairs of small and large tips • Semi-rigid ballistic nylon carrying case • 2 lapel clips • Quick Start Guide. P/N 11-13294.....**$725.00**

CLARITY ALOFT HEADSET



Used to improve both hearing protection and speech communications. Each earpiece includes a miniature speaker that reproduces speech signals from the aircraft audio system. The replaceable compliant foam tips attach to the earpiece and contain a pathway for the sound to travel from the transducer to the ear. Provides the highest level of hearing protection available by any method including active noise reduction. (ANR) The noise-canceling microphone is a high fidelity noise canceling Electret Condenser microphone. Include a music input in the Volume control box. This button could also be used as a backup in case of other system failures. Balance and comfort are the result of its elegantly simple design. P/N 11-02923.....**$525.00**

CLARITY ALOFT LINK AVIATION HEADSET



Wirelessly connect to multiple Bluetooth devices for phone calls, music, and more. Tailored Digital Signal Processing gives it the clearest sound available today. Purchase includes: Headset, carrying case, owner's guide, starter supply of eartips (package of 12), and 2 AA batteries. **Features:** •Full spectrum noise reduction • Professional grade microphone with added Digital Signal Processing • 2 Bluetooth devices can be linked simultaneously • Enjoy music and movies on your iPod or iPad P/N 11-10420.....**$795.00**

CLARITY ALOFT ACCESSORIES

Description	Part No.	Price
Headset Bag	11-08441	$35.00
Microphone Cover	11-04644	$4.00
Replacement Ear Tips - Standard (Gray) 6 Pairs	11-04643	$24.95
Replacement Ear Tips - Slim (Peach) 6 Pairs	11-04642	$24.95
Replacement Ear Tips - Large (Black) 6 Pairs	11-15133	$24.95
Adjustment Bands	11-13291	$4.00
Lapel Clip	11-13290	$5.00

ARCUS ANR 7 NIMBO PNR HEADSETS



Full Android/iPhone/iPad/iPod/MP3 speaker & mic integration via 3.5mm connection. (N/A for Military). Hi-Fi Ported True Stereo Speakers. Stereo / Mono switching. Dynamic Clamping for complete comfort. Weighs 14oz. Ultra Sharp Electret Noise Canceling Microphones. Advanced Inline Volume Controls with Smart Comm / Aux Control. Large Soft Head Pad. Twin Layer True Gel Ear Seals. Passive Noise Reduction: (NRR) 24dB (The most controversial number in all headsets...) Active Noise Reduction: +16dB-19dB @100Hz (Low end "droning" sounds is what ANR is for). Pilot Direct Internal Noise Cancelling System. Embedded in the ANR technology is an Enhanced Voice Intelligibility (EVI) circuit. Three-Year Unlimited Warranty. Made in USA. Meets or exceeds all CE and FCC standards.

SEE WWW.AIRCRAFTSPRUCE.COM FOR COMPLETE LIST OF HEADSETS, PART NUMBERS, AND PRICES.

AV

3M™ PELTOR HEADSETS – PILOT USA



3M™ PELTOR™ DIGITAL WORKTUNES

Worktunes is a self-contained AM/FM noise attenuating headset (NRR 26db) which provides hearing protection combined with an AM/FM radio to provide. Features include: • Easy finger tip controls • 5 preset stations • Volume limited to a safe 82 dB level • Gel/Foam cushions • MP3 cord included • Peltor™ stainless steel spring arm headband provides even pressure all day. • Wide, soft padded headband, flexible antenna. • Quick and easy tuning and volume adjustments P/N 11-01589..... **$85.80**

3M™ PELTOR™ HEADSET ACCESSORIES

Deluxe Carrying Bag ..... P/N 11-01586... **$34.75**
3m Peltor Foam Liquid Seal Ring Replacement - sold as a pair
P/N 11-01587... **$19.95**
Gel sealing cushions - sold as a pair ..... P/N 11-01588... **$53.75**
Mic Muff for MT22/MT24 ..... P/N 11-18535... **$12.70**
Peltor™ Microphone Windscreen..... P/N 11-04558..... **$9.25**
Peltor™ Clothing Clip ..... P/N 11-04559..... **$6.00**



3M™ PELTOR ™ 8103 HELICOPTER HEADSET

The Aviation 8103 helicopter headset has an ambient-noise compensated dynamic differential microphone, specially designed for aviation intercom systems. The microphone amplifier is designed for intercom systems with 5 Ohm impedance. The frequency range is adjusted for good speech recognition. The earphones have a limited frequency range, to give the best possible speech recognition in the ambient noise of a helicopter. Peltor's two-point suspension of the shells on a broad headband ensures total comfort and consistent noise attenuation. The spiral polyurethane cable has a moulded NATO-standard connector equivalent to the Nexus TP-120. P/N 11-08704 ..... **$66.75**



PILOT USA PA-1160AI HEADSET

The headset is designed to plug directly into the ICOM® A2, A3, A4, A20, A21 and A22 aviation transceivers eliminating any need for extra adapters. It can also be used with the A6, A14, and A24 but we suggest the PA-1160AI/R with Right angle plug for those latter models that have the input on the side of the radio. For ease of use, we have installed an inline Press-To-Talk (PTT) switch on the comm-cord. Great to have at air shows to listen to the tower and performers. ICOM Straight Plug.
P/N 11-12982 ..... **$145.95**



PILOT USA PA-1140HNE GROUND CREW HEADSET

Great fit for aviation ground crew, passive noise attenuating headset preferred by ground crews around the world. This behind-the-head style allows headset to be worn under a hard hat while maintaining a secure fit and clear communications. Headset comes normally with an electret noise canceling microphone. This style of headset can also be fitted with various 2-way radio plugs and can be worn under a hard hat where hand held radios are in use. NRR 27 Three Year Warranty..... P/N 11-06511..... **$130.00**



PILOT USA PA-1100 LISTEN ONLY HEADSET

Keep your passengers informed and protect their hearing with our lightweight listen-only headset. Audio input jack allows user to listen to their favorite IPOD®, MP3®, cd player or monitor a radio. Your passengers will thank you for making their flight more enjoyable. NRR 24.
PA-1100 ..... P/N 11-06516..... **$76.85**
PA-1100S Stereo ..... P/N 11-06515..... **$80.00**

PILOT USA PA-1110 SINGLE SIDE HEADSET



This single sided ear cup headset is perfect for monitoring a radio and keeping one ear free to listen to crew members or monitor a 2nd radio source. One stirrup and ear cup have been replaced with an adjustable 2 cushion Air-Foam temple pad. Headset is fitted with a half flex/half metal mic boom with a noise canceling PA-7 electret microphone. Ear seals are liquid and foam for comfort and excellent noise cancellation. Weight 9.6 ounces. Three Year Warranty.
PA-1110..... P/N 11-06513..... **$110.00**
PA-1110H Helicopter P/N 11-06514..... **$135.00**

PA-1779M MILITARY HEADSET



- Passive Noise Reduction (NRR): 25dB
- Active Noise Reduction: Additional 20-22dB
- Genuine Sheepskin Headpad
- Gel Ear Seals
- M-87/AIC Dynamic Microphone
- Custom Padded Protective Case
- Rechargeable NIMH battery
- Usage Time: 30-40 hrs
- Coiled Cord with U-174/U Plug
- Weight: 16.9 ounces (479 grams)
- Five Year Warranty
- Made in U.S.A

Model	Part No.	Price
PA-1779M87	11-06539	$575.00
PA-1779M101	11-06538	$550.00

PA-1176M MILITARY HEADSET



- Passive Noise Reduction (NRR): 24dB
- Dual Volume Controls
- Pillow-Top Headpad
- Gel Ear Seals
- M-87/AIC Dynamic Microphone
- Metal Hinged Microphone boom
- Cloth Ear Seal Covers
- Soft Padded Headset Case
- Coiled Cord with U-174/U Plug
- Weight: 16.9 ounces (479 grams)
- Three Year Warranty

Model	Part No.	Price
PA-1176M87	11-06543	$235.95

PA-1166M MILITARY HEADSET



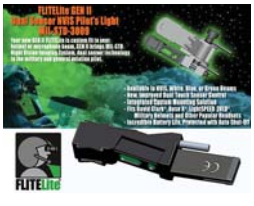
- Passive Noise Reduction (NRR): 25dB
- Dual Volume Controls
- Pillow-Top Headpad
- Gel Ear Seals
- M-101/AIC Dynamic Microphone
- Metal Hinged Microphone boom
- Cloth Ear Seal Covers
- Soft Padded Headset Case
- Coiled Cord with U-174/U Plug
- Weight: 16.9 ounces (479 grams)
- Three Year Warranty

Model	Part No.	Price
PA-1166M101	11-06544	$275.00
PA-1166M87	11-06545	$290.00



PILOT USA H10-76 CONVERSION KIT

Allows the use of a David Clark 11-02226 (H10-76) or 11-05428 (H10-76XL) low impedance headset in a general aviation aircraft. Kit includes a noise canceling electret microphone (high impedance), and adapter to convert the H10-76's single U-174/U plug to a dual plug system (PJ-068 and PJ-055). P/N 11-14427 ..... **$69.95**



FLIGHT LITE GEN II DUAL SENSOR PILOT LIGHT

FLITELite GEN II Dual Sensor Pilot Light. The New GEN II is 30% smaller, and more efficient than GEN One. The new version was developed to meet MIL-STD-3009, for Night Vision Imaging Systems (NVIS) aircrew auxiliary and utility lighting. This light is also perfect for the General Aviation Cockpit. FLITELite comes complete with: * GEN II FLITELite unit, computer controlled, dual sensor pilot light * Headset or Helmet Adapter (new adapters are free) * AAA Battery Pack * Optional Coin Cell Pack * Attachment accessories * AAA Batteries * Warranty

Headset	White	Red	Blue	Green	Price lights	Night Vision	Price Night Vision
Bose	11-07034	11-08002	11-08003	11-08004	$45.50	11-07038	$54.95
Lightspeed	11-07035	11-08006	11-08007	11-08008		11-07039	
David Clark	11-07036	11-08010	---	11-08013		11-07040	
Sennheiser	11-07037	11-08014	11-08015	11-08016		11-07041	
Optional Coin Cell Battery Pack				11-07872		$3.85	

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PILOT USA HEADSETS

PA-1779T ANR HEADSET



- Passive Noise Reduction (NRR): 25dB
- Active Noise Reduction: Additional 20-22dB
- Auto Shutoff System
- Cell/Satellite Phone Interface
- Auxiliary Audio Interface for Music or Audible Checklist/Warnings
- Mono/Stereo Capability
- Dual Volume Controls
- Genuine Sheepskin Headpad
- Gel Ear Seals
- Noise Cancelling Electret Microphone
- Custom Padded Protective Case
- Rechargeable NIMH battery
- Usage Time: 30-40 hrs
- Weight: 16.9 ounces (479 grams)
- Five Year Warranty
- Made in U.S.A

PA-1779T ..... P/N 11-11515 ..... **$465.00**
PA-1779TH (Helicopter) ..... P/N 11-03538 ..... **$490.00**
PA-1779TP (Panel Mount) ..... P/N 11-00440 ..... **$500.00**
PA-1779TB (Bose Connect) ..... P/N 11-03539 ..... **$530.00**

PA-1771T ANR HEADSET



- Passive Noise Reduction (NRR): 25dB
- Active Noise Reduction : Additional 20-22dB
- Auto Shutoff System
- Cell/Satellite Phone Interface
- Auxiliary Audio Interface for Music or Audible Checklist/Warnings
- Mono/Stereo Capability
- Dual Volume Controls
- Genuine Sheepskin Headpad
- Gel Ear Seals
- Noise Cancelling Electret Microphone
- Custom Padded Protective Case
- Powered by 9V Battery
- Battery Life: 25-30 hrs
- Weight: 13.4 ounces (380 grams)
- Five Year Warranty
- Made in U.S.A

PA-1771T ..... P/N 11-02110 ..... **$375.00**
PA-1771TH (Helicopter) ..... P/N 11-03537 ..... **$400.00**

PA-1761T ANR HEADSET



- Passive Noise Reduction (NRR): 24dB
- Active Noise Reduction: 16-19dB
- Auto Shutoff System
- Cell/Satellite Phone Interface
- Auxiliary Audio Interface for Music or Audible Checklist/Warnings
- Mono/Stereo Capability
- Dual Volume Controls
- Pillow-Top Headpad
- Gel Ear Seals
- Noise Cancelling Electret Microphone
- All Flexible Microphone Boom
- Cloth Ear Seal Covers
- Soft Padded Headset Case
- Powered by 9V Battery
- Battery Life: 25-35 hours
- Weight: 16.9 ounces (479 grams)
- Three Year Warranty

PA-1761T ..... P/N 11-03550 ..... **$295.00**
PA-1761TH (Helicopter) ..... P/N 11-06505 ..... **$320.00**

PA-2170T PASSIVE HEADSET



- Passive Noise Reduction (NRR): 26dB
- Cell/Satellite Phone Interface
- Auxiliary Audio Interface for Music or Audible Checklist/Warnings
- Mono/Stereo Capability
- Dual Volume Controls
- Genuine Sheepskin Headpad
- Gel Ear Seals
- Noise Cancelling Electret Microphone
- Soft Padded Headset Case
- Weight: 12.4 ounces (352 grams)
- Five Year Warranty
- Made in U.S.A.

PA-2170T ..... P/N 11-04940 ..... **$185.00**
PA-2170TH (Helicopter) ..... P/N 11-03553 ..... **$210.00**

PA-1181T PASSIVE HEADSET



- Passive Noise Reduction (NRR): 24dB
- Cell/Satellite Phone Interface
- Auxiliary Audio Interface for Music or Audible Checklist/Warnings
- Mono/Stereo Capability
- Dual Volume Controls
- Push-to-Talk Switch (PTT) on Ear Cup
- Pillow-Top Headpad
- Gel Ear Seals
- Noise Cancelling Electret Microphone
- All Flexible Microphone Boom
- Cloth Ear Seal Covers
- Soft Padded Headset Case
- Weight: 15.9 ounces (389 grams)
- Three Year Warranty
- Also Available in PINK!

PA-1181T ..... P/N 11-03554 ..... **$185.00**
PA-1181T-P (Pink) ..... P/N 11-07326 ..... **$185.00**
PA-1181TH (Helicopter) ..... P/N 11-03555 ..... **$210.00**

PA-1171T PASSIVE HEADSET



- Passive Noise Reduction (NRR): 24dB
- Cell/Satellite Phone Interface
- Auxiliary Audio Interface for Music or Audible Checklists/Warnings
- Mono/Stereo Capability
- Dual Volume Controls
- Super Cushion Headpad
- Confor® Foam Leatherette Ear Seals
- Noise Cancelling Electret Microphone
- Half Metal / Half Flex Microphone boom
- Soft Padded Headset Case
- Weight: 14.9 ounces (422 grams)
- Three Year Warranty

PA-1171T ..... P/N 11-03556 ..... **$145.00**
PA-1171TH (Helicopter) ..... P/N 11-03557 ..... **$170.00**

PA-1161 PASSIVE HEADSET



- Passive Noise Reduction: (NRR) 24dB
- Half Metal/Half Flex “Memory” Microphone Boom
- Noise Canceling Electret Microphone
- Foam Head Pad
- Mono/Stereo Capability
- Foam Ear Seals
- Individual Volume Controls
- Warranty: Three Year Warranty.

PA-1161 ..... P/N 11-11560 ..... **$120.00**

PA-1151ACB/ACG CHILD PASSIVE HEADSET



- Passive Noise Reduction (NRR): 24dB
- Auxiliary Audio Interface for Music
- Mono/Stereo Capability
- Dual Volume Controls
- Mini Super Cushion Headpad
- Foam Ear Seals
- Noise Cancelling Electret Microphone
- Mini Full Flex Microphone Boom
- Small Headband for Perfect Fit
- Weight: 11.9oz (337 grams)
- Three Year Warranty
- ACB has 1 RED and 1 BLUE ear cup. ACG has PINK ear cups.

PA-1151ACB (Boys) ..... P/N 11-09660 ..... **$120.00**
PA-1151ACG (Girls) ..... P/N 11-03540 ..... **$120.00**

PILOT USA BLUETOOTH CELLPHONE / MUSIC ADAPTER



BluLink enables you to use your Bluetooth cell phone and any music source wirelessly in the cockpit. You can use your existing general aviation, helicopter, Bose style panel mount, or military aviation headset with BluLink. No more tucking your cell phone under your headset or adapters with various additional cords and adapters. The BluLink will work with any cell phone with Bluetooth version 2.0 or lower. Great for filing a flight plan, checking weather, calling for fuel, getting a clearance at an uncontrolled field, calling a taxi, voiding a flight plan, closing a VFR flight plan, calling for a taxi. Can be use as primary communications for experimental and ultralight pilots.

Fpr GA Headsets: Works for general aviation headsets equipped with standard dual plugs ... P/N 11-06553 ..... **$249.00**
For Helicopter Headsets: Works for helicopter headsets equipped with the U-174 single plug P/N 11-06613 ..... **$274.00**
For Lemo Headsets: Works for panel powered headsets equipped with the Bose style single plug ..... P/N 11-06614 ..... **$299.00**
For Military Headsets: Works for dynamic, Low Impedance headsets equipped with a U-174 plug. Standard in military operations.
P/N 11-09226 ..... **$349.99**

AV

SOFTCOMM HEADSETS

SOFTCOMM C-10 CHANCELLOR HEADSET



• 24 db passive NRR • Mono/Stereo switchable • Built-in PTT switch • Black gel and foam earseals included • M-56 electret mic • 66" Flexible Heavy Duty Cables • Wt: 15.1oz. head weight • 5 year warranty

P/N 11-03756 .....**$174.95**

SOFTCOMM C-35 WHITE KNIGHT HEADSET



• 22 db passive NRR • 3 year warranty • Mono / Stereo switchable • Lightweight foam ear seals • M-56 electret mic • 66" Flexible Heavy duty cables • Wt: 11.9 oz. head weight

P/N 11-03759 ..... **$164.00**

SOFTCOMM C-40 STEREO HEADSET



The C-40 headset blocks out cabin noise & provides crisp, clear communications. It features a high-performance electret microphone for superior sensitivity. The padded head- band adjusts to fit all head sizes comfortably. 'No-Head- Squeeze ear seals are made of soft polyurethane to minimize pressure, reduce noise and provide a comfortable fit. The extremely efficient receivers are wired in parallel for greater reliability. The headset comes with PJ-068 and PJ-055B plugs and is furnished in handsome military gray color. Weight: 12.3 oz. 3-year warranty. **Note: Mic Muff is included with C-40 Headsets**.

P/N 11-03762 .....**$149.95**

C45-10A CHILD'S PRICE HEADSETS WITH AUDIO



Now your child could enjoy the long flight with a personal electronics audio jack for CD,DVD,MP-3 players or Handheld Video Games.

Red.....P/N 11-05946 .....**$113.50**
Purple .....P/N 11-14121 .....**$129.95**



C-200 CENTURION

The C-200 headset features a contoured head pad for a soft, comfortable fit, a flex boom articulating fulcrum with adjustable mic boom and mic muff, and a small power pack with low battery LED indicator. The C-200 is cell phone ready and is complete with interface jack, interconnect cable and hands free adaptor. Other features include silver black dones with silver letting, gel and foam filled ear seals; stereo/mono switch and dual volume controls, noise canceling electret mic and RF immune M-56 amplifier, -24 db passive and -19 ANR, and push-to-talk switch on ear dome. Wt: 14 oz. Power: 9V battery. 3 year warranty. Made in the USA. Specifications: • Head Weight: 14.2 oz. • Total weight: 18.5 oz. • NR Rating: -24 db Passive, -19 db active Warranty: 3yr Unconditional.

P/N 11-03019.....**$363.00**

SOFTCOMM C-45 PRINCE HEADSET



• 22 db passive NRR • Mono only • Lightweight foam ear seals • M-56 electret mic • 66" Flexible Heavy Du ty Cables • Wt: 11.4 oz. head weight • Folds into Ball • 3 year warranty. P/N 11-03763 .....**$115.75**

SOFTCOMM HEADSET ACCESSORIES

Black Gel Ear Seals ..... P/N 11-11834.....**$27.50 Pr.**
Foam Ear Seals..... P/N 11-02122.....**$12.90 Pr.**
Cloth Comfort Covers..... P/N 11-11810.....**$6.95 Pr.**
Foam Mike Muff..... P/N 11-11820..... **$5.95 Ea.**
Cigarette Adapter 290204 ..... P/N 11-00134.....**$39.50**

AV

C-20 COBRA HEADSET



Features for this headset include an extra thick ventilated cushion headpad and ear seals for maximum comfort, earphones wired in parallel for safety and reliability, adjustable boom microphone that can be placed on left or right side of mouth, and high performance noise cancelling microphones.
Additional Features: • Corrosion proof chrome plated steel in accordance with demanding government specifications • PU cord up to 5 feet long, shielded cable for near perfect E.M.I/R.F.I. protection • PU cord and plug configurations for specific aircraft • Lock nut construction for customized fit. Set it once it fits you right every time • Earphones (300 ohms ea.) wired in parallel for safety and reliability. Earphones compatible with 150-1000 ohm systems. • Listen Volume Control allows you to adjust to a comfortable level • Flexible tension boom assembly for more comfortable and precise microphone placement • Microphone Windscreen • Noise Reduction/ Sensitivity: 21dB • PU cord and plug dual plug configurations for specific aircraft. P/N 17-00237.....**$151.75**

POWDER PUFF PINK HEADSETS



Pink Powder Puff Pilot headsets, available in PNR and ANR models, are built by a leading avionics manufacturer that specializes in FAA-qualified aviation headsets. Each Powder Puff Pilot headset is hand-made by skilled engineers, and built with an electret microphone and advanced special noise attenuation technology to provide a comfortable audio environment. Both models feature a flexible boom assembly that allows you to adjust the mic to a position that's just right for you. Powder Puff Pilot is so confident of the quality of our headsets, we offer a 3-year warranty on all headset parts and service. Another guarantee: the distinctive Powder Puff Pilot logo in pink on pink on the non-mic earcup is certain to keep flyboys' hands off your headset!
The PNR model offers a more affordable option—especially suitable for student pilots and passengers—delivering a perfect combination of noise reduction, clear sound, and comfortable fit. PNR headsets obstruct annoying noise and amplify communication signals for crystal clear voice transmission.

Description	Part No.	Price
Powder Puff ANR Headset	11-08095	$299.00
Powder Puff PNR Headset	11-08096	$198.00

AX-40 HEADSET



This headset helps to ensure four important goals of today's airline communications: •safety • reliability • health protection • convenience.
The hands of the pilot are completely free from any communication chores, thus ensuring full prompt response to all flight events. Thus, the headset contributes to flight safety. By being tightly, yet comfortably, positioned on the pilots head, above the ear, the headset allows to separate all important communications from cockpit noise, thus contributing to flight reliability. Noisy cockpits produce fatigue and stress on pilots. The headset nearly eliminates this problem, thus contributing to the pilots health protection. Comfort and conveniene are evident by a simple look at the headset. AX40 — straight cord up to 5 feet long. Stirrup pivot assembly, such that cups can provide universal fit; Comfortable, extra tick, headpad cushioning; — cushioned ear seals for the best possible noise attenuation and comfort; Shielded cable for near perfect E.M.I./R.F.I. protection; Corrosion-proof chrome plated steel; — parallel earphone wiring;— adjustable volume control; 150 to 10,000 ohms compatibility; Universal mike boom assembly for precise placement of microphone; High performance, noise cancelling microphone. P/N 17-00236.....**$124.95**

FLIGHTCOM VENTURE 30 PASSIVE FIXED WING HEADSET



The Venture 30 Passive stereo headset combines affordable quality, durability, and features for new pilots and passengers young and old. The 17 ounce weight, open-cell foam PVC ear seals, ventilated foam-rubber head pad, and shallow speaker design deliver adaptable fit. The 24dB passive NRR enables clear communication. A stereo/mono switch and single volume control optimize hearing. The powder-coated black headband matches natural black ear domes. P/N 11-10585 ....**$104.75**

FLIGHTCOM VENTURE 50 PASSIVE HEADSET



The 17 ounce weight, open-cell foam PVC ear seals, wide and comfortable air-pillow head pad, and shallow speaker design make a very comfortable headset. With 24dB passive NRR, everyone will enjoy clear communication. A stereo/mono switch and dual volume controls optimize hearing. A powder-coated black headband complements the fresh look of onyx black ear domes. A lightweight carrying bag is included.
Fixed Wing..... P/N 11-10584.....**$99.00**
Helicopter..... P/N 11-10583.....**$169.00**

FLIGHTCOM VENTURE 70 PASSIVE FIXED WING HEADSET



This headset weighs a mere 17 ounces and comes with supple ComLeather ear seals and washable polar-fleece head pad for long-wearing comfort. Like other Flightcom™ Venture series headsets, the Venture 70 provides a 24dB NRR barrier against cockpit noise. Dual volume controls with stereo/ mono switch optimize hearing. The powder-coated black headband and carbon fiber print ear domes look professional in any cockpit. A lightweight carrying case is included.
P/N 11-10581.....**$179.00**

FLIGHTCOM VENTURE 90 DUAL INPUT PASSIVE HEADSET



Weighing in at 17 ounces with super-thick ComLeather ear seals and washable thick polar-fleece head pad, this headset is designed to maintain the comfort demanded by experienced pilots spending long hours in the left seat. With 24dB passive NRR and an additional 14-18dB ANR, noise won't prevent you from hearing radio traffic or using your MP3 and your Sat/Cell phone through the dual-input battery box. Auxiliary inputs are muted when communications are received. The Sure Power system shuts off ANR to preserve battery life when no audio is present longer than 15 minutes. A stereo/mono switch and dual volume controls optimize hearing. The chrome headband with carbon fiber print ear domes put this into a class of its own with the latest in style complemented with outstanding features and reliability. Includes a heavy-duty padded carrying case.
Passive Fixed Wing ..... P/N 11-10580.....**$219.00**
Helicopter..... P/N 11-10579.....**$249.00**

FLIGHTCOM VENTURE 50 DUAL INPUT ANR HEADSET



The 17 ounce weight, open-cell foam PVC ear seals, wide and comfortable air-pillow head pad, and shallow speaker design make a very comfortable headset. With 24dB passive NRR and an additional 14-18dB ANR, noise fatigue and clear communication shouldn't be an issue. A stereo/mono switch and dual volume controls optimize hearing. A powder-coated black headband complements the fresh look of onyx black ear domes. A lightweight carrying bag is included. P/N 11-10582.....**$279.00**

FLIGHTCOM VENTURE 90 DUAL INPUT ANR HEADSET



Weighing in at 17 ounces with super-thick ComLeather ear seals and washable thick polar-fleece head pad, this headset is designed to maintain the comfort demanded by experienced pilots spending long hours in the left seat. With 24dB passive NRR and an additional 14-18dB ANR, noise won't prevent you from hearing radio traffic or using your MP3 and your Sat/Cell phone through the dual-input battery box. Auxiliary inputs are muted when communications are received. The Sure Power system shuts off ANR to preserve battery life when no audio is present longer than 15 minutes. A stereo/mono switch and dual volume controls optimize hearing. The chrome headband with carbon fiber print ear domes put this into a class of its own with the latest in style complemented with outstanding features and reliability. Includes a heavy-duty padded carrying case. P/N 11-10578.....**$399.00**

COMTRONICS HEADSETS & HELMETS

COMTRONICS HEADSETS



MODEL-3100 HEADSET - Comtronics Model-3100 Headset has a 34 dB noise attenuation rating making it one of the quietest passive headsets on the market today. The electret noise-canceling Microphone has state-of-the-art voice quality and is compatible with all current Comtronics intercoms and radio interface cables. Headset cables can be terminated with a single plug or configured with two plugs for general aviation use. Earmuffs can be adjusted up or down. All Comtronics helmets and headsets are designed for high noise environments and open cockpit flying including ultralights, powered parachutes, auto-gyros and all sport planes. Weight: 1 lb. (Black) P/N 11-07425 ..... **$239.95**



MODEL-3000 HEADSET - • The Model-3000 Headset offers 30 dB noise attenuation. • They are light-weight and have dark green muffs. • Ear seals are fluid foam-filled cushions and very comfortable. • Can be fitted with our PRO-COM Helmet. • Gel/Foam Ear Seals are optionally available. • This headset can also be used for high noise environments • Weight: 1 lb.(Dark Green)
P/N 11-09942 ..... **$210.75**



PRO-LITE SUPERIOR STEREO HEADSET - This headset uses either ultralight or general aviation audio and has a second pair of speakers for High Fidelity Stereo Music. Outstanding audio! • Music Speakers Frequency Response: 15 - 25000 Hz • 3.5 mm Stereo Music Jack on Ear Cup • Comes with Music Cord • Comfortable • Gel/Foam Ear Seals can be added for extra comfort and noise attenuation • NRR 33 - 45 dB • Can also be used with our PRO-COM Helmet • Weight: 1 lb.
w/ Electret Mic (Blue)..... P/N 11-09943 ..... **$289.95**
Listening Only (Blue) ..... P/N 11-07429 ..... **$189.95**



COM-AIR MODEL-5000 GENERAL AVIATION HEADSET - • Similar to Model-3100 Headset • General Aviation Plugs and Audio • Can also be fitted with our PRO-COM Helmet • Also available is a General Aviation - to - Ultralight Adapter • Gel/Foam Ear Seals can be added • Weight: 1 lb. (Black) P/N 11-09944 ..... **$285.00**



COMTRONICS ULTRA-PRO 2000 - Earmuffs are attached to a spring steel wire frame which is secured to the inside surface of shell. This arrangement provides a more positive seal for noise reduction caused by the engine, propeller and wind. The Ultra-Pro 2000 Flight Helmet is available in Metallic White, Metallic Silver, Metallic Red, Metallic Wine, Gloss Red, and Gloss Black. Sizes include Small, Medium, Large, X-Large, and XX-Large. **$375.00**



COMTRONICS ULTRA-PRO STANDARD - The ULTRA-PRO Standard Helmet also has a plush fully upholstered liner and beaded foam inner shell with the new ultra-soft chin pad design. A feature unique to the Comtronics ULTRA-PRO Standard Helmet, the flip-out ear muffs allow easy entry and ability to converse with a student or passenger while making pre-flight inspections. The Ultra-Pro 2000 Flight Helmet is available in Blue, Metallic White, Metallic Silver, Metallic Red, Metallic Wine, Gloss Red, and Gloss Black. Sizes include Small, Medium, Large, X-Large, and XX-Large..... **$375.00**

COMTRONICS ACCESSORIES

Description	Part No.	Price
Helmet Bag - Fleece Lined	11-07437	**$47.95**
Coiled Cord - Helmet/Headset Option	11-07438	**$57.95**
Gel/Foam Ear Seal Cushions	11-07439	**$47.95**
Face Shield - Clear	11-07440	**$49.75**
Face Shield - Smoke	11-07441	**$47.50**
Ulta Paq II - Heavy duty pack for the Ultra-Com II intercom	11-07442	**$44.95**
Dual Paq II - Heavy duty pack for the Dual-Com II intercom	11-07443	**$58.95**
Peak Visor	11-07444	**$8.60**
Windscreen - Foam / Dynamic	11-07445	**$11.95**
Windscreen - Foam / Electret	11-07447	**$11.95**
Windscreen - Leather / Electret	11-07448	**$11.95**
Ultra to GA adapter / Dynamic	11-12537	**$94.75**
Ultra to GA adapter / Electret	11-08645	**$92.50**
Ultra to Heli Adapter	11-09957	**$92.50**
GA Dual Plug	11-09805	**$77.75**
Remote Antenna with BNC and 2 foot Whip	11-07436	**$92.50**
Comtronics W/s Leather Elect	11-07448	**$11.95**
Comtronics Capacitor Kit	11-09948	**$27.95**
Comtronics Capacitor Cable	11-09949	**$38.25**
Comtronics Copilot Trans Mod	11-09950	**$67.95**
Comtronics Headband Repl Cover	11-09958	**$19.25**
Comtronics Headset Bag	11-09956	**$19.25**
Comtronics U/p F/f Shld Smk	11-10386	**$29.00**

AV

COMTRONICS ULTRA-PRO 2000 FLIGHT HELMETS



The ULTRA-PRO 2000 Helmet is one of the quietest helmets offered by Comtronics Engineering. This helmet incorporates a plush liner and our new ultra-soft chin pad design. These straps have elastic bands over the fitted ear cups creating a positive seal when tightening the chin strap. The helmet utilizes an extremely efficient ear muff which reduces the ambient noise to a more comfortable level. ULTRA-PRO 2000 helmets have high quality speakers and the latest state-of-the-art electret microphones, used by everyone in the industry, offering the highest voice quality .

COMTRONICS ULTRA-PRO HF FLIGHT HELMETS



The ULTRA-PRO HF Helmet is superb for open cockpit flying. This helmet is completely enclosed and comes standard with a clear full face shield. It offers super coverage and also protects the microphone from wind noise. It has a quick release button for the face shield, rear exhaust diffuser, adjustable top vent, ultra-plush interior, padded D-Ring straps, UV protective clear coated paint and is DOT approved. The helmet interior has a comfortable liner, built-in ear cups with a pair of 2-inch speakers to enhance audio reception and built-in electret microphone.

COMTRONICS PRO-COM FLIGHT HELMET



Comtronics PRO-COM Helmet is unique as well because it offers a detachable design allowing removal of headset from helmet. This helmet can be used with Comtronics Model-3100 Headset, Model-3000 Headset, PRO-LITE SUPERIOR STEREO Headset and COM-AIR Model-5000 General Aviation Headset. There is a cut-out in the liner into which the headband fits snuggly. And the chin strap has the new built-in ultra-soft chin pad design as well.

COMTRONICS ULTRA-PRO 9B ISHADE FLIGHT HELMETS



The ULTRA-PRO ISHADE 9B Helmet is also very unique because it has a retractable internal sun shield. This shield is optically correct with a quick release for the clear external shield. It is open in the front and sports dual rear reflectors, adjustable forehead ventilation, a rear exhaust diffuser, padded D-Ring straps, offers UV protective clear-coated paint and is DOT approved. The helmet interior has a comfortable liner, built-in ear cups with a pair of 2-inch speakers to enhance audio reception and built-in electret microphone.

COMTRONICS ULTRA-PRO 62B ISHADE FLIGHT HELMETS



The ULTRA-PRO 62B ISHADE HELMET offers a retractable internal sun shield, rapid-release external shield, adjustable forehead ventilation, rear exhaust diffusers, padded D-ring retention system, UV protective clear coated paint and is DOT approved. The helmet interior has a comfortable liner, built-in ear cups with a pair of 2-inch speakers to enhance audio reception and built-in electret microphone. Can be installed with either Ultralight or General Aviation audio.

COMTRONICS ULTRA-PRO FULL FACE HELMETS



Comtronics Full Face fiberglass helmets are complimented by an Air Channel technology vent system, quick release shield system, padded chin bar, adjustable chin and top vents, rear exhaust vents, breath spoiler, padded D-ring retention system, UV clear protects paint and graphics, and DOT approved. The helmet interior has a comfortable liner, built-in ear cups with a pair of 2-inch speakers to enhance audio reception and built-in electret microphone. This Full Face Helmet does an excellent job of cutting out wind noise making it much easier to hear.

VISIT OUR WEEBSITE FOR ALL HELMET SIZES AND COLORS ABOVE.

COMTRONICS HELMETS

Helmet Size Selection Chart	
Helmet Size	**Head Size**
XX-Large	7-5/8" & up
X-Large	7-3/8" to 7-5/8"
Large	7-1/8" to 7-3/8"
Medium	6-7/8" to 7-1/8"
Small	6-5/8" to 6-7/8"

COMTRONICS INTERFACE CABLES

Interface cables are designed to connect our helmets or intercoms to your transceiver. Different interface and custom cables available.

Cable For:	Part No.	Price
Icom A6/A24/A14	11-07450	**$127.75**
For IC-A6/A16 Electret	11-13845	**$134.50**
Ultralight to Dual GA Headset Adapter Electret	11-08645	**$92.50**
Ultralight to Dual GA Headset Adapter Dynamic	11-12537	**$94.75**

PLEASE SEE AIRCRAFTSPRUCE.COM FOR A COMPLETE LISTING OF MODELS AND PART NUMBERS.

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DIGITAL HORIZON



RCA1510-3
DIGITAL HEADING

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Both the ***RCA2610*** and the new ***RCA1510*** are FAA Certified and designed as direct replacements for your mechanical gyro instruments. They are totally self-contained and fit in standard panel cut-outs. With no moving parts to wear out, the ***RCA2610*** and the ***RCA1510*** will give years of dependable service.

The ***RCA1510*** is our latest addition to our digital lineup. It combines data from its own internal magnetometer and GPS receiver for a more stable and accurate heading reading. This eliminates the need to "cage" or "zero" the instrument.

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- Split Mode transmit capability for pilot and copilot
- 4 - unswitched unmuted inputs for additional aural alerts



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UPS-AT SL-15



PS Engineering PMA7000M-S



GARMIN GMA340



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- Bluetooth® capability for Music Streaming Telephone
- Digital Aircraft Radio Recorder for instant playback of calls
- Multiple Music Distribution and Muting modes
- Alternative Intercom Function for intercom flexibility



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- IntelliAudio® True Dimensional Sound for clear com reception
- *flightmate*® Pilot Recordable Audio Alerts and Messages
- Bluetooth® for Wireless Telephone and Music Streaming
- Continuous 10 watts of charging power from USB port



The PMA450B with Dual Bluetooth®

- IntelliAudio® True Dimensional Sound for clear com reception
- flightmate Pilot Recordable Audio Alerts and Messages
- Bluetooth® for Phone, Streaming, and Recording
- Continuous 15 watts of charging power from USB-C port



Take Your Communication To A Higher Level.

FTA-750L

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- VOR Navigation
- Integrated 66 Channel GPS Receiver
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- 800 mW Loud Audio

FTA-550 AA/FTA-550L

- ILS Navigation (Localizer)
- VOR Navigation
- 1.7" x 1.7" Full-Dot Matrix Display
- 800 mW Loud Audio

FTA-450L

- 1.7" x 1.7" Full-Dot Matrix Display
- 800 mW Loud Audio
- 200 Memory Channels
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FTA-250L

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- 700 mW Loud Audio
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EDM-930

Certified Primary, One Screen with 30 Functions. Records engine data and location. With the 930 on board, you can remove all of your old engine gauges and open up valuable panel space. 6.0" X 5.1"

EDM-960 TWIN

Certified as Primary, replace your steam gauge instruments. One Screen, 30 functions per engine. Pre-wired harness. Only 3 wires engine to instrument. Logs all engine data. Includes fuel flow. 6.0" X 5.1"





EDM-900

Certified Primary, One Screen. Fits in a standard 3" hole. Over 30 Functions. Records flight data. The EDM900 can be placed vertically or horizontally. Compact size fits any panel 4.8" X 3.5" with 3"Mount



EDM 700/800



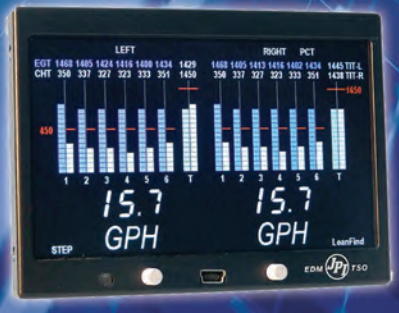
FS-450

Fuel Flow Stand Alone with Turbine FF Transducer. 2.25



EDM-830

The EDM-830 is an advisory instrument with all the functions of the JPI primary instruments. 3" mount is offset to allow a vertical or horizontal fit in any panel. User can customize readout display. 3" X 4"



EDM-790 TWIN

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RUGGED AIR HEADSETS

RUGGED AIR RA200 HEADSET



Headset with 24 db NRR, Clear Hear performance audio speakers, volume control and 3.5mm music input jack for Ipods and MP3. With Foam Fit ear seals, stainless steel headband and Deep Pocket ear canals student pilots and flight instructors will enjoy the all day comfort of the RA200. Superior Clear Hear 50mm audio performance speakers. EM56 noise reflective cup microphone and wind block foam mic muff. 7 year factory warranty

Rugged Air is bringing new audio technology with the same proven reliable cup and headband design. Finish it off with gold plated plugs, tough molded Y block, music input port, Total Shield cabling, and EM56 noise reflective microphone the RA200 is the perfect choice for all of your aviation adventures. P/N 13-09291 .....**$99.85**

RUGGED AIR STEREO AVIATION HEADSET RA454



Rugged Air brings new stereo audio performance with the same proven reliable cup and headband design. With Clear Hear stereo speakers and a 24 dB noise reduction rating ATC will come through loud and clear. Always be heard with the all new designed EM56 noise reflective cup microphone with wind blocking foam mic muff. Other features include volume control, 3.5mm music input port for Ipods and MP3, Foam Fit ear seals, and adjustable stainless steel headband. Finish it off with a backup ATC push to talk, gold plated plugs, tough molded Y-Block, and Total Shield cabling. The Rugged Air RA454 headset is the perfect choice for all of your flying adventures. Full Factory 7 Year Warranty. P/N 13-09911 .....**$138.50**

RUGGED AIR RA900 FLEX HEADSET



The Rugged Air aviation headset with 24 db NRR, Clear Hear performance audio speakers, dual volume control stereo weather proof push to talk on the dome and 3.5mm music input jack for Ipods and MP3. With Foam Fit ear seals, stainless steel headband and Deep Pocket ear canals student pilots and flight instructors will enjoy the all day comfort of the RA900. Never miss an instruction with the superior Clear Hear 50mm audio performance speakers. Always be heard with the all new designed EM56 noise reflective cup microphone and wind block foam mic muff. 7 year factory warranty

Rugged Air is bringing new audio technology with the same proven reliable cup and headband design. Finish it off with gold plated plugs, tough molded Y block, music input port, Total Shield cabling, and EM56 noise reflective microphone the RA900 is the perfect choice for all of your aviation adventures. P/N 13-09293 .....**$199.00**

RUGGED AIR RW-RA900 WIRELESS HEADSET



Connect your Bluetooth cell phone for the ultimate wireless connection to stream music, answer phone calls, and enjoy it all without cables. Professional features offer both comfort and clear audio performance for clear communciations with ATC and passengers. Now with Rugged Wireless technology, enjoy your music without cables and clutter. 24dB NRR, Clear Hear 50mm performance audio speakers, weather proof push to talk (PTT) on the dome and 3.5mm music input jack for iPods and MP3. With Foam Fit ear seals, stainless steel headband and Deep Pocket ear canals, student pilots and flight instructors will enjoy the all day comfort of the RA900. Always be heard with the all new designed EM56 noise reflective cup microphone and wind block foam mic muff. Performance features include Total Shield cabling, gold plated plug and tough molded Y-block. Wireless Features: • Pair your Bluetooth cell phone • Answer calls with one-button press • Hang up with one-button press.

P/N 13-14959 .....**$389.95**

RUGGED AIR RA980 ANR STEREO AVIATION HEADSET



The RA980 headset does it all and then some! This general aviation headset boasts active noise reduction, bluetooth cell phone and music streaming, and is engineered from the finest materials including true carbon fiber. With a noise reduction rating of 26dB, the RA980 provides ANR hearing protection. It is powered by two AA batteries and the control module has a power indication light so you can always know how much battery life you have left. In the event of the batteries going completely dead, the headset is still able to provide passive noise reduction with a rating of 20dB. 7 Year Warranty.

P/N 13-21307 .....**$599.95**

RUGGED AIR RA950 ANR STEREO AVIATION HEADSET



The Rugged Air RA950-ANR aviation headset with Active Noise Reduction, Clear Hear performance audio speakers, dual volume control stereo, and easy access 9v battery pack with mono/stereo switch. With urethane Gel ear seals, fully adjustable spring steel headband and Deep Pocket ear canals, pilots and flight instructors will enjoy the all day comfort of the RA950-ANR. Never miss ATC with the superior Clear Hear ANR audio technology blocking out the background noise. Always be heard with the all new designed EM58 noise cancelling microphone and wind block foam mic muff. 2 year factory warranty

Rugged Air is bringing new ANR audio technology with the same proven reliable cup and headband design. Finish it off with gel ear seals, comfort top head pad, quick change 9v battery compartment, Total Shield cabling, and EM58 noise reflective microphone the RA950-ANR is the perfect choice for all of your aviation adventures.

P/N 13-09294 .....**$368.00**

RUGGED AIR RA250 CHILD HEADSET



Headset with 24 db NRR, Clear Hear performance audio speakers, volume control and 3.5mm music input jack for Ipods and MP3. With Foam Fit ear seals, stainless steel headband and Deep Pocket ear canals student pilots and flight instructors will enjoy the all day comfort of the RA250. Never miss an instruction with the superior Clear Hear 50mm audio performance speakers. Always be heard with the all new designed EM56 noise reflective cup microphone and wind block foam mic muff. 7 year factory warranty

Rugged Air is bringing new audio technology with the same proven reliable cup and headband design. Finish it off with gold plated plugs, tough molded Y block, music input port, Total Shield cabling, and EM56 noise reflective microphone the RA200 is the perfect choice for all of your aviation adventures. P/N 13-09292 .....**$99.85**

RUGGED AIR RA620 HELICOPTER HEADSET WITH DUAL VOLUME CONTROL



Rugged Air brings new audio technology with the same proven reliable cup and headband design. With Stay Put full flex boom, Clear Hear performance speakers and a 24 dB noise reduction rating ATC will come through loud and clear. Always be heard with the all new designed EM56 noise reflective cup microphone with wind blocking foam mic muff. Other features include volume control, 3.5mm music input port for Ipods and MP3, Foam Fit ear seals, and an adjustable stainless steel headband.

Finish it off with Military grade U174 plug, tough durable coil cord, and Total Shield cabling. The Rugged Air RA620 headset is the perfect choice for all of your flying adventures. Full Factory 7 Year Warranty.

P/N 13-10016 .....**$159.95**

RUGGED AIR HEADSET ACCESSORIES

Description	Part No.	Price
Straight cord for music (IPod or MP#)	13-09295	**$6.70**
Cloth Ear Covers	13-09298	**$7.95**
Small Foam Ear Seals	13-09299	**$10.00**
Large Foam Ear Seals	13-09300	**$13.50**
Gel Ear Seals	13-09301	**$23.85**
Wind Blocking Foam Mic Muff	13-09302	**$4.95**
Deluxe Foam Headpad	13-10017	**$17.95**
Pillow top Headpad	13-09303	**$38.75**
Push-to-talk	13-09304	**$33.85**
GA to Helicopter Adapter	13-09305	**$36.70**
Helicopter to GA Adapter	13-09307	**$36.70**
RA200 Main Cable	13-09311	**$39.95**
RA900 Main Cable	13-09312	**$46.50**
RA950 Main Cable	13-09313	**$61.85**
Large Headband	13-10018	**$14.95**
Small Headband	13-10019	**$14.75**
Mic: EM56 Amplified Electret Aviation Impedance	13-10021	**$25.50**
Electret Mic for flex boom non amplified	13-10022	**$16.95**

AV

HEADSETS – HELMET LINERS

FARO G2 PASSIVE HEADSET



Enjoy high-end build quality, performance and features at economy prices, plus all the advantages of purchasing from us.
Features: • Amazing Noise Reduction- Up to 26 db • Only 13 oz (without cord assembly) • Large Comfortable Head Pad • Soft Silicone Gel over Foam Earseals • MP3/iPod/iPhone/iPad/Android Input (3.5 mm auxiliary cable included) • High-performance Noise Cancelling Electret Microphone • Flexible Mic Boom with Detent Positioning • Advanced Dual Volume Control • Engineered and Assembled in the USA • Dual GA Plugs. P/N 13-16041.....**$189.99**

FARO G2 ANR HEADSET



The Faro® G2 Active Noise Reduction (ANR) is designed for pilots who want the quietest cockpit. Using the newest sound technology, the G2 Active noticeably reduces cockpit noise up to 52db. So you can fly longer, more comfortably, and in a quieter environment.
Large Soft Cushion - Extra Comfort for long cross-country flights. Made of soft, durable fiber, the cushion makes the headset feel extra light.
Always Loud. Always Clear. - A fully adjustable microphone beam with wind screen allows ATC and your companions to hear you loud and clear. The microphone has been perfected to deliver high quality, crystal clear communication.
Soft Leather Ear Protection - The soft faux-leather ear protection provides you with an amazing 23db in passive and an incredible 52db of noise reduction with active noise reduction turned on. Engineered to comfortably protect your ears on the longest cross country flights. Featuring dual volume controls, and an MP3 / iPhone Audio Input
Active Noise Reduction Technology (ANR) - The Faro Active reduces the unwanted ambient noise in the cockpit by using both Passive Noise Reduction (PNR) and Active Noise Reduction (ANR)
P/N 13-16042.....**$349.99**

FARO G3 ANR HEADSET



The First Premium Aviation Headset made of Carbon Fiber. Faro G3 is unlike any other headset you have ever worn. Hold it for just a second to realize what thousands of pilots have realized, this is very light. At only 9oz, you will truly appreciate the low-key, low-weight design of Faro G3.
P/N 13-20711.....**$679.99**

FARO AIR IN-EAR HEADSET



Lightweight, only 1 oz. Not limited to jets. Use in any GA aircraft or helicopter. Three-Year Warranty. Provides up to 50db of Noise Reduction. Music Input. Dual Volume Control. Replaceable foam ear plugs. Dual GA Plugs. P/N 11-16235.....**$309.00**

MGL AVIONICS MGL-880 HEADSET



High class anthracite look, metal frame - hand adjustable, no tools required. Very comfortable headband resulting in no pressure points due to light overall weight Operates as mono or stereo headset with volume and balance controls and very good audio quality. Super soft gel ear seals with soft material allows for a good acoustic seal even if you are wearing glasses. Very high passive noise suppression figures over the full audio band. Filtered, noise canceling microphone. Gold plated connectors and high quality, long life cable. Reversible microphone boom. The headset features two volume control knobs - one on each earcup. **Specifications**: Stereo and mono operation, Soft silicone gel filled earcups, Gold plated Headphone and Microphone plugs, Metal swivel gooseneck and metal microphone boom, Extremely light and strong at only 20.5oz / 580g, Excellent passive noise reduction rating of 27dB, Clear frequency response from 20-17,000Hz, distortion free through entire range, Adjustable open foam cushioned headband, Quick response noise canceling filter amplified electret microphone with wind muff, Conforms to FAA TSO C57a and TSO C58a P/N 11-09437.....**$127.75**

HEADSET BUYBACK PROGRAM



Aircraft Spruce accepts the return of most models of headsets for credittowards the purchase of certain high end ANR headsets. Please call or email our sales team for pricing and availability on trading in your head-set at 877-477-7823 or info@aircraftspruce.com.
Used headset credit will be applied to your Aircraft Spruce account which can then be used towards the purchase of a new headset over $600value (only one used headset will be accepted towards the purchase of one of these new headsets). Used headset must be complete, having all accessories, and the unit must be in good cosmetic and working condition. Any unit not meeting this requirement may receive a lesser credit value or have the unit returned.

ZETA™ / ZETA II™ HELMET LINERS







Visco-elastic foam sewn into cool, washable wear-resistant fabric. Eliminates top-of-head hot spots. Self-wicking fabric controls heat buildup by evaporative cooling of perspiration. Eliminates "bob and roll" when mounting external equipment. Lighter weight than other liners. Fitting only takes a few minutes. Testing shows these helmet liners reduce skin temperature 1.5°F compared to existing liner systems.
Both liners come in four thicknesses: 1/4", 3/8", 1/2" and 5/8". The most commonly used thickness is 3/8".
Visit our website for the Application, Installation, Cleaning Instructions, and Sizing Chart in pdf format.

Zeta™ Helmet Liners							
Size	**Thickness**	**Part No.**	**Price**	**Size**	**Thickness**	**Part No.**	**Price**
12"	1/4"	11-09857	**$111.75**	15"	1/4"	11-09872	**$111.75**
12"	3/8"	11-09858	**$111.75**	15"	3/8"	11-09873	**$111.75**
12"	1/2"	11-09859	**$111.75**	15"	1/2"	11-09874	**$111.75**
12"	5/8"	11-09861	**$111.75**	15"	5/8"	11-09875	**$111.75**
13"	1/4"	11-09862	**$111.75**	16"	1/4"	11-09876	**$111.75**
13"	3/8"	11-09863	**$111.75**	16"	3/8"	11-09877	**$111.75**
13"	1/2"	11-09864	**$111.75**	16"	1/2"	11-09878	**$111.75**
13"	5/8"	11-09866	**$111.75**	16"	5/8"	11-09879	**$111.75**
14"	1/4"	11-09867	**$111.75**	17"	1/4"	11-09881	**$111.75**
14"	3/8"	11-09868	**$111.75**	17"	3/8"	11-09882	**$111.75**
14"	1/2"	11-09869	**$111.75**	17"	1/2"	11-09883	**$111.75**
14"	5/8"	11-09871	**$111.75**	17"	5/8"	11-09884	**$111.75**

Zeta II™ Helmet Liners							
Size	**Thickness**	**Part No.**	**Price**	**Size**	**Thickness**	**Part No.**	**Price**
16"	1/2"	11-07976	**$111.75**	17"	3/8"	11-07979	**$114.95**
17"	1/4"	11-07978	**$114.95**	17"	5/8"	11-07981	**$114.95**
				18"	5/8"	11-07985	**$114.95**

AV

Prices Subject to Change Without Notice

ASA AIRCLASSICS HS-1 HEADSET WITH FLEX BOOM



HS-1A Headset features: * Earcups of high-density acoustic foam * High fidelity speakers * Electret, noise-canceling microphone * Gold-plated microphone and headphone plugs *High-grade, multi-strand wire * Stereo/mono capability * Large, dual controls * Microphone muff * Adjustable headband with easy thumb screws * Quality foam ear seals and light weight add to overall comfort * Sleek, all-Black design with ASA silver wings silk-screened on each earcup * Sturdy and reliable - yet reasonably priced for maximum value * Lifetime warranty.

HS-1 Headset features: * Lifetime warranty * Stereo / mono capability * Earcups of high-density acoustic foam * High fidelity speakers for clear, natural sound * Electret, noise-canceling microphone reduces background noise and allows clearest voice transmission * Gold-plated mic & headphone plugs ensure best connection & resist corrosion * High-grade, multi-strand wire improves cable life * Large, dual controls for quick, easy volume adjustment of each ear * Microphone muff * Adjustable headband with easy thumb screws eliminates "hot spots" and accommodates eyeglasses and any head size * Quality foam ear seals and light weight add to overall comfort * Sleek, all-Black design with ASA silver wings tastefully silk-screened on each earcup * Sturdy and reliable - yet reasonably priced for maximum value.

ASA Airclassics Headset HS-1A ..... P/N 11-07809 ..... **$99.95**
HS-1 Cloth Earseal Covers ..... P/N 13-18468 ..... **$7.95**

CRAZEDPILOT CP-1 PASSIVE HEADSET



The most COST EFFECTIVE yet COMFORTABLE aviation headset on the market this CRAZEDpilot CP-1 headset is worth every dime for student pilots or that spare headset you require. Fully flexible mic boom like the expensive competitors, stereo headset with integrated volume control knob. Includes quality memory foam ear seals and headpad for those longer flights. With 24dB of Passive Noise Reduction these headphones are IDENTICAL in performance to David Clark, but without the price tag. The steel construction flexible mic boom and adjustable headband will last a lifetime. The molded two-plug aviation cable will last a lifetime with its integrated strain reduction. Get your CRAZEDpilot CP-1 today, you won't regret the purchase.

Features: • Flexible mic boom • Memory foam ear seals and headpad • Stereo Headset • 24dB Passive Noise Reduction • Electret Noise Cancelling Microphone • One year warranty.

Description	Part No.	Price
CP-1 Passive Headset Dual GA Plugs	11-12918	**$89.95**
CP-1 Passive Headset (Heli)	11-13683	**$102.75**
Accessories		
Description	**Part No.**	**Price**
Ear Cup Inserts	11-12908	**$2.95**
Gel Ear Seals	11-12909	**$18.95**
Headset Headpad	11-12910	**$12.75**
Mic Cover	11-12911	**$3.95**
Mic Covers (4 pack)	11-12912	**$14.95**

CRAZEDPILOT CP-1 ANR HEADSET



The CRAZEDpilot CP-1ANR is the most aggressively prices ACTIVE NOISE CANCELLING HEADSET on the market today. Amazing performance comparable to Bose and Lightspeed, but for a literal fraction of the price!

• Great active noise cancelling level, average 20dB • One 9 volt battery working time up to 48 hours much better than David Clark 25 hours • AUX jack for Cell phone with link cables (iPhone adapter included) • Gel ear seals and cotton cloth ear covers included for extra comfort! • When the ANR is ON, low frequency noise cancellation improves by an additional 18-24 dB • Auto Power On and Off when the unit is either unplugged or when your intercom turns on!

Standard ..... P/N 11-13315 ..... **$199.00**
Helicopter ..... P/N 11-13684 ..... **$196.00**

AVCOMM AC-260 PNR™ HEADSET



Features: • AVCOMM's exclusive P/NR™ audio technology • Perfect for kids or those who need a smaller headset • Simple & affordable desigN • Larger volume control knob — easy for a child to use • Ultra-lite Neodymium speakers • Lighter weight for added comfort • Higher noise attenuation • Acoustic mic muff included • Full 5 yr factory warranty. P/N 11-02260 ..... **$143.17**

AVCOMM AC454 P/NR STEREO HEADSET



Features: • AvComm's exclusive P/NR™ audio technology • Full spectrum stereo response •Each ear cup features an independent volume control • Ultra-lite Neodymium speakers • Built in Push-to-Talk • M-65 mic w/active filtering chip • 4-way adjustable wire boom • Deluxe Comfort package incl. • Full 5yr factory warranty P/N 11-02261 ..... **$197.16**

AVCOMM AC747 P/NR CONVERTIBLE HEADSET



Features: • Exclusive P/NR™ technology and "plug and fly" design • Converts from general aviation to helicopter use (both cables included) • Full flex boom • Ultra-lite Neodymium speakers • Each ear cup features an independent volume control • M-65 microphone with active filtering chip • Deluxe Comfort Package incl. • 5yr factory warranty

P/N 11-02262 ..... **$292.53**

AVCOMM AC200 P/NR HEADSET



Features: • Simple & affordable P/NR™ performance • Incredible voice clarity • Higher noise attenuation • Ultra-lite Neodymium speakers • Volume control and easy to adjust stainless steel headband • Acoustic foam ear seals and acoustic mic muff • M-65 microphone with active filtering chip • Lightweight; 13.4 oz. • 5yr. factory warranty. P/N 11-02259 ..... **$125.46**

AVCOMM ACCESSORIES

		Part No.	Price
COMFORT ACCESSORIES			
P1-006	Foam ear seals - pair/small	11-02280	**$10.50**
P1-007	Foam ear seals - pair/large	11-02281	**$11.21**
P1-009	Deluxe gel ear seals - pair	11-02282	**$24.04**
P1-004	Deluxe cloth ear covers-black	11-02283	**$4.35**
P1-022	Acoustic mic muff	11-02284	**$4.35**
P1-024	Acoustic mic muff	11-02285	**$4.35**
P1-041	AvComm deluxe head pad	11-02286	**$15.20**
PARTS & ADAPTERS			
P2-001V2	Deluxe PTT switch	11-02287	**$43.50**
P2-004	Adapter - GA to helicopter	11-02288	**$41.39**
P2-005	Adapter - helicopter to GA	11-02289	**$33.95**
P2-009	Headset extension cord - 5ft.	11-02290	**$48.89**
P2-010	Headset splitter	11-02291	**$63.28**
P2-121	Gen. aviation straight cord	11-02293	**$47.22**
AC-I0421	Headset Jack Kit (12ft)	11-02273	**$64.75**
MICROPHONES			
AC-454	Replacement Mic for AC-454 Headset	11-08807	**$57.39**
AC-747	Replacement Mic for AC-900, AC-910, AC-920 Headsets	11-08808	**$57.39**

AV

LYNX HEADSETS - HELMETS - INTERCOMS



LYNX MICRO SYSTEM

The Micro System is a unique self contained intercom system which is plug and play compatible with any radio. This equipment is extremely popular for use is open cockpit aircraft and is the market leader for use in ultralight, powered parachutes, etc.

MICROSYSTEM COMPONENTS

Part No.	System Equipment	Description	Price
11-05346	Micro System Headset	Self contained intercom headset,white*	$554.00
11-05350	Micro System Helmet	EU certified protective helmet. S	$299.95
11-05351	Micro System Helmet	EU certified protective helmet. M	$299.00
11-05352	Micro System Helmet	EU certified protective helmet. L	$298.95
11-05353	Micro System Helmet	EU certified protective helmet. XL	$299.95
11-05354	Helmet Visor Standard	Attaches to the helmet with screw fixings.	$89.95
11-09310	High Visibility Visor	For use with Lynx helmets large	$89.95
11-11196	High Visibility Visor	For use with Lynx helmets standard	$379.00
11-05364	Leather Helmet	Soft leather helmet for headset large	$379.00
11-05347	Headset Coup. Adap.	Connects two headsets together.	$49.95
11-05348	Headset Switch Adap.	Switch-on a single headset.	$26.50
11-05349	Dual Charger	Wall charger headsets.	$128.75
11-05356	Visor Extension	Wind deflector chin guard for visor.	$52.75
11-05357	Helmet Bag	Cloth bag for a helmet and visor.	$15.75
11-05358	Headset Bag	Cloth bag to protect a headset.	$15.65
11-05359	Headset Exten. Lead	Used to extend the headset leads.	$110.00
11-05360	Panel Exten. Lead	Extension lead with panel socket.	$145.75
11-05361	Headset Panel Adap.	Converts lead socket into panel.	$104.75
11-05362	Headset Lead Splitter	Used to connect several headsets together.	$195.75
11-05363	Headset Lead Comb.	Connects several interface units together.	$195.00
11-05365	Helmet Goggles	For use with either type of helmet.	$136.75
11-05366	Double Helmet Bag	Large bag for complete systems.	$175.00
11-07092	Radio Splitter + Coiled Radio Lead	Connects in-line with a headset and provides connections for an additional device.	$519.00
11-07093	Coiled Radio Leads	Connecting different radios to portable interface equipment.	$44.50
11-07094	Straight Radio Leads	Connecting different radios to portable interface equipment.	$42.00
11-07095	Car Charger	Charges two headsets at the same time.	$119.75
11-07096	Audio Output Lead	Connecting professional recording equipment to the Micro System	$36.50

See Website for other colors

HELMET SIZES:

To obtain the correct size of helmet, use a tape measure to measure the circumference of your head just above the ears.

Small: 55-57cm (22")
Medium: 57-59cm (23")
Large: 59-61cm (23.5")
Extra Large: 61-63cm. (24.5")

LYNX G3 PNR MICRO SYSTEM HEADSET



The G3 headset is the latest Passive Noise Attenuation (PNR) version of the Micro System headset. A fifty percent increase in available headset volume and immunity to aircraft transponder and mobile telephone interference. Digital power management which protects the battery. A switch is also provided on the headset to disable the battery if the headset is only used with a Powered Radio Interface and the battery function is not required.

Description	Part No.	Price
Lynx G3 Pnr Micro System Single Headset Package	11-12178	$718.00
Lynx G3 Pnr Micro System Add On Headset Package	11-12179	$609.00
Lynx G3 Pnr Micro System Dual Headset Package	11-12180	$1,310.00
Lynx G3 Pnr Micro System Single Headset Helmet Package	11-12181	$1,099.00
Lynx G3 Pnr Micro System Add On Headset Helmet Package	11-12182	$1,000.00
Lynx G3 Pnr Micro System Dual Headset Helmet Package	11-12183	$2,094.00

AV

LYNX G4 ANR MICRO SYSTEM HEADSET



The G4 headset is the latest digital Active Noise Reduction (ANR) version of the Micro System headset which also includes a digital Voice Controlled Microphone (VCM). Monitors the level of background noise inside the ear-cups and generate an equal volume of anti-noise. The ANR function can be switched on or off. Contains an intercom circuit and a rechargeable battery located in the headband. Connecting two or more headsets together forms an intercom providing communication for a minimum of fifty hours.

Description	Part No.	Price
Lynx G4 Anr Micro System Single Headset Package	11-12184	$1,060.00
Lynx G4 Anr Micro System Add On Headset Package	11-12185	$957.00
Lynx G4 Anr Dual Headset Package	11-12186	$2,017.00
Lynx G4 Anr Micro System Single Headset Helmet Package	11-12187	$1,453.00
Lynx G4 Anr Micro System Add On Headset Helmet Package	11-12188	$1,353.00
Lynx G4 Anr Micro System Dual Headset Helmet Package	11-12189	$2,810.00
Lynx G4 Anr Micro System White Headset	11-12190	$895.95

LYNX MICRO SYSTEM HELMET VISORS



The Integral Helmet Visor (face shield) is designed for use with Lynx Integral helmets and provides face protection alongside the head protection offered by the helmet. The visor is manufactured from Polycarbonate and attaches securely to the helmet using machine fasteners.

Clear.....P/N 11-14782.....**$58.75**
Tinted.....P/N 11-14783.....**$56.95**

MICROSYSTEM ACCESSORIES

Part No.	Radio Equipment	Description	Price
11-05368	Twin Jack Adapter	Converts the headset to twin jack plugs.	$198.75
11-05369	Audio Adapter	Connects a Walkman or mobile telephone.	$415.00
11-05370	Radio Adapter *	Connects one headset to a radio.	$493.00
11-05371	Radio Interface unit *	Connects one or two headsets to a radio.	$518.00
11-05378	Radio/Power Interface unit *	Powers two headsets and a radio. For Type B connections only and these radios: ICOM A3, A22, A6, A24 and ICA5, A23 with the CT-44 adapter. Vertex Standard VXA-100, 120, 150, 200, 210 with the CT-44 adapter. All other radios will require special order.	$478.00
11-05372	Velcro Mount PTT Switch	Velcro fixing PTT Switch.	$85.75
11-05373	Screw Mount PTT Switch	Screw fixing PTT Switch.	$59.95
11-05374	PTT Extension Lead	Two Metre extension lead for PTT Switch.	$73.75
11-05375	PTT Connector and Lead	Special PTT connector with two metre lead.	$33.00
11-05376	Audio Input/Output Lead	Connects a Walkman to an Audio Adapter or Power Interface.	$37.70
11-05377	Mobile Telephone Lead *	Connects a mobile telephone to an Audio Adapter.	$54.50
11-05379	Power Supply Lead	Connects aircraft battery to Power Interface.	$54.50
11-05380	Power Supply Filter	Used to filter aircraft power supply.	$135.75
11-05381	Large Power Filter	Used with very noisy power supply.	$65.75
11-05382	Radio Power Filter	Used to prevent feed-back with Icom A2/A20 Radios.	$105.00
11-05383	Radio Power Adapter 11V13	Used to connect Icom A6/A24 radios to a Power Interface.	$133.75
11-05384	VHF Antenna -Short Flexible	Antenna for use with airband radios.	$111.75
11-05385	VHF Antenna -1/4 Wave Whip	Antenna for use with airband radios.	$119.85
11-05386	Antenna Extension Lead	Five metre extension for antenna.	$54.75
11-05387	Adapter LA-25	Used to connect Cobra FRS and GMRS radios.	$86.00
11-05388	Adapter LA-30	Used to connect Yaesu VXA 100 radios.	$86.00
11-05389	Adapter LA-44	Used to connect Yaesu VXA 100/120/150/200/210/220 radios.	$86.00
11-05390	Adapter CT-44	Used to connect Icom A5/A6/A23/A24 radios.	$46.50
11-05391	Adapter CT-91	Used to connect Vertex Stadard radios.	$46.50
11-05392	Adapter CT-96	Used to connect Yaesu VXA 300/700 radios.	$46.50
11-05393	Power Lead Adapters	Used to connect various radios to a Power Interface.	$51.00

Please specify the make and model that will be used with this product.

LYNX MICRO SYSTEM G3 HELMETS



The Integral Helmet G3 is the Passive Noise Attenuation (PNR) version of the Micro System helmet.

The helmet is specifically designed for use in high noise environments and provides both hearing protection and streamlined full face head protection.

Micro System helmets can be connected to a radio via a range of interface units and are fully compatible with all availaable radio transceivers.

Small.....P/N 11-14780 ....**$1,122.00**
Medium.....P/N 11-14851 ....**$1,122.00**
Large .....P/N 11-14852 ....**$1,122.00**
X-Large.....P/N 11-14853 ....**$1,122.00**

LYNX MICRO SYSTEM G4 HELMETS



The Integral Helmet G4 is the latest digital Active Noise Reduction (ANR) version of the Micro System helmet which also includes a digital Voice Controlled Microphone (VCM).

The helmet is specifically designed lor use in high noise environments and provides both head protection and streamlined fu1l face head protection.

Micro System helmets can be connected to a radio via a range of interface units and are fully compatible with all available radio transceivers.

Small.....P/N 11-14781 ....**$1,475.00**
Medium.....P/N 11-14854 ..**$14,753.00**
Large .....P/N 11-14855 ....**$1,475.00**
X-Large.....P/N 11-14856 ....**$1,475.00**

Prices Subject to Change Without Notice

LYNX PILOT SYSTEM



The Pilot System is a range of headsets and helmets for use in light aircraft and helicopters. The main advantage of these products are that they provide an integrated headset and helmet system for use in aircraft which have standard twin jack intercom equipment already installed. Headset Colors: Black, White, Grey, Red, Pink, Blue, Yellow or Green

Part No.	System Equipment	Description	Price
11-05394	Pilot System Headset + Lead	Standard general aviation headset.	$510.00
11-05395	Twin Jack Headset Lead	Interchangeable lead for Pilot headset.	$98.75
11-05396	US NATO Headset Lead	Interchangeable lead for Pilot headset.	$104.00
11-05397	UK NATO (Euro) Headset Lead	Interchangeable lead for Pilot headset.	$85.00

NOTE: Pilot System uses the same helmet, helmet visor, visor extension, leather helmet, helmet goggles, helmet bag, headset bag, and double helmet bag as the Micro System. Order part numbers as shown for Micro System Components.

LYNX CLOTH HELMET BAG



A soft cloth bag used to store an individual integral helmet.
The bag is made from fleece cloth and incorporates a drawstring closure. The bag provides suitable protection for a helmet when not being used.
The bag is particularly practical for storing a helmet which is fitted with a visor (face shield) as it will protect the visor and increase its useful life considerable. P/N 11-14785 .....**$17.50**

LYNX PADDED HELMET BAG



A padded nylon holdall to protect and carry integral helmets.
Internal partitions are provided to hold two helmets and additional accessories. A document pocket and three separate pockets for other items, such as radio equipment, are also provided
P/N 11-14784 .....**$175.00**

LYNX PILOT SYSTEM HELMET PLUS LEAD



The Pilot System Integral Helmet is specifically designed for use in high noise environments and provides both hearing protection and streamlined full face head protection.
The helmets are fitted with interchangeable leads which allow them to be used with all of the different types of connector found in aviation.
The helmets are specifically designed to work in open cockpit aircraft and integrate with the modular lynx Pilot System intercom to provide a plug-anti -play communication and radio system.
The helmet is also available in versions compatible with any other aircraft intercom system; this includes standard general aviation systems which use twin jack plugs, microlight systems which use single Jack plugs and gyrocopler systems which use six pin connectors.

Small.....P/N 11-14779 ....**$1,081.00**
Medium.....P/N 11-14847 ....**$1,082.00**
Large .....P/N 11-14848 ....**$1,081.00**
X-Large.....P/N 11-14849 ....**$1,081.00**

LYNX RELAI SYSTEM



The relai System is a range of headsets and helmets for direct connection to hand-portable radios. This equipment also provides the facility to use a helmet with the headset and is used mainly by pilots of single seat aircraft, Paramotor pilots and airport ground crew. Headset Colors: Black, White, Grey, Red, Pink, Blue, Yellow or Green ****Please specify the make and model of radio that will be used with the Relai System Headset.***

Part No.	Description	Price
11-05398	Relai System Headset + Radio Module.	$491.00
11-05400	Lynx Avionics Relai System headsets to be used with the following radios: Alinco, Cobra, Delcom, Icom A2/A20/A21,JRC,Maxon,Motorola,Radio Shack, Yaesu FT-23R,YAESU 2000	$17.00
11-05401	Lynx Avionics Relai System headsets to be used with the following radios: ICOM A3/A4/A6/A22/A24 ICOM A5/A23	$46.00
11-05402	Allows Lynx Avionics Relai System headsets to be used with the following radios:ICOM A3/A4/A6/A22/ A24/ ICOM A5/A23	$17.00

NOTE: Relai System uses the same helmet, helmet visor, visor extension, leather helmet, helmet goggles, helmet bag, headset bag, and double helmet bag as the Micro System. Order part numbers as shown for Micro System Components.

LYNX ACCESSORIES

Part No.	Spare Parts	Description	Price
11-05403	Ear Seals Type 1 Foam (Two)	For use with all Lynx headsets	$24.75
11-05404	Ear Seals Type 2 Gel (Two)	For use with all Lynx headsets	$44.65
11-05405	Microphone Wind Shield Large (37mm Ø)	Used in an open cockpit. For use with all Lynx headsets.	$12.85
11-05406	Microphone Wind Shield – Small (25mm Ø)	Used in an enclosed cockpit. For use with all Lynx headsets.	$10.50

LYNX POWERED RADIO INTERFACE AND RADIO POWER LEAD



The Powered Radio Interface provides the facility to connect a radio transceiver and a mobile telephone, music player, or recording equipment to two Micro System headsets. Can be used with either panel mount radios or portable radios.
P/N 11-12526 .....**$769.95**

LYNX PILOT SYSTEM HTC AUTOGYRO HEADSET LEAD



Lynx Pilot System headsets and Integral helmets are filled with interchangeable leads which allow the headsets to be used in different aircraft by simply changing the lead. The HTC Autogyro Lead allows the headset to connect to the six pin intercom systems installed in some Autogyros. The in-line connector also allows the lead to separate in an accident and is in compliance with UK Civil Aviation Authority safety recommendations (AIC 312002). P/N 11-14795 .....**$74.75**

LYNX MICRO PILOT SYSTEMS IPHONE LEAD



The Mobile Telephone Lead (iPhone) allows Apple portable telephones to be connected to Lynx equipment The lead also works with telephones from other manufacturers.
P/N 11-14796 .....**$57.75**

LYNX MICRO PILOT SYSTEMS NOKIA LEAD



The Mobile Telephone Lead (Nokia) allows Nokia portable telephones which have a 2.5mm hands-free socket to be connected to Lynx equipment. P/N 11-14797 .....**$54.00**

LYNX MICRO PILOT SYSTEMS SONY LEAD



The Mobile Telephone Lead (Sony) allows Sony portable telephones to be connected to Lynx equipment The lead also works with telephones from other manufacturers.
P/N 11-14798 .....**$54.00**

AV

PUSH-TO-TALK - LEATHER HELMETS

PUSH-TO-TALK SWITCHES

TELEX PT-300 PUSH-TO-TALK SWITCH - Attaches to any control wheel. Simple installation, no tools required. Simply wrap hook and pile strap around control wheel. Provides instant communications when used with any headset or Telex flexible boom mike. With 6 ft. coiled cord, jack and plug. P/N PT-300 ..... **$68.75**



ECONOMY PUSH-TO-TALK SWITCH - Similar to PT-300, this top quality switch is offered at considerable savings. Features gold contacts for durability. Fully guaranteed.
P/N 11-12100..... **$19.85**

DAVID CLARK C10-15 PORTABLE PUSH-TO-TALK SWITCH - Compatible with all general aviation headsets, recommended for use with David Clark. Dual plunger switch assures positive contact. High quality features are incorporated in every aspect of this switch.
P/N C10-15 ..... **$71.75**

PTT-400 PORTABLE PUSH-TO-TALK SWITCH - Designed so that the pilot may push downward to invoke the radio transmit function, instead of the traditional "sideways activation" of typical strap-on PTTs. Secures to the top of the vertical handle of the contol yoke with provided velcro tape. Housed at the top of a thin, 1/2" dia. cylindrical enclosure, the soft-touch red push button is rated for 50,000 failure-free operations. 5ft. coiled cable terminates with standard plug & jack. Fast and easy plug-in installation, in virtually any aircaft. P/N 11-02072 ..... **$36.50**



NAV-DATA PUSH-TO-TALK SWITCH - Push-to-talk switch with heavy duty construction and dual internal contacts. Included strap to attaches to most yoke controls.
P/N 13-06089..... **$24.95**

MICROPHONES

TELEX 66T TRANSISTORIZED MICROPHONE - Dynamic, noise-cancelling, hand-held mic. Built-in amplifier is adjustable for full transmitter output. Meets specifications for aircraft and mobile applications. Impedance 50-600Ω. Wt: 9oz. Complete with 5 ft. coiled cord and hanger bracket. Also available with right-angle plug - specify model 66TRA.
P/N 66T..... **$149.00**
Right angle plug ..... P/N 66TRA..... **$138.80**





TELEX 100TRA DYNAMIC MICROPHONE - Dynamic, noise-cancelling, amplified, handheld mike. Push-to-talk switch is in front. Handsome beige and black with walnut grain trim. Impedance 50-600Ω. Wt. 9 oz. Includes 5ft. coiled cord with right-angle plug and hanger bracket.
P/N 100TRA..... **$129.95**

TELEX 38T ELECTRET MICROPHONE - A state-of-the-art high quality noise cancelling microphone designed as a direct replacement for the RS-38 series microphones. Hanger bracket not included. P/N 38T **$151.95**





TELEX 500T ELECTRET MICROPHONE - Amplified hand-held electret mike features outstanding noise cancellation. Impedance 50-600 Ω (ohms). Weight: 6.5oz. Complete with 5ft. coiled cord, plug and hanger bracket.
P/N 500T..... **$177.95**



DAVID CLARK M-I/DC AMPLIFIED DYNAMIC HEADSET MIC - The M-1/DC Amplified Dynamic headset microphone is a noise canceling type designed to operate in place of carbon and amplified dynamic microphones.
P/N 11-09230..... **$71.95**



DAVID CLARK M-1A AMPLIFIED DYNAMIC HEADSET MIC - The M-1Amplified Dynamic headset microphone is a noise canceling type designed to operate in place of carbon and amplified dynamic mics.
P/N 11-09225..... **$73.75**



HEADSET MICROPHONE A1060 BLACK - Proper shielding improves noise immunity in aircraft with heated windshields, power inverters, and other sources of electrical noise. Fits all C40 Model Headsets (David Clark, Softcomm, Telex, etc.)
A1060 fits all C40 Models ..... P/N 11-04838..... **$28.75**
Microphone windscreen covers all headsets . P/N 11-04840..... **$1.95**

CALL FOR SPECIAL PRICES!

LEATHER FLYING HELMETS



MODEL 711
GOATSKIN / COTTON LINING HELMET
Black (Small).....P/N 11-10505-S..... **$89.95**
Black (Medium).....P/N 11-10505-M..... **$89.95**
Black (Large).....P/N 11-10505-L..... **$89.95**
Black (X-Large).....P/N 11-10505-1..... **$89.95**
Brown (Small).....P/N 11-10510-S..... **$89.95**
Brown (Medium).....P/N 11-10510-M..... **$89.98**
Brown (Large).....P/N 11-10510-L..... **$89.95**
Brown (X-Large).....P/N 11-10510-1..... **$89.95**



MODEL 711K
COTTON KHAKI HELMET FOR DAVID CLARK HEADSETS
Brown with Leather Ear Cut-Outs
Small.....P/N 11-10525-S..... **$75.95**
Medium.....P/N 11-10525-M..... **$75.75**
Large .....P/N 11-10525-L..... **$75.85**



MODEL 711L
GOATSKIN / FLEECE LINED FOR DAVID CLARK HEADSETS
Black (Small) .....P/N 11-10515-S..... **$97.85**
Black (Medium).....P/N 11-10515-M..... **$97.85**
Black (Large) .....P/N 11-10515-L..... **$97.85**
Black (X-Large).....P/N 11-10515-1..... **$97.85**
Brown (Small).....P/N 11-10520-S..... **$97.85**
Brown (Medium) .....P/N 11-10520-M..... **$97.85**
Brown (Large).....P/N 11-10520-L..... **$97.85**
Brown (X-Large) .....P/N 11-10520-1..... **$97.95**



MODEL 711M
MESH / UNLINED WITH LEATHER TRIM
Small.....P/N 11-10555-S..... **$82.75**
Medium.....P/N 11-10555-M..... **$82.75**
Large .....P/N 11-10555-L..... **$82.75**
X-Large.....P/N 11-10555-XL..... **$82.75**



MODEL 712
GOATSKIN / COTTON LINING
Black (Small) .....P/N 11-10530-S..... **$66.75**
Black (Medium).....P/N 11-10530-M..... **$66.75**
Black (Large) .....P/N 11-10530-L..... **$66.75**
Black (X-Large).....P/N 11-10530-1..... **$66.75**
Brown (Small).....P/N 11-10535-S..... **$66.75**
Brown (Medium) .....P/N 11-10535-M..... **$67.75**
Brown (Large).....P/N 11-10535-L..... **$67.75**
Brown (X-Large) .....P/N 11-10535-1..... **$67.80**



MODEL 712C
TRADITIONAL COTTON KHAKI FLYING HELMET
Small.....P/N 11-10550-S..... **$54.75**
Medium.....P/N 11-10550-M..... **$54.75**
Large .....P/N 11-10550-L..... **$54.75**
X-Large.....P/N 11-10550-1..... **$54.75**

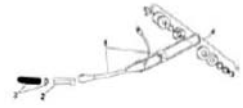


MODEL 712L
GOAT SKIN / FLEECE LINING FLYING HELMET
Black (Small) .....P/N 11-10540-S..... **$65.75**
Black (Medium).....P/N 11-10540-M..... **$65.75**
Black (Large) .....P/N 11-10540-L..... **$65.75**
Black (X-Large).....P/N 11-10540-1..... **$65.75**
Brown (Small).....P/N 11-10545-S..... **$65.75**
Brown (Medium) .....P/N 11-10545-M..... **$65.75**
Brown (Large).....P/N 11-10545-L..... **$67.75**
Brown (X-Large) .....P/N 11-10545-1..... **$67.50**

Note: Specify size by completing part no. with -S, -M, -L, or -1 for XL. Small (19"-20") Med.(21"-22") Large(23"-24") XL(25"-26")

MIC/BOOM KITS FOR AVIATION HELMETS

Now available for aviation helmets the David Clark patented combination flex/wire boom allow for easy, perfect microphone positioning. Each kit is complete with attachment assembly, microphone & cover, and boom with 16" cord for installation.





M-7A mic and flex/boom ass'y Kit for Aviation helmets (High impedance / Civilian radio systems. Model 40688G-24
P/N 11-00866..... **$113.75**

M-87/A1C mic & flex/boom ass'y. Kit for Aviation helmets (Low impedance/military radio systems. Model 40688G-23
P/N 11-00867..... **$90.75**

AV

DAVID CLARK HEADSET ACCESSORIES

Description	Part No.	Price
Comfort covers – David Clark Style ***(sold as a pair)***	11-04793	**$8.50**
Mic Muff -Protects mic on all David Clark and standard size headset mics. This is not a foam muff.	11-04788	**$4.70**
Mic Protector M77	11-09262	**$4.80**
Gel Earseals - Provide optimum comfort and fit all David Clark Headsets.	11-04820	**$22.50**
David Clark H10 Comfort Gel Undercut Ear Seals	11-01782	**$23.50**
Foam-Filled Ear Cushions - Soft and durable covers with an all polyurethane core. Fits all David Clark headsets.	11-04787	**$8.50**
Foam Headband - A light, foam filled headband which snaps on all David Clark Headsets for great comfort.	11-04791	**$32.95**
H20-10 Gel Ear Seals	11-01828	**$50.55**
Headset Bag- Nylon Carry bag, Black on Black.	11-00642	**$19.90**
DC M-4 Mic Muff	11-04819	**$3.65**
Electret Microphone -Matches David Clark M-4 or equivalent.	11-05896	**$45.75**
DC Mic Muff - Fits standard electret mic. Foam mic muff w/O-ring.	11-09201	**$3.65**
Pro X Ear Seals	11-12457	**$27.50**
Pro X Mic Protector	11-12458	**$7.95**
Mic Muff M-7 - Designed to operate in place of carbon and amplified dynamic microphones. It will not operate in circuits that do not supply a DC bias voltage.	11-08282	**$51.75**
Low-Hi Impedance Adapter	11-08283	**$168.75**
Stop Gap - These eyeglass adapters place a soft coupler between the side of the head and the ear seal to prevent any noise leak and assure a comfortable fit.	11-04785	**$4.70**
X11 Microphone	11-09263	**$38.95**
40998G-05 ADAPTER CORD - Designed for wiring into existing avionics built-in intercoms, radios, etc.	11-05542	**$73.99**
40998G-03 ADAPTER CORD - Optional adapter cord allowing use of the X11P in aircraft already equipped with David Clark ENC "XP" Series panel mount module.	11-05548	**$97.75**
Head Pad Cover	11-04792	**$8.50**
Boom Guide Kit Standard Mount	11-12490	**$8.50**
Dome Filter	11-12493	**$3.35**
Filter	11-12496	**$2.89**
Sheepskin Headpad	11-12497	**$38.99**
10A/10AS Hearing Protection	11-12489	**$38.50**

STRAIGHT CORD (5 FT) WITH PJ-068 & PJ-05 40133G-04 - Increases the versatility of the H10-60 headset. Plugs into the dome connector.
P/N 11-05948.....**$85.75**



COIL CORD (5 FOOT) WITH PJ-068 & PJ-055 PLUGS 40133G-05 - Increases the versatility of the H10-60 headset. Plugs into the dome connector.
P/N 11-05949...**$115.85**



COIL CORD (5 FOOT) WITH U-174/U PLUG 40133G-06 - Increases the versatility of the H10-60 headset. Plugs into the dome connector. P/N 11-05950.....**$84.75**



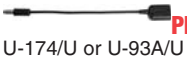
PLUG ADAPTER 18253G-01 - Converts PJ-068 & PJ-055 to U-75/U P/N 11-05952.....**$86.75**



PLUG ADAPTER 18253G-02 - 18253G-02 - Converts U-75/U to M642/5-1 (PJ068) and M642/4-1 (PJ055) P/N 11-05953.....**$86.75**



PLUG ADAPTER 18253G-03 - Converts U-75/U to U-174/U P/N 11-05954.....**$83.75**



PLUG ADAPTER 18253G-04 18253G-04 - Converts U-174/U or U-93A/U to U-75/U P/N 11-05955.....**$86.75**



PLUG ADAPTER 18253G-05 - Converts U-174/U or U-93A/U to M642/5-1 (PJ068) and M642/4 (PJ055). Also converts the Helicopter Single Plug to a Dual Plug configuration for Fixed Wing flying. General Aviation applications only.
P/N 11-05956.....**$86.75**



PLUG ADAPTER 18253G-06 - Converts PJ-068 & PJ-055 to U-174/U. Also converts the Fixed Wing Dual Plug configuration to a Single Plug for Helicopter flying. General Aviation Applications only. P/N 11-05957.....**$88.75**

DAVID CLARK HEADSET ACCESSORIES CONT.



PLUG ADAPTER 18253G-17 - Converts NATO to PJ-068 & PJ-055 P/N 11-05958.....**$83.75**



PLUG ADAPTER 18253G-16 - Converts PJ-068 & PJ-055 to NATO P/N 11-05959.....**$86.75**



PLUG ADAPTER 18253G-18 - Converts U-174/U to NATO P/N 11-05960.....**$86.75**



PLUG ADAPTER 18253G-19 - Converts NATO to U-174/U P/N 11-05961.....**$83.75**

DAVID CLARK HEADSET HANGER



The 43200G-01 Headset Hanger is the perfect NFPA-compliant headset restraint for fire apparatus, EMS, and rescue vehicles. Manufactured from heavy duty, transportation-grade rubber, it is not affected by hot of cold temperatures, UV rays or corrosive marine environments. An integrated quick-release strap completes this unique, simple and effective solution for any style David Clark noise-attenuating headset..... P/N 11-13518 .....**$8.50**

LYNX BOSE LEMO HEADSET CONVERTER



This Lynx Avionics Headset Converter is for use with Bose or Lightspeed headsets fitted with Lemo panel connectors. The Headset Converter (Bose Lemo) is backwards compatible with all Lynx products and allows Bose or Lightspeed headsets to connect to the Lynx intercom systems installed in many aircraft. P/N 11-13799 ....**$239.95**

LYNX MICRO SYSTEM BOSE LEMO HEADSET CONVERTER



For use with helicopter headsets or helmets fitted with a UK NATO jack plug and allows the headset or helmet to connect to a lynx radio Interface. P/N 11-13666....**$239.95**

LYNX BLUETOOTH ADAPTOR



This bluetooth adaptor allows wireless telephone connections to Lynx equipment. It can be used with an audio adaptor or any interface from the latest range of portable radio equipment. All handsfree functions can be controlled from the adaptor.
P/N 11-09457.....**$114.75**

LYNX BLUETOOTH AUDIO ADAPTER



The Bluetooth Audio Adapter allows wireless connections to a Lynx Micro System headset and can also be used with two separate audio or telephone leads. The adapter is powered from the headset. or from a Radio/Power Interface, and does not require charging. Once paired with a telephone, all of the main handsfree functions can be controlled from the adapter, including: voice dialling. call transfer. call reject and last number redial. The adapter is backwards compatible with all Lynx Micro System products. P/N 11-10446.....**$526.00**

CRAZEDPILOT HEADSET CABLES



COCKPIT AUDIO RECORDING CABLE FOR GOPRO HERO3 / HERO3+ / HERO4 - The CRAZEDpilot HEERO3/HERO3+/HERO4 audio cable will directly interface your GoPro HERO3 , HERO3+ or HERO4 series cameras to your audio system with no fuss! P/N 11-13680.....**$54.95**

HEADSET AUDIO RECORDING CABLE FOR GOPRO HERO 2 CAMERA - Allows you to interface your Digital Audio/Video Recorder with the aircraft intercom system in your helicopter! Also works great with the ContourHD line of cameras, or any other hand held camera or recording device utilizing the standard 3 conductor 3.5mm cables. P/N 11-13682.....**$54.95**

HEADSET AUDIO RECORDING CABLE FOR GARMIN VIRB - The Video Recorder Audio Adapter allows you to record all transmissions (local and remote) from the helicopter intercom system to your Garmin VIRB Digital Video Recorder. P/N 11-13681.....**$54.95**

HEADSET AUDIO RECORDING CABLE FOR IPHONE - This product allows you to interface your iPhone / Android / iPad with the aircraft intercom system from your HELICOPTER. P/N 11-13679.....**$54.95**

3.5MM MUSIC PLAYBACK CABLE FOR DUAL GA HEADSET - Connects any 1/8" (3.5mm) stereo music device (iPod, iPhone, MP3 player, CD player, Garmin with XM radio, etc.) directly between the intercom and your GA (dual plug) headset. P/N 11-13678.....**$35.95**

BLUETOOTH HEADSET INTERFACE - Bluetooth interface allows you to WIRELESSLY hear "TERRAIN" warnings or "TRAFFIC" notices, right in your headset - without the risk or inconvenience of wires! P/N 11-14137.....**$52.75**

GA TO HELI HEADSET ADAPTER CABLE - Adapts your GA fixed wing dual-plug headset to a helicopter single-plug connector for General Aviation Civilian Helicopters (not "Military" headsets, that would require an Impedance matching device, the PA-87). P/N 11-14138.....**$34.95**

AV

HEADSET ADAPTERS

PILOT USA SMARTPHONE DIGITAL AUDIO ADAPTER



Turn your Smartphone or Tablet (iPhone, iPad, Android, Windows Phone, etc.) into a Cockpit Voice Recorder! You'll be able to record audio through your aviation headset. Your Smartphone will be able to record all transmissions through the Intercom systems including in-cabin and ATC transmissions. Great for CFI's and Students to review radio communication skills after the flight!

P/N 11-10531..... **$49.95**

ANR HEADSET RETROFIT KIT



The ANR Adapter is a product that will transform a current aviation headset into a high-tech active noise reduction unit. The ANR Adapter comes as a kit and includes a pair of inserts that fit more than 20 different headset models. Installation requires fitting the inserts, drilling a small hole in one earcup for the power receptacle, and soldering the original cable leads to the kit replacement parts. (uses two 9-volt batteries). IMPORTANT: It is mandatory that you use "silicone gel" type earseals. The original earseals (dry or liquid filled) are not as airtight as gel seals, and in addition do not dampen sound and vibration as effectively. The result is that the ANR units will greatly underperform (20-50%) and will be more likely to malfunction.

David Clark type..... P/N 11-11955..... **$159.00**
Peltor..... P/N 11-11956..... **$179.00**

AMP CABLE (AUDIO+MIC+POWER)



A standard ANR upgrade kit comes with a 6' long addon power cable which tie-wraps to your original audio cable, and it requires that you drill a 1/4" hole in the left earcup (next to where the main cable enters the cup). The AMP cable replaces your original cable and has the DC power wires, audio wires and mic wires all in 1 cable. The result is more esthetically pleasing and no additional hole is required in the left earcup.

P/N 11-03012..... **$32.60**

LYNX AVIONICS HEADSET CONVERTERS



- Connects twin jack headset or helmet
- Works with speakers from 8 to 600 Ohms
- Accepts dynamic, electret or carbon microphones
- ANR power to microphone jack tip
- Headset volume control
- Maintains selective PTT operation and muting
- Water resistant bayonet locking connector
- Supplied with fixing kit

Lynx Twin Jack Headset Converter ..... P/N 11-09306 .... **$241.00**
Lynx Single Jack Headset Converter..... P/N 11-09307 .... **$239.95**
Lynx US NATO Jack Headset Converter..... P/N 11-09308 .... **$239.95**
Lynx UK NATO Jack Headset Converter..... P/N 11-09309 .... **$239.95**

LEATHER EAR CUPS FOR HEADSETS



The AVCOMM deluxe leather ear seals offer any headset comfort that is unsurpassed! They fit any standard GA headset and make for a fantastic upgrade. Toss the old hard foam ones or heavy gel units and step up to hours of flying comfort. P/N 11-15033 ..... **$28.50**

CRAZEDPILOT LEATHERETTE EAR SEALS



Looking for a luxurious leather feel on your David Clark, CRAZEDpilot, or any other similarly styled headset? The CRAZEDpilot Leatherette Ear Seals are a lovely mix of class and comfort for your David Clark, CRAZEDpilot, PilotUSA, Flightcom, and 99% of all 'ear shell' style airplane and helicopter headsets. Sold in Pairs.

P/N 11-14953 ..... **$24.95**

USB EXTENTION CABLE



USB 2.0 extension cable is used to extend the distance between the USB port and the USB peripheral. This panel mount extension cable features a USB type A male connector on one end, and a USB panel-mount (female) molded connector on the other end. The female panel end can be mounted on a faceplate, a wall plate, or a bulkhead surface. P/N 11-15365 ..... **$14.95**

ANR RETROFIT KIT REPLACEMENT CROSSOVER CABLE



Crossover cable replacement cable between ear cups. HA-010 4 conductor cable.

P/N 11-15415 ..... **$3.55**

THE MUSE PERSONAL MUSIC DEVICE



PS Engineering, Inc's The Muse®, as simple and low cost way of interfacing your favorite entertainment device into your aviation headset. The Muse® is a miniature Personal Music Device (PMD) that allows connection of an entertainment source directly to your headset without complicated wiring or permanent installation--no rocket science here. About the size of a 9-Volt battery, The Muse® mates with stereo or mono headsets and has no effect on radio transmissions or intercom functions.

P/N 11-09045 ..... **$349.95**

IPOD / MP3 MUSIC ADAPTER



This adapter works with your existing intercom by pumping your music into any available mic jack, allowing it to be distributed through the intercom to everyone wearing a headset. Plug one end into the aircraft's mic jack and the other into your media player's headphone jack. * Compatible with ipod, iphone, mp3, CD, laptops, and most other portable media players * Music in your headset without costly upgrades * Listen to music through the aircraft's speaker during pre-flight * Plugs into standard mic jack * Just Plug and Play! No more wearing uncomfortable in-ear headphones under your aviation headset. No need for an expensive new intercom or new headset. This will work in any intercom system with an available mic jack. Maintain the comfort and quiet of you current headset; just add your favorite music! Also works great in many airliners. P/N 11-07541..... **$21.50**

HEADSET AUDIO RECORDING CABLE FOR IPHONE



This product allows you to interface your iPhone with the aircraft intercom system. Great for creating your own aerial audio recordings without excess cabin noise. Works with devices that use a 3.5mm 4 connector iPhone connector. Perfect for recording ATC communications or Intercom communications with your passengers during your flight for later review. Compatible with all iPhone recording apps. No better training tool exists than to record your ATC communications for later review. Splice your iPhone recorded audio into your favorite flying video, and you have an instant highly engaging YouTube video!

P/N 11-12913..... **$38.95**

PILOT 24V TO 12V CONVERTER / STEP DOWN TRANSFORMER



24v to 12v Converter / Step-down Transformer. The perfect low-cost 24v to 12v transformer for your 24 volt system aircraft. Run ANY device up to 5 AMPS total current draw. Use this in your experimental to drive a 12V cigarette lighter,12v iPad, etc. Fits in the palm of your hand - it only weighs 2 oz.! Rated at 60 Watts, this converter is EASY to wire - Just provide 24volts positive to the RED line, Ground both black wires, and 12 Volts will flow OUT of the YELLOW wire. Simple as that! The least expensive 24v converter on the market! P/N 11-12192..... **$19.95**

MICROPHONE WINDSCREENS



PA-10M - Flightcom: 4DX, 5DX. Skycom H-40A, h-80A. Sigtronics: S-68, S-20. Peltor LE Sport, 7004, 7104. Telex: Stratus, Airman 750, ANR 150. David Clark: H 10-40, H-10-80, 10-20, 10-21, 10-26, 10-6-, 13.4.Pilot Hdsts: P-51, 11-40, all ANRs. PN 11-05808..... **$1.95**



M-87 - Any headsets using M-87 Microphones (usually the mics in helmets such as Gentex or Gallet)

PN 11-05810 ..... **$2.50**

PILOT HEADSET EAR COVERS



Prevent that sweaty-sticky feeling! Great for the soft comfortable fit you want! They are perfect for loaner headsets - just wash em anytime! They fit David Clark and many other similarly sized headset shells. Packaged in pairs. Made of soft comfortable knit fabric in Black to suit any headset color. P/N 11-12191..... **$5.95**

HEADSET UPGRADE KITS



For considerably less than the cost of a new headset, you can upgrade the headset you already own to improve comfort and performance. You'll experience improved intelligibility and transmission clarity, and you'll enjoy pain-free, cool, dry ears. Comes with: A-SoftTop® Headset Cushion, B- SoftSeal® Ear Cushions, C- SoftSkin® Ear Seal Covers, D- HushKit® Passive Ear Cup Noise Attenuation Kit, & E- MicMuff® Microphone Cover.

David Clark Upgrade Kit.....P/N 11-07808 ..... **$164.90**
Bose® Headset Upgrade Kit .....P/N 11-06309 ..... **$123.75**

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HEADSET ACCESSORIES

HEADSET & HELMET ACCESSORIES BY OREGON AERO

Individual Oregon Aero® Upgrade components are available for the Headset & Helmet models listed.



OREGON AERO® SOFTTOP® HEADSET CUSHIONS - Eliminates top-of-head pressure. 100% plush sheepskin wool. Keeps head cool or warm. Moisture-proof, self-wicking action. Flexible leather backing. Customized mount of either rubber extrusion or nylon with hook/loop wrap.

10006 SoftTop® Headset Cushion for David Clark and David Clark Clones ..... P/N 11-10905 ... **$39.95**
10006D SoftTop® Headset Cushion with D ring for David Clark and David Clark Clones..... P/N 11-10906 ... **$39.95**
10020 SoftTop® Headset Cushion for Bose® Aviation Headset X™* and Bose® A20™..... P/N 11-08679 ... **$39.95**
10016 SoftTop® Headset Cushion for FlightCom Denali, LightSpeed QFR, Sennheiser 100/300, Telex Air 3000,3100,3500,4000,4100,4105,ANR 150, Echelon 100/150, ANR1-D,MRB-600 ... P/N 11-10915 .... **$39.95**
10017 SoftTop® Headset Cushion for Peltor 7000 series
P/N 11-10903 ... **$41.50**
10004SoftTop® Headset Cushion for Telex Airman 750
P/N 11-10902 ... **$15.50**



OREGON AERO® SOFTSEAL® EAR CUSHIONS - Conform to your head. 200-300% more volume for total comfort. Smooth, soft, washable synthetic leather cover over temperature and pressure sensitive visco-elastic foam core. Great with eyewear or earrings. Eliminate ear pressure. Attach with flange, adhesive ring or snap-on mount, depending on headset type.

20005 SoftSeal® Ear Cushions (1 1/8") for David Clark and David Clark Clones..... P/N 11-10917 ... **$63.75**
20034 SoftSeal® Ear Cushions for ANR David Clark and David Clark Clones other than X11 ..... P/N 11-10920 ... **$66.75**
20007 SoftSeal® Ear Cushions for Bose® Aviation Headset X™* and Bose® A20™..... P/N 11-08680 ... **$66.75**
20020 SoftSeal® Ear Cushions for Peltor 7000 Series, LYNX, and Sennheiser HMEC 200/222 Headsets ..... P/N 11-10921 ... **$75.75**
20002 SoftSeal® Ear Cushions (¾") for SPH-4B®*, SPH-5®*
P/N 11-10928 ... **$66.75**
20050 SoftSeal® Ear Cushions (¾") For Plastic Ear Cups In SPH-4®* and HGU (Sonex) Helmets ..... P/N 11-08681 ... **$63.75**



OREGON AERO® SOFTSKIN® EAR SEAL COVERS - Keep your ears even drier and cooler and add to product life by slipping SoftSkin® Ear Seal Covers over SoftSeal® Ear Cushions. Self-wicking reduces perspiration buildup. Especially helpful in hot, humid climates. They fit loose, not tight like a drum (this is important because tight cloth covers produce pressure on the ear, causing pain).

29118 SoftSkin® Ear Seal Covers (1 1/8") for David Clark and David Clark Clones P/N 11-10930 ... **$15.50**
29034 SoftSkin® Ear Seal Covers for 3/4" SoftSeal® Ear Cushions
P/N 11-10929 ... **$14.60**



OREGON AERO® HUSHKIT® PASSIVE EAR CUP NOISE ATTENUATION KIT - Testing shows the HushKit® Passive Ear Cup Noise Attenuation Kit performs better than ANR headsets in the 700-7000Hz mid-range where hearing loss Dramatically improves noise attenuation and intelligibility.

92005 HushKit® Passive Ear Cup Noise Attenuation Kit for David Clark and David Clark Clones P/N 11-10934 ... **$39.95**
92056 HushKit® Passive Ear Cup Noise Attenuation Kit for HGU-56 Helmets P/N 11-06312 ... **$39.95**
92050 HushKit® Passive Ear Cup Noise Attenuation Kit for SPH-4®, SPH-4B® , SPH-5® or HGU (Sonex) helmets. P/N 11-06311 ... **$38.80**



OREGON AERO® SOFTSEAL/HUSHKIT® COMBO - An ear seal and insulation kit in one — one giant shock absorber. Replaces triangular leather earpad or upgrades plastic Ear Cup. Eliminates pain.

28734 SoftSeal/HushKit® Combo for Telex 750 and 850 (¾" thick)
P/N 11-10918 ... **$75.75**
28034 SoftSeal/HushKit® Combo for HGU Civilian Helmets (¾" thick)
P/N 11-08682 ... **$96.99**
28118 SoftSeal/HushKit® Combo for HGU Civilian Helmets (1 1/8" thick) P/N 11-08684 ... **$96.99**



HEADSET MICMUFF™ MICROPHONE COVERS

Eliminates cockpit noise from radios and intercom. Greatly improves intelligibility. MicMuff™ functions as an acoustic baffle and must be used on all headsets installed in the communications system. Adaptable to all mics, electret or dynamic. Doesn't blow away.

Amplified Dynamic MicMuff Mic Cover ..... P/N 11-10937 ... **$18.65**
Electret MicMuff Mic Cover ..... P/N 11-10938 ... **$18.50**
Military Dynamic (M-87) MicMuff Mic Cover ..... P/N 11-10939 ... **$18.50**

EVERY HEADSET MICROPHONE USED IN AN INTERCOM SYSTEM MUST HAVE THE MICMUFF INSTALLED IN ORDER FOR THE MICMUFF TO BE EFFECTIVE! THE ONLY EXCEPTION IS PUSH-TO-TALK INTERCOM SYSTEMS.

OREGON AERO® COMPLETE HEADSET UPGRADE KITS

The Worlds Greatest Headset Is the One You Already Own!®
With an Oregon Aero Upgrade!®

For best results and best value, we recommend the complete Headset Upgrade Kit which includes all necessary components custom-designed for these headset types.



FOR BOSE® AVIATION HEADSET X™* & BOSE® A20™
83006BX -
Includes: SoftSkin® Ear Seal Covers, MicMuff® Microphone Cover, SoftTop® Headset Cushion , SoftSeal® Ear Cushions
PN 11-06309.....**$123.75**



MILITARY HEADSET UPGRADE KIT FOR DAVID CLARK TYPE HEADSETS -
Electret mic: 83006E.
Dynamic Military Mic: #83006DM
Includes: SoftSkin® Ear Seal Covers, MicMuff® Microphone Cover, HushKit® Passive Ear Cup Noise Attenuation Kit, SoftSeal® Ear Cushions, SoftTop® Ear Cushions
PN 11-06310.....**$164.90**
David Clark H10-76 P/N 11-07808.....**$164.90**



J-HOOK HEADSET HANGER

The J-Hook Aviation Headset Hanger is designed to be installed on one of the tube crossmembers in the cockpit of aircraft with exposed tubing upon which to hang your headsets when not in flight. These types of aircraft include Huskies, Cubs, Citabrias, etc. Machined from 6061-T6 aluminum with stainless steel hardware for a lifetime of service. Mounts on 3/4" or 7/8" tubing
J-Hook Headset Hanger 3/4".....P/N 11-02409 .....**$39.85**
J-Hook Headset Hanger 7/8".....P/N 11-02410 .....**$39.85**



HEADSET HANGER

• Hang your headset out of the way in a handy fold down bracket. • Secure headset with hold down hook & loop strap. • Headset Hanger - folds neatly out of the way when not in use. • Strong extruded aluminum - black finish • Mount with 2 screws • Made in USA
P/N 11-08615 .....**$34.85**



UNIVERSAL AVIATION HEADSET HANGAR

Sometimes it is the simple things that provide the most utility. This inexpensive product is designed to provide a safe secure storage solution for aviation headsets inside the aircraft. No longer will you have to throw your expensive headset on the glare shield, the seat, or hang it on the control wheels. This easy to install device gets the headset up and out of the way so that it is easier to get into and out of the cockpit without fighting loose headsets.

Black ..... P/N 11-09312 ..... **$19.95**
Gray ..... P/N 11-14417 ..... **$19.95**
Tan ..... P/N 11-14419 ..... **$19.95**
Hangar Mounting Kit ..... P/N 11-14421 ..... **$9.95**
1" Mounting Screw ..... P/N 11-14423 ..... **$3.25**



SHEEPSKIN HEADSET PAD

Universal Sheepskin Pad for Headsets
P/N 13-12358.....**$19.95**



HEADSET CUSHION

For headsets with single 5/8" wide headband springs (Aviall, David Clark, etc.) and Telex ProAir 2000E and ANR-type headsets. Eliminates top-of-the-head pressure.
P/N 11-02858 ..... **$13.50**



ASA HEADSET HEADPAD

Soft, padded, microfiber fleece cover is a great way to increase comfort and bring new life to an old headset. The Headset Head Pad fits ASA headsets as well as most other models. It is designed to fit spring steel headbands up to 5/8" wide. Instructions are included.
P/N 13-16431.....**$16.65**



LIQUID FOAM EAR SEALS

Replacement ear seals for DC40 style headsets. Great comfortable replacement ear seals with foam and liquid interior.
P/N 11-02737 .....**$19.70**

AV

PLUGS – JACKS – ADAPTERS

PLUGS & PANEL JACKS



PLUGS - Made to specification MIL-P-642A. Molded, cord mounting type. Screw-on shell.

Headphone Stereo Plug 3-Circuit SWC 260 Takes SWL-12B mating jack P/N 11-08308 ..... **$11.50**

Headphone Mono Plug, 2-Circuit PJ-055B Takes JJ-034 mating jack P/N 11-04065 ..... **$12.99**

Microphone Plug, 3-Circuit PJ-068 Takes JJ-033 mating jack P/N 11-03918 ..... **$22.85**



11-04936

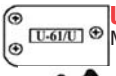


11-03907

11-05995

PANEL JACKS - Contact springs are of special alloys for long life. Insulation is high dielectric strength phenolic. Tinned terminal lugs for easy soldering. Short frame. Mounts by 3/8-32 threaded bushing and nut. Open circuit until plug inserted.

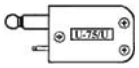
Stereo Headphone Jack, 3-Circuit SWC-12B P/N 11-04936 ..... **$2.95**
Mono Headphone Jack, 2-Circuit JJ-034 ..... P/N 11-03907 ..... **$2.85**
Microphone Jack, 3-Circuit JJ-033 ..... P/N 11-05995 ..... **$4.35**
Insulated Flat Washer (SWC S1028) Tan ..... P/N 04-00975 .... **$0.28 ea.**
Insulated Flat Washer (SWC S1029) Black ... P/N 04-00976 ... **$0.80 ea.**
Mini Stereo Jack 1/8" diameter ..... P/N 11-09332 ..... **$3.35**
Mini Stereo Plug 1/8" diameter..... P/N 11-09333 ..... **$3.35**



U-61/U JACK – (MIL-C22442/4-1) (NSN 5935-00-689-6052) Mates with U-75/U. P/N 11-00696 ..... **$47.50**



U-172/U MICROPHONE JACK –(NSN 5935-00-665-7599), Mates w/U-173/U, PJ-292, or MP-101. 2-conductor jack w/nickel-plated beryllium copper contacts assembled into nylon body. P/N 11-00697 ..... **$3.50**



U-75/U PLUG – (MIL-C-22442/5-1) Mates with U-61/U. P/N 11-00698 ..... **$35.50**



4-CONDUCTOR PLUG – (TP-120, U-174/U, U-93A/U, MIL-C9177/1B) (NSN 5935-00-642-0626) Mates with U-92/U, TJ-120 & TJ-102. Jack, and TJ-101 Jack. 1-piece nickel plated brass contacts are integrally molded into plastic body. P/N 11-00699 ..... **$13.50**



2-PIN MICROPHONE PLUG - (U-173/U, MP-101) (NSN 5935-00-888-5351) Mates with U-172/U, U-179/U, MP-101, & JJ-055. Nickel-plated beryllium copper contacts assemble into nylon body. P/N 11-00701 ..... **$1.85**



.206" COMMERCIAL MIC PLUG – (S-267) (PJ-068) Mates w/JJ-033, S-12B, CES830. Black plastic handle with .206" dia. chrome plug. 3 conductors. solder plug and cable clamp. P/N 11-00702 ..... **$6.95**



.25" COMMERCIAL MONO PHONE PLUG – (S-250) Mono (PJ055B) Mates w/JJ-034, CE80. Black plastic handle w/ .25" dia. chrome plug. 2 conductors. solder plug & cable clamp. P/N 11-00703 ..... **$2.45**



.25" COMMERCIAL STEREO PHONE PLUG – (S-250; PJ055B) Mates with JJ-034 or CE80. Black plastic handle with .25" dia. chrome plug. 3 conductor. solder plug & cable clamp. P/N 11-00704 ..... **$2.25**



1/8" STEREO PLUG (3.5MM)– Black plastic handle w/ solder terminals & cable clamp. P/N 11-00705 ..... **$2.25**



U174/U PLUG TP-101 - Mates with NEXUS Series TJ-120and TJ-102 jacks and jack TJ-101. One piece monel contacts integrally molded into glass filled nylon plastic. P/N 11-09335 ..... **$33.50**



FRONT MOUNT JACK TJT-120 - Mates with NEXUS Series TP-120 plugs and plugs TP-101 and TP-102. Same material and construction as the TJ-120. Jack housing is threaded for front mounting by screwing into threaded mounting hole or by inserting into front of panel and securing with nut and lockwasher from behind. P/N 11-09334 ..... **$12.50**

TRIPLE HEADSET ADAPTER



This high quality adapter converts one set of radio or intercom mic and phone jacks into three sets. Sets are one, five and five feet respectively. This adapter is great for adding a pair of headsets to the back of the aircraft without requiring major installation. P/N 14-00071 ..... **$109.95**

FOUR CONDUCTOR PHONE JACK



(TJ-101) Mates with series TP-120, TP-102 plugs and plugs PT-101, U-93-A/U, and U-174/U. Nickel Plated beryllium copper contacts molded into a black plastic body. P/N 11-02744 ..... **$19.85**

FIVE CONDUCTOR PHONE JACK



(TJ-105, U385/U, M64/22-01) Mates with series TP-105, U-384/U, M642/14-01. Nickel plated beryllium copper contacts molded into a red plastic body. P/N 11-02745 ..... **$39.85**

AUDIO GOLD PLUG ADAPTERS



JB-11LDS - 1/8" stereo to .25 stereo plug, increases a 3.5mm plug to a .25" stereo plug. ..... P/N 11-02746 ..... **$3.45**
JB-11LDM - 1/8" mono to .25 stereo plug, increases a 3.5mm plug to a .25" mono plug. ..... P/N 11-02747 ..... **$3.60**
JB-11DLS - .25" stereo to 1/8" stereo plug, decreases a .25" plug to a 3.5mm stereo plug..... P/N 11-02740 ..... **$3.60**
JB-11DLM - .25" mono to 1/8" stereo plug,decreases a .25" plug to a 3.5mm mono plug..... P/N 11-02741 ..... **$3.60**

FIVE CONDUCTOR PHONE PLUG



(U-384/U, TP-105, M642/14-01) Mates with series TJ-105 and TJ-125. One piece monel contacts integrally molded into red plastic body. P/N 11-02742 ..... **$37.75**

CABLE JUNCTION BOX



This product allows you to convert two cables into one. Size: 1.5" x 1" x .5"). Comes with 4 screws. P/N 11-02743 ..... **$4.85**

IPOD/MP3 ADAPTER



This adapter can be used to connect your IPOD or MP3 player directly into your intercom system. It comes in a 5' length. ..... P/N 11-03510 ..... **$30.90**

BOSE A20 (6-PIN) HEADSET TO GA ADAPTER



Model: PA-89/A20. Converts your 6-pin connector to a dual GA plug. Adapter measures approximately 21" P/N 11-09422 ..... **$52.75**

BOSE A20 (6-PIN) HEADSET TO HELICOPTER ADAPTER



Model: PA-89H/A20 Converts your 6-pin connector to a single helicopter plug. Adapter measures approximately 21" P/N 11-09423 ..... **$64.75**

NFLIGHTCAM HELICOPTER TO GA ADAPTER 602



P/N 11-14809 ..... **$34.99**

NFLIGHTCAM DUAL HELICOPTER MIL ADAPTER 611



P/N 11-14810 ..... **$69.99**

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JACK HOUSINGS AND MOUNTS

MIC & PHONE JACK HOUSINGS



SINGLE HOLE BLACK ALUMINUM HOUSING - Single-hole aluminum housing for single cord headset jacks (Nexus Jack TJT-120).

Description	Part No.	Price
Single Hole Black	11-09989	**$17.95**
Single Hole Beige	11-09990	**$22.70**
Single Hole Aluminum	11-09991	**$22.70**



SINGLE HOLE MIC & PHONE JACK HOUSING - HOUSING - (1) hole surface mounted. For mic or phone jack. Hole diameter .375 with key. Mount with 4 small screws on outer flang.

P/N 11-10747 .....**$16.75**



2 HOLE SURFACE MOUNTED MIC & PHONE JACK HOUSING - Mounts flush to any flat surface. Heat-treated aluminum with a powder coat finish. Jacks not included. (See electrical section).

Description	Part No.	Price
Surface Mount, Black	10-01595	**$17.85**
Surface Mount, Beige	11-01120	**$17.85**
Surface Mount, Aluminum	11-01130	**$17.95**



TWO HOLE ALUMINUM HOUSING - Two-hole aluminum housing (no paint) for single cord headset jacks / Nexus Jack TJT-120.

Description	Part No.	Price
Aluminum no Paint	11-09994	**$21.75**
Black	11-09992	**$21.65**
Two Hole Aluminum	11-09993	**$21.65**



2 HOLE RECESSED MIC & PHONE JACK HOUSINGS - Powder coat finish. Comes with a clamp to hold housing securely in place. Jacks not included. Size: 3.0" x 3.75" x 1".

Description	Part No.	Price
Recessed Mount, Black	11-01140	**$21.95**
Recessed Flush Mount, Beige	11-01150	**$23.85**
Recessed Flush Mount, Aluminum	11-01160	**$21.95**

4 HOLE SURFACE MOUNTED MIC & PHONE JACK HOUSING - If panel space is scarce or you'd prefer to locate your headphone jacks in a more convenient spot, this housing is perfect. Mounts flush to any flat surface. Heat-treated aluminum with a powder coat finish. Jacks not included. (See electrical section). **Housing only!**



Description	Part No.	Price
Black wrinkle finish	11-01195	**$21.65**
Tan wrinkle finish (Pictured)	11-00365	**$21.65**
Aluminum (unpainted with holes)	11-00366	**$21.75**
Aluminum (unpainted NO holes)	11-00367	**$17.85**



4 HOLE RECESSED MIC & PHONE JACK HOUSINGS - Modified to allow plugs to enter from the opposite side, being recessed they are out of the way. When jacks are plugged in they are flush with the edge of the housing. Made of aluminum, with a powder coat finish. Comes bagged with housing, clamp, mounting screw. Dims: 4"W x 5"L x 1.06"H; Cutout req.: 3.25"W x 4.43"L

Description	Part No.	Price
Black wrinkle finish	11-01939	**$27.85**
Tan wrinkle finish	11-01940	**$28.75**
Aluminum (unpainted with holes)	11-01941	**$28.75**



4 HOLE NEXUS FRONT MOUNT JACK HOUSINGS - Housing- (4) hole .687 dia. surface mounted for nexus jack #TJT-120

Description	Part No.	Price
Black	11-11527	**$27.85**
Beige	11-11528	**$28.75**
Aluminum	11-11529	**$28.75**

MIC / PHONE JACK MOUNTING BRACKET

Mic & Phone Jack Bracket 90 degree under the dash. Also for switches, fuses etc. . A sturdy and attractive mount, sides are formed to hide wires, .063 thick heat-treated aluminum. Black wrinkle powder coat finish. Five styles to choose from for most any installation. Easily installed.



MIC OR PHONE JACK MOUNT 1 HOLE - 1) Hole for either Mic or Phone Mounting Bracket Dimensions- 1.5w x 1.5h x 1.0 deep. Black wrinkle powder coat finish.

P/N 11-01170 .....**$12.95**



MIC OR PHONE JACK MOUNT 2 HOLE - (2) Hole Mic & Phone Mounting Bracket Dimensions- 2.3w x 1.5h x 1.0 deep. Black wrinkle powder coat finish

P/N 11-01180.....**$12.95**



MIC OR PHONE JACK MOUNT VERTICAL 4 HOLE - Bracket- (4) Hole Vertical for Mic & Phone Dimensions- 2.3w x 2.5h x 1.0 deep.

P/N 11-01190.....**$14.75**



MIC OR PHONE JACK MOUNT HORIZONTAL 4 HOLE - Bracket- (4) hole horizontal for either Mic or Phone Dimensions- 4.5w x 1.5h x 1.0 deep.

P/N 11-01942.....**$14.75**

MOUNTINGS FOR BOSE LEMO HOUSINGS



Metal housing available in raw Aluminum, Black or Beige. Designed to be utilized with the BOSE 6 Pin Lemo Jack #323172-0010. Can mount with (4) small screws on outer flange. Dimensions: W2.9" x L3.56" x H1.06". Weight: 22 grams. Note: Hardware not included.

Description	Part No.	Price
Surface Mounted Housing 1 Hole LEMO Aluminum	11-16194	**$20.80**
Surface Mounted Housing 1 Hole LEMO Black	11-16196	**$19.85**
Surface Mounted Housing 1 Hole LEMO Beige	11-16197	**$20.80**
Surface Mounted Housing 2 Hole LEMO Aluminum	11-16201	**$20.80**
Surface Mounted Housing 2 Hole LEMO Black	11-16202	**$20.80**
Surface Mounted Housing 2 Hole LEMO Beige	11-16203	**$20.80**
Recessed Mounted Housing 1 Hole LEMO Aluminum	11-16198	**$27.85**
Recessed Mounted Housing 1 Hole LEMO Black	11-16199	**$27.85**
Recessed Mounted Housing 1 Hole LEMO Beige	11-16200	**$27.85**
Recessed Mounted Housing 2 Hole LEMO Aluminum	11-16204	**$27.85**
Recessed Mounted Housing 2 Hole LEMO Black	11-16209	**$27.85**
Recessed Mounted Housing 2 Hole LEMO Beige	11-16210	**$27.85**

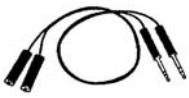
AV

HEADSET ADAPTERS AND EXTENSIONS

HEADSET EXTENSIONS



HEADPHONE EXTENSION – This heavy duty extension allows a .25" phone jack to be extended by 5ft. Great for customizing an aircraft with rear passenger headphone (listen only) capabilities.
P/N 11-10620 .....**$23.85**



HEADSET EXTENSION – This heavy duty extension allows a general aviation headset using PJ-068 & PJ-055B or equivalent plugs to be extended by 5ft. Ideal when aircraft radio or intercom does not allow headset cords to reach comfortably. P/N 11-10640 .....**$51.75**



MICROPHONE EXTENSION – This heavy duty extension allows a .206" mic jack to be extended by 5ft. Great for customizing an aircraft with rear passenger microphone jacks.
P/N 11-10625 .....**$24.50**



HELICOPTER HEADSET EXTENSION – Extends a headset that uses a U-174/U, U-93A/U or equivalent plug. 5 ft. in length.P/N 11-00688 .....**$48.95**



U-75/U EXTENSION – Extends a headset which uses U-75/U plug 5 ft. in length.
P/N 11-00689 .....**$104.95**

"Y" ADAPTERS



DUAL HEADSET Y ADAPTER – This heavy duty adapter converts one .25" phone jack into two. Perfect for those who want to connect two headphones to one a/c radio headphone jack. Can be used with stereo or mono headphones and jacks. Length: 2 ft. P/N 11-10610 .....**$24.65**



DOUBLE HEADSET Y ADAPTER – This heavy duty adapter converts one set of a/c radio panel jacks, (.206" mic and .25" phone) into two sets. Can be used with any general aviation headset using PJ-068 & PJ-055B or equivalent plugs.
P/N 11-10635 .....**$67.75**



DUAL MICROPHONE Y ADAPTER – This heavy duty adapter converts one .206" aircraft radio microphone jack into two. Perfect for those who want to add another push-to-talk position to the radio. Length: 2 ft. P/N 11-10615 .....**$34.50**



TRIPLE HEADSET ADAPTER – This high quality adapter converts a set of radio or intercom mic and phone jacks into 3 sets. Sets are one, three and five feet respectively. Great for adding a pair of headset to the back of the aircraft without requiring major installation. P/N 11-00680 .....**$86.75**



DUAL HELICOPTER Y HEADSET ADAPTER – This adapter allow a single helicopter radio or intercom jack (TJ-120, TJT-120, TJT-102) to be used by two headsets. Length: 1 ft. Great for adding an additional space for headset without costly installation. P/N 11-00681 .....**$65.75**



DIGITAL AUDIO RECORDER ADAPTER FOR GA HEADSETS - This product allows you to interface your Digital Audio/Video Recorder with the aircraft intercom system. Great for creating your own aerial videos without excess cabin noise. Works with devices that use a 3.5mm Stereo External Mic Input like GoPro HD Video Cameras and Digital Voice Recorders. P/N 11-10486 ..... **$34.95**



24 CONDUCTOR COIL CORD - This coil cord incorporates 24 individual 22-gauge wires, which is the minimum gauge required to connect typical PTT, Autopilot Disconnect, Map Light, Trim and other control wheel-mounted switches. The coiled section of the cord has a retracted length of 6 inches and a generous 18 inches of free length on either end, allowing electrical components to be connected without splicing additional wire.
P/N 11-09937 ..... **$249.00**



PUSH TO TALK SWITCH HOUSINGS

HOUSING FOR MICROMINI MOMENTARY SWITCH
P/N 11-07342 ..... **$113.95**



CX-2556/U CABLE (U-229/U TO U-94A/U CONNECTOR)

4 foot extension cable. The U-229/U is the military standard audio connector. Has a U-94A/U connector on the other end with a push to talk switch built in. P/N 11-09134 ....**$92.95**

AIRCRAFT/HELICOPTER CONVERSION ADAPTERS



.206" JACK Y ADAPTER – This adapter converts a headset with a single .206" plug into one with 2 (standard .206 mic & .25" phone plugs). Length: 9". P/N 11-00682 ..... **$34.65**



.25" JACK Y ADAPTER – This adapter converts a headset with a single .25" plug into 1 with 2 (standard .206" mic & .25" phone plugs). Length: 9".
P/N 11-00683 ..... **$34.75**



.206" PLUG Y ADAPTER – This adapter converts a headset w/ dual .206 mic & .25" phone plugs into one plug (.206') headset. Length: 9". P/N 11-00684 ..... **$34.85**



.25" PLUG Y ADAPTER – This adapter converts a headset w/ dual .206 mic & .25" phone plugs into one plug (.25") headset. Length: 9".
P/N 11-00685 ..... **$28.95**



STANDARD (MIC/PHONE) TO HELICOPTER ADAPTER – This adapter converts a G.A. headset that has both mic and phone plug into one that uses a helicopter (U-174U, U-93A/U or equiv.) plug. Length: 9". P/N 11-10630 ..... **$34.95**



HELICOPTER TO STANDARD (MIC/PHONE) ADAPTER – This adapter converts a helicopter (U-174U or U-93A/U) headset that has one plug into a G.A. headset that has both mic and phone plug. Length: 9". P/N 11-10650 ..... **$34.95**



U-75/U HEADSET CONVERTER ADAPTER – This adapter converts a headset which has a U-174/U, U-93A/U or equivalent type plug into one which uses a U-75/U plug. Length: 9".
P/N 11-00687 ..... **$76.75**



U-75/U HEADSET CONVERTER ADAPTER – This adapter converts a headset which has a .206" mic and .25" phone plug into one which uses a U-75/U plug. Length: 9". P/N 11-00690 ..... **$77.75**



U-75/U TO STANDARD PLUGS CONVERTER – This adapter converts a headset which has a U-75/U or equivalent plug into a standard .206" mic & .25" phone plug. Length: 9".
P/N 11-00691 ..... **$76.75**

TRIPLE HELICOPTER ADAPTER W/7'CABLE

TJT-120 & TJT-102 type Jacks) This adapter allows for 3 headsets to share one 4 conductor panel mount in jack. Backing of converter box comes with commercial grade Velcro adhesive tape for easy attachment to any surface. P/N 11-02752 .....**$132.85**

.25" HEADSET PLUG REDUCER



This adapter reduces a single .25 headset plug to a single .206 headset plug. 5" in length.(JB-34)
P/N 11-02748 ..... **$24.50**

.206 MICROPHONE PLUG REDUCER



This adapter reduces a single .206 microphone plug to a 3.5mm mini plug. 5" in length.(JB-35)
P/N 11-02749 .....**$25.50**

HEADSET TAPE RECORDER ADAPTER



This adapter allows you to record conversations through your headset into a portable tape recorder.
(JB-40) ..... P/N 11-02750 **$15.75**

SPECIALTY ADAPTERS/ IMPEDANCE CONVERTERS



VIDEO RECORDER ADAPTER GA/HELICOPTER – This product allow you to interface your video recorder with the aircraft intercom system. Great for creating your own aerial videos without excess cabin noise. Records sounds transmitted through the intercom system only. Std Version.....P/N 11-00692.....**$33.75**
Helicopter Version .....P/N 11-00693.....**$41.65**



GENERAL AVIATION MUSIC PLAYER ADAPTER– This product allows you to input a music device (iPod, MP3 player, CD player, Garmin with XM radio, etc.) directly in to your GA (Dual plug) headset. This will allow music to be heard only through the individual headset it is connected to rather than through the entire intercom system. .....P/N 11-00694.....**$31.95**



LOW TO HIGH IMPEDANCE ADAPTER – This adapter converts a low impedance mic & military headset into higher impedance for use in general aviation aircraft.
Standard Version .....P/N 11-10645 ... **$69.85**

AV

Prices Subject to Change Without Notice

HEADSET ADAPTERS AND CABLES

PILOT USA ADAPTERS

Description	Part No.	Price
PA-50 Push-to-talk use with or without Intercom	11-07712	$19.95
PA-70S Headphone Extension (5ft)	11-06517	$21.75
PA-71 Microphone Extension (5ft)	11-10625	$24.50
PA-72S Dual Headset Adapter	11-06518	$47.95
PA-72H Dual Helicopter Headset Adapter	11-03562	$59.95
PA-73S Dual Headphone Y Adapter	11-06519	$24.95
PA-74 Dual Microphone Y Adapter	11-10615	$34.50
PA-75 Helicopter to GA headset Adapter	11-10650	$34.95
PA-76 GA to Helicopter Headset Adapter	11-10630	$34.95
PA-77S Headset Extension (2 Jacks, 2 Plugs)	11-06520	$44.95
PA-77H Helicopter Headset Extension (5ft)	11-00688	$48.95
PA-78 Mono Replacement Headset Cable (Chrome Plugs)	11-03563	$49.95
PA-79 Mono/Stereo Replacement Headset Cable (Chrome Plugs)	11-03564	$35.95
PA-79DNC M/S Headset Cable: For use with PA-1779, PA-1776, PA-2	11-06521	$49.95
PA-80S General Aviation Music Player Adapter	11-00694	$31.95
PA-95 Dual Ga To Yaesu Vertex 3.5mm Plug	11-03565	$47.95
PA-81 Airbus Aircraft Headset Adapter	11-03566	$39.95
PA-82 Headset Adapter for ICOM A22,A24 Transceiver	11-02116	$36.50
PA-82.4 Headset Adapter for ICOM A4 Transceiver	11-03567	$39.90
PA-82B Bose Headset Adapter for IC-A6, A22,A24	11-06523	$69.95
PA-82H Helicopter Headset Adapter for IC-A6, A22,A24	11-06524	$55.95
PA-83 Europe NATO to US NATO Headset Adapter	11-06525	$75.95
PA-84 US NATO to Europe NATO Headset Adapter	11-06526	$75.95
PA-85 Dual GA To Icom A5, A23 Adapter & PTT Input	11-00618	$42.50
PA-86A Amplified Cell Phone Adapter GA (Twin Plug) Version	11-03568	$99.95
PA-86AH Amplified Cell phone Adapter - Helicopter Version	11-06527	$114.75
PA-86AB Amplified Cell phone Adapter (Panel Power) BOSE	11-06528	$129.95
PA-87 Impedance Converter Hi (GA) to low Military	11-06529	$49.85
PA-87H Impedance Converter Hi (Heli) to low Military	11-06530	$63.95
PA-88 Amplified Impedance Converter low (MIL) to Hi (GA)	11-10645	$69.85
PA-88H Impedance Converter Low (MIL) to Hi (Helicopter)	11-06531	$78.95
PA-89B Power Supply for Panel Power BOSE Headset	11-03570	$69.85
PA89/A20 Bose A20(6-Pin) to GA Adapter	11-09422	$52.75
PA89H/A20 Bose A20(6-Pin) to Helicopter Adapter	11-09423	$64.75
PA89A/A20 Bose A20(6-Pin) to Airbus XLR Adapter	11-09997	$64.95
PA89BH Bose X panel Powered to Helicopter Adapter	11-09996	$78.95
PA-90S Triple Headset Adapter	11-03571	$67.95
PA-91 GA (Twin Plug) Headset to (.25") Single Plug Adapter	11-00685	$28.95
PA-92 (.25") Single Plug Headset to GA (Twin Plug) Adapter	11-03572	$28.95
PA-93B GA to Bose Plug Headset Adapter	11-06533	$59.95
PA-93BH Helicopter Headset to Bose Plug Adapter	11-06602	$72.95
PA-94 Helicopter Ground Crew Extension Cable W/PTT (3ft.)	11-06534	$79.95
PA-95 Headset Adapter for Vertex Transceiver	11-03574	$42.95
PA-96 PC to GA (Twin Plug) Headset Adapter	11-03575	$44.95
PA-97 Airbus Plug to GA Headset Adapter	11-06535	$36.95
PA-98 Inline Helicopter Volume Control	11-06536	$55.95
PA-99 Inline GA Volume Control	11-06537	$55.95
PA-100B Oxygen Mask Microphone Adapter for Bose Plug Headset	11-06603	$92.95
GOPRO Hero 3 to Dual GA Headset Adapter	11-11565	$44.95
GOPRO Hero 3 to Lemo Headset Recording Adapter**	11-12364	$44.95
VIRB to Dual GA Headset Recording Adapter*	11-12270	$44.95
VIRB to Helicopter Headset Recording Adapter*	11-12271	$44.95
Smart Phone Digital Audio Recorder Adapter for Helicopter	11-13042	$59.95
Helicopter U-174 Headset Recording Adapter For Gopro Hero 5	11-15227	$92.00
Dual Ga Headset Recording Adapter For Gopro Hero 5	11-15226	$79.75
Helicopter Bose 6 Pin Lemo Headset Recording Adapter For Gopro Hero 5	11-15228	$99.95
Dual Ga Mono Stereo Extension Cable 5ft	11-06520	$44.95
Dual Ga Mono Stereo Extension Cable 10ft	11-15525	$68.85
Dual Ga Mono Stereo Extension Cable 20ft	11-15526	$95.50
Dual Ga Mono Stereo Extension Cable 25ft	11-15527	$115.00

***Will not work with Garmin VIRB or VIRN Elite*
** Will not work with GOPRO Hero 3 Camera.*
See www.aircraftspruce.com for our Pilot USA Adapter Wizard. A quick way to find the right adapter for you!

SIGTRONICS ADAPTER CABLES

Description	Part No.	Price
PTT Switch intercom use with intercom	11-02806	$24.25
Headphone Replace. Cable Stereo 5'	800029	$15.75
Headphone Replace. 3-6' Coil Mono	800034	$20.95
Headphone Replace. Coil 3-6' Stereo	800035	$24.25
Mono Headphone 5' Cord	800037	$9.95
M-80 Electret Microphone	800082	$60.50
Converter STD Aviation Plug	900050	$32.75
Converter Plug-STD Aviation	900051	$32.75
Converter Plug-STD Avia-Coiled	900052	$45.25
Headset 5' Straight Monaural	900053	$30.50
Headset 3-6' Coiled Monaural (GA Version)	900054	$42.50

Description	Part No.	Price
Headset Ext 3-6' Coiled (Helicopters Version)	900055	$44.50
Microphone Y Adapter	900056	$36.95
Headphone Monaural Y Adapter	900057	$27.95
Headphone Stereo Y Adapter	900058	$39.50
Headphone 5' Straight Monaural	900059	$18.95
Microphone Extension Cable	900060	$22.50
Headphone 5' Straight Stereo	900061	$22.50
Converter Plug to STD Avi Plug	900062	$69.95
Convert U-75U to U174 Plug 18"	900063	$70.25
Convert STD Plug to U-75U	900064	$69.95
Converter to U-75 Plug 18"	900065	$70.25

MAGNETO TIMING LIGHT - MODEL E50



Designed specifically for internal timing of aircraft magnetos and for synchronizing magnetos to aircraft engines. Eliminates all guesswork and provides a greater safety factor by creating perfect timing quickly and easily. Simply attach three clips to the magnetos and adjust until both bright lights flash in sync and the buzzer changes pitch. Fail-safe circuitry, variable pitch buzzer. Heavy-duty 3"x 5"x 2-1/8" unbreakable case. Wt. 1.5 lbs. Complete with 18 gauge lead wires 36" long and instructions.

P/N 12-01013 ..... **$104.85**

U.S. Industrial Equivalent.....P/N TP105.....**$66.75**

AIRCRAFT TIMING INDICATOR MODEL E25



The Aircraft Timing Indicator Model E25 is a unique device that locates the relative relationships between the crankshaft, magneto point openings, camshaft and valve timing. Easily attached to the propeller spinner with mounting bands that are included with the unit, the E25 quickly and accurately (within ½ degree!) locates top dead center. The result: the all-aluminum Model E25 speeds up and improves the process of timing magnetos to the engine. With its easy-to-read dial and 18mm, hardened aluminum piston stop, the E25 is a snap to use. Note: Piston Stop is included.

E25 Timing Indicator ..... P/N 12-01014..... **$65.75**

Replacement Piston Stop..... P/N 12-18100..... **$19.50**

U.S. Industrial Equivalent TP102 ..... P/N 12-01167..... **$70.90**

MAGNETO TIMING LIGHT



Measures the change in inductance in the magneto coil when the points open and close. Simply shorting the clip leads together will not indicate a point closing, therefore eliminating any false reading caused by loss of contact to the magneto grounding terminal. Adjust magneto timing accordingly. 100% solid state, compact 3/4" x 3" x 5" size, long battery life. Color coordinated leads are 4 ft. long. Comes in strong anodized aluminum case.

Dual Magneto Synchronizer w/Tweeter ..... P/N 12-16901.....**$49.50**

Single Magneto Timing Light w/Tweeter..... P/N 12-16903.....**$53.75**

PROPELLER BLADE MOUNTED MAGNETO TIMING DEVICE



The propeller blade mounted timing device is a self-contained unit that incorporates the blade mount, digital inclinometer, and adjustable cinch strap. More accurate, quicker, and easier to use than competitive products. The blade slots are graduated and spaced so as to allow installation on many different blade model designs. P/N 12-04969.....**$195.00**

TRACERLINE AVIATION ULTRASONIC LEAK DETECTOR



Master Kit Includes: • Marksman Receiver • UltraSonic Emitter • Headphones • 12 inch Air Probe • Contact Probe • Carrying Case ***Features***: • Converts & Amplifies Ultrasonic Sound Into Audible "Natural" Sound for Accurate Diagnosis. • Frequency Response: 36,000 - 44,000 Hz • Detects Air Brake, Compressed Air, Vacuum, EVAP System and Other Pressurized Leaks Quickly and Effortlessly • Pinpoints Gear and Bearing Wear in Wheel Hubs, Transmissions, Transfer Cases, Differentials and Electric Motors. One Standard 9-Volt Alkaline Battery Each for Receiver & Emitter. P/N 12-01745.....**$698.75**

ENGINE TEST TOOL KIT



This small test kit is designed to allow the aircraft mechanic a convenient and economical way to purchase the basic small engine test equipment. This kit contains: 1 - TP104 Cylinder Pressure Tester, 1 - TP105 Magneto Timing Light, 1 - TP102 Timing Indicator, 1 - TP103 High Voltage Cable Tester, 1 - TP216 Tool Box

P/N 12-02349.....**$306.00**

ENGINE TEST KIT



EK5EM - The Engine Test Kit EK5EM has all of the test equipment needed to check engine compression, synchronize magnetos, time aircraft engines, and test ignition leads all in one tool box. The kit contains: the 2EM Differential Pressure Tester with master Orifice, LED52 Electronic Magneto Synchronizer, Eastern E25 Aircraft Timing Indicator, Eastern E5 High Voltage Cable Tester, the Compression Tester Extension & Hip Roof Tool Box.

P/N 12-02449.....**$357.00**

EK5 - ATS Engine Test Kit has all of the test equipment needed to check engine compression, synchronize magnetos, time aircraft engines, and test ignition leads all in one tool box. Contains: 2E, LED52, Eastern E25, Eastern E5, & 19000 tool box. Now includes the 18mm-XT Compression Tester Extension. P/N 12-02943.....**$344.00**

HIGH VOLTAGE CABLE TESTER MODEL E5



Gives a fast, accurate test of high voltage aircraft ignition cables. Simply connect 3 wires, push test button and test is completed. The E5 will instantly indicate in its test window both good and defective cables - no waiting for indication to appear. Fail-safe circuitry. Heavy-duty lead wires. Compact 3" x 5" x 2-5/8" case. Wt. 1-1/2 lbs.

P/N 12-01016 ..... **$109.75**

DIFFERENTIAL CYLINDER PRESSURE MODEL E2A



Eliminates guesswork by allowing you to locate the exact location and cause of your engine's loss of efficiency. Field tester for 2 years by Teledyne Continental Motors, and approved for use on Teledyne Continental Engines by their Engineering and Field Services Group. Complete instructions and an 18mm adapter with each unit. "M" models have built-in master orifice.* **Not approved by TCM.**

E2A - for cylinders < 5" bore.....P/N 12-01012 ..... **$96.50**

E2A-1000 - for cyl. > 5" bore .....P/N 12-01017 ..... **$92.50**

E2A-1000 with 12mm.....P/N 15-05209 ..... **$105.95**

E2M - for cylinders < 5" bore .....P/N 12-01015 ..... **$124.75**

E2M-1000 - for cyl. > 5" bore* .....P/N 12-00692 ..... **$126.85**

E2A-12mm (Rotax) for cyl. < 5" bore.....P/N 12-00693 ..... **$92.75**

12 mm Adapter .....P/N 12-01018 ..... **$17.50**

18 mm Adapter .....P/N 12-18202 ..... **$17.50**

E2 Industrial Equiv. .....P/N TP104 ..... **$98.75**

14MM Adapter.....P/N TP171 ..... **$13.50**

18MM Adapter.....P/N TP104-9A **$15.50**

Compression Tester Extension Hose 24"..P/N 12-04601 ..... **$17.50**

ATS DIFFERENTIAL CYLINDER PRESSURE TESTERS



Comes complete with on-off safety valve to eliminate pressure when disconnecting from the cylinder. Can be used to check intake or exhaust valves, cracked or worn rings, defective cylinders, worn bushings, etc.

LESS THAN 5" BORE - Specifications: Orifice size is .040". precision gauges matched to within +/-2%. 18MM plug adapter. 24" pressure hose. Includes hose and spark plug adapter. Factory calibrated. Letter of certification available upon request. Note: For an engine cylinder having less than a 5.00-inch bore; 0.040-inch orifice diameter; .250 inch long; and a 60-degree approach angle. .....P/N 12-02344 ..... **$84.75**

GREATER THAN 5" BORE -Specifications: Orifice size is .060". precision gauges matched to within +/-2%. 18MM plug adapter. Includes hose and spark plug adapter. Factory calibrated. Letter of certification available upon request. Note: For an engine cylinder with 5.00 inch bore and over: 0.060 inch orifice diameter, .250 inch long, and a 60 degree approach angle.....P/N 12-02345 ..... **$89.95**

18MM CYLINDER PLUG - 18MM adapter plug used with the ATS 2E and 2EM Differential Pressure Testers. For engines with massive electrode plugs.....P/N 12-05064 ..... **$10.50**

DIFFERENTIAL PRESSURE TESTER WITH MASTER ORIFICE



Now you can conveniently check the calibration of your pressure tester before each use without disconnecting the tester. Comes with complete instructions. Includes hose and spark plug adapter.5" Bore Diameter or smaller.....P/N 12-02346 ..... **$107.75**

Bore Diameters greater than 5".....P/N 12-02347 ..... **$109.95**

ATS PRO DIFFERENTIAL PRESSURE TESTER KIT



ATS 2EM Differential Pressure Tester (with Master Orifice) and the Spark Plug Port Extension Tool together, to make your life a whole lot easier. **NOTE**: The ATS 2EM Differential Pressure Tester has a .040" orifice as required by Teledyne Continental SB03-3 Service Bulletin, and is the proper type of instrument to test ALL Teledyne Continental engines in accordance with the aforementioned bulletin. The ATS 2EM also complies Textron Lycoming SI-1191A Service Instruction and is appropriate for ALL Textron Lycoming engines as indicated in the Service Instruction. .....P/N 12-03330 ..... **$129.95**

COMPRESSION TESTER EXTENSION



This tool makes compression testing easy. Wrench free way to test that allows for exhaust system and baffling clearance. Tester is manufactured with quality-welded construction and offers a spark plug thread with O-Ring seal. It has a standard air fitting. .....P/N 12-01060 ..... **$28.99**

12mm Extension P/N 05-06883 ..... **$31.90**

ATS COMPRESSION TESTER EXTENSION



A replacement plug adapter with an 8-1/2" reach to work around manifolds, baffling, harnesses, support structures, and anything else that gets in your way. Note: For use with ATS models 2E and 2EM Compression Testers. 1 lbs (0.5Kg) weight. 18MM aviation engine plug threads 8-1/2" long to clear obstacles

Standard ..... P/N 12-02380 ..... **$31.85**

TO

TIME-RITE DELUXE COMBO KIT



The Time-Rite unit is the number one choice of aviation mechanics for precisely timing engines. It is assembled by hand and tested to the strictest standards to preserve the original craftsmanship. The unit has specialized arms and calibrated scales to accurately locate Top Dead Center (TDC) and then enables you to set the timing angle with dead-on accuracy. Kit includes: One 18 mm Time-Rite unit, one 14 mm Cone to adapt for 14mm use, a complete set of scales for 14mm and 18mm engines, a complete set of arms for 14mm and 18mm engines, an instruction manual, and a fitted case. .....P/N 12-02872 ..... **$596.00**

COMPRESSION TEST KIT



Includes everything you need to check valves and rings, perform carbon buildup inspection and test for late timing on a wide range of vehicles. Comes with an extension hose, straight and angled fittings and a rubberized gauge protector. Features: Adapters for a wide number of vehicles, Gauge has dual color scale with 0-300 PSI, 0-20 kPa, Test from your own garage.....P/N 15-08314 ..... **$53.50**

DR. ROTECH ENGINE DIAGNOSTIC TOOL



Perform all required electrical tests for the Rotax 912/914 engine in a matter of seconds. Simply plug the Doctor into your ignition unit plugs and within seconds you'll know which systems pass and which fail. Dr. RoTech performs all the required measurements of BRP-Rotax 912/914 Heavy Maintenance Manual section 74 paragraph 3.12: Generator coil (on stator), Charging coil (on stator), Trigger coil (A&B), Primary ignition coil (A&B) Secondary ignition coil, Spark plug connector, Ignition switch & Engine ground. What used to take you an hour now takes less than 1min with Dr. RoTech. P/N 12-03150 ..... **$499.00**

FAULTCHASER CABLE TESTER



FaultChaser & TP-200 Tone Probe come as a kit in a protective case. Easily test cables and determine cable length quickly and accurately with the FaultChaser Handheld. This simple device allows users to find cable length and determine impediments as well as the overall condition of cables up to 3,000 feet long. Using advanced spread spectrum TDR technology, The FaultChaser provides accuracy of 1% or better while remaining immune to voltage, current, or data stream disruptions. P/N 12-03282 ..... **$595.00**

T300 SYNCRO LASAR® IGNITION TIMING LIGHT TOOL



The SyncroLASAR® tool is used to syncronize Slick 4700/6700 LASAR® magnetos to the engine during installation using the right and left LASAR® magneto conectors. During bench inspections and overhaul the SyncroLASAR® is also used to adjust the magneto contact braker opening position when the cover and low voltage control harnress pigtail are removed.....P/N 12-00181 ..... **$913.00**

DUAL DISPLAY MULTIMETER



The Eclipse Pro's Kit MT-1860 Professional Digital Multimeter with USB Connector is endowed with the key touching function instead of the traditional mechanical knobs, is a new type of 3 5/6 digital multimeter equipped with the LCD display device with the text height of 33mm which has the merits of visual display, easy operation, stable performance and high reliability. It can be used to measure DC voltage,AC voltage, DC current,AC current, resistance, capacitance, frequency, temperature, diode and make on-and-off test Eclipse MT-1860

P/N 12-04811 ..... **$107.75**

ENGINE OIL PRESSURE TEST KIT



Test and diagnose problems with engine oil pressure in diesel or gasoline engines with this easy-to-use kit. The oil pressure test kit contains a wide assortment of durable brass adapters designed to fit most engines. The kit includes a rugged 66 in. high pressure rubber hose and a tough steel gauge that withstand even harsh work conditions.

P/N 12-05093 ..... **$31.55**

VGA RESOLUTION PROBE



Ideal for capturing high-quality (640 x 480 pixel) video and images of hard-to-reach or hard-to-see areas and equipment. Light boost, anti-reflection and image rotation functions extract clear images from even the darkest spaces. Compatible with General?s DCS1600, DCS1600ART and DCS1800 high-performance video borescope inspection systems, H16 handheld recording console and DCS1800-TR wireless probe handle/controller

P/N 12-03374 ..... **$548.95**

PORTABLE VIDEOSCOPE KIT 4MM X 1300MM



4 mm diameter 1300mm working length (available in other lengths and diameters). Steel braid insertion probe, water and oil proof, temp to 90 C. Forward view, 2 ways of articulation 120/120 up down. Comfort grip with adjustable LCD screen. Video output easily connects to capture device. KIT includes: Flexible Portable Videoscope Battery Charger Standard Storage / carrying case

Portable VideoScope 4MMX1300MM .....P/N 12-02583 ..... **$6,989.00**
Portable VideoScope Carry Case .....P/N 12-02584 ..... **$289.00**

RUGGED VGA RECORDING VIDEO BORESCOPE SYSTEM



Super High-Performance Rugged VGA Recording Video Borescope System with 7 inch LCD. Ideal for professional close-up inspections of hard-to-see and hard-to-reach areas. General's best super high-performance video borescope system. • 7 in. Screen • Rugged • VGA Recording • VGA Resolution Probe. LCD can show side-by-side front and side views using optional probe tip attachment. Ideal for identifying safety problems on aircraft engines and heavy equipment. Saves time and money on automotive maintenance and repair. P/N 12-03704 ..... **$1,589.00**

HAWKEYE® V2 VIDEO BORESCOPE



The Hawkeye® V2 Videoscopes contain a brighter, higher resolution, more durable camera, delivering sharp, clear photos and videos in a wide range of demanding inspection applications. The larger 5" LCD screen provides detailed close-up views, and has a 2X zoom function, mirror image capability, and easy-to-use intuitive controls. Has an articulation mechanism, and has increased the range to +/-150 deg. The insertion tube has rugged, 4-layer construction, with a crush resistant stainless steel inner layer. Available in diameters of 4 and 6 mm, lengths of 1.5m, 3.0m, and 6.0m.

Visit www.aircraftspruce.com for part numbers and pricing.

TO

INSPECTION SCOPES

THE SEEKER 100 USB VIDEO INSPECTION 12MM PROBE



Features wireless transmission of video and images to your computer up to 30 feet away and a Skype® enabled streaming video for remote viewing over the internet. Built-in radio transmitter wirelessly transmits (up to 10 feet) live video signal to the RCV100 USB video receiver, this enables the video to be viewed on a Windows PC and streamilined live over the internet. Works with Windows 7, Vista and XP. 12mm (0.47 in.) diameter, 1m (3.28 ft.) long, flexible-obedient, far focus camera-tipped probe is water, oil and dust proof to IP67 standards. Optional probe extensions of 1m, 2m, and 3m (3.28 ft., 6.56 ft., 9.84 ft.) are available for the 12mm probe. In addition to the 12mm (0.47 in.) diameter probe, this unit can also accept optional 9.0mm (.35 in.) and 5.5mm (.22 in.) camera tipped probes. Adjustable light intensity from built-in LEDs. Flexible-obedient probes retain configured shape to suit various applications. Includes: Custom Hard Case, Transmitter Handle with 12mm Diameter x 1m Long, Flexible-Obedient Probe 3 Accessory Tools: (45° Mirror, Magnetic Pick-Up, Pick-Up Hook), RCV100 Wireless USB Video Receiver, Interface Cable, Software on Mini-CD Instructional Manual, 3 Year Limited Warranty. P/N 12-02656 .....**$171.95**

HIGH PERFORMANCE VIDEO SYSTEM DCS1600



Portable, hand-held, complete borescope system with monitor, camera and video. Kit Includes: • Charger • Lens module cable 39.4" (1 M) • SD memory card • 30.45 and 60º mirrors • USB to 5-pin mini-B cable • Video cable • Cleaning cloth • Cotton swabs • Instructions • Heavy duty water proof blow mold case

P/N 12-02299 .....**$857.00**

WIRELESS VIDEO/AUDIO BORESCOPE SYSTEM DCS1800



A portable, hand-held borescope system with monitor, camera, video and wireless data transmission. Operate the instrument anywhere without the cable. The complete kit includes: Main monitor, 33 ft (1m) camera probe, 33 ft (1m) SD card, 30º 45º and 60º mirrors, instructions and waterproof blow mold carrying case.

Borescope System .....P/N 12-02301 .....**$1,114.00**
Probe Extensions - 2 Meters .....P/N 12-02397 .....**$25.75**

SEEKER 300 VIDEO BORESCOPE SYSTEMS



The Seeker 300 Video Borescope System offers a large 3.5-inch LCD color monitor and a 5.5mm flexible, configurable camera probe with adjustable LED lighting. Ideal for use in the visual inspection of otherwise inaccessible areas. This Video Borescope Kit also includes a mirror, magnet and pick-up hook that can be attached to the end of the probe. 3.5" (88.9mm) Color LCD Screen for crystal clear image, superb clarity and viewing effect. 5.5mm or 12mm diameter Camera-tipped Probe is flexible and strong with built-in adjustable LED lighting, and is slim enough to perform automotive engine check-up. Flexible Probe retains configured shape to suit different inspection needs. Probe Length: Standard: 3.28ft. (1m), Optional: up to 16ft (5m). View findings instantaneously

Includes: 3.28ft. (1m) Flexible Probe, Extension Tools: (Mirror, Magnet, Pick-Up Hook), 1 "9V" Battery Blow Mold Case Instruction Manual.

5.5 mm Probe .....P/N 12-02652 .....**$256.95**
12mm Probe .....P/N 12-02297 .....**$212.95**
2 Meter Probe Extension .....P/N 12-02397 .....**$25.75**

VOYAGER ARTICULATING VIDEO BORESCOPE



The state-of-the-art ATS Voyager videoscope features an articulating tip that swings 240 degrees to reach every inspection point of an airplane. With a simple turn of the control knob, you can move its Tungsten-sheathed tip from side to side to look left, right, and even backwards! The ATS Voyager gives you unprecedented access to areas that simply cannot be reached with a straight probe. Included with the ATS Voyager is a 70 degree tip mirror to look at right angles to the normal line of sight. And on that score, the ATS Voyager features a remarkable innovation that places an extra set of LED lights to the side of the probe, which when activated, successfully eliminates the glare and spots that are sometimes present when looking through a mirror. The result is an absolutely crystal clear, well lit, image through the tip mirror. It's a brilliant idea that you'll be seeing on other videoscopes in the future. The camera captures video and stills at a resolution of 640x480 pixels, and optionally stores them to an SD card. The 3.5" display shows images with excellent clarity. The flexible 1 meter probe bends to any shape, while the sealed 6mm tip will resist dirt, scratches, and abrasions associated with normal use.

P/N 12-04561 .....**$1,224.00**

HIGH RESOLUTION DIGITAL INSPECTION CAMERA WITH RECORDER



With vivid 640 x 480 images and a tempered glass lens, this high-resolution digital inspection camera allows you to inspect engine parts, home appliances and other tight spaces with precise clarity. The inspection camera also features a recorder that enables you to hook up the camera to your computer for review. And then, save those images on internal flash memory or SD card (cable, SD card not included).

P/N 15-08342 .....**$429.00**

USA 6MM ARTICULATING VIDEOSCOPE



MCVS-2-6-1000 – 6mm Articulating Videoscope With Side View. 6MM diameter - 1 Meter working length - 2 Way Articulation. Interchangeable Straight view and side view mirror tip. 3.5" TFT LCD. 3.5" Extra-wide view angle and clear TFT, protected by oil and scratch resistant tempered glass.. LED brightness adjustment. Simply push +/- button to increase/decrease brightness. Snap shot and video recording. Records VGA resolution (640x480 pixel) video clips and still images with instant playback review. AV out. Allows for TV monitor and computer interfaces. Zoom in and Mirror. Larger images (3X, 5X) and horizontal/vertical mirror for code identification. IP 55 dust and water protection. Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact. Water projected by a nozzle (6.3 mm) against enclosure from any direction shall have no harmful effects.. Slim and Compact. Weighed only 300g (w/o batteries). Interchangeable Insert Tube options. Front/Side Camera probe : 3.9mm, 4.5mm, 5.5mm, 8.5mm. Dual Camera Probe : 4.9mm. Two way Articulation : 5.5mm, 6.0mm.

P/N 12-04964 .....**$1,499.00**

USA 4 WAY ARTICULATING PORTABLE RECORDING VIDEOSCOPE



An articulating videoscope with its own internal lightsource, video recording, picture taking, and SD card storage. This unit features tungsten sheathing as found in many other higher end videoscope systems. The image quality provides an improvement over flexible fiberscopes which typically will feature between 9,000-15,000 pixels. This unit is a basic system to allow for a low cost inspection option. Specifications: • Diameter: 4mm • Length: 1500mm • Articulation: 4 way • Screen: 4.5" LCD (752x582) • Articulation range: 120°+ • Storage: SD Card • Battery Life: 4 hours • Light: LED (50,000 hours) • Sheathing: Tungsten • Camera housing: Stainless Steel • Waterproof: IP67.....P/N 12-04966 .....**$4,995.00**

USA 2 WAY ARTICULATING PORTABLE RECORDING VIDEOSCOPE



The USAVS2-2.8-1000 has been added to USA Borescopes economy videoscope line up because it offers end users the opportunity to upgrade from a lower cost fiberscope to an articulating videoscope with its own internal lightsource, video recording, picture taking, and SD card storage. This unit features tungsten sheathing as found in many other higher end videoscope systems. The image quality provides an improvement over flexible fiberscopes which typically will feature between 9,000-15,000 pixels. This unit is a basic system to allow for a low cost inspection option. Specifications: • Diameter: 2.8mm • Length: 1000mm • Articulation: 2 Way • Screen: 4.5" LCD (752x582) • Articulation range: 120°+ • Storage: SD Card • Battery Life: 4 hours • Light: LED (50,000 hours) • Sheathing: Tungsten • Camera housing: Stainless Steel • Waterproof: IP67

P/N 12-04963 .....**$6,995.00**

ECONOMY ALL WAY ARTICULATING 3.8MM VIDEOSCOPE



The USAVS-J-4-1300AV videoscope provides the flexibility to be used in a variety of manufacturing industries. Designed for today's professional that requires a system that is lightweight, durable and budget friendly. The 3.8mm diameter and 1.3 meter probe is perfect for many inspections. This unit features camera chip in the tip technology, built in LED lightsource, lightweight and portable design, 3.5" LCD screen, picture taking and video recording. This unit also utilizes rechargeable lithium ion batteries. Useful for aircraft engine inspection, airframe inspection, automotive inspection, and many other types of field applications. Features: • Joystick-Controlled,360 ° Articulation. • Highly Durable and Flexible Insertion Tube. • High-Intensity LED Illumination. • True Portability in a Compact Package. • Battery Powered Operation.

P/N 12-04965 .....**$7,995.00**

VIVIDIA ABLESCOPE VA-400



Articulation bendable angle: 0° to 180° continuously adjustable. You can inspect the back side of a closed dark compartment. Very easy to operate: just push down the release button by bending the thumb to adjust the articulation angle. The articulation angle can be locked/unlocked at any degree by opening/closing the locker. Very small bending radius: 30mm. Illumination: 6 white LED lights built-in. High resolution image with CMOS sensor. Focal Distance: 4cm – 40cm, fixed focus. Power supply: by USB port of PC or 7 inch tablet with Android system (sold separately). P/N 12-04891 .....**$200.00**

VIVIDIA ABLESCOPE VA-800



Articulation bendable angle: 0° to 180° continuously adjustable and can be locked at any angle. Very easy operation: just push down the release button with the thumb to adjust the articulation angle. The articulation angle can be locked/unlocked at any degree by open/close the locker. Very small bending radius: 30mm. Illumination: 6 white LED lights built-in. Focal Distance: 3cm – 40cm, fixed focus. Can be used on PC, Mac, and Android micro USB port by using an OTG cable (OTG cable is included in the package). Power supply: by USB port of PC or 7 inch tablet (sold separately, click for details...), or Android smart phones via OTG cable.

P/N 12-04892 .....**$350.00**

VIVIDIA ABLESCOPE VA-920



Vividia Ablescope VA-920 is a handy borescope inspection tool. It is short and the semi-flexible cable can be formed to shapes you want. The image is clear, and can be connected to PC, Mac, Android devices.

P/N 12-04893 .....**$350.00**



VIVIDIA ABLESCOPE VA-980

Vividia Ablescope VA-980 Semi-Flexible Digital Inspection Camera Borescope has long semi-rigid cable, which can be molded with hand to different shape and keep it. VA-980 has bright LED lights, 8.5mm cable camera and it can be used to look into dark places. VA-980 can be connected to PC, Mac, Android devices.

P/N 12-04894 .....**$400.00**

VIVIDIA ABLESCOPE VA-B2 WIFI AIRBOX



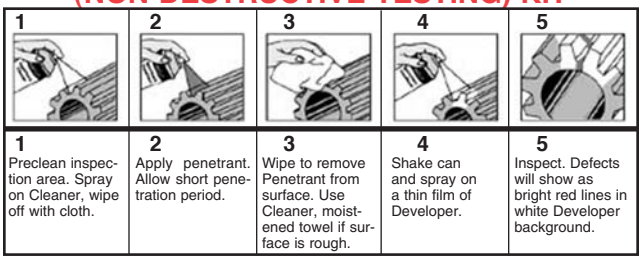
Vividia Ablescope VA-B2 WiFi AirBox USB-to-WiFi. Converter Adapter for iPhones/iPads and Android devices for Digital Borescopes and Microscopes is designed to convert the USB output from USB borescopes and/or microscopes into a WiFi hotspot. It works with UVC (USB Video Camera) that has MJPEG or YUY2 format outputs. This VA-B2 WiFi AirBox is suitable to your USB digital microscopes, borescopes, cameras, inspection cameras etc... With this device, you can use your iPhone, iPad, Android phones and tablets to access your USB microscopes, borescopes and inspection cameras through WiFi connection. The free APP, AirBox from Ablescope, can be downloaded from Apple's APP Store. The free Android APP, AirBox.apk, can be downloaded from this website below.

P/N 12-05079 .....**$100.00**

TO

PENETRANT INSPECTION KITS

MAGNAFLUX NDT (NON-DESTRUCTIVE TESTING) KIT



1	2	3	4	5
Preclean inspection area. Spray on Cleaner, wipe off with cloth.	Apply penetrant. Allow short penetration period.	Wipe to remove Penetrant from surface. Use Cleaner, moistened towel if surface is rough.	Shake can and spray on a thin film of Developer.	Inspect. Defects will show as bright red lines in white Developer background.

A quick, easy way to make shop and in-field inspections of landing gear, airframe and components. Highly sensitive Spotcheck dye penetrants which give clear, bright red indications. Locates very fine cracks on the surface of ferrous and non-ferrous components, equipment and structures. Reveals cracks on materials with surface temperatures as high as 350°F. Perfect for testing welds before thorough cooling. Convenient spray cans make application easy and contain no fluorocarbon propellants. Non-flammable. Materials meet applicable specifications for dye penetrant inspections (ASME, ASTM and MIL specs). Considered flammable and hazardous by UPS.



4-CAN SPOT CHECK® TEST KIT - The lowest priced way to check for cracks, leaks and other defects on any metal parts. Kit includes 1 spray can of developer, 2 cans of cleaner & 1 can of dye penetrant in cardboard case.

4-CAN SPOT CHECK® TEST KIT - SK-416 - Includes: • SKC-S, 2 aerosol cans • SKL-SP2, 1 aerosol can • SKD-S2, 1 aerosol can • SCRUBS® hand cleaner towels, 3 towels • DYKEM® Brite-Mark yellow paint marker, 1 pen • Shop Cloth, 1 towel

Magnaflux 4-can kit - SK-416 ..... P/N 09-00391 ..... **$119.95**
Developer ..... P/N SKD-S2 ..... **$24.50**
Cleaner/Remover (12oz. Aerosols) ..... P/N SKC-S **$20.50**

SK-816 KIT - *8-CAN SPOT CHECK® TEST KIT -* SK-816 - Includes: • SKC-S, 4 aerosol cans • SKL-SP2, 2 aerosol cans • SKD-S2, 2 aerosol cans • SCRUBS® hand cleaner towels, 3 towels • DYKEM® Brite-Mark yellow paint marker, 1 pen • Shop Cloth, 1 towel.

P/N 09-01192 ..... **$211.95**

SKC-S CLEANER - This clear, fast-drying solvent can be used for precleaning, post-cleaning and penetrant removal.

16 oz. ..... P/N 09-01188 ..... **$20.50**
Gallon ..... P/N 09-04508 ..... **$69.95**
Case (4 Gallons) ..... P/N 09-04509 ..... **$275.00**

SKL-SP2 - Because of its vivid red color, this solvent removable dye penetrant provides excellent color contrast performance to locate surface cracks in virtually any metal or non-porous ceramic material.

P/N 09-04661 ..... **$26.85**

SKD-S2 DEVELOPER - Made especially for use with SKL-SP penetrant, this developer contains suspended white particles that provide an ideal background for red Spotcheck penetrant indications.

16 oz. ..... P/N 09-01190 ..... **$24.50**
Gallon ..... P/N 09-04510 ..... **$126.95**
Case (4 Galons) ..... P/N 09-04511 ..... **$495.00**

MAXIMA™ UV LAMP LEAK DETECTION KIT



MAXIMA™ Aviation Leak Detection Kits Feature state-of-the-art Micro Discharge Light (MDL) technology! Ultra-high UV intensity delivers unprecedented power—up to 10 times the UV-A output of conventional High Intensity Discharge (HID) lamps! Instant-on operation allows lamp to reach full intensity immediately. Eliminates warm-up time. Works even in direct sunlight. Inspection range of up to 30 feet (9.1 m) or more. MLK-35A lamp kit includes ML-3500S UV lamp, 8 oz (237 ml) bottle of Aero-Brite™ dye (AD-8609-0008), UV-absorbing glasses (UVS-30), fluorescence-enhancing glasses (UVS-40), extra large carrying case (CC-350) and 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner (CR-800). Aircraft Fuel Systems, Hydraulic Systems, Pneumatic Systems, Vacuum Systems, Reciprocating Engine, Lubrication Systems, Turbine Engines, And Much More! ..... P/N 13-18748 ..... **$1,695.00**

AERO-BRITE UNIVERSAL FLUORESCENT LEAK DETECTION



Locates all leaks in petroleum- and synthetic-based aviation fluid systems! Checks an entire system in just minutes! Ideal for use as part of a diagnostic/ preventive maintenance program for commercial and military aircraft fuel and fluid systems! Features: FAST— The quickest way to inspect for leaks in aviation fuel, lubrication and hydraulic systems. SAFE — Specially formulated to accommodate the host fluid. Will not damage the fluid's properties or any of the system's components. VERSATILE — Allows inspection of the entire system under virtually all operating conditions. Ideal for both in-flight and static testing. COST EFFECTIVE — Super-concentrated. Use less per dose! Glows a bright green under UV light.See our website for suggested dilution ratios.

16 oz. ..... P/N 13-07351 ..... **$179.50**
8 oz. ..... P/N 13-07350 ..... **$96.80**
Optimax UV LED Flashlight Kit ..... P/N 13-07347 ..... **$742.85**
Leak Detection Kit ALK-365 ..... P/N 13-07348 ..... **$814.00**
Tritan Board Beam UV Lamp 365 ..... P/N 13-07349 .... **$1,351.00**
Cobra Borescope 7400 Pixel ..... P/N 13-07352 ..... **$227.95**
Marksman II Ultrasonic Diagnostic Tool Kit ... P/N 13-11730 ..... **$675.00**

PLEASE VISIT OUR WEBSITE FOR ALL KIT DETAILS LISTED ABOVE.

MET-L-CHEK PENETRANT INSPECTION KITS



Met-L-Chek kits provide a completely portable, job-proven method used throughout the industry to locate cracks, flaws and other defects. These economical & effective kits provide everything needed to make inspections in the shop or field. The penetrant materials are packaged in easy-to-use aerosol spray cans and a can of cleaner included for cleaning parts before inspection. The inspection procedure is easy to learn, accurate and inexpensive. Met-L-Chek can be used on ferrous and non-ferrous materials to find surface defects and 'thru leaks'. Supplied in a rugged metal case with complete instructions. The 4-Can Kit has one aerosol spray of cleaner, penetrant, developer and remover. The 8-Can Kit has 2 cans of each material. Individual replacement cans available.

4-Can Kit ..... P/N 09-03040 ..... **$83.95**
16 oz Kit ..... P/N 09-03052 ..... **$107.85**

MET-L-CHEK PENETRANT VP-30



VP-30 is a visible (Type 2), water washable (Method A) and solvent removable (Method C) inspection penetrant. It is designed for use in general metalworking, welding, nuclear and automotive applications for surface flaw and through leak detection. VP-30 has found wide use in the inspection of food and dairy processing equipment such as heat exchanges. Visible penetrants are not rated by sensitivity levels per AMS-2644 but are considered approximate to level 1 fluorescent penetrants. 50µ discontinuities are readily detected and under controlled conditions 30µ size defects may be high lighted by visible penetrants. ISO-3452-2005 does rate visible penetrants by sensitivity level with #2 being the most sensitive. VP-30 is a level 2 per this specifications requirements.

P/N 09-04320 ..... **$9.95**

MET-L-CHEK CLEANER/REMOVER E-59A



E-59A is a class 2 (non-halogenated), Method C inspection penetrant remover. It is designed for use in the solvent wipe technique for penetrant inspection in general metalworking, welding, nuclear and automotive applications. It is a moderate dry rate material and is ideal for penetrant wipe removal and pre-inspection surface cleaning. As a pre-cleaner it is sprayed directly on the test surface. As a penetrant remover it is sprayed onto wiping media and then the penetrant wiped from the surface.The remover should not be sprayed directly on to the test surface to remove the excess penetrant as the sensitivity will be impaired.

P/N 09-04307 ..... **$9.95**

MET-L-CHEK DEVELOPER D-70



D-70 has been used by automotive manufacturers to assist in locating oil and gas leaks in engine components and hydraulic lines. The area of interest is cleaned and the developer applied. The engine is run and the oil leak will appear as a dark spot on the white coating. Reminiscent of the old oil and whiting inspection used by railroads before the advent of modern penetrant inspection materials.

P/N 09-04303 ..... **$9.99**

TO

Prices Subject to Change Without Notice

LEVER TYPE BENDERS



Each tool bends one size. Open side type slips over tube at any point. Makes smooth short-radius bends up to 180° with minimum effort. No marking, scraping or flattening of tubing. Calibrated to show angle of bend. Wide hook grips tube securely. Suitable for bending annealed copper, aluminum, steel, stainless steel and hard copper tubing of bending temper.

Tubing O. D.	Bender Model No.	Part No.	Bending Radius	Price
1/8"	364-FH-02	12-20002	3/8"	**$78.90**
3/16"	364-FH-03	12-20003	7/16"	**$86.95**
1/4"	364-FHA-04	12-20004	9/16"	**$83.75**
5/16"	364-FHA-05	12-20005	11/16"	**$115.90**
3/8"	364-FHA-06	12-20006	15/16"	**$89.85**
1/2"	364-FHA-08	12-20008	1-1/2"	**$116.90**
5/8"	364-FHA-10	12-20010	2-1/4""	**$287.95**
3/4"	364-FHA-12	12-20012	3"	**$324.00**

WIDE RANGE LEVER TYPE BENDERS



Tool quickly adapts to all sizes in its range by changing forming wheel and block. Long handles re-position during bend for best leverage. Calibrations show precise bend angle. Benders for 3/8" through 3/4" O.D. tubes are as illustrated. Benders for 1/4" and 5/16" O.D. tube in #350-FHA kit are one piece type. Kits furnished in steel tool box.

Model 350-FHA Kit- For 1/4",5/16",3/8",1/2",5/8"& 3/4" Tube..... P/N 12-20100..**$698.00**

Model 360-FHA Kit- For 3/8",1/2",5/8"& 3/4"Tube. P/N 12-20200..**$673.00**

TRIPLE HEADER TUBE BENDER



For bending annealed copper, aluminum, brass, steel and stainless steel tubing. Multi-tube design does the work of three conventional lever type benders. Calibrated markings for making accurate left-hand, right-hand and offset bends. (for 1/8", 3/16", 1/4" O.D.)

P/N 12-01577 .....**$33.70**

IMP® TRIPLE HEADER TUBE BENDER



Calibrated markings for making accurate left-handed, right-handed and offset bends. 90° start requires less effort-making bending fast and easy. For 1/4", 5/16", & 3/8" (6 & 8 mm) O.D. tubing. 15/16" radius to center of tube.(for 1/4",5/16",3/8" OD)

P/N 12-01578 .....**$49.60**

BRAIDED STAINLESS STEEL HOSE CUTTER



The AN braided stainless steel hose cutter makes quick work of cutting hoses to length. It features long handles for better leverage and a rubber no-slip grip. It can cut any braided stainless steel line up to size 12 AN. .....P/N 12-02574 .....**$64.90**

SOFT PIPE/TUBING CUTTER



This economical tool will cut soft pipe and tubing up to 1-1/4" outside diameter. The blade is teflon-coated and reverses for double the useful life of the blades. .....P/N 12-20020 .....**$16.85 ea.**

Replacement Blades.....P/N 12-20025 .....**$5.85 ea.**

PLASTIC TUBE SHEAR



Lightweight tubing shear only 3" overall in length, easily cuts all thermoplastic tubing and other types of non-wire reinforced hose.....P/N 12-02580 .....**$11.50**

Pkg' of 5 blades.....P/n 12-02579.....**$21.55**

EZ-BEADER TUBING BEADERS



Compact design. Capable of tubing wall thickness from .035 to .065 thick

Size	Description	Part No.	Price
3/8"	EZ-BEADER TP885A	12-00354	**$59.75**
3/4"	EZ-BEADER TP885D	12-00357	**$78.75**
1-1/4"	EZ-BEADER TP885G	12-00359	**$89.95**
1-1/2"	EZ-BEADER TP885H	12-00360	**$121.75**
1-3/4"	EZ-BEADER TP885I	12-00361	**$121.75**
2"	EZ-BEADER TP885J	12-00362	**$79.75**
Set of all 9	EZ-BEADER Tubing Beader	12-00363	**$407.00**

HI-DUTY TUBE CUTTER



For 1/8" to 1" O.D. metal tubing. Makes clean, right-angle cuts with no burrs or chips to clog tubing. Roller type with flare cut-off groove, fold-away reamer and spare cutting wheel. Wt. 6-1/2 oz.

Hi-Duty Tube Cutter.....P/N 12-00382.....**$38.50**

Replacement Cutter Wheel P/N 75015.....**$8.75**

Replacement Reamer Blade P/N 79318-01.....**$10.95**

"IMP" TUBE CUTTER



Designed for use in tight quarters where other cutters won't fit. For 1/8" to 5/8" O.D. tubing. Requires only 13/16" swing radius. Perfect for instrument panels, control cabinets, machine tools, etc, Size: 111/16"x 1-5/16" x 7/8". Wt. 2-1/2 oz. P/N 12-01277.....**$29.50**

JUNIOR TUBE CUTTER



Exceptionally handy in close quarters - only 3-1/2" overall length. Makes clean, right-angle cuts without flattening tube. Cuts 1/8" to 3/4" O.D. tubing. Enclosed feed mechanism. Wt. 5 oz.

Junior Cutter.....P/N 12-01576.....**$21.90**

Replacement Cutter Wheel P/N 32633.....**$7.85**

MINI TUBING CUTTER



The mini tube cutter's compact design is ideal for tight spots under sinks and behind appliances. It cuts copper, brass and aluminum tubing from 1/8" to 1 1/8".

P/N 15-07093.....**$9.50**

MINI TUBING CUTTER



Performs where conventional tubing cutters simply cannot fit. With a 1-1/2" swing radius, the Mini Cutter is ideal for limited-space applications. Accepts tubing sizes from 1/8" to 7/8" in diameter and up to 1/8" in wall thickness. Capable of cutting through copper, aluminum, brass and thin-wall stainless steel.

P/N 12-03348.....**$8.70**

TUBING CUTTER



Tubing sizes from 1/8" to 1-1/8", and up to 3/16" in thickness. The cutter easily slices through copper, aluminum, brass, stainless steel and other tin-wall tubing. Uses the RW122 cutting wheel. Includes a retractable reamer with dual cutting edges. P/N 12-03347.....**$10.50**

COMPOUND TUBING BENDER



Allows you to make precise left, right and offset bends with a simple, hand-held mechanism. The calibrated angle markings indicate 15 degree increments from 0 to 45 degrees for accurate results. Handles 4 popular tubing sizes and comes in a convenient vinyl storage pouch. P/N 12-03353.....**$26.95**

WEATHERHEAD



T-1295 Heavy Duty Segmented Flaring Tool (37°)

Tool Flares: 1/8", 3/16", 1/4", 5/16", 3/8", and 1/2", O.D. tubing. Forms 37° flares in annealed stainless steel (MIL-T-6845 or AMS-5566), cold drawn stainless steel, and annealed copper, brass, steel or aluminum. Bar has vice extension. Wt.: 3lbs. P/N 12-01166.....**$795.00**

HI-DUTY FLARING TOOL 37°



For: 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing. 437-FB For use with soft copper, aluminum and brass tubing. New slip-on yoke permits use in tight quarters, allows flaring where there is little space between nut and tube end. Wt. 1.75 lbs. P/N 12-01581.....**$104.75**

ROL-AIR FLARING TOOL 37°



Faceted, hard chrome finished cone rolls out perfect flares above die block, then automatically burnishes flare face. Slip-on yoke permits use in tight quarters. Heat treated dies grip tubing without scoring. Flares and burnishes: 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing. Wt. 1-1/2 lbs. Works on some Stainless Steel Tubing but not warranted for Stainless. P/N 12-01582.....**$99.50**

ROLO-FLAIR FLARING TOOL 37°



Operates on same principle as Imperial #507-FA but flares 1/8" (primer line) and 3/4" tubing as well. Size: 4"W x 4"D x 8"H. Wt. 2-1/2 lbs. Excellent tool for bench - not for close-quarter work. Not for use on Stainless Steel Tubing. P/N 12-01575.....**$116.75**

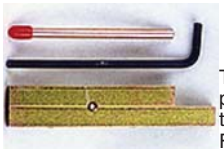
DELUXE 37° FLARING TOOL



Forms 37° flare to AN standards in steel, stainless steel (including MIL-T 6845), titanium, an other metal tubing. Three rollers in flaring cone roll out 37° flare above die block. Extension on yoke for clamping in vise. Furnished in plastic kit. Wt. 2-1/2 lb. P/N 12-01579.....**$448.00**

TO

FLARING TOOLS - BENDERS - RIVET SQUEEZERS



37° FLARING BLOCK FOR 1/8" TUBING

This tool is designed to flare 1/8" tubing for primer lines. Leaves no ridges or marks on tubing, complying with aircraft requirements. Furnished with 37° flaring punch. The slip-on yokes of most flaring tools also fit this block.

P/N 17010 ..... **$29.80**



37° DOUBLE & SINGLE LAP FLARING TOOL

Makes flares to AN standards in soft copper and aluminum tubing for 3/16" 1/2" O.D. Also makes single 37° S.A.E. standard and oversize flares. Double Lap Flare: 1/4", 5/16", 3/8". Single Lap Flare: 3/16", 1/2". Wt. 4 lbs. P/N 12-00205 ..... **$595.00**



37° DOUBLE & SINGLE LAP FLARING TOOL KIT

Forms 37° double lap flares to AN10078 in soft copper and aluminum tubing (wall thickness to .040"). Also includes a tubing cutter, an inner-outer reamer, and a plastic carrying case. Double Lap Flare: 1/4", 5/16", 3/8". Single Lap Flare: 3/16", 1/2". A quality tool kit which is made in the U.S.A.

P/N 12-00210 ..... **$689.00**



FLARING TOOL KIT 402FA

Forms 37° flares aircraft grade stainless steel (MIL-T-6845), titanium, and other metal tubing, both soft and hard. Positive stop gauge assures correct size of flare. The three rollers in the flaring cone roll out 37° flares above the die block while burnishing the flare face to a smooth finish. A built in extension on the yoke can be clamped in a vise for extra support. Satin chrome and black nickel finish. Complete kit includes flaring tool and reaming yoke. P/N 12-02423 ..... **$399.00**

BRAKE LINING & GENERAL RIVET SETS



Standard Model (403)- Designed especially to economically reline brakes, this riveting set is a handy tool for many other jobs where rivets are used to fasten leather, canvas, plastic and metal parts.

P/N 824..... **$28.50**

Brake lining Rivets ..... P/N 06-02300 .. **$0.03ea**

Deluxe Model (404) - Our deluxe model brake relining tool makes it virtually impossible to botch a brake relining job. The threaded screw action of the rivet insertion tool insures a perfect roll on brake rivets every time without damaging the liner.

Standard Model (Not Threaded) .....P/N 824 ..... **$28.50**
Deluxe Model (Threaded).....P/N 12-20810 ..... **$27.85**
Punch Non-Threaded / Brake Relining for model 403
P/N 12-01171 ..... **$3.99**
Anvil Punch / Brake Relining for model 404
P/N 12-01170 ..... **$4.75**
Brake Lining Rivet 4X6.....P/N 06-02300 ..... **$0.03**
BR1007 Rivet Set for Reline .....P/N 12-01173 ..... **$8.85**



PARKER TYPE AIRCRAFT TUBE BEADING TOOL

The Parker Beading Tool has been the number one choice of aircraft mechanics for making clamping beads in metal tubes. To this day, no other tool even comes close to matching its quality. So by special arrangement, the manufacturer tooled up to recreate this classic tool in every detail. In the process they have added a few enhancements of their own, such as ground, hardened, and polished surfaces for mar-free beads in aluminum, copper, brass, and mild steel tubes ranging from 1/4" to 1" diameter. Meets MILSPEC MS33660D and SAE AS5131 standards.

P/N 12-01049..... **$461.00**



PROFESSIONAL RIVETING KIT

This Professional Riveting Kit has all the tools you need to drive rivets like a pro... It contains the best-selling ATS Pro Series 3X Rivet Gun, a selection 4 of our most popular Bucking Bars (141, 142, 148, and 149), plus a complete assortment of Rivet Sets to install Universal Head (AN470) or Flush (AN426) rivets in sizes 3/32" to 3/16".

P/N 12-01698 ..... **$276.95**



IMPERIAL 470-FH TRIPLE HEAD 180° TUBING BENDER

The 470-FH Triple Head 180° Tube Bender bends 4 diameters of tubing with just one tool! It handles soft copper, aluminum and thin-walled steel tubing in 3/16", 1/4", 5/16" & 3/8" diameters. Like the heavy duty 464-FH, it features the patented ROTO-LOK™ two-stage handle that allows east fabrication of bends up to 180°. It also features optimized bending grooves that allow the user to bend the tubing in the smallest radius possible to enable tighter turns and minimize the space taken by the bends. Soft copper - .030-.032" wall. 304 stainless steel - .030-.032" wall. P/N 12-01042 ..... **$49.85**

ATS HAND RIVET SQUEEZER



Has a very solid feel, and professional look that will complement anyone's toobox. Squeezes up to 5/32" aluminum (1/8" seel) rivets. Works with any rivet sets, or diple dies having a 3/16" (.187") shank. Adjustable ram does not need shims. Lifetime warranty. Features:•1.5" Yoke •Drop forged from Stainless Steel for unmatched strength and durability •Clasic bushed stainless steel finish. •Adjustable ram does not need shims •Squeezes aluminum rivets up to 5/32" and steel rivets up to 1/8" •Comfort grip rubber handles •4lbs shipping weight. P/N 12-01620 ..... **$124.85**

PRO HEAVY DUTY RIVET SQUEEZER



3" Reach. 1-1/2"gap height. 3/16" aluminum rivet capacity. 360 degree swivel head locks yoke locks in any position for greater versatility 5/8" adjustable ram eliminates the need for shims. Longer handles for better leverage. 3/16" aluminum (5/32" steel) rivet capacity. 21" overall length. Does not come with squeezer sets.

P/N 12-04961 ..... **$143.85**



RIVET SQUEEZER BENCH UPGRADE KIT

Upgrade kit converts 5011-1 (12-04961) Rivet Squeezers to new bench model. Easy to install. Does not work with older model rivet squeezers.

P/N 12-04962 ..... **$52.75**



PNEUMATIC "C" SQUEEZER KIT

Lightweight and has the same power as the Chicago Pneumatic 214C squeezer on which it is based. It accepts the same yokes and attachments as the 214C squeezer, and is powerful enough to squeeze up to 1/8" solid aluminum, or 3/32" solid steel rivets. Complete kit includes ATS-114C Squeezer with a 1-1/2" yoke (p/n 14-3), a Longeron yoke (14-10), and a 17 piece assortment of squeezer and dimpler snaps. Features: • Compatible with Chicago Pneumatic 214C squeezers • Squeezes up to 1/8" aluminum or steel rivets • Compact only 10" long • Accepts all squeezer and dimpling sets with a .187" shank. P/N 12-03504 ..... **$688.00**

Description	Part No.	Price
Squeezer Yoke 1-1/16"	12-03663	**$68.95**
Yoke, Longeron	12-03664	**$109.75**
Squeezer Yoke 1-3/16"	12-03665	**$69.95**
Squeezer Yoke 1-1/2"	12-03666	**$69.95**
Squeezer Yoke 1-3/4"	12-03667	**$105.95**
Squeezer Yoke 2-1/2"	12-03668	**$125.95**
Squeezer Yoke 2-3/4"	12-03669	**$125.95**
Squeezer Yoke 3"	12-03670	**$135.95**
Squeezer Yoke 3-7/8"	12-03671	**$145.95**
Squeezer Yoke 5-5/8"	12-03672	**$155.95**
Squeezer Set Assortment, 17pc	12-03673	**$119.95**



ATS DELUXE HAND/BENCH RIVET SQUEEZER KIT

The Rivet Squeezer Kit is designed to take on any riveting task. It contains the new ATS Heavy Duty Rivet Squeezer, a Bench Mount Kit, plus and extra 1-1/2" yoke head to reach into tight areas. You'll also get a complete set of squeezers and dimple dies in a convenient holder. Ats Pro Lifetime warranty. 14 lbs (6.5Kg) shipping weight.

P/N 12-02406 ..... **$350.00**

TO

RIVET SQUEEZERS – RIVET SETS



HANDI-CLAMPS

Handi-Clamps are a specially designed tool for clamping various types of surfaces, shapes and thicknesses. Ideal for holding light plastics, wood, sheet metal and other materials temporarily. The clamping cap is 0-5/16"

TP640HC - 1" Jaw Depth ..... P/N 12-02305 ..... **$1.95**
TP641HC - 1-1/2" Jaw Depth ..... P/N 12-02306 ..... **$1.95**

SIDE GRIP CLAMPS



Side-Grip clamps are designed to clamp at the edge of the work area. Ideal for holding work pieces of all types, particularly during bonding, sealing or gluing operations. Plier-operated. Spring loaded. Constant clamping force. Color-coded for easy identification. Use TP74 or US902 installation tool. Made in the USA

Part No.	Clamping CAP (GAP)	EFF. Body Depth (Reach)	Body Length	Price
12-01161	0-1/2"	1/2"	2-3/16"	**$1.95**
12-01162	0-3/4"	1/2"	2-7/16"	**$3.40**
12-01143	0-1/2"	1"	2-3/16"	**$2.25**
12-02643	0-3/4"	1"	2-7/16"	**$3.70**



AT-114C3 QUICK-CHANGE RETAINER SPRING

Makes possible the changing of rivet sets without removal of retainer spring. For .402" shank dia. rivet sets. P/N 12-01079 ..... **$4.65/ea.**



AT 107A FLUSH RIVET SETS

Large radii at critical points to prevent breakage. Slightly crowned, highly polished face designed for rapid flush riveting where a smooth skin surface is essential. Shank dia. .401".

Part No.	Face Dia.	Length	Price
AT-107A-1	1"	2-3/4"	**$26.50**
AT-107A-3	1-1/4"	3-3/4"	**$30.75**



AT 100A STRAIGHT RIVET SETS

Cup surfaces are highly polished and guaranteed to conform with rivet heads. Carried in stock in AN470 (MS20470) universal-head cup shape. Overall length, 3-1/2", .401" dia. centerless-ground shank.

AT-100A-3-3/32 ..... 3/32" **$8.50**
AT-100A-3-1/8 ..... 1/8" **$7.80**
AT-100A-3-5/32 ..... 5/32" **$8.75**
AT-100A-3-3/16 ..... 3/16" **$10.85**



AT 101A OFFSET RIVET SETS

Same tool as AT100A but has 10° bend 1" back from the cup to allow added clearance. Permits easier riveting where obstructions are encountered.

AT-101A-3-3/32 ..... 3/32" **$9.50**
AT-101A-3-1/8 ..... 1/8" **$9.50**
AT-101A-3-5/32 ..... 5/32" **$8.35**
AT-101A-3-3/16 ..... 3/16" **$13.50**



TATCO HAND RIVET SQUEEZER

This tool was designed and built as a portable low cost solution for both small and large aerospace applications. It is made of aerospace grade stainless steel and heat treated on all wear and deflecting components to 38/42 on the Rockwell Hardness Scale. A large variety of interchangeable yokes are available with ranges from as small as 1.00" to 6.00" reach. It has proven itself over the years as a portable rugged solution, for light to medium duty, rivet squeezing applications.

Model	Dimensions	Part No.	Price
THS-10	1-1/4" Gap x 1" Reach	12-03674	**$155.75**
THS-15	1-1/4" Gap x 1-1/2" Reach	12-00300	**$143.50**
THS-20	1-1/4" Gap x 2" Reach	12-03675	**$176.75**
THS-22	2" Gap x 2" Reach	12-03676	**$203.95**
THS-25	1-1/4" Gap x 2-1/2" Reach	12-03677	**$195.75**
THS-30	1-1/4" Gap x 3" Reach	12-03678	**$199.85**
THS-35	1-1/4" Gap x 3-1/2" Reach	12-03679	**$224.95**
THS-40	1-1/4" Gap x 4" Reach	12-03680	**$247.95**
THS-50	1-1/4" Gap x 5" Reach	12-03681	**$294.95**
THS-60	1-1/4" Gap x 6" Reach	12-03682	**$299.95**
THS-100	1" Gap x 2" Reach	12-03683	**$193.75**
THS-101	1-1/4" Gap x 1-1/2" Reach	12-03684	**$193.75**
THS-102	1-1/4" Gap x 1-1/2" Reach	12-03685	**$193.75**

TATCO SQUEEZER YOKES FOR RIVET SQUEEZER

Model	Description	Part No.	Price	Model	Description	Part No.	Price
THY-10	1" Yoke	12-00308	**$56.75**	THY-40	4" Yoke	12-00322	**$112.95**
THY-15	1.5" Yoke	12-00309	**$56.85**	THY-50	5" Yoke	12-00323	**$158.75**
THY-20	2" Yoke	12-00310	**$69.75**	THY-60	6" Yoke	12-00324	**$174.75**
THY-22	2" x 2" Yoke	12-00315	**$84.75**	THY-100	1" x 2" Yoke	12-03688	**$64.00**
THY-25	2.5" Yoke	12-00318	**$76.75**	THY-101	No Set Hole	12-03689	**$74.90**
THY-30	3" Yoke	12-00320	**$84.75**	THY-102	Special Yoke	12-03690	**$74.90**
THY-35	3.5" Yoke	12-00321	**$99.90**	THY-103	Special Yoke	12-03691	**$74.90**
				THY-30M	Mod. Yoke	12-03692	**$171.00**

SWIVEL HAND RIVET SQUEEZER



This tool incorporates a 3/8" stroke and 5/8" ram adjustment. The full 360° yoke can be locked in any position in relation to the handles. Uses standard squeezer sets with 3/16" shank diameter. Yoke depth: 1-1/2".

Model AT502AH-D.....P/N 12-00400 ..... **$347.00**

INSTRUCTIONS FOR SELECTING RIVET SETS

To develop maximum power, the riveter must drive the rivet near the end of the riveter's stroke. For maximum power the combined length of the two rivet sets must be of the correct length. Determine the correct length as follows:

WHEN TWO CUPPED RIVET SETS ARE USED – The sum of the two rivet sets "L" dimension should equal the closed height dimension of the yoke minus the total thickness of the material being used.

WHEN TWO FLUSH SETS ARE USED – The sum of the two rivet sets "L" dimension should equal the closed height dimension of the yoke minus the overall length of the rivet after it is driven.

WHEN ONE CUPPED SET & ONE FLUSH SET ARE USED – The sum of the two rivet sets "L" dimension should equal the closed height dimension of the yoke minus the total thickness of the material being riveted and the height of the finished rivet head driven by the flush set. If necessary, select rivet sets a little short and shim to proper length with hardened shims listed in the table. The closed height dimension of the yoke referred to above is the opening available when jaws of plunger are in extreme closed or forward position with both rivet sets in place.

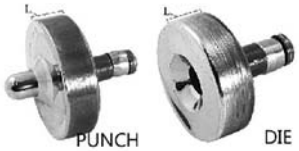


RIVET SETS FOR SQUEEZER

Assorted Squeezer Set. 5-piece, consisting of rivet sets for 3/32,1/8 and 5/32" AN470 rivets, and one flat set. Shank dia. 3/16".

P/N 26-5 ..... **$31.75**

DIMPLING SETS FOR SQUEEZER



When ordering, specify: Basic Part No. - Rivet Size No. - Body Length, Letter. PN PER SET 1 PUNCH 1 DIE

FASTENER AN 426 RIVET

SIZE	3/32	1/8	5/32	3/16
DASH NO.	-3	-4	-5	-6
BODY LENGTH	1/4	3/8	1/2	
AFTER DASH NO.	-P	-R	-S	

Part No.	Price
207/206-3-P	**$39.95**
207/206-3-R	**$39.95**
207/206-3-S	**$39.95**
207/206-4-P	**$39.95**
207/206-4-R	**$39.95**
207/206-4-S	**$39.95**
207/206-5-P	**$39.95**
207/206-5-R	**$39.95**
207/206-5-S	**$30.80**
207/206-6-P	**$17.85**
207/206-6-R	**$39.95**
207/206-6-S	**$31.85**



INDIVIDUAL CUPPED SQUEEZER SETS

Rivet Diameter	Body Length ("L" Dim.)	Part Number	Price
3/32"	3/8	AT108AR-3/32	**$9.80**
3/32"	1/4	12-01661	**$10.50**
3/32"	1/8	AT108AN-3/32	**$6.50**
3/32"	1/2	AT108S-3/32	**$10.50**
1/8"	1/8	AT108AN-1/8	**$7.50**
1/8"	1/4	12-01660	**$9.80**
1/8"	1/2	AT108S-1/8	**$10.50**
1/8"	3/8	AT108AR-1/8	**$9.80**
3/16"	1/4	12-02680	**$9.50**
3/16"	1/2	AT108S-3/16	**$9.80**
3/16"	3/8	AT108AR-3/16	**$9.80**
3/16"	1/8	AT108AN-3/16	**$7.70**
5/32"	1/4	12-01662	**$10.50**
5/32"	3/8	AT108AR-5/32	**$9.80**
5/32"	1/8	AT108AN-5/32	**$9.80**
5/32"	1/2	AT108S-5/32	**$9.80**



FLUSH RIVET SETS

Body Length ("L" Dim.)	Part No.	Price
1/8"	AT109AN	**$7.75**
1/4"	AT109AP	**$6.50**
3/8"	AT109AR	**$7.50**
1/2"	AT109AS	**$7.80**

TO

COUNTERSINK CUTTERS



ATS ADJUSTABLE SQUEEZER RAM

Adjustable ram eliminates the need for shims. Simply rotate the set holder until the desired clearance is reached and begin riveting. Made of hardened high strength steel and polished to minimize surface wear.

P/N 12-04968.....**$55.95**



MICROSTOP COUNTERSINK CUTTER KIT AT590CSK

This kit provides countersinking versatility with nine different 1/2" diameter cutters, six of the most commonly used foot pieces, and a high-speed bearing-constructed microstop. The microstop controls cutting depth in .001 increments, from 0 to 5/16". Cutters-ground on-centers to ensure concentricity-are 100°, with pilot diameters #40, #30, #21, 3/32", 1/8", 3/16", and 1/4".

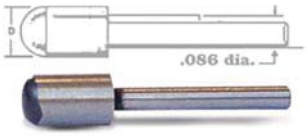
P/N 12-00824.....**$264.95**



100° AT455 COUNTERSINK CUTTER

Designed for operating in angle drills with 1/4-28 threads and in the AT441SLS Micro Stop Countersink. Has 1/4-28 threaded shank. Cutter angle 100°. AT455D-4 has 7/16" dia. cutter head. Use with AT484 pilots.

P/N AT455D-4 ....**$19.95**



AT484 PILOTS

AT484 replaceable pilots have a .086" dia. shank with a flat to accommodate the set screw of the AT455 cutter. An undercut permits the head to seat on the cutter angle. Order by P/N.....**$12.85 ea.**

Part No.	Head Dia. "D"	Part No.	Head Dia. "D"
AT484-2	#40	AT484-56	3/32
AT484-12	#30	AT484-57	1/8
AT484-21	#21	AT484-59	5/32
AT484-31	#11	AT484-61	3/16
AT484-32	#10	AT484-63	7/32



AT441 HSS MICROSTOP COUNTERSINK

AT441 HS Micro Stop Countersink, similar to the AT442SLS unit, except with 1/4-28 female threaded nose to accommodate AT455 cutter. P/N 12-01591.....**$27.90**



FLUSH RIVET SET WITH RUBBER RING

Features a rubber ring around the face to reduce slippage and to prevent damage to aircraft skin. Face Diameter: 1 1/4". Shank: 0.401.

Rivet Set..... P/N 12-03361...**$16.50**

Replacement Rubber Ring.. P/N 12-03362.....**$4.35**



MICRO-STOP COUNTERSINK CAGES AND NYLONFOOT PIECE

2 Models available-one with NEEDLE bearing and one with BRONZE bushings. .001" increment depth adjustment. Positive adjustment lock. 1/4" dia. shank. 9/32" shaft travel. 9/16" cutter capacity. For 1/4-28 threaded cutters. Comes with "NO-MAR" foot piece. Rated at 3,000 RPM. Made in USA.

With Bronze Bushings

P/N 12-01412 .....**$36.50**

With Needle Bearings

P/N 12-00940 .....**$44.90**



DIE GRINDER MANDREL

Die Grinder Arbor (Mandrel). Holds your cutoff wheels. It has a 1/4" shank for use in most drills and die grinders. Can accomadate either 1/4" or 3/8" cut-off wheel through hole sizes.

P/N 12-02924.....**$4.95**

AT 409 SERIES STRAIGHT SHANK COUNTERSINK WITH INTERCHANGEABLE CUTTERS AND PILOTS



Assembly, consists of AT418E (1/2") cutter, AT416 pilot and AT409-1, 1/4" straight-shank. Has a collet-type shaft to securely hold the replaceable pilot.

When ordering specify: Part number of cutter and pilot dia.

Assembly Example: AT409 with 100° cutter A418E & 1/8 pilot.

.....(AT416-57) ..... Adapter only

P/N AT409-1.....**$18.50**

AT418 STOP COUNTERSINK CUTTERS



Three-straight flute replaceable pilot cutters with female thread. These cutters are designed with extra deep flute to permit numerous resharpenings and radial clearance to assure fast smooth cutting.

For Replaceable Pilots Refer to AT416 Series.Used With AT418

Part No.	Cutter Dia.	Thread Size	Pilot Hole	Price
AT418A-4	1/4"	1/4 - 28	.086	**$30.50**
AT418D-4	7/16"	1/4 - 28	.086	**$36.85**
AT418E-4	1/2"	1/4 - 28	.086	**$26.60**

120° AT418 COUNTERSINK CUTTER

Same type cutter as described above except with 120° Cutter Angle. 7/16" Cutter Diameter. P/N AT418D-7.....**$43.80**

AT416 PILOTS

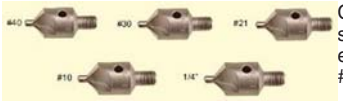


Fit AT418 cutters. Undercut permits head to seat on cutter angle. Order by Part No. in table below.

Order by part Number. ..... **$12.99 Ea.**

Part No.	Head Dia. "D"	Part No.	Head Dia. "D"
AT416-2	#40	AT416-56	3/32
AT416-12	#30	AT416-57	1/8
AT416-21	#21	AT416-59	5/32
AT416-31	#11	AT416-61	3/16
AT416-32	#10	AT416-63	7/32
		AT416-65	1/4

COUNTERSINK SETS



Countersinks made of high-speed steel, 3-fluted and 14" - 28 threaded. Set includes #40, #30, #21, #10, and 1/4".

Countersink 82 degree 5 pc. set..... P/N 12-02883.....**$42.95**

Countersink 120 degree 5 pc. set..... P/N 12-02884.....**$42.95**

PANEL DIMPLING TOOL (C-SPEC 2700)



This panel dimpling tool is used for dimpling thin sheet metal panels to accept the 2700 Series C-Spec Fasteners. It can also be used to dimple panels to accept FJ4 Series Flush-Head Z-Spec Fasteners. This tool is made from premium tool steel and is bright Zinc plated. ..... P/N 12-02855.....**$23.65**

PANEL DIMPLING TOOL (C-SPEC 4000)



This panel dimpling tool is used for dimpling thin sheet metal panels to accept the 4000 Series Flush-Head C-Spec Grommets. This tool is made from premium tool steel and is bright Zinc plated.

P/N 12-02856.....**$23.65**

SNAP SOC RIVET SET CAPS



Insert these caps onto the ends of your rivet sets to provide a protective zone between the rivet set and the rivet. Helps to prevent against damage to the rivet or adjoining aircraft skin. Color coded for easy use. Each cap lasts for approximately 50-70 rivets. **Note: Rivet Set pictured is not included.**

Color	Size	Part No.	Price
White	3/32"	12-03363	**$17.50**
Orange	1/8"	12-03364	**$16.85**
Green	5/32"	12-03365	**$17.50**
Yellow	3/16"	12-03366	**$17.50**
Blue	1/4"	12-03367	**$17.50**

TO

HAND SEAMER



Handy tools for comparatively light work. Wide, deep jaws machined for smooth parallel fit. Form precise folds and seams. Strong, lasting drop-forged steel construction. No. 44 has plain 3 1/2" wide blades. No. 44r is similar with a radius to prevent tearing of aluminum and other light metals. No. 793 has a 3 1/2" wide blade with adjustable depth gauge.

P/N 12-00620 .....**$58.90**

HAND SEAMER



Makes permanent, tight fitting seams. Strong, lasting construction. Jaw Size: 1" D x 3-1/2" W. Overall Length: 8" (203 mm). Weight: 1.1 lbs (0.5 kgs)

P/N 12-03751 .....**$21.75**

ROPER-WHITNEY METAL CRIMPER



Handy crimping tool to disperse excess metal. Depth of throat 1-1/8". Overall length 9". Wt. 1 lb.

P/N 111 .....**$79.95**

ROPER-WHITNEY NOTCHER



Designed for fast, accurate 32° notch in sheet metal. Hook design of jaws permits notching to exact desired depth without slippage. Spring-return jaws. Capacity 20 ga. Wt. 1 lb.

P/N 141 .....**$88.95**

FLUTING PLIERS



These aircraft-type fluting pliers are a drop-forged quality tool. Non-marring working surfaces of jaws specifically designed for use on aircraft components. Comfort grip handles.

P/N 12-00500 .....**$15.75**

HOLE FLANGING TOOL



A real time saver for flanging lightening holes. Non-marring. Easy to use. Nylon rollers and ball bearings assure long life. P/N 12-00600.....**$22.50**

PRO PNEUMATIC C DOUBLE FORCE SQUEEZER



The ATS Tandem C-Squeezer incorporates two pistons to deliver twice the force of a standard squeezer at the same air pressure. Its lightweight, compact, and efficient design is modeled after the industry standard Chicago Pneumatic 0214-C squeezer. The parts are completely interchangeable, and it will accept any jaws and accessories compatible with the 0214-C. With enough force to squeeze up to 3/16" solid aluminum, or 5/32" mild steel rivets, this riveter will easily fit most of your riveting needs without breaking your budget.

P/N 12-04980.....**$643.97**

ROPER-WHITNEY METAL PUNCH



#5 JR. HAND PUNCH – with one ton punching power. Punches 1/4" hole through 16 Ga. mild steel. Throat clearance 1-3/4". Complete set in metal box with 3/32, 1/8, 5/32, 3/16, 7/32, 1/4 and 9/32" punches & dies. Wt. 4-1/4 lbs.

P/N 12-01600 .....**$87.85**



BENCH MOUNT BASE – for stationary use. Base swivels to any position. Punch is held by L-shaped clamp rod through a 7/16" or larger hole in bench.

P/N 12-01700 .....**$37.95**



STRAIGHT PUNCH & DIE SETS – for No. 5 Jr. punch in the seven sizes shown below.

3/32"	#12-01800	7/32"	#12-02200
1/8"	#12-01900	1/4"	#12-02300
5/32"	#12-02000	9/32"	#12-02400
3/16"	#12-02100	Each Size	**$19.50/set**

ECONOMY MODEL BENDING BRAKE



For bending and forming. Makes clean, smooth bends and forms up to 90° in metals. 18" & 30" handle up to 16GA aluminum. 40" handles is up to 20GA sheet metal, 18GA aluminum. All include brake bars. Clamps not included. Made in USA. Up to 30" width stock

P/N 12-02810 .....**$109.75**

ORIGINAL LANCASTER PORTO-METAL FORMER



The Porto-Metal Former makes the specialty angle needed in minutes. Can be used on the work bench or in a vise to make inside angles, outside angles, straight bends - even circles, to a radius as small as 3". Jaws are made of hardened alloy steel. Works 18 gauge soft steel, 20 gauge stainless, 16 gauge aluminum up to 2" in width. 45 to 1 leverage for powerful press. Special malleable iron body will not break as we have found with cheaper imitations. Order #LSH-71 metal shrinker for inside angles. Order #LST-82 stretcher for outside angles. Wt. 12 lbs. each.

#LSH-71 Shrinker.....P/N 12-19800 .....**$199.95**
#LST-82 Stretcher.....P/N 12-19900 .....**$199.95**
Combination Shrinker/Stretcher Tool.....P/N 12-02950 .....**$262.95**

Either unit can be converted into its opposite by ordering complete conversion kit, includes jaws, blocks & wire.

TO

CHERRY RIVET TOOLS

HYDRO-SHIFT CHERRYLOCK® RIVETER



Specifically for the installation of all CherryLOCK® Rivets. Recommended primarily for 1/4" diameter CherryLOCK® rivets. It can be used to install all diameters and lengths as indicated on the tool capacity charts. Low recoil, low noise and a comfortable fit in the operator's hand. It can be operated in any posi-tion with one hand. The H681 Series pulling heads fit directly on this tool to install both bulbed and standard NAS type 2000 Series CherryLOCK® Rivets. With the proper adapters and pull-ing heads, this tool can install other types of rivets.

P/N 12-02983.....**$11,549.00**

LOCKBOLT POWER RIVETER G84



For high speed, reliable installation of the most popular sizes of aircraft Lockbolts. Incorporates a bayonet attachment for quick change of pulling heads. This tool can also be used to install blind bolts and blind rivets. A comfortable grip for one handed operation in any position. Compatible with Huck 352 & 230 riveter pulling heads.

P/N 12-03011.....**$1,697.00**

LOCKBOLT POWER RIVETER TOOL KIT G84LBK



Installs: 5/32", 3/16" & 1/4" NAS Style. LockBolt **Includes**: G84 LockBolt Power Riveter - Stroke: 9/16", Pulling Force: 5, 750 lbs (2,608 kgs), Weight: 7.7 lbs (3.5 kgs). H513-08-35 Pulling Head. H513S-05-20 Pulling Head Cherry 5/32" D LockBolt. H513S-06-20 Pulling Head MaxiBolt 3/16" LockBolt. P1395 Molded Carrying Case. 269C5 Grip Gauge LockBolt. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. All Necessary Manuals.

P/N 12-03013.....**$4,540.00**

CHERRY RIVETER SERVICE KIT G84KS



All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G84.

P/N 12-03012.....**$164.75**

LIGHTWEIGHT LOCKBOLT RIVETER TOOL KIT G83AKT



Installs: 5/32" & 3/16" MS Blind Bolt & LockBOLT, 1/8", 5/32" & 3/16" Cherry MAX **Includes**: G83 Lightweight LockBolt Hand Riveter - Stroke: 7/16", Pulling Force: 3, 750 lbs (1, 701 kgs), Weight: 4.95 lbs (2.3 kgs). H513S-05-20 Pulling Head Cherry 5/32" D LockBolt. H513S-06-20 Pulling Head 3/16" LockBolt. H701B-456 Pulling Head Straight 3/4" x 1 3/4". H753A-4562 CherryMAX Pulling Heads RT Angle 2 1/4" x 5 7/16" x 3/8". H781-456 Cherry Pulling Head Offet 1/8"-5/32"-3/16". H83B-5MB Pulling Head MaxiBolt 5/32"D. H83B-6MB Pulling Head MaxiBolt 3/16" D G83/G84. P1393 Plastic Box. 269B12 Maxibolt Gauge. 269C3 CherryMAX Grip Gauge. 269C5 Grip Gauge LockBolt. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. 744-300 Adapter. All Necessary Manuals

P/N 12-03008.....**$5,278.00**

LIGHTWEIGHT LOCKBOLT RIVETER TOOL KIT G83BKT



Installs: 5/32" & 3/16" MS Blind Bolt & NAS Style LockBolt Includes: G83 Lightweight LockBolt Hand Riveter - Stroke: 7/16", Pulling Force: 3, 750 lbs (1, 701 kgs), Weight: 4.95 lbs (2.3 kgs). H513S-05-20 Pulling Head Cherry 5/32" D LockBolt. H513S-06-20 Pulling Head 3/16" LockBolt. H83B-5MB Pulling Head MaxiBolt 5/32"D. H83B-6MB Pulling Head MaxiBolt 3/16" D G83/G84. P1393 Plastic Box. 269B12 Maxibolt Gauge. 269C5 Grip Gauge LockBolt. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. All Necessary Manuals.

P/N 12-03009.....**$5,396.00**

CHERRY RIVETER SERVICE KIT G83KS



All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G83.

P/N 12-03010.....**$211.95**

LIGHTWEIGHT LOCKBOLT RIVETER G83



Designed for high speed, reliable installation of the most popular sizes of aircraft Lockbolts. By bending the rubber pin deflector sideways, 1-1/2" additional clearance can be obtained. This tool can also be used to install blind bolts and blind rivets. A comfortable grip for one handed operation in any position. Compatible with Huck 352 & 230 riveter pulling heads. Stroke: 7/16". Pulling Force: 3, 750 lbs (1, 701 kgs). Weight: 4.95 lbs (2.3 kgs).

P/N 12-03007.....**$1,439.00**

CHERRY RIVETER SERVICE KIT G800KS



All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G800.

P/N 12-03006.....**$149.75**

CHERRYMAX HYDRAULIC HAND RIVETER G800



The G800 is an ergonomic, lightweight hand powered riveter capable of installing a wide variety of blind fasteners. The all metal design makes this compact and robust tool ideal for use in rugged shop environments or field repair. Exceptional power with low hand effort for increased productivity. Mounting system (same as G704B) compatible with popular pulling heads including H782, H781-456& H753A-456. Leak-proof design with advanced seals & built-in redundancies. Ergo design with internal shock absorber & cushioned handle. Adjustable lever easily accommodates different hand sizes. Stroke: 3/4". Pulling Force: Up to 6000 lbs. Weight: 1.7 lbs (0.8 kgs).

P/N 12-03004 .....**$919.00**

CHERRYMAX HYDRAULIC HAND RIVETER KIT G800CMR



G800CRM CherryMAX Hydraulic Hand Riveter Kit Includes: G800 CherryMAX Hydraulic Hand Riveter - Stroke 3/4", Pulling Force up to 6000 lbs, Weight 1.7 lbs. H781-456 Pulling Heads. H753A-456 Pulling Heads. 269C5 Grip Selector Gauge. 269B12 Grip Selector Gauge. Molded Plastic Case. All Necessary Manuals (except -6 all aluminum)

P/N 12-03005 .....**$2,748.00**

CHERRY RIVETER SERVICE KIT G784KS



All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G784.

P/N 12-03002.....**$348.00**

NUT-PLATE RIVETER G702A



The G702A is a pneumatic-hydraulic tool designed specifically for installation of nut plate rivets. Its dura-ble, all metal housing makes this tool ideal for use in rugged shop environments. The H702-3NPR pulling head fits directly on the tool to install -3, -4, 2.5 mm & 3mm nut plate rivets. 10° angled head allows user to work using a natural hand position. A comfortable grip for one handed operation in any position. Air Pressure: 90 PSI (6.2 bar) min./110 PSI (7.6 bar) max. Cycle Time: approximately one second. Noise Level: 71 dB (A). Vibration: less than 2.5 m/s2. Air Consumption: .09 SCF / cycle (2.55 L / cycle). Stroke: 3/4". Pulling Force: 1,100 lbs (499 kgs). Weight: 3.5 lbs.

P/N 12-02985.....**$1,329.00**

CHERRYLOCK POWER RIVETER KIT G784CLRB



Includes: G784 Cherry Universal Power Riveter 12" High, 8 lbs., 15/16" Stroke. P1395 Molded Carrying Case. TLC852 CherryLock Selector Card. TLC864 CherryLock Process Manual. 269C3 CherryMAX Grip Gauge. 700A77 Bleeder Bottle. Note: No Pulling Heads Included.

P/N 12-03001.....**$3,395.00**

CHERRYLOCK POWER RIVETER G784



Installation of CherryLOCK rivets. Will install nearly all diameters of CherryLOCK rivets up to a half-inch grip, 'A' group only. With proper adapters & pulling heads this tool can be used to install other types of rivets. A com-fortable grip for one handed operation in any position. Pulling heads not included with riveter. Air Pressure: 90 PSI (6.2 bar) min./110 PSI (7.6 bar) max. Noise Level: 69.7 dB (A). Vibration: less than 2.5 m/s2. Air Consumption: .27 SCF / cycle (7.65 L / cycle). Stroke: 7/8". Pulling Force: 2,600 lbs (1, 179 kgs). Weight: 8 lbs (3.6 kgs)

P/N 12-02998.....**$3,279.00**

POWER RIVETER G747



Installation of CherryMAX and nut plate rivets. This tool utilizes straight, offset and right angle pulling heads, all of which can install -4, -5 and -6 diameter CherryMAX bulb type rivets in all head styles, materials and grip lengths. Extensions are available for extending the pulling heads to reach limited access areas. 10° angled head allows user to work using a natural hand position. A comfort-able grip for one handed operation in any position. Same weight as the G702A, with the power of much larger tools.

P/N 12-02995.....**$889.00**

TO

CHERRY RIVET TOOLS



CHERRYLOCK POWER RIVETER KIT G784CLRA

Installs: 1/8" to 3/16", NAS 1398/9. Type & Cherry Lock. **Includes**: G784 Cherry Universal Power Riveter 12" High, 8 lbs., 15/16" Stroke. H681-4C CherryLock H681Pulling Heads Dia. 1/8" Dim. A=.208 B=.341. H681-5C CherryLock Pulling Head 5/32" D. H681-6C CherryLock H681 Pulling Heads Dia. 3/16" Dim. A=.335 B=.386. P1395 Molded Carrying Case. TLC852 CherryLock Selector Card. TLC864 CherryLock Process Manual. 269C3 CherryMAX Grip Gauge. 700A77 Bleeder Bottle.

P/N 12-02999.....**$4,439.00**



CHERRY RIVETER SERVICE KIT G747KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G747.

P/N 12-02996.....**$187.75**



CHERRY RIVETER SERVICE KIT G746KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G746A.

P/N 12-02994.....**$227.95**



CHERRY RIVETER SERVICE KIT G704KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G704B.

P/N 12-02990.....**$192.75**



CHERRY RIVETER SERVICE KIT G689KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G689.

P/N 12-02984.....**$333.00**



BLIND BOLT RIVETER TOOL KIT G84-MBK

Installs: 5/32", 3/16" & 1/4" MS Blind Bolt
Includes: • G84 Power Riveter Cherry- Stroke: 9/16", Pulling Force: 5, 750 lbs (2,608 kgs), Weight: 7.7 lbs (3.5 kgs) • H83B-5MB Pulling Head MaxiBolt 5/32" D • H83B-6MB Pulling Head MaxiBolt 3/16" D G83/G84 • H84A-8MB Pulling Head MaxiBolt 1/4" D G84 • P1395 Molded Carrying Case • TLC872 Cherry Maxibolt Card • 269B12 Maxibolt Gauge • 670A20 Stem Catcher Bag • 700A77 Bleeder Bottle P/N 12-03015 .....**$3,535.00**

CHERRYMAX POWER RIVETER KIT G747CMR



Installs: NAS 9301 to 9312 (1/8" to 3/16"). MS90353/4. MS21140/1. TAF "S" TYPE (1/8" & 5/32"). MS20604/5 (3/32"). **Includes**: G747 Cherry Lightweight - Installs CherryMAX Rivets. H701B-456 Pulling Head Straight 3/4" x 1-3/4". H747-3NPR Pulling Head. H753A-456 CherryMAX Pulling Heads RT Angle 2-1/4"X5-7/16"X3/8". H781-456 Cherry Pulling Head Offet 1/8"-5/32"-3/16". P1393 Plastic Box. 269C3 CherryMAX Grip Gauge. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. All Necessary Manuals. P/N 12-02997 .....**$2,435.00**

CHERRY POWER RIVETER KIT G746ACMRB



Installs: -4, -5, -6 CherryMAX. **Includes**: G746A Power Riveter Cherry 1/8",5/32",3/16" "A" Rivets. H701B-456 Pulling Head Straight 3/4" x 1-3/4". H753A-456 CherryMAX Pulling Heads RT Angle 2-1/4"X5-7/16"X3/8". H781-456 Cherry Pulling Head Offet 1/8"-5/32"-3/16". P1393 Plastic Box. 269C3 CherryMAX Grip Gauge. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. All Necessary Manuals. P/N 12-02992.....**$3,445.00**



CHERRYLOCK POWER RIVETER KIT G746ACMRW

Installs: SST & -3, -4, -5, -6. CherryLock 'A'. **Includes**: G746A Power Riveter Cherry 1/8",5/32",3/16" "A" Rivets. H955-3 Pulling Head. H955-4 Pulling Head H955-5 Pulling Head. H955-6 Pulling Head. P1393 Plastic Box. 269C3 CherryMAX Grip Gauge. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. All Necessary Manuals. P/N 12-02993.....**$3,534.00**

CHERRY POWER RIVETER KIT G704BCMR



Installs -4, -5, -6 CherryMax. **Includes**: 6704B Power Riverter - Cap = 1/8-3/16" Wt. = 4 1/2 lbs. H701B-456 Pulling Head Straight 3/4" x 1-3/4". H753A-456 CherryMAX Pulling Heads RT Angle 2-1/4"X5-7/16"X3/8". H781-456 Cherry Pulling Head Offet 1/8"-5/32"-3/16". P1393 Plastic Box. TLC816 CherryMAX Process Manual. TLC865 CherryMAX Selector Guard. 269C3 CherryMAX Grip Gauge. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle.

P/N 12-02988 .....**$3,285.00**



CHERRY HAND NIPPER

Used for flush trimming Cherry rivets.

P/N 12-02977.....**$44.55**



GRIP GAUGE LOCKBOLT

Cherry Grip Gauge Lockbolt. Material thickness & grip.

P/N 12-02979.....**$21.65**



MAXIBOLT GRIP GAUGE 269B12

Cherry Maxibolt Grip Gauge 269B12.

P/N 12-02978.....**$12.50**



CHERRYMAX GRIP GAUGE

Rivet Grip & Diameter Gauge.

P/N 12-00217.....**$8.65**



POWER RIVETER G746A

Pneumatic-hydraulic tool designed specifically for installation of CherryMAX Bulb, CherryMAX 'AB' wiredraw and CherryLOCK 'A' wiredraw rivets. Ideal for use in rugged shop environments. This tool utilizes straight, offset and right angle pulling heads. A comfortable grip for one handed operation in any position. Stroke: .875". Pulling Force: 1,850 lbs (839 kgs). Weight: 4.25 lbs (1.9 kgs). P/N 12-02991.....**$864.00**



G84-LS SPLIT POWER RIVETER

Designed for high-speed, reliable installation of the most popular sizes of blind rivets, lockbolts and blind bolts. Fastener installation in many limited access areas and also reduces operator fatigue. This tool installs all Lockbolt, blind bolts and blind rivets to 1/4" diameter, as well as Cherry rivetless nut plate in all sizes. Stroke: 0.53". Pulling Force: 5700 lbs (2608 kgs). Weight: 11.8 lbs (5.4 kgs). P/N 12-03014.....**$4,665.00**



LOCKBOLT HEAVY-DUTY POWER RIVETER G87D

Heavy-duty production tool designed for high speed, reliable installation of the most popular sizes of aircraft Lockbolts. Ideal for use in rugged shop environments. By bending the rubber pin deflector sideways, 1-1/2" additional clearance can be obtained. This tool can also be used to install blind bolts and blind rivets. Stroke: 9/16". Pulling Force: 9,500 lbs (4,309 kgs). Weight: 10.75 lbs (4.9 kgs) P/N 12-03016.....**$3,878.00**



SPLIT POWER RIVETER G704B-40SH

Installation of CherryMAX rivets in applications with extremely limited access. Equipped with an 8 foot hose. Pulling heads not included with riveter. Hose Length: 8'. Stroke: .518". Pulling Force: 3136 lbs (1423 kgs). Weight: 4.5 lbs (2.0 kgs) (power unit only) P/N 12-02987.....**$1,995.00**



SPLIT POWER RIVETER G704B-SR

Designed specifically for the installation of CherryMAX rivets in applications with extremely limited access. Equipped with an 3 foot hose. Pulling heads not included with riveter. Hose Length: 3'. Stroke: .518". Pulling Force: 3136 lbs (1423 kgs). Weight: 4.5 lbs (power unit only).

P/N 12-02989.....**$1,699.00**



NUT-PLATE RIVETER G902 (FEED THROUGH)

All-pneumatic tool designed specifically for installation of nut plate rivets. This tool utilizes straight pulling heads which can install 3/32" and 1/8" pull-through type nut plate rivets and 3/32" CherryLOCK 'A' rivets. Stroke: 3/4". Pulling Force: 550 lbs (250 kgs). Weight: 2 lbs (0.9 kgs) P/N 12-03017.....**$723.00**



NUT-PLATE RIVETER G902-15 (SIDE EJECT)

The G902-15 (side eject) is an all-pneumatic tool designed specifically for installation of nut plate rivets. This tool utilizes straight pulling heads which can install 3/32" and 1/8" pull-through type nut plate rivets and 3/32" CherryLOCK 'A' rivets. Stroke: 3/4". Pulling Force: 550 lbs (250 kgs). Weight: 2 lbs (0.9 kgs) P/N 12-03018.....**$880.00**



CHERRY HAND RIVETER G30

Pulling head is integral part of tool. Great in areas with limited access or power limitations. The G30 is an efficient, compact and lightweight tool for installing Cherry LOCK 'A' rivets. Overall length: 9 1/4" (23.5cm). Weight 0.8 lbs.. P/N 12-02982.....**$336.00**

CHERRYLOCK POWER RIVETER TOOL KIT G784KT

Includes: • G784 CherryLock Power Riveter - Stroke: 7/8", Pulling Force: 2,600 lbs (1, 179 kgs), Weight: 8 lbs (3.6 kgs) • B36B740 Valve Spring Installation Tool • B37B740 Valve Sleeve Removal Tool • 74DA43 Shift Piston Tool • 680A114 Seal Guide • 680A114 1 1/2" End Cap Socket Wrench • 680A48/49 Clamp Wrench • 700B65 Packing Plug Wrench • 740A43 Power Cylinder Tool • 700A61 Piston Rod Wrench • P1178 Valve Plug Extractor • 700A60 Seal Guide P/N 12-03003.....**$2,692.00**

TO

CHERRY PULLING HEADS

PULLING HEAD FOR CHERRYLOCK® A-RIVETS H9055



STEM SIDE EJECTION: H9055 series pulling heads are available for installation of 3/32", 1/8", 5/32" and 3/16" diameter locked spindle CherryLOCK® 'A' code rivets in all materials, head styles and grip lengths. Stems are ejected from the side of the pulling head.

H9055-3: 3/32" ..... P/N 12-03132 ..... **$694.00**
H9055-4: 1/8" ..... P/N 12-03133 ..... **$694.00**
H9055-5: 5/32" ..... P/N 12-03134 ..... **$729.00**
H9055-6: 3/16" ..... P/N 12-03135 ..... **$694.00**

CHERRY® MS STRAIGHT PULLING HEADS H9040



Cherry MS Straight Pulling Heads - H9040 Series.

H9040-4C ..... P/N 12-03127 ..... **$1,079.00**
H9040-5C ..... P/N 12-03128 ..... **$1,079.00**
H9040-6C ..... P/N 12-03129 ..... **$1,079.00**
H9044-8C ..... P/N 12-03130 ..... **$1,079.00**

OFFSET MAXIBOLT PULLING HEAD H856-6MB



Maxibolt Pulling Head. Offset head style. Maxibolt Diameters: 3/16".
P/N 12-03112 ..... **$1,443.00**

CHERRY® NUT PLATE PULLING HEADS H902



These pulling heads fit directly onto Cherry G902 and G746A Power Riveters.

Cherry P/N	Rivet Dia. Inches	Part No.	Price
H902-3NPR	-3 (3/32")	12-03125	$322.00
H902-4NPR	-4 (1/8")	12-03126	$398.00

CHERRY® FLUSH STYLE PULLING HEADS H9015



Flush style pulling heads will install both universal and countersunk rivets. These pulling heads fit directly onto Cherry G902-15 riveters.

H9015-3C ..... P/N 12-03121 ..... **$559.00**
H9015-4C ..... P/N 04-01515 ..... **$586.00**
H9015-5C ..... P/N 12-03123 ..... **$559.00**
H9015-6C ..... P/N 12-03124 ..... **$559.00**

PULLING HEADS FOR CHERRYLOCK A-RIVETS H955



The H955 Series pulling heads fit directly on the G701A, G704B, G746A and G747 riveters. The heads in this series are capable of installing 3/32", 1/8", 5/32" and 3/16" diameter rivets in all materials and head styles and grip lengths. Stems feed through the pulling head and are ejected out the back of the tool.

H955-3: 3/32" ..... P/N 12-03136 ..... **$413.00**
H955-4: 1/8" ..... P/N 12-03137 ..... **$467.00**
H955-5: 5/32" ..... P/N 12-03138 ..... **$467.00**
H955-6: 3/16" ..... P/N 12-03139 ..... **$467.00**

COMPACT UNIVERSAL HEAVY DUTY PULLING HEAD HD800



Description	Part No.	Price
HD800-6MB Installs Maxibolt -6 "S" type Cherry	12-03140	$509.00
HD800-6MBU Installs Maxibolt -6 "U" type / "S" type AFS	12-03141	$577.00
HD800-8MB Installs Maxibolt -8 "S" type	12-03144	$623.00
HD800-8MBU Installs Maxibolt -8 "U" type	12-03145	$711.00
HD800 Installs CherryMAX "AB" -8 (all materials) 8 Dia. MB Plus	12-03142	$583.00
HD800-8A Installs Cherrylock "A" code	12-03143	$548.00

CHERRY OFFSET PULLING HEAD H782



The Cherry® brand H782 is a new universal, off-set pulling head capable of installing a broad variety of pull-type fasteners. Its strength, light weight and compact dimensions make it ideal for a diverse range of applications including restricted spaces. The H782 is capable of installing CherryMAX rivets, CherryLOCK 'A' code rivets, MaxiBolt 'S' type blind bolts, MBC rivets, SPR rivets, NAS1398 A & AB code products, MS90353/4, MS21140/1, 4, 5, NAS1719, 1720 & 1721 and pull-through type nut plate rivets. Note: Uses CherryMAX mounting system (G704B, G746A, G747).
P/N 12-03091 ..... **$637.00**

MAXIBOLT STRAIGHT PULLING HEADS



For use with G83 & G84 tools. For use with Cherry shift washer type only.

H83B-5MB ..... P/N 12-03098 ..... **$465.00**
H83B-6MB ..... P/N 12-03101 ..... **$494.00**
H84A-8MB ..... P/N 12-03107 ..... **$568.00**
H84C-8MB ..... P/N 12-03110 ..... **$595.00**

MAXIBOLT PULLING HEAD H84B-568



Maxibolt Pulling Head. Straight head style. Maxibolt Diameters: 5/32", 3/16".
P/N 12-03109 ..... **$799.00**

MAXIBOLT PULLING HEAD (S TYPE) H744



Cherry P/N	Head Style	MaxiBolt Dia.	Part No.	Price
H744-5MB	Straight	5/32"	12-03085	$576.00
H744-6MB	Straight	3/16"	12-03086	$634.00

MAXIBOLT U-TYPE PULLING HEAD



Pulling heads to install "U" type Maxibolts®. Will fit G83 or G84-LS (w/744-700 adaptor).

H83B-5MBU ..... P/N 12-03099 ..... **$465.00**
H83B-6MBU ..... P/N 12-03102 ..... **$466.00**
H84A-8MBU ..... P/N 12-03108 ..... **$596.00**
H84C-8MBU ..... P/N 12-03111 ..... **$814.00**

MAXIBOLT® PULLING HEAD (S TYPE) H652-8MB



Cherry MaxiBolt Pulling Head (S Type): Head Style - Straight, MaxiBolt Diameter - 1/4"
P/N 12-03067 ..... **$822.00**

MAXIBOLT RIGHT ANGLE PULLING HEAD H828



This pulling head aids installation of MAXIBOLTs in limited access applications. For use with G744 tool. For use with Cherry shift washer type only. Use 744-200 adapter for G83/G84.

Cherry P/N	Head style	Rivet Dia. Inches	Part No.	Price
H828-5MB	Right Angle	5/32"	12-03094	$2,096.00
H828-6MB	Right Angle	3/16"	12-03095	$2,096.00
H828-8MB	Right Angle	1/4"	12-03097	$2,279.00

RIGHT ANGLE PULLING HEAD H690-4C

H690-4C pulling head. 1/8" rivet diameter. Countersunk Head.
P/N 12-03082 ..... **$1,032.00**

PULLING HEAD FOR CHERRYLOCK® ''A'' CODE RIVETS H9044-8

These heads fit directly on the G55, G86, both obsolete and G740 Cherry® power riveters. Will fit on the G784 and G689 hydro-shift Cherry® riveters with the 680B57 adapter. For the 1/4" Cherrylock "A" rivets. 8 Diameter. P/N 12-03131 ..... **$1,890.00**

CHERRYMAX STRAIGHT PULLING HEAD H846A-456



This pulling head installs 1/8", 5/32" & 3/16" Nominal & Oversize CherryMAX Rivets (G744 only). P/N 12-03103 ..... **$439.00**

CHERRYMAX RIGHT ANGLE PULLING HEAD H828-8



CherryMAX Right Angle Pulling Head installs 1/4" Nominal & Oversize CherryMAX Rivets (G744 only). P/N 12-03096 ..... **$1,957.00**

CHERRYMAX OFFSET PULLING HEAD H827-8



CherryMAX Offset Pulling Head installs 1/4" Nominal & Oversize CherryMAX Rivets (G744 only). P/N 12-03093 ..... **$1,458.00**

CHERRYLOCK® RIGHT ANGLE PULLING HEADS H886



The H886 series right angle s fit directly on the G701A, G704B, G746A and G747 power riveters to install CherryLOCK® 'A' brand rivets in 3/32", 1/8", 5/32" and 3/16" diameters in all materials, head styles and up to -04 grip length.

H886-3 ..... P/N 12-03113 ..... **$1,011.00**
H886-4 ..... P/N 12-03114 ..... **$1,063.00**
H886-5 ..... P/N 12-03115 ..... **$1,063.00**
H886-6 ..... P/N 12-03116 ..... **$1,063.00**

OFFSET LOCKBOLT PULLING HEADS H562-6B/8B



The H562 series pulling heads. Requires adapter (744-100) when used on the Cherry G84 tool.

-6 Diameter 3/16" ..... P/N 12-03059 ..... **$1,364.00**
-8 Diameter 1/4" ..... P/N 12-03060 ..... **$1,350.00**

TO

Prices Subject to Change Without Notice

CHERRY PULLING HEADS

CHERRY PULLING HEAD H1900-456

The H1900-456 is designed to reliably install all sizes of the single action NAS1919/1921 product assembled with or without a drive washer. To install the product without a drive washer use the appropriate nose piece. Total weight without riveter: .27 lbs (0.1222 kg). Use with G83 or G84 Cherry Riveter or any riveter equipped with a 352 Style Mounting System. P/N 12-03019.....**$624.00**

COMPACT UNIVERSAL STRAIGHT PULLING HEAD H800

Compact Universal Straight Pulling Head for G800 riveter. Weight - 0.15 lbs. P/N 12-03092.....**$192.95**

SHORT PINTAIL BASIC PULLING HEAD H513



Cherry Short Pintail Basic Pulling Head H513 - See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	LockBolt Dia.	Installed Length	Part No.	Price
H513-04-20	1/8”	2” (51 mm)	12-03020	**$784.00**
H513-04-35	1/8”	3-1/2” (89 mm)	12-03021	**$699.00**
H513-05-35	5/32”	3-1/2” (89 mm)	12-03022	**$796.00**
H513-06-20	3/16”	2” (51 mm)	12-03023	**$808.00**
H513-06-60	3/16”	6” (152 mm)	12-03024	**$1,085.00**
H513-08-35	1/4”	3-1/2” (89 mm)	12-03025	**$1,090.00**

SWIVEL NOSE PULLING HEAD H513S



Cherry Swivel Nose Pulling Head H513S - See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	LockBolt Dia.	Installed Length	Part No.	Price
H513S-05-20	2” (51 mm)	5/32”	12-03026	**$725.00**
H513S-05-35	3-1/2” (89 mm)	5/32”	12-03027	**$659.00**
H513S-06-20	2” (51 mm)	3/16”	12-03028	**$851.00**
H513S-06-24	2-3/8” (60 mm)	3/16”	12-03029	**$805.00**
H513S-06-35	3-1/2” (89 mm)	3/16”	12-03030	**$1,012.00**
H513S-06-48	4-13/16” (122 mm)	3/16”	12-03031	**$705.00**
H513S-08-24	2-3/8” (60 mm)	1/4”	12-03032	**$940.00**
H513S-08-35	3-1/2” (89 mm)	1/4”	12-03033	**$860.00**
H513S-08-48	4-13/16” (122 mm)	1/4”	12-03034	**$1,016.00**
H513S-10-27	2-11/16” (68 mm)	5/16”	12-03035	**$1,016.00**
H513S-10-42	4-3/16” (106 mm)	5/16”	12-03036	**$1,019.00**
H513S-12-27	2-11/16” (68 mm)	3/8”	12-03037	**$900.00**
H513S-12-42	4-3/16” (106 mm)	3/8”	12-03038	**$977.00**

SELF RELEASING SWIVEL NOSE PULLING HEAD H513SR



Cherry Self Releasing Swivel Nose Pulling Head H513SR - See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	LockBolt Dia.	Installed Length	Part No.	Price
H513SR-05-20	2” (51 mm)	5/32”	12-03039	**$725.00**
H513SR-05-35	3-1/2” (89 mm)	5/32”	12-03040	**$976.00**
H513SR-06-20	2” (51 mm)	3/16”	12-03044	**$929.00**
H513SR-06-24	2-3/8” (60 mm)	3/16”	12-03045	**$806.00**
H513SR-06-35	3-1/2” (89 mm)	3/16”	12-03046	**$1,018.00**
H513SR-06-48	4-13/16” (122 mm)	3/16”	12-03047	**$1,053.00**
H513SR-08-24	2-3/8” (60 mm)	1/4”	12-03048	**$770.00**
H513SR-08-48	4-13/16” (122 mm)	1/4”	12-03049	**$667.00**
H513SR-10-27	2-11/16” (68 mm)	5/16”	12-03050	**$828.00**
H513SR-10-42	4-3/16” (106 mm)	5/16”	12-03051	**$704.00**
H513SR-12-27	2-11/16” (68 mm)	3/8”	12-03052	**$912.00**
H513SR-12-42	4-3/16” (106 mm)	3/8”	12-03053	**$979.00**

SELF RELEASING SWIVEL NOSE/ CHISEL SHAPE PULLING HEAD H513SRC



Cherry Self Releasing Swivel Nose/Chisel Shape Pulling Head H513SRC - See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	LockBolt Dia.	Installed Length	Part No.	Price
H513SRC-05-20	2” (51 mm)	5/32”	12-03054	**$884.00**
H513SRC-05-35	3-1/2” (89 mm)	5/32”	12-03055	**$913.00**
H513SRC-06-20	2” (51 mm)	3/16”	12-03056	**$979.00**
H513SRC-06-35	3-1/2” (89 mm)	3/16”	12-03057	**$1,083.00**
H513SRC-08-48	4-13/16” (122 mm)	1/4”	12-03058	**$1,270.00**

OFFSET LOCKBOLT PULLING HEAD H563



See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	Type	LockBolt Dia.	Part No.	Price
H563-4B	Basic Pulling	1/8”	12-03061	**$1,322.00**
H563-5B	Basic Pulling	5/32”	12-03062	**$1,322.00**
H563-6B	Basic Pulling	3/16”	12-03063	**$1,323.00**



OFFSET LOCKBOLT/ SHORT PINTAIL PULLING HEAD H563SP

See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	Type	LockBolt Dia.	Part No.	Price
H563SP-4B	Basic Pulling/Short Pintail	1/8”	12-03064	**$1,322.00**
H563SP-5B	Basic Pulling/Short Pintail	5/32”	12-03065	**$1,322.00**
H563SP-6B	Basic Pulling/Short Pintail	3/16”	12-03066	**$1,322.00**



CHERRYLOCK® STRAIGHT PULLING HEAD H681

Fits directly on all Cherry hydroshift riveters, 2-9/16” installed. Separate pulling head is required for each style & diameter rivet.

Description	Rivet Dia.	A/B Dims.	Part No.	Price
H681-3C Universal C-sunk Head	3/32”	.163”/.332”	12-03070	**$399.00**
H681-4C Universal C-sunk Head	1/8”	.208”/.341”	12-03071	**$388.00**
H681-4F Countersunk Head 156	1/8”	.430”/.358”	12-03072	**$825.00**
H681-4S Countersunk Head NAS 1097	1/8”	.174”/.341”	12-03073	**$898.00**
H681-5C Universal C-sunk Head	5/32”	.269”/.352”	12-03074	**$348.00**
H681-6C Universal C-sunk Head	3/16”	.335”/.386”	12-03075	**$387.00**
H681-6F Countersunk Head 156	3/16”	.625”/.367”	12-03076	**$860.00**
H681-6S Countersunk Head NAS 1097	3/16”	.281”/.386”	12-03077	**$902.00**
H681-8C Universal C-sunk Head	1/4”	.458”/.398”	12-03078	**$455.00**



CHERRYLOCK® STRAIGHT PULLING HEAD H681B

Fits directly on all Cherry hydroshift riveters, 2-9/16” installed. Separate pulling head is required for each style & diameter rivet.

Description	Rivet Dia.	A/B Dims.	Part No.	Price
H681B166-4 Uni-Sink Head	1/8”	.250” / .359”	12-03079	**$890.00**
H681B166-5 Uni-Sink Head	5/32”	.313” / .377”	12-03080	**$890.00**
H681B166-6 Uni-Sink Head	3/16”	.375” / .419”	12-03081	**$890.00**



CHERRYMAX® STRAIGHT PULLING HEAD H701B-456

CherryMAX Straight Pulling Head H701B-456 - Installs 1/8”, 5/32” & 3/16” Nominal & Oversize CherryMAX Rivets. P/N 12-03083.....**$156.85**



NUT PLATE PULLING HEAD W/ NOSEPIECES H702-3NPR

Cherry® Nut Plate Pulling Head. Includes nosepieces: 728A9-3 (3/32””) & 728A9-104 (1/8””). For G702A Riveter. Installs 3/32” & 1/8, 2.5 mm & 3 mm Nut Plate. P/N 12-03084.....**$231.95**



CHERRYMAX STRAIGHT PULLING HEAD H744A-8

CherryMAX Straight Pulling Head installs 1/4” Nominal & Oversize CherryMAX Rivets (G744 Only). P/N 12-03087.....**$569.00**



CHERRYMAX RIGHT ANGLE PULLING HEAD H753A-456

CherryMAX Right Angle Pulling Head H753A-456 installs 1/8”, 5/32” & 3/16” Nominal & Oversize CherryMAX Rivets. P/N 12-03089.....**$599.00**



CHERRYMAX OFFSET PULLING HEAD H781-456

CherryMAX Offset Pulling Head installs 1/8”, 5/32” & 3/16” Nominal & Oversize CherryMAX Rivets. P/N 12-03090.....**$472.00**

CHERRYLOCK ‘’A’’ CODE PULLING HEAD H84-8CLA

Cherrylock “A” Code Pulling Head for use with G84 riveters. Tool weight (without riveter): .3 lbs (0.14 kg). P/N 12-03104.....**$827.00**

STRAIGHT PULLING HEAD -8 CHERRYMAX® H84A-8

Straight pulling head H84A-8 for use with G84 Power Riveter and G84-LS Split Power Riveter (with adaptor 744-700). Pulling Head Weight: 0.2 lbs (0.09 kg). P/N 12-03106.....**$629.00**



COMPACT UNIVERSAL HEAVY DUTY PULLING HEAD HD800

HD800 Heavy Duty Pulling Heads are used with the G-800 hand riveter. Weight- 0.2 lbs.

Description	Part No.	Price
HD800-6MB Installs Maxibolt -6 “S” type Cherry	12-03140	**$509.00**
HD800-6MBU Installs Maxibolt -6 “U” type / “S” type AFS	12-03141	**$577.00**
HD800-8MB Installs Maxibolt -8 “S” type	12-03144	**$623.00**
HD800-8MBU Installs Maxibolt -8 “U” type	12-03145	**$711.00**
HD800 Installs CherryMAX “AB” -8 (all materials) 8 Dia. MB Plus	12-03142	**$583.00**
HD800-8A Installs Cherrylock “A” code	12-03143	**$548.00**

TO

RIVET GUNS

CHERRY G-28 HAND RIVETER GUN



The Cherry G-28 is a lightweight (13 oz.) ruggedly compact hand tool designed to efficiently set a broad range of Cherry commercial rivets. A unique torsion spring keeps the lever arm in place, ready to accept rivet after rivet. The G-28 comes with two popular size nosepieces, 728A9-4 (to set Cherry N Rivets - 1/8" dia. & Cherry Q Rivets - 1/8" dia.) and 728A9-6 (to set Cherry N Rivets - 5/32" & 3/16" dia. & Cherry Q Rivets - 5/32" & 3/16" dia.), one of which is stored securely out of the way in the riveter handle. P/N 12-03000 ..... **$123.75**

CHERRY G-29 HAND RIVETER



The Cherry® G-29 Hand Riveter is an efficient, compact, lightweight tool for installing Cherry® NUT-PLATE rivets. It comes equipped with a 728A9-3 nosepiece to install 3/32" rivets and has a 728A9-104 nosepiece stored in the handle for installing 1/8" rivets. The G-29 Riveter is 9-1/4" long, weighs just 13 ounces and is intended for use when access or power limitations prevent the use of Cherry® power tools. P/N 12-00701 ..... **$118.75**

CHERRY G-27 HAND RIVETER KIT



The Cherry G-27 Hand Riveter is designed specifically for the most efficient installation of 1/8" CherryMAX Rivets. The G-27 Riveter is intended for use where access or power limitation prevents the use where access or power limitation prevents the use of Cherry pneumatic power tools. Overall length of the G-27 is 9-1/4", the net weight is just 13 ounces and the pulling head is an integral part of the tool.

P/N 12-03105 ..... **$93.75**

RIVET KIT



This rivet kit includes 200 assorted Klik-Fast rivets in popular sizes. The molded plastic case houses and protects the tool and rivets. Weight 4 lbs.

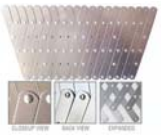
P/N 12-03100 ..... **$97.85**

120° FLUSH DIMPLING TOOL



This unique tool for 1/8" 120° countersunk "Pop" rivets attaches to the Cherry G-28 standard hand "Pop" rivet gun. Simple design makes dimpling foolproof, quick and easy, with no cracking of metal. For use on aluminum to .040" thickness. P/N 17014 ..... **$15.75**

ADJUSTABLE RIVET SPACER



For uniform spacing of rivets, bolts, nails, etc. Unique fan design expands to 36". Equally spaces up to 20 holes between 2 given points. Made of 301 stainless steel.

P/N 12-11700 ..... **$41.50**

10 Hole spacer P/N 12-00184 ..... **$25.85**

RIVEDRILL™



Allows operators to set up to 14 rivets per minute - twice as many as can be set by standard hand tools. The RiveDrill is ergonomically friendly, requiring just 6.6 lbs. of pressure to operate, compared to 77.2 lbs. required for hand tool operation. Able to set any standard blind rivet up to 3/16" aluminum. (For cordless electric power drills, a minimum 12V battery is recommended.) Nosepieces for 1/8", 5/32", & 3/16" sizes are included. P/N 12-00253 ..... **$77.85**

ULTRALIGHT NUTPLATE DRILL MOTOR



Ergonomic, lightweight design. Only one hand required to locate, drill & countersink both holes. Easily convert rivet spacings with interchangeable foot attachments. Accomodates all nutplate spindle spacings from 0.219" to 1.125". Fully adjustable feed rate. P/N 12-01376 ..... **$4,565.00**

SWIVEL RIVETING TOOL



Rotates 360° and rivets in any position. High leverage handles for added power. Hardened steel construction for long life. Extended nose for hard to reach places. Will pull 3/32", 1/8", 5/32", and 3/16" rivets. Model TP844..... P/N 12-00365..... **$56.85**

HOMEBUILDERS RIVET NUT TOOL



Enables the rivet nuts to be seated tighter than with conventional tools. The rivet nut possesses far greater load bearing capability than a regular sheet metal screw! Proudly made in U.S.A. For use with aluminum or steel rivet nuts.Kit includes Rivet Nut Tool, Stabilizing Rod, and Qty 1 each of 6-32, 8-32 and 10-32 rivet nuts.

P/N 12-00968 ..... **$22.95**

1/4-20 Stud Assy. with washer.....P/N 12-03797 ..... **$4.35**

THREAD SELF-COILING AIR/VACUUM HOSE



This 25 ft. air vacuum hose snaps back to a compact 20" coil for easy storage. Includes non-corrosive brass male fittings. Excellent for air tools using a compressor. 100 PSI working pressure. Oil resistant polyurethane construction High visibility color. 1/4" NPT air inlet P/N 12-00218..... **$9.85**

ATS AIRCRAFT RIVET GUN #2602



So controllable you can easily buck rivets as small as 3/32" to as large as 3/16".

P/N 12-18340 ..... **$138.75**

RIVET SET MAX FOR 2602 RIVET GUN

3/32", 1/8", 5/32" and 3/16" rivets.

3-1/2" (5 pcs. straight, includes flat) P/N 12-18341 ..... **$29.95**
3-1/2" (4 pcs. offset) P/N 12-18342 ..... **$29.95**
5-1/2" (4 pcs. straight) P/N 12-18344 ..... **$29.95**

PROFESSIONAL HAND PLIER RIVET TOOL



Professional Hand Plier Rivet Tool is 50% easier to use then other hand tools. A patented compound link designed does the work for you. A shorter grip opening ergonomically designed for one hand operation. Grips cover the length of the lever and body, and soft handles are contoured to fit the hand.

The wrench and nosepieces (3/32", 1/8", 5/32", & 3/16") are stored in the handle of the tool. Excellent for use on Cherry and other standard pop rivets.

Features: • Robust aluminum casting and vanadium steel handle design • Setting capacity: aluminum rivets up to 3/16" (4.8 / 5.0mm) body diameter • Contoured handle grips for comfort • Rivet retaining handle design for one-handed riveting • Supplied with nosepieces for 3/32", 1/8", 5/32" & 3/16" (2.4mm, 3.2mm, 4.0mm & 4.8mm) rivets • Supplied nosepiece wrench • Length: 9.65" (245mm) • Weight: 1.3 lbs. (0.6 kg)

P/N 12-00178 ..... **$35.85**

HEAVY DUTY RIVETER



Includes four nosepieces to set rivet diameters from 3/32" up to 3/16". Convenient lock chain keeps handles closed when tool is not in use. Made in U.S. P/N 12-18352 ..... **$38.95**

3M™ RIVETERS TAPE



3M™ Riveters Tape 685 Transparent Film with Green Adhesive, 1.7 mils (.043 mm) Polyester film with a rubber-strip coated along edges of tape only and tack-free center Window P/N 12-18355..... **$14.50**

COMBINATION RIVET NUT TOOL



Ideally suited to the needs of the aircraft homebuilder. Develops 3,500 lbs. of pulling force which permits the installation of all Cherry Commercial Blind Rivets or any other Pop type rivets through 1/4" diameter as well as all CherryMax rivets through 3/16" diameter. Will not pull Cherry Lock rivets. Quickly converts to a threaded blind nut setter. The kit includes the D100 hydraulic tool with adapters for blind rivet and blind nut installation, rivet nosepieces for 1/8", 5/32" and 3/16" diameter blind rivets, blind nut pull-up studs with nosepieces for 6-32, 8-32, 10-32 and 1/4-28 Rivnuts, operating instructions and a rugged Plastic storage case. Size: 12-1/2" x 8-1/4 x 3'. Weight: 3 lbs.

P/N D100-RN Kit..... **$358.00**

PNEUMATIC-HYDRAULIC BLIND RIVETER



No larger than a compact drill motor, will install virtually any straight-pull blind rivet with installation loads of 3500 lbs. or less. All blind rivets from 3/32" dia. up to and including 1/4" dia. Can install CherryMax rivets. It utilizes a patented two-valve hydraulic pump actuated by 90 to 130 PSIG air pressure. Collect/jaw assembly remains stationary while the outer sleeve-nosepiece assembly is hydraulically moved, creating sufficient load to install the rivet. Furnished with three nosepieces for 1/4", 1/8", 3/16" & 3/32" rivets. Wt. 29 oz. P/N 09-01070 ..... **$559.00**

RED BOX 737 RIVET GUN KIT



Includes: 1pc Rivet Gun (choose size 2X, 3X or 4X), 1pc Type A -Bucking Bar, 1pc Type B -Bucking Bar, 1pc Brass Regulator, 1pc Air Tool Fitting, 4pcs 3.5" Straight Rivet Set (3/32", 1/8" 5/32", 3/16"), 1pc Standard Flush Set (Surface: 1", Length: 2.5"), 1pc Beehive Spring, 1pc Retainer Spring, 1pc Marvel Air Tool Oil (Made in USA)

Gun	Length	BPM	Cap.	Bore	Shank	Stroke	Weight	Part No.	Price
2X	6-11/16"	2580	1/8"	1/2"	.401"	2-1/4"	3. lbs	12-02682	**$198.75**
3X	7-5/16"	2160	3/16"	1/2"	.401"	2-7/8"	3.2 lbs.	12-02686	**$198.75**
4X	8-1/2"	1740	1/4"	1/2"	.401"	3-1/16"	3.4 lbs.	12-02687	**$198.75**

RED BOX 777 RIVET GUN KIT



Includes: • 1pc Rivet Gun (Choose Size 2X, 3X or 4X) • 1pc Type A -Bucking Bar • 1pc Type B -Bucking Bar • 1pc Type C -Bucking Bar • 1pc Type D -Bucking Bar • 1pc Brass Regulator • 1pc Air Tool Fitting • 4pcs 3.5" Straight Rivet Set(3/32",1/8",5/32",3/16") • 4pcs 3.5" Offset Rivet Set(3/32",1/8",5/32",3/16") • 1pc Standard Flush Set (Surface: 1", Length: 2 1/2") • 1pc Flush Set w/ Rubber (Surface:1 1/4",Length:2 3/8") • 1pc Beehive Spring • 1pc Retainer Spring • 1pc Marvel Air Tool Oil (Made in USA).

2X Rivet Gun Kit ..... P/N 12-03726 ..... **$265.00**
3X Rivet Gun Kit ..... P/N 12-03727 ..... **$265.00**
4X Rivet Gun Kit ..... P/N 12-03728 ..... **$265.00**

TO

Prices Subject to Change Without Notice

BLUE PNEUMATIC RIVETING TOOL BP-3V



2100lbs. of force the tool has the best weight to power ratio in the industry, boasting 2100lbs of pulling force. It can set 1/8,5/32 and 3/16 rivets in all Alloys. Super light weight and small, allowing the rivet gun to fit in the tightest of spaces. Convenient, thumb-operated on/off vaccum control switch to control compressor air consumption. Comes complete with nose tips for 1/8, 5/32 and 3/16,. Also included are wrenches for service and oil applicator. Recommended operating air pressure is 80-95psi. Weight 3.2 lbs. P/N 12-03384 .....**$388.00**

BLUE PNEUMATIC RIVETING TOOL BP-4V



3500lbs of pulling force. Can set 1/8,5/32, 3/16 and 1/4 rivets in all Alloys. Super light weight, allowing the rivet gun to be operated continually with great comfort. Convenient, thumb-operated on/off vaccum control switch to control compressor air consumption. Complete with nose tips for 1/8, 5/32, 3/16 and 1/4. Also included are wrenches for service and oil applicator. Recommended operating air pressure is 80-95psi. Weight 3.6 lbs. P/N 12-03385 .....**$598.75**

BLUE PNEUMATIC COMPACT HEAVY DUTY RIVETER BP-54



The power of the large "heavy duty" riveters in the body of a small one. Sets 3/32, 1/8, 5/32 and 3/16 rivets in all materials. Ideal for multi-grip rivets and pulls 3/16 Monobolt/Magna-lok structural rivets. Nose pieces and service wrenches are included. Recommended operating air pressure is 85-100 psi. Weight 4 lbs.
Without Vacuum .....P/N 12-03386 .....**$311.00**
With Vacuum .....P/N 12-03429 .....**$388.00**

BLUE PNEUMATIC HEAVY DUTY AIR / HYDRAULIC RIVETER BP-50



3800lbs. of force. Sets rivets from 1/8 through 1/4 in all materials. Its 7/8 stroke allows this rivet tool to pull most structural rivets in one stroke. Great for high production applications. Comes with nose pieces including 1/8, 5/32, 3/16 and 1/4. Also included are wrenches for service and oil applicator. Recommended operating air pressure is 85-100 psi. Weight 5 lbs.
P/N 12-03387 .....**$572.58**

BLUE PNEUMATIC POWER MICRO BLIND RIVET GUN BP-48V



Installs 3/32, 1/8 and 5/32 blind rivets in all materials. This rivet tool weighs in at 2.4 lbs and has 1760 lbs. of pulling force. The rivet gun comes with a vaccum powered mandrel collection system. Also included are wrenches for service and oil applicator. Recommended operation pressure 85-100 psi. Weight 2.4 lbs.
P/N 12-03388 .....**$339.00**

BLUE PNEUMATIC AIR HYDRAULIC RIVETER WITH VACUUM BP-50V



3800lbs. of force. Sets rivets from 1/8 through 1/4 in all materials. Its 7/8 stroke allows this rivet tool to pull most structural rivets in one stroke. Great for high production applications. Rivet tool comes with nose pieces including 1/8, 5/32, 3/16 and 1/4. Also included are wrenches for service and oil applicator. Recommended operating air pressure is 85-100 psi. Weight 5 lbs.
P/N 12-03430 .....**$625.00**

BLUE PNEUMATIC BIG SPIN RIVET NUT TOOL BP-200BC



Now with a swiveling air inlet and ergonomic composite handle. Operates at 200 rpm for installations of the large rivet nuts. Places 1/2-13 and M12. Recommended operating air pressure is 85-110 psi. Weight 2.8 lbs. Part includes nose assembly, make selection at time of order. Nose assembly sizes: 632, 832, 1024, 1/4-20, 5/16-18, 3/8-16. P/N 12-03431 .....**2.95**

BLUE PNEUMATIC HEAVY DUTY LEVER RIVET NUT TOOLS



HEAVY DUTY LEVER RIVET NUT TOOL BP-734: • Heavy Duty Lever Rivet Nut Tool • Comfortable easy grip handle • Long handles for easy rivet nut and nutsert installations. • Includes M5, M6, M8 and M10 Nose Assemblies.
P/N 12-03501 .....**$83.75**

HEAVY DUTY LEVER RIVET NUT TOOL BP-734S: • Heavy Duty Lever Rivet Nut Tool • Comfortable easy grip handle • Long handles for easy rivet nut and nutsert installations • Includes 10-24, 1/4-20, 5/16-18 and 3/8-16 Nose Assemblies. P/N 12-03502 .....**$93.65**

HEAVY DUTY LEVER RIVETER BP-764: • Up to 1/4 steel • Heavy Duty Lever Rivet Tool • Comfortable easy grip handle • Rivet tool comes with nose pieces including 1/8, 5/32, 3/16 and 1/4.
P/N 12-03503 .....**$78.75**

BLUE PNEUMATIC COMPACT HEAVY DUTY RIVETER BP-54



Sets 3/32, 1/8, 5/32 and 3/16 rivets in all materials. Ideal for multi-grip rivets and pulls 3/16 Monobolt/Magna-lok structural rivets. Nose pieces and service wrenches are included. Recommended operating air pressure is 85-100 psi. Weight 4 lbs. P/N 12-03432 .....**$462.00**

BLUE PNEUMATIC ACCU-SPIN RIVET NUT TOOL BP-600QC



Swiveling air inlet and ergonomic composite handle. Operates at 800 rpm for quick installations of smaller rivet nuts. Places 8-32, 10-24, 1/4-20 and M4, M5, and M6 rivet nuts. Recommended operating air pressure is 85-110 psi. Weight 2.8 lbs. Part includes nose assembly, make selection at time of order. Nose assembly sizes: 632, 832, 1024, 1/4-20, 5/16-18, 3/8-16. P/N 12-03433 .....**$431.00**

BLUE PNEUMATIC QUICK SPIN RIVET NUT TOOL BP-2000QC



Swiveling air inlet and ergonomic composite handle. Operates at 1600 rpm for quick installations of smaller rivet nuts. Places 6-32, 8-32, 10-24 and M3, M4, as well as Jacknuts. Recommended operating air pressure is 85-110 psi. Weight 2.8 lbs. Part includes nose assembly, make selection at time of order. Nose assembly sizes: 632, 832, 1024, 1/4-20, 5/16-18, 3/8-16 P/N 12-03434 .....**$432.00**

BLUE PNEUMATIC SPIN PULL SPIN ULTRA RIVET NUT TOOL BP-60



SPIN-PULL-SPIN setting sequence. In one touch the fastener quickly spins on, pulls the fastener, and with the release button, spins out of the fastener. Setting cycle is about 2 seconds. Fully adjustable stroke for accurate insert placements. Mandrels are included with tool. Comes complete with sizes 8-32 through 1/2-13 or M4 through M12. "More Power" means this tool uses its huge 6800 lbs. of pulling force to set up to 1/2 (M12) steel rivet nuts with ease. Recommended operating air pressure is 80-100psi. Weight 6 lbs.
Standard.....P/N 12-03436 .....**$1,338.00**
Metric.....P/N 12-03505 .....**$1,249.00**

BLUE PNEUMATIC HAND TOOL BP-738



Rivet Nut Hand Tool BP-738.
P/N 12-03437 .....**$29.50**

BLUE PNEUMATIC RIVET NUT TOOL WITH MANDRELS BP-738M



Hand tool with mandrels. Includes Mandrel sizes 6-32,8-32,10-24 and 1/4-20.
P/N 12-03440 .....**$49.65**

BLUE PNEUMATIC R AND D HAND TOOL KIT BP-738K



BP-738 Hand Tool. Mandrels including 6-32, 8-32, 10-24, and 1/4-20. Also includes 40 total pcs of assorted rivet nuts that match included mandrels. Comes in molded plastic case (Private labeling available).
P/N 12-03441 .....**$56.85**

BLUE PNEUMATIC NOSE ASSEMBLY FOR SPIN-SPIN RIVET NUT TOOLS



Quick change nose assembly. Available in 6-32 through 3/8-16. Spin-Spin tools use replaceable socket head cap screw. 3/8 air hose recommended for optimal performance.

Description	Part No.	Price
Blue Pneumatic BPQ-632 Nose Assembly	12-03442	**$68.90**
Blue Pneumatic BPQ-832 Nose Assembly	12-03443	**$68.90**
Blue Pneumatic BPQ-1024 Nose Assembly	12-03444	**$69.95**
Blue Pneumatic BPQ-1/4-20 Nose Assembly	12-03445	**$69.95**
Blue Pneumatic BPQ-5/16-18 Nose Assembly	12-03446	**$62.85**
Blue Pneumatic BPQ-3/8-16 Nose Assembly	12-03447	**$69.85**

TO

RIVET NUT TOOLS – TAPE MEASURES

L-6000 RIVET NUT SPEED DRIVER



This tool is designed for light production and features high speed push-pull, smooth, spiral action. Sized #4 through #10 adequate for brass, aluminum, and steel. Sized #4 through #8 adequate for stainless steel. Provides easy on-and-off threading of rivet nut with push-pull knob. Adjustable anvil for different length rivet nuts. Made in U.S.A. The C-6000 Speed Header is available for Rivet Nuts with the following thread sizes:

6-32 ..... P/N 12-12600.... **$136.95** 8-32..... P/N 12-12700.... **$136.95**
10-32 .... P/N 12-12800.... **$136.95** 1/4-28..... P/N 12-12900.... **$153.95**

CONVERSION KIT - For changing speed header to a different Rivet Nut thread size. Order by P/N .

6-32 Kit.... P/N 12-13000... **$36.75** 8-32 Kit..... P/N 12-13100... **$34.85**
10-32 Kit.. P/N 12-13200... **$34.65** 1/4-28 Kit.. P/N 12-13300... **$53.75**

L-7000 RIVET NUT SPEED DRIVER

Designed for light production. Same as the L-6000 except made with a longer stroke for slotted rivet nuts. Made in U.S.A. Order by part number. Available in the following thread sizes: 6-32 (P/N 12-13605), 8-32 (P/N 12-13610), 10-32 (P/N 12-13615), and 1/4-28 (P/N 12-13620)

$172.80/ea.



C-845 ECONOMY RIVET NUT TOOL

Model L-845 wrench type Rivet Nut tool is for field repair & experimental use. Adequate for aluminum, brass, steel, and stainless. Made in U.S.A. Order by part number.

Available in following thread sizes:

6-32 ..... P/N 12-13400..... **$47.75** 8-32..... P/N 12-13500... **$47.75**
10-24 ..... P/N 12-13600..... **$47.75** 10-32.... P/N 12-13700... **$47.75**
1/4-20 ..... P/N 12-13800..... **$47.75** 1/4-28... P/N 12-13900... **$47.75**

L722 WRENCH TYPE RIVET NUT TOOL



L722 Wrench Type Rivet Nut installation tool for the larger size fasteners 5/16" up to 1/2", tool comes with long arm allen wrench with plastic handle for easy installation.

L722 wrench type header	Part No.	Price	L722 wrench type header	Part No.	Price
5/16-18	12-00920	$52.75	5/16-24	12-00921	$49.75
3/8-16	12-00922	$49.75	3/8-24	12-00926	$49.75
1/2-13	12-00927	$82.75	1/2-20	12-00928	$82.50
M10	12-00930	$84.75			

WRENCH TYPE RIVET NUT TOOL

Kit includes: TP726A, TP726B, TP726C, TP726N, and handy case. •Perfect for field repair and experimental use • Easy to use - inserts from one side of the work in seconds • Excellent for close quarters, overall height less mandrel 1-1/2" • Uses 3/4" open end or socket wrench • TP726N Notcher manually operated • Made in the U.S.A.



Model	Part No.	Price
TP726A / 6-32	12-00348	$52.75
TP726B / 8-32	12-00349	$48.50
TP726C / 10-32	12-00350	$49.90
TP726N/Notcher	12-00351	$26.50
TP726K / Kit	12-00352	$154.90

L-1000 ECONOMY HAND RIVET NUT TOOL



The L-1000 economy hand Rivet Nut tool is recommended for slotted rivet nut fasteners. Adequate for aluminum, brass, steel and stainless steel fasteners. Made in U.S.A. Order by part number. L-1000M is same tool, except in metric sizes.

Model	Thread Size	Part No.	Price Ea.
L-1000	(60-32)	12-13645	$45.75
L-1000	(8-32)	12-13650	$47.75
L-1000	(10-32)	12-13655	$47.75
L-1000	(1/4-28)	12-13660	$47.75
L-1000M	(M6)	12-13675	$49.75

RIVET NUT TOOL WITH METRIC MANDRELS



Enables the rivet nuts to be seated tighter than with conventional tools. Far greater load bearing capability than a regular sheet metal screw. The rivet nut tool is proudly made in the USA. For use with aluminum rivet nuts or steel rivet nuts.

P/N 12-03708 .....**$22.95**

BLIND RIVET REMOVAL TOOL



This rivet removal tool allows you to remove those stubborn Pop, Avdel, Cherry-Q, and other blind rivets. The serrated nosepiece fits over any button head, round head, or universal head rivet and locks in place to keep it from spinning as it's being drilled out. It will also remove solid rivets. Includes adapters to remove 3/32", 1/8", 5/32", and 3/16" rivets.

P/N 12-03368 .....**$79.00**

HEAVY DUTY RIVET CUTTER



This high quality, durable rivet cutter features all steel construction and cuts 1/16" to 1/4" diameter rivets. It is adjustable for 1/4" to 3/4" long rivets.

P/N 12-16840 .....**$42.50**

RIVET CUTTER



This handy rivet cutter, w/ 2 hardened blades, cuts rivets of any standard dia. from 3/32" to 3/16" without burring. The length of the cut rivet can be varied from 3/16" to 5/8" by means of 8 adjustable leaves attached to the cutting head. Plastic coated grips. Wt. 2 lbs. P/N 12-00200 .....**$29.85**

LUFKIN METRIC/INCH TAPE MEASURE



LUFKIN NO. W921OME Has 1/2" blade, 3 meters long (equal to about 10 ft.). Markings are on one side only, with millimeters on upper edge and inches to 16ths on lower edge. White face. .....P/N 12-19700 .....**$14.75**

STANLEY DECIMAL INCH TAPE MEASURE



This 12-ft. steel tape measure with 1/2" blade is graduated in tenths & hundredths of inches and also in fractions of inches (32nds). Very handy for all aircraft construction. A must for building composite aircraft.

P/N 33-272 .....**$23.75**

SMART TOOL DIGITAL INCLINOMETER



Smart Tool is a unique digital inclinometer with up to 0.1° of repeatable accuracy. Measures and displays any angle through 360°, and readings can be relative to any angle. Smart level even calculates complicated slope measurements in either percent or inches per foot. It is sunlight viewable, features 3 sensitivity settings, and has 120-hour battery life with auto shut–off. Powered by any 9V battery.

Smart Tool in 24" rail.....P/N 12-21365 .....**$163.95**
Smart Tool in 48" rail.....P/N 12-21370 .....**$153.00**

INSTANT MAGNETIC ANGLE FINDER



DASCO PRO angle finders are molded of high impact plastic and allow the user to read any angle instantly and accurately from 0° to 90° in any quadrant. Accurate to within 1/2 of 1°. Not affected by magnetic fields, cold or heat. Angle and grade chart on back shows angles in degrees and converts them to pitch per inch and pitch per foot.

P/N 12-14800 .....**$23.85**

DIGITAL PROTRACTOR/LEVEL ND-81



Full 360-degree measuring range with maximum resolution and accuracy of 0.1 degree. Simple 30 second calibration procedure using only the top flat edge of a table or desk. Alternate zero button to set zero starting point at any angle (commonly used for aileron, flap and elevator rigging). Display hold button to freeze reading when measuring in tight spaces. Readout stays upright even when protractor is upside down. P/N 12-02651 .....**$98.95**

PRO 360 DIGITAL PROTRACTOR



The Pro 360 Digital Protractor is a revolutionary measuring tool that provides an immediate, digital reading of all angles in a 360º circle.The machined aluminum frame is a rigid, light weight, ultra-precise platform that allows the state-of-the-art sensor and its microprocessor circuit to provide unsurpassed accuracy throughout the Protractor's 360º range. Typical used by aircraft builders, maintenance personnel and airport operators. P/N 12-20125....**$279.00**

PRO 3600 DIGITAL PROTRACTOR



The PRO-3600 is accurate to 0.01º and has an RS-232 compatible serial port for a computer interface and SPC records keeping.

P/N 12-00759 .....**$399.00**

ATS-360 DIGITAL PROTRACTOR



It provides absolute measurement as well as relative measurement. 2.75" wide by 1.50" high LCD screen. Can convert between angles and slopes; Accurate to within .05 degrees P/N 12-04967 .....**$128.75**

RIV-NUT PULLERS



The Riv-Nut Puller was designed for installation of steel and aluminum rivet-nuts. High speed, push-pull action. Available in sizes 6/32, 8/32, and 10/32.

Rivet Nut Puller 6-32 ..... P/N 12-02886 .....**$99.75**
Rivet Nut Puller 8-32 ..... P/N 12-02887 .....**$99.75**
Rivet Nut Puller 10-32 ..... P/N 12-02888 .....**$99.75**
Rivet Nut Puller Conversion Kit 8-32 ..... P-N 12-02880 .....**$36.50**
Rivet Nut Puller Conversion Kit 10-32 ..... P/N 12-02881 .....**$36.50**
Rivet Nut Puller 6-32 w- 2 Conversion KitS.... P/N 12-02885 .....**$157.75**
Rivet Nut Stem Replacement 6-32 ..... P/N 12-02889 .....**$22.95**
Rivet Nut Stem Replacement 8-32 ..... P/N 12-02890 .....**$22.95**
Rivet Nut Stem Replacement 10-32 ..... P/N 12-02891 .....**$22.95**
Rivet Nut Puller Conversion Kit 8-32 ..... P/N 12-02880 .....**$36.50**
Rivet Nut Puller Conversion Kit 10-32 ..... P/N 12-02881 .....**$36.50**
Rivet Nut Puller 6-32 w- 2 Conversion Kit ..... P/N 12-02885 .....**$157.75**

TO

Prices Subject to Change Without Notice

PLASTIC PRY TOOLS – SCRAPING TOOLS

BOJO PLASTIC PRY TOOLS

Soft, yet strong, all Bojo tools are made tough enough to pry, but not hard enough to damage. These 4 tools are provided as a set.



PLASTIC GENERAL WEDGE TOOL - General narrow point for reaching in narrow spaces.

PLASTIC STICKER/GASKET TOOL - Wedge tip, for use where a wide area is desired with a "soft" touch.





PLASTIC PRY BAR TOOL - The forked tip. The original for removing door panels and plastic grommets.

PLASTIC WEDGE PULLER TOOL - The forked tip. The original for removing door panels and plastic grommets.



Set of 4 listed above ..... P/N 12-00748 ..... **$14.95**



MASTER INSTALLER KIT - Soft, yet strong, all Bojo tools are made tough enough to scrape, but not hard enough to damage. Set of 7.
P/N 12-00976 ..... **$19.95**

AIRCRAFT ASSEMBLY SCRAPER KIT - Soft, yet strong, all Bojo tools are made tough enough to scrape, but not hard enough to damage. Set of 4. P/N 12-00977 ..... **$17.50**





DELUXE SCRAPER KIT - This is an expansion of our original 4 Piece Scraper Kit (which you currently buy in the medium strength material NGL). The new tips were design from request in the aviation fuel bladder cleaning industry for the US Air Force and US Navy overhaul programs. This new, stronger material is highly resistance to all forms of chemicals and sealants. PN 12-01858 ..... **$31.75**

Description	Part No.	Price
Pry Tool Large LFT-2-N	12-01859	**$7.50**
Sheet Panel ADJ Tool Kit	12-01860	**$18.25**
Wire Guide Tool ATH-30-GNL	12-01857	**$3.75**

MULTI WEDGE NON-MARRING TOOL SETS



Multi Wedge non-marring tool sets allow homebuilders and avionics installers to remove panels, dash trim bezels, and other interior moldings, including door panels, without causing damage. Excellent for use in aviation, auto restoration, body work, electronics installation, upholstery etc. The Black Set (3500) P/N 12-01672 is made of a more expensive high impact polycarbonate plastic for prying harder materials such as thin walled aluminum engine covers and sheet metal panels. ***Product Benefits:*** • Thin tip to fit into tiny gaps •Wide surface area to displace force, therefore reducing damage • Flexible • Slick surface for ease of prying • Built-in handle • Non-marring surface • Slim powerful angle • Curved tip for easy prying • Thing tip for tight gaps

Multi Wedge Set Black (Hard) 3500 ..... P/N 12-01672 ..... **$11.75**
Two Multi Wedge Sets - Orange (Soft) / Black (Hard) 3400/3500
P/N 12-01673 ..... **$16.75**

SEALANT CUTTERS



Sealant cutter quickly and safely removes thick applications of seam sealant for aircraft maintenance and repair. Eliminates the need for harsh chemicals. Saves time and effort. 1/4" x 28 Threaded Shank.

.40" Diameter ..... P/N 12-02879 ..... **$6.75**
.83" Diameter ..... P/N 12-02878 ..... **$6.50**

MULTI-PURPOSE SCRAPER



This Muli-purpose scraper has a 2 1/4" wide blade ideal for more coverage. This scraper is ideal for lighter duty jobs. It has a blade cover for safety and a hole in the handle to hang for convenience. This scraper is disposable and does not have replacement blades available. P/N 12-02371 ..... **$6.99**

OLFA MULTI-GRIP SCRAPER



The PP resin provides enhanced durability and high acetone-resistance. Handle is kept as thin as possible; its thickest part is only 7mm-thick. 4-3/4" Stainless steel blade is perfect for use with dishwashing liquid or dish bleach. Blade exchange needs no special tools.

Scraper ..... P/N 12-04886 ..... **$13.50**
Replacement Blades (30 Pack) ..... P/N 12-04887 ..... **$14.50**

BOJO STRONG 90MM WIDE SCRAPERS



3" (90mm) Wide Edge Scraper Tool Extreme or CELCON Material ITH handle. .....
Extreme ..... P/N 12-04766 ..... **$2.99**
Celcon ..... P/N 12-04768 ..... **$3.35**

BOJO EXTREME EDGE SCRAPERS



Composite Angle or Concentrated Extreme Edge Scraper Tools. Angle: for Sharp edges & corners. Concentrated: for scraping power into small regions.
Angle ..... P/N 12-04769 ..... **$3.35**
Concentrated ..... P/N 12-04770 ..... **$3.35**

2 PIECE LONG AND NARROW PRY TOOL KIT



Includes: 1 - For wedging & splitting deep into narrow locations. (Flat tip) 1 - For prying in narrow and deep locations. (Pry tip) ..... P/N 12-04771 ..... **$6.50**

BOJO COMPOSITE ANGLED PUSH/PULL EXTREME SCRAPERS



Includes: 1 - Composite Angled Push/Pull Extreme Scraper 1 - Composite Flat Push/Push Extreme Edge Scraper ..... P/N 12-04772 ..... **$6.50**

BOJO SCRAPER EDGE



Narrow Edge Scraper Edge Scraper (1/4" Wide)
P/N 12-04773 ..... **$3.35**

BOJO SCRAPER 3MM WIDE



Narrow Edge Scraper Edge Scraper (1/8" Wide).
P/N 12-04774 ..... **$3.35**

BOJO 3 PIECE SMOOTHING KIT WITH POUCH



Sealant Smoothing Tool Kit "Extreme". Includes all three Bojo smoothing tools and vinyl pouch. Bojo Tools now offer a comprehensive range of sealant smoothing tools to complement the scraper systems supplied for aerospace, automotive and general industrial applications. Industry standard profiles and unique Bojo designed tips ensure economical, consistent and aesthetic application of all standard sealant types. ..... P/N 12-04775 ..... **$6.50**

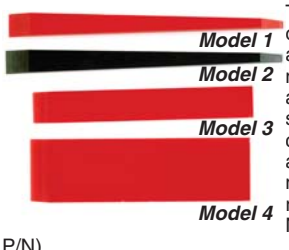
SCRAPERITE BLADES



ScrapeRite razor blades come in a variety of colors and tensile strengths to meet your every need, they are the best in the world and offer many unique advantages over other scrapers and metal blades. You can use ScrapeRite blades anywhere you would use a steel blade with out the fear of damaging the underlying surface; they are perfect for glass, plastics, chrome, marble and painted surfaces.

Description	Part No.	Price
Polycarbonate Blades & Holder Wavy Surfaces - Blue	12-03313	**$5.75**
Acrylic Blades & Holder Flat Surfaces - Yellow	12-03312	**$5.75**
General Purpose Blades & Holder Delicate Surfaces - Orange	12-03314	**$5.75**
Replacement Blue Blades	12-03309	**$0.95**
Replacement Yellow Blades	12-03310	**$0.95**
Replacement Orange Blades	12-03311	**$0.95**
Big Gripper Long Handle	12-03308	**$2.85**

SEALANT REMOVAL TOOLS



These tools are full machined and/or laser cut, which helps them retain a sharp edge. The tools are used by many defense contractors and Naval air stations for sealant application, sealant removal, paint removal, acrylic canopy contact, and general use. They are made from cell cast acrylic or black nylon as noted. These tools can be resharpened on an abrasive belt or disc. Note: 15% Discount on 12 or more (Per P/N)

Model	Material	Part No.	Price
Model 1	Acrylic	12-02360	**$1.65**
Model 2	Nylon	12-02361	**$5.75**
Model 3	Acrylic	12-02362	**$2.45**
Model 4	Acrylic	12-02363	**$2.95**

TO

RECOIL KITS



The Recoil System is the simple way to repair stripped or damaged threads. It provides stronger and more efficient threads which have great holding power. The system is quick and easy to use and is ideal for alloys and other light materials. The recoil insert, which is larger in diameter than the tapped hole, is compressed during installation then allowed to spring back, permanently anchoring into place. The Recoil System consists of Recoil stainless steel helically wound precision inserts, high quality HSS taps and installation tools

* UNF - Unified Fine Thread
**UNC = United Coarse Thread
*** Metric = Metric & Spark Plug (ISO)

Kit PN	Size	Inserts per kit	Price
33004**	UNC Range Kit	50	**$288.95**
34004*	UNF Range Kit	50	**$334.00**
33058**	UNC Range Kit	15	**$69.75**
34608*	UNF Range Kit	15	**$77.90**
34048*	UNF Range Kit	15	**$69.75**
34058*	UNF Range Kit	15	**$77.90**
34068*	UNF Range Kit	15	**$72.95**
34078*	UNF Range Kit	10	**$81.75**
34088*	UNF Range Kit	10	**$97.75**
35068***	M6X1	15	**$69.75**
35088***	M8X1.25	15	**$71.75**

PERMA-COIL® INSERTS 18MM



Replacement coils for Perma Coil Spark Plug Thread Repair Kit. Pack of 6 pieces. 18mm x .5" 1 lbs (0.5Kg) shipping weight.

P/N 12-04596.....**$7.50**

MASTER CHUCK



These versatile Master Key Chucks are available in two sizes (small & large) which open sizes 1/4" to 3/4". These tools allow you to open over 1200 different key chucks. Save wear on chucks by always having the proper key size available. The squared center of the keys opens acetylene tanks. Made of treated steel with black oxide finish.

Small ..... P/N 12-30165..... **$18.50**
Large ..... P/N 12-30170..... **$19.00**

ALL-SHARP DIAMOND SHARPENER



All Sharp is an innovative diamond sharpener that provides 4 different grit sizes on the same tool. All Sharp sharpens and fine sharpens tools and bits and cleans burrs on hard to reach parts and equipment. It's tough stainless body will not rust and All Sharp fits in any tool tray or pouch. Model ST-7.....P/N 12-21430. .....**$18.95**

6-IN-1 COMBINATION SCREWDRIVER



- Industrial rated bits for extra long life
- Heat treated 1/4" & 5/16" nut drivers
- Interchangeable bits fit both Philips & Slotted screws • Bits: 3/16" Slotted; 9/32" Slotted; #1 Philips, #2 Philips.

P/N 12-14000 .....**$9.95**

HOBBY KNIFE SET



Ideal for professionals, DIYers and hobbyists. Applications include precision woodworking, graphic design, wallpapering and carpeting. 18 piece set. P/N 12-04746 .....**$14.95**

STRIP AND CRIMP TOOL



5 Way all purpose wire 9" long made of hardened steel matte black permanent finish with bright clear markings. Makes it an attractive & easy to use product. Features long comfortable plastic grip handles. A one piece tool that shapes & cuts wire 5 different ways. Specifications: Standard wire cutter crimps insulated terminals 22-14 12-10, Shears 5 bolt sizes 4-40 6-32 8-32 10-24 10-32, Crimps non-insulated terminals 10-12 14-16 18-22, Strips wire 10-22 awg

P/N 11-08077 .....**$13.95**

COAX CABLE CRIMPING TOOL



This 12 point, full ratchet crimping tool terminates precision BNC connectors in size RG 55,58,59,62,141,142,223,303 and 400. This crimper is built to MS22520 specifications and die set is included with the crimper. Specifications: Cable Groups: RG 55/58/59/62/141/142/223/303/400

P/N 12-02378 .....**$128.75**

3M™ CRIMPING TOOL TH-440



High carbon, heat-treated steel crimping tool that has a unique design that provides a high strength/weight ratio that crimps a broad range of 22-10 AWG terminals and connectors. P/N 12-01146 .....**$57.50**

AT508K CANNON CONNECTOR PLIERS



The AT508K features serrated jaws for improved gripping and a slip joint for improved leverage. Ideal for all common cannon connector applications.

P/N 12-01627.....**$28.50**
Replacement Plier Pads.....P/N 12-01425.....**$2.50**

WIRE MARKING TOOL



Ever been on your back looking up at a bunch of white wires or in a really tight space where only your arms and shoulders would fit and wonder, "how am I going to tell the difference between all of these wires?" this wire marking tool will allow you to do just that.

The wire marking tool works on wire from 24 ga to 8 ga. This tool is perfect for every mechanic and do it yourselfer. Mark just one wire or all of your wires before you start or while installing in just seconds. 4 and 12 pack of markers sold separately.

Wire Marking Tool .....P/N 12-02497 .....**$49.90**
4 pack colors: Black, Blue, Red, Green.....P/N 12-02501 .....**$11.85**
12 pack colors: Black, Blue, Green, Red, Orange, Yellow, Purple, Brown, Turquoise, Lime, Berry, & Aqua. .....P/N 12-02503 .....**$26.50**

POWER PRECISION SCREWDRIVER



General's Cordless Power Precision Screwdriver is ideal for ultra-delicate applications such as computer and electronics repair, hobbies and crafts. The 100+ RPM motor features forward and reverse controls, and the quick-change chuck allows for effortless swapping between 1/8" Slotted, Phillips and Torx bits. **Features**: • Cordless Precision Screwdriver (2 "AAA" alkaline batteries included) • 10+ hours of power • 100+ RPM motor with forward and reverse controls • Super-torque drive • Quick-change chuck • Ergonomic design allows for various comfortable grips • Precision bit assortment (1/8" drive) • Phillips: #00, #0 • Slotted: 1/16", 1/8" • Torx: T5, T6 P/N 12-02308 .....**$23.50**

AT 540M SCREW EXTRACTOR



This heavy duty screw extractor is designed with a .401 shank to fit most standard rivet guns and is held in place by a retainer spring. The square tip will accommodate 3/8" socket tool bit holders with inserts for removing hex, square, Phillips, or standard screws. Manufactured from high grade shock resistant tool steel.

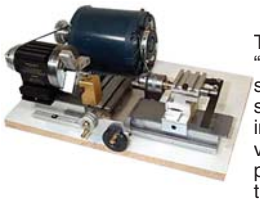
P/N 12-01632.....**$15.50**

SCREW REMOVAL TOOL



•Useful in removing screws that are corroded or have stripped heads •.401 Parker taper shank for use in rivet gun •3/8" square drive with wrench. •Use standard Phillips or Slotted insert bits •Rivet gun required. **NOTE: Does not include Tips.** P/N 12-00827 .....**$36.75**

MICRO LATHE



This is the machine you don't have to "baby". The Micro Lathe is a rugged, precision instrument. Its machined, ground and stabilized steel bed has a lifetime ball bearing spindle, coupled with a 6-speed positive v-belt drive. Spindle speeds in geometric progression from 525 to 5200rpm provide the power to "HOG" 1/8-inch cuts in mild steel or the speed and accuracy to dust a few tenths. Other big lathe features include large .001 graduations on the cross slide dial, an all-angle tool post and a carriage depth stop. Adjustable gibs provide full compensation for carriage and cross slide wear. 2-yr. factory warranty. 15" bed. Comes factory assembled. The Unit pictured is a basic unit (P/N 12-00171) with an optional 3-Jaw Chuck, Boring bar(1097E), Tailstock (1150), Drill Chuck (1091), 1/4 HP 1725 RPM Motor (1021w), Motor Mount Bracket (1022), Mounting Board (1023), and Pulleys (1162 with 3M 500 belt). All accessories are sold separately and are not included in the base price. Note: Photo shows Lathe with all accessories which are not included (Available separately). P/N 12-00171 is basic lathe unit only.

P/N 12-00171 ..... **$214.10**

General Specifications:

- Overall working accuracy: 0.0005"
- Max. bearing run out: 0.0004"
- Headstock normality to bed: .0004 in max error
- Max. taper bed dovetail over pins: 0.0001"
- All machine dovetails: 45°
- Bed width: 2 5/16 "
- Cross slide dial graduation: 0.001
- Cross slide screw: 1/4"-20 adjustment for back-lash take-up provided (jam nut arrangement)
- Carriage travel: 0.600" 1 rev. of hand wheel
- Max. spindle speed recommend: 7000 rpm
- Motor requirement: 1/8 – 1/4 HP
- Pulley type: Std. 5/8" bore, multi-step V-belt
- Length of headstock on ways: 2.875"
- Length of carriage on ways: 3.000"
- Width of cross slide on carriage: 2.000"
- Tool post: may be adjusted for angle cutting (chamfer, boring, etc.)

Capacity:

- Swing over bed: 4.5" (max. turning dia.)
- Swing over cross slide: 2 3/8"
- Overall length of bed: 15.5"
- Overall length of lathe: 16.5
- Tool bit size: 1/4"
- Drill chuck capacity: 0 to 1/2"
- Distance between centers: 9.75"
- Carriage travel: 9"
- Cross slide travel: 1.75"

Spindle Specifications:

- Sealed precision ball: 1.5748 O.D. 0.6692 I.D.
- Spindle nose: 3/4" – 16 (3/4" SAE)
- Spindle hole: 0.343
- Spindle ID taper: 15° (30° included)
- Max. collet diameter: 9/32"
- Pulley size: 5/8" bore

Accessories	Part No.	Price
3-jaw chuck	12-01602	**$70.40**
Boring bar	12-01603	**$6.25**
Tailstock	12-01604	**$44.60**
Drill chuck	12-01605	**$12.30**
1/4 1725 RPM Motor	12-01606	**$123.10**
Motor mount bracket	12-01607	**$5.95**
Mounting board	12-01608	**$8.65**
Pulleys 20" L	12-01609	**$27.75**
Pulleys 12-1/2" L	12-01710	**$31.50**

MICRO MILL



The Micro Mill has effortless, chatterless table and mill head movement. This is due to the unique design of our oversized gibs, ground steel ways, massive carriage, steel bed and vertical mill head support which makes the Micro Mill ready for CNC upgrade if you desire. Our small mill is really a scaled down big mill with manual operation. Other big mill features include large 0.001 graduations on friction adjustable micrometer dials for X, Y, and Z controls. Adjustable gibs provide full compensation for X, Y, and Z mill-ways wear. It all adds up to the best value in small mills. 15.5" table, power switch & cord included. Comes factory assembled. 2-yr. warranty. P/N 12-00170 ..... **$785.00**

General Specifications:

	Manual	*CNC*
•Height:	21-3/8"	26-3/8"
•Width:	17"	22"
•Depth:	16.75"	21"
•Weight:	65 lbs.	85 lbs.

- •Max. bearing run out: 0.0004"
- •Dovetails, X-axis: 45°; Y-axis: 90°

Capacity:

- •Working Axis Travel: X=9.5", Y=5.5", Z=6.0"
- •Maximum Z-Distance to Table: 9.0"
- •Z-Axis Swivel: 90°
- •Column Rotation: up to 180°
- •Spindle Head Rotation: 90°
- •6 Spindle Speeds: 525 to 5200 RPM
- •Z-axis: Steel box-ways
- •Pulley type: Std. 5/8" bore, multi-step V-belt
- •Construction: steel, hard anodized aluminum on all moving components adjustable brass gibs and precision ground steel-ways.

Spindle Specifications:

- •Maximum Spindle Speed: 7000 RPM
- •Sealed Precision Ball Bearing: O.D.=1.5748, I.D.=0.6692
- •Spindle Nose: 3/4" -16 (3/4" SAE)
- •Spindle Hole: 0.343"
- •Spindle ID taper: 15° (30° included)
- • Max. Collet Diameter: 9/32"
- • Pulley size: 5/8" bore

AT429SXC MICRO MILLER



The AT429SXC Micro Miller features a .75 horsepower 20,000 RPM Sioux Tools motor. Cutter capacity is 3/4" and the unit will cut steel, aluminum and stainless steel. Spindle size is 1/4-28 and inlet pipe tap is 1/4" NPT. Air requirements: 90 PSI. Tease trigger allows slow start up & exhaust porting is through the bottom of the handle.

P/N AT429SXC **$584.00**

Cutter Size	Cutter Dia.	Skirt Part No.	Skirt Price	Cutter Part No.	Cutter Price
-1	5/16	AT429A-1	**$29.50**	AT429B-1	**$24.50**
-2	3/8	AT429A-2	**$29.50**	AT429B-2	**$24.50**
-3	7/16	AT429A-3	**$29.50**	AT429B-3	**$24.50**
-4	1/2	AT429A-4	**$27.80**	AT429B-4	**$28.50**
-5	9/16	AT429A-5	**$27.80**	AT429B-5	**$24.50**
-6	5/8	AT429A-6	**$27.80**	AT429B-6	**$30.50**
-7	3/4	AT429A-7	**$27.80**	AT429B-7	**$31.80**

PLYWOOD SCARFING MACHINE KIT



Simple and easy to construct using a sanding drum and other readily available items. Allows you to make neat and efficient scarf joints with all types of plywood, varying in thickness from a 1/4 inch down to .4 mm with a professional finish that all woodworkers like to achieve. Safe to use, easy to handle and portable. A fun gadget to use for the amateur or experienced woodworker alike. In The Box: Now includes: Dust removal attachment, 30 inch by 20 inch blueprint and instructions.

P/N 12-02819 ..... **$15.85**

CRAFTSMAN WOOD TOOL CHEST PLANS



Build this magnificent wood tool chest from our detailed professional plan. It's the kind of chest a craftsman dreams of. Features 10 drawers in the sturdy base, 12 more drawers plus a large top bin in the removable upper section. Overall size is 25"W x 10-5/16"L x 27"H. Ideal for the aircraft builder or aircraft mechanic. Plans only for Wood Tool Chest.

P/N 12-18350..... **$24.95**

SUPER NOTCHER THREE-IN-ONE ABRASIVE TUBING NOTCHER



The Super Notcher by Dixie Fried Fabrication is an abrasive belt tube notcher that doubles as a universal shop belt grinder, and includes a flat platen for surface grinding. Accessories are available for notching round and square tubing and pipe at extreme angles of up to 25 degrees.

With Motor ..... P/N 12-05035 ..... **$3,250.00**
Without Motor ..... P/N 12-05036 ..... **$2,990.00**

ACCESSORIES

Description	Part No.	Price
Square Tubing Insert	12-05037	**$195.00**
Thin Wall Tubing Insert	12-05038	**$65.00**
Notcher Cart Crt100	12-05039	**$325.00**
Roller 5/8" Rol058	12-05040	**$125.00**
Roller 3/4" Rol034	12-05041	**$125.00**
Roller 7/8" Rol078	12-05042	**$125.00**
Roller 1" Rol100	12-05043	**$125.00**
Roller 1 1/8" Rol118	12-05044	**$145.00**
Roller 1 1/4" Rol114	12-05045	**$165.00**
Roller 1 3/8" Rol138	12-05046	**$175.00**
Roller 1 1/2" Rol112	12-05047	**$179.00**
Roller 1 3/4" Rol134	12-05048	**$195.00**
Roller 2" Rol200	12-05049	**$210.00**
Roller 2.5" Rol250	12-05050	**$310.00**
Roller 3" Rol300	12-05051	**$335.00**

TO

TOOL KITS

RV BUILDER TOOL KIT



These RV builders tool kits are based on recommendations from the Van's Aircraft Builders Manual as well as on the tools that have been purchased from Aircraft Spruce by RV builders. It is an excellent tool kit for the construction of the RV4, 6, 7, 8, and 10 aircraft. They include an air drill, hand rivet squeezer, rivet sets and other tools of the highest quality. If you are building a RV-9 order 100 extra 3/32" clecos and 50 extra 1/8" clecos. If you are building a RV-10 kit, order 175 extra 3/32" clecos and 125 extra 1/8" clecos as well as the RV-10 bucking bar. See Chart Below for Components

Kit with 2x Rivet Gun.....P/N 12-00890..... **$2,795.00**
Kit with 3x Rivet Gun.....P/N 12-00899..... **$2,785.00**
RV-10 Bucking bar .....P/N 12-00903..... **$34.50**

RV BUILDER KIT COMPONENTS

Part No.	Description	Price
12-02004	2X Rivet Gun	$158.85
A1006-234X	RETAINER SPRING, BEEHIVE TYPE	$6.50
12-00869	AVERY PNUEMATIC AIR TOOL REG.	$17.50
12-00816	AIR DRILL (PISTOL TYPE)4500RPM	$606.00
12-00872	AVERY AIR TOOL OIL	$7.95
12-00177	HAND RIVETING & DIMPLING TOOL	$233.95
12-00605	AVERY POLY. DIMPLING MALLET	$42.50
12-00320	3" YOKE for Hand Rivet Squeezer	$84.75
12-00882	AVERY 6PC SQUEEZER SET	$48.65
12-00868	AVERY DELUXE DIMPLE DIE KIT	$161.75
12-00613	AVERY POP RIVET DIMPLER 3/32"	$23.50
12-00611	AVERY VISE GRIP DIMPLER 3/32"	$49.99
TP-670	BUCKING BAR 1-3/4 LB.	$23.75
SM10-4704	STRAIGHT RIVET SET 1/8X 3-1/2	$7.80
12-00873	AVERY 1/8" DBL OFFSET RIVET ST	$29.50
12-00741	AVERY FLUSH SWIVEL RIVET SET	$50.50
12-07100-3	AVERY BACK RIVET SET 4-1/8"L	$34.99
12-00609	AVERY FLUTING PLIER	$49.99
12-00608	AVERY HAND SEAMER 3-1/2" JAW	$50.95
12-10105	CLECO PLIERS	$5.65
M-3/32	SHEET HOLDERS M-3/32 KWIK-LOK	$0.65
M-1/8	SHEET HOLDERS M-1/8 KWIK-LOK	$0.67
M-5/32	SHEET HOLDERS M-5/32 KWIK-LOK	$0.65
M-3/16	SHEET HOLDERS M-3/16 KWIK-LOK	$0.65
SC-1/2-1/2	1/2" X 1/2" SIDE GRIP CLAMP	$1.95
SC-1/2-1	SIDE GRIP CLAMPS P/N SC-1/2-1	$2.25
12-00632	AVERY EDGE ROLLING TOOL	$22.50
12-00618	AVERY BACK RIVETING PLATE	$68.75
12-00876	AVERY CUT/POLISH WHEEL KIT	$65.75
12-03900	UNIBIT STEP DRILL # 3	$43.75
12-18355	3M™ RIVET TAPE 3/4" GREEN	$14.50
12-04214	#40 SUPER COBALT DRILL (4PACK)	$1.35
12-04217	SUPER COBALT DRILL #30 (3PACK)	$1.65
12-14221	SUPER COBALT DRILL #21 (3PACK)	$2.25
12-04219	SUPER COBALT DRILL #27 (3PACK)	$1.95
12-00886	AVERY #19 COBALT DRILL BIT 2PK	$2.08
12-00885	AVERY #12 COBALT DRILL BIT 2PK	$2.55
12-00884	AVERY 1/4" COBALT DRILL BIT	$3.45
12-05200	DRILL BITS 12" LONG 3/32"	$5.50
12-05300	DRILL BITS 12" LONG 1/8"	$5.75
12-00867	AVERY 4PC DRILL STOP SET	$10.75
12-00883	AVERY 90° ANGLE DRILL KIT	$192.90
12-01412	AVERY MICRO-STOP CSNK CAGE	$36.50
12-00879	AVERY #40 X 3/8" CSNK CUTTER	$12.85
12-00880	AVERY #30 X 3/8 CSNK CUTTER	$12.85
12-00881	AVERY #20 X 1/2" CSNK CUTTER	$12.85
1216	STEEL RULES #1216	$8.95
12-00631	AVERY SHOP HD RIVET GAUGE SET	$21.85
12-00633	AVERY RIVET LENGTH GAUGE	$12.55
M-1R	WISS SNIPS # M-1R	$21.50
M-2R	WISS SNIPS # M-2R	$20.95
12-00622	AVERY SPEED DEBURR-CSINK TOOL	$35.99
12-02547	AVERY ROYAL MULTI-BURR TOOL	$11.50
12-00629	AVERY DOUBLE EDGE DEBURR TOOL	$20.90
12-00875	7A DEBURRING WHEEL - MEDIUM GRADE	$88.75
01-00392	CURVED TOOTH FILE 14" LONG	$49.95
12-00870	AVERY 3/32" DRIVE PIN PUNCH	$10.50
12-00871	AVERY 1/8" DRIVE PIN PUNCH	$10.50
12-00889	AVERY 360DEG SWIVEL POP RVT TL	$47.50
13-11400	STANDARD AIRCRAFT HANDBOOK	$24.50



KIT BUILDER AIRCRAFT TOOL KIT

Initially designed for the RV3, RV4 and RV6 builders, this kit has proven to be very popular with virtually all aircraft home builders. It contains our most popular rivet hammer and is an excellent tool kit for RV builders. Weight: 40 lbs.

P/N 12-01145.....**$695.00**

Part No.	Pcs.	Description
02-R18C-12	3	Jobber's Length Drill
02-R18C-28	3	
02-306-21	1	Integral Pilot Cutter
02-306-30	1	
02-306-40	1	
02-441	1	Countersink Cage
04-M-1/8	175	'M'Type Fastener
04-M-3/32	325	
04-1120	1	Fluting Plier
04-17	1	Rivet Cutter
02-22022	1	Multi-Burr w/5 Blades
04-62	1	Cleco Plier
07-10-4703	1	Rivet Set, 3-1/2" O.A.L.
07-10-4704	1	
07-10-4705	1	
07-10-4706	1	
07-10-500	1	Flush Set, 3-1/2" O.A.L.
07-20-4703	1	Offset Rivet Set, 3-1/2" O.A.L.
07-20-4704	1	
07-20-4705	1	
07-20-4706	1	

Part No.	Pcs.	Description
07-20-500	1	Offset Flush Set, 3-1/2" O.A.L.
07-91	1	Mushroom Rivet Set
08-112	1	Bucking Bar
08-638	1	
08-647	1	
08-670	1	
09-RH-2	1	Handi Retainer Spring
10-420-2A	1	Hand Rivet Squeezer, 2" Yoke
17-3XSP	1	USATCO Rivet Gun
26-200-4703	1	Cupped Squeezer Set
26-200-4704	1	
26-200-4705	1	
26-210	2	Flush Squeezer Set
4263PDSB	1	Spring Back Punch &Die
4264PDSB	1	
62-54404	1	Plastic Kit Box
JSM-705	1	3/8" Reversible Air Drill
TP44	1	Hand Seamer

RV BUILDERS STARTER KITS



This scaled down version of this RV Builder's Kit contains just the tools you need to get your feet wet with sheet metal construction. The kit closely follows the recommended tools list from Van's RV TRAINING PROJECT-1 and their TOOL BOX KIT projects. This kit is also the minimum recommended set of tools to build the empennage (tail) section of the RV3, RV4, RV7, RV8, RV9, and RV10 series of home built airplanes. Start out with this kit, and when you're ready to do more advanced work, get the upgrade package to take you all the way up to the full RV Builder's Tool Kit.

Description	Part No.	Price
Starter Kit W/ 3x Rivet Gun	12-04850	$917.00
Starter Kit W/ Pro 2x Rivet Gun	12-04851	$924.00
Starter Kit W/ Pro 3x Rivet Gun	12-04852	$927.00
Starter Kit Upgrade Package	12-04853	$977.00

RV-12 QUICKBUILD TOOL KIT



This kit contains all the tools you need to build Van's exciting RV-12 Quickbuild Kit. The RV-12 has become an instant favorite of Light Sport Aviation (LSA) kitplanes because it's so remarkably easy to assemble. It requires virtually no sheet metal skills, and needs little more than a few hand tools. We've made your task even easier by bringing together all the tools you'll need into one complete kit, and priced it to be easy on your wallet. This kit is based on Van's recommended tool list, as well as recommendations from customers. .....P/N 12-04849..... **$1,599.00**

RV BUILDERS KITS



The RV Builder's Kit has been completely revised to conform to Van's recommended tool list for their very popular line of RV homebuilt airplanes. It contains all of the aviation tools and equipment needed to successfully assemble Van's Aircraft RV-3/3B, RV-4, RV-6/6A, RV-8/8A, RV-9/9A, and the newer RV-7/7A and RV-10 series homebuilt airplanes. It's also an excellent toolkit to assemble the Murphy family of kitplanes, including the Rebel, Elite, Maverick, and Super Rebel; The Precision Aero Mustang S-51D; The Skystar Kitfox; and any other metal airplane.

Description	Part No.	Price
Rv Builders Kit W/ Econ 3x Rivet Gun	12-04854	$1,911.00
Rv Builders Kit W/ Pro 2x Rivet Gun	12-04855	$1,897.00
Rv Builders Kit W/ Pro 3x Rivet Gun	12-04856	$1,920.00

TO

TOOL KITS

MASTER KIT BUILDERS KIT



The Master Kit Builders Kit (TP176MKB) contains all the tools supplied in the "RV" tool kit plus many more. It is designed to supply all the major, most commonly used tools for the building sheet metal aircraft. These items can be used on RV's, Zenair, Questair and Mustang Aeronautic Kits as well as many, many others. A huge savings can be realized by purchasing this kit over the individual tool price. Wt. 50 lbs.

P/N 12-00832 ..... **$893.00**

Part No.	Pcs.	Description
02-R10C-1/4	1	Jobber's Length Drill
02-R18C-12	2	
02-R18C-30	4	
02-R18C-40	6	
02-306-21	1	Integral Pilot Cutter
02-306-30	1	
02-306-40	1	
02-441	1	Countersink Cage
04-M-1/8	175	'M' Type Fastener
04-M-3/32	325	
04-1120	1	Fluting Plier
04-17	1	Rivet Cutter
02-22022	1	Multi-Burr w/5 Blades
04-63	1	Cleco Plier w/Comfort Grips
07-10-4703	1	Rivet Set, 3-1/2" O.A.L.
07-10-4704	1	
07-10-4705	1	
07-10-4706	1	
07-170	1	Flush Mushroom Set w/Guard
07-20-4703	1	Offset Rivet Set, 3-1/2" O.A.L.
07-20-4704	1	
07-20-4705	1	
07-20-4706	1	
07-20-500	1	Offset Flush Set, 3-1/2" O.A.L.
07-90	1	Mushroom Rivet Set

Part No.	Pcs.	Description
08-112	1	Bucking Bar
08-638	1	
08-647	1	
08-670	1	
09-RH-2	1	Handi Retainer Spring
10-37001	1	POP Swivel Hand Riveter
10-420-2A	1	Hand Rivet Squeezer, 2" Yoke
17-3XSP	1	USATCO Rivet Gun
18-DS-1/4	1	Drill Stop
18-DS-10	1	
18-DS-30	1	
18-DS-40	1	
26-200-4703	1	Cupped Squeezer Set
26-200-4704	1	
26-200-4705	1	
26-210	2	Flush Squeezer Set
4263PDSB	1	Spring Back Punch ! Die
4264PDSB	1	
53-120	1	POP Dimple Tool
53-70453	1	3 Piece Aviation Snip Set
61-13551	1	Hole Cutter
62-54405	1	Plastic Kit Box
JSM-705	1	3/8" Reversible Air Drill
TP44	1	Hand Seamer

MASTER AIRCRAFT TOOL KIT



This 121-piece complete Aircraft mechanics Kit is excellent for aircraft restoration, repair and manufacturing. It is ideal for the A & P mechanic, student and homebuilder. Kit comes with everything from sheet metal tools to riveting tools in a two-drawer tool chest. This kit includes the top quality riveting hammer manufactured in the U.S.A. Wt. 48 lbs.

P/N 12-01126 ..... **$779.00**

Part No.	Pcs.	Description
02-2962-21	1	Threaded Shank Adapter Drill
02-2962-30	1	
02-2962-40	1	
02-306-21	1	Integral Pilot Cutter
02-306-30	1	
02-306-40	1	
02-441	1	Countersink Cage
02-1120	1	Fluting Plier
04-200	1	Chip Chaser
04-5S	1	Hand Metal Punch Kit
04-501	1	Heavy-Duty Rivet Cutter
04-6	1	Nibbling Hand Tool
04-62	1	Cleco Plier
04-EL-1/2-1	3	Side Grip Fastener
04-EL-1/2-1/2	2	
04-M-1/8	10	'M'Type Fastener
04-M-3/16	10	
04-M-3/32	10	
04-M-5/32	10	
04-WNX-1/8	5	Wing Nut Fastener
04-WNX-3/16	5	
04-WNX-3/32	5	
04-WNX-5/32	5	
07-10-4703	1	Rivet Set, 3-1/2" O.A.L.
07-10-4704	1	
07-10-4705	1	
07-10-4706	1	
07-10-500	1	Flush Rivet Set
07-170	1	Flush Mushroom Set w/ Guard
07-20-4703	1	Offet Rivet Set, 3-1/2" O.A.L.
07-20-4704	1	
07-20-4705	1	Offset Rivet Set, 3-1/2" O.A.L.

Part No.	Pcs.	Description
07-20-4706	1	Offset Flush Set
07-20-500	1	
08-112	1	Bucking Bar
08-638	1	
08-647	1	
08-670	1	
10-420-2A	1	Hand Rivet Squeezer, 2" Yoke
149-1	1	Wrench (for Cone Jaw Chuck)
15-1580	1	Junior Air Vac
17-3XSP	1	Rivet Gun
18-DS-10	1	Drill Stop
18-DS-21	1	
18-DS-30	1	
18-DS-40	1	
20-127-4S	1	90°Angle Drill Attachment
20-M3	1	Cone Jaw Chuck
26-200-4703	1	Cupped Squeezer Set
26-200-4704	1	
26-200-4705	1	
26-210	1	Flush Squeezer Set
46-231-1	1	Strap Duplicator
46-231-2	1	
46-231-3	1	
46-231-5	1	
53-70453	1	3 Piece Aviation Snip Set
62-54405	1	Plastic Kit Box
75HP575	1	Sheet Metal handbook
JSM-705	1	3/8" Reversible Air Drill
TP44	1	Hand Seamer

TP83 & TP84 RIVET GUN KIT



Virtually all the tools you need for riveting in kit form. Intended for professional sheet metal mechanics, serious home builder/students. Packed in a sturdy molded plastic case. #1 selling kit.

Part No.	Description
07-10-4703	3/32" Rivet Set, 3-1/2" O.A.L.
07-10-4704	1/8" Rivet Set, 3-1/2" O.A.L.
07-10-4705	5/32" Rivet Set, 3-1/2" O.A.L.
07-10-4706	3/16" Rivet Set, 3-1/2" O.A.L.
07-11-4704	1/8" Rivet Set, 5-1/2" O.A.L.
07-11-4705	5/32" Rivet Set, 5-1/2" O.A.L.
07-11-4706	3/16" Rivet Set, 5-1/2" O.A.L.
07-11-4703	Flat Rivet Set
07-140	Offset Flush Mushroom Set
07-170	Flush Mushroom Rivet Set w/ Guard
07-20-4703	3/32" Offset Rivet Set, 3-1/2" O.A.L.
07-20-4704	1/8" Offset Rivet Set, 3-1/2" O.A.L.

Part No.	Description
07-20-4705	5/32" Offset Rivet Set, 3-1/2" O.A.L.
07-92	Flush Mushroom Rivet Set
08-111	Bucking Bar
08-112	Bucking Bar
08-669	Bucking Bar
08-670	Bucking Bar
09-140	Power Regulator
09-RB-2	Beehive Retainer Spring
09-RH-2	Handi Retainer Spring
17-	Rivet Gun
62-14	Molded Plastic Carrying Case

Kit with TP83(3x) Gun .....P/N 12-00240 ..... **$299.00**

DELUXE STUDENT TOOL KIT



This kit meets most school requirements for basic sheet metal tools. These high quality tools will take the student through school and into the profession for years of outstanding service. It contains the most popular rivet hammer and is a great starter kit. Wt. 14 lbs.

P/N 12-01127 ..... **$359.00**

Part No.	Pcs.	Description
0210A-3/32	3	Jobber's Length Drill
0210A-1/8	3	
0210A-5/32	3	
0210A-3/16	3	
0210A-1/4	3	
02-306-21	1	Integral Pilot Cutter
02-306-30	1	
02-306-40	1	
04-M-1/8	10	'M' Type Fastener
04-M-3/16	10	
04-M-3/32	10	
04-M-5/32	10	
02-441	1	Countersink Cage
04-501	1	Rivet Cutter
04-62	1	Cleco Plier
08-670	1	Bucking Bar

Part No.	Pcs.	Description
09H-2	1	Handi Retainer Spring
09B-2	1	Beehive Retainer Spring
09-140	1	Power Regulator
17-3	1	Rivet Gun
07-10-4703	1	Rivet Set, 3-1/2" O.A.L.
07-10-4704	1	
07-10-4705	1	
07-10-4706	1	
07-170	1	Mushroom Set w/ Guard
18-D -10	1	Drill Stop
18-D -21	1	
18-D -30	1	
18-D -40	1	
62-297	1	Canvas Tool Bag
JSM-705	1	3/8" Reversible Air Drill

GLASTAR TOOL KIT



This kit is designed for all new Glastar kit aircraft. The tools included are recommended by the manufacturer, specifically for the assembly of the sheet metal portion of the kit. Many of these tools are of top quality, and designed to last. They are all covered by a 30 day unconditional money back guarantee.

P/N 12-00831 ..... **$1,027.00**

Part No.	Pcs.	Description
02-2962-21	1	HREADED SHANK DRILL
02-2962-30	1	
02-2962-40	1	
02-306-21	1	PILOT CUTTERS COUNTERSINK
02-306-30	1	
02-306-40	1	
02-306-30-120	1	PILOT COUNTERSINK 120°
02-441	1	COUNTERSINK CAGE
02-501-12-40	3	12" AIRCRAFT EXTENSION DRILL
02-501-6-30	3	6" AIRCRAFT EXTENSION DRILL
02-501-6-40	3	
02-C1-H	1	DRILL SETS 60 (NUMBER SIZES)
02-R10B-1/16	3	JOBBERS LENGTH DRILL
02-R10B-1/4	3	
02-R10B-11/64	3	
04-200	1	CHIP CHASER
04-20SL	1	OFFSET SNIPS LEFT HANDED
04-20SR	1	OFFSET SNIPS RIGHT HANDED
04-22022	1	MULTI/BURR-5 5 BLADES INCLUDED
04-3090-1/2	2	SPRING TENSION CLAMPS A-1/2" D-3-1/2"
04-62	1	CLECO PLIER FOR SHEET METAL FASTNERS
04-EL-1/2-1/2	10	SIDE GRIP FASTENER CAPACITY-0-1/2" REACH 1"
04-EL-3/4-1/2	10	
04-K380	1	DEBURR TOOL W/ 3/4" BLADE

Part No.	Pcs.	Description
04-M-1/8	150	'M' TYPE SHEET METAL FASTENER
04-M-3/16	25	
04-M-3/32	250	
04-K380	1	DEBURRING TOOL
04-M-1/8	150	'M' TYPE SHEET METAL FASTENER
04-M-3/16	25	
04-M-3/32	250	
07-10-4703	1	RIVET SET, 3-1/2" O.A.L.
07-10-4704	1	
07-10-4706	1	
07-170	1	MUSHROOM RIVET SET
08-638	1	BUCKING BAR
08-647	1	
08-721	1	
08-760B-1	1	
09-140	1	POWER REGULATOR
10-37001	1	360° POP RIVETER
1245	1	12" FLEX RULER
17-3XSP	1	RIVET GUN
20-127-4S	1	90° ANGLE DRILL ATTACHMENT
53-211-4263	2	RIVET SQUEEZER
53-211-4264	2	PUNCH & DIE SET
53-420-2A	6	HAND SQUEEZER KIT
53-RBH-2	2	BEEHIVE & HANDI RETAINER SPRING
61-860	1	CENTER PUNCH & SCRIBE
62-54405	1	KIT BOX-PLASTIC & METAL
CP-785	1	AIR DRILL,REVERSABLE 3/8" CHUCK

MUSTANG KIT



This kit is designed especially for the assembly of the Mustang Kit aircraft. It is comprised of over 300 items, specifically required in the fabrication and assembly of this aircraft.

This 317 piece kit includes:

1 TP83(3x) or TP84(4x) Rivet Gun
1 TP91 Flush Rivet Set
1 SM10-4703 Rivet Set
1 SM10-4704 Rivet Set
1 SM10-4705 Rivet Set
1 A1007-234X QC Retainer Spring
1 TP346 Heavy Duty Rivet Cutter
1 TP61K Stop Countersink Kit
1 TP722 Fluting Pliers
130 TP75-1/8 Cleco Fasteners
25 TP75L-1/8 Cleco Fasteners
80 TP75-3/32 Cleco Fasteners
1 TP74 Cleco Pliers
1 TP44 Hand Seamer
1 TP227G Duckbill Pliers
1 TP266 Deburring Tool
1 TP888-3 Hand Rivet Squeezer
1 TP116A Squeezer Sets
1 TP751 Bucking Bar
1 TP670 Bucking Bar
1 SM181 Swivel Flush Rivet Set
5 TP641HC Handi-Clamp
25 TP75L-3/32 3/32 Cleco Fasteners
1 TP81 Hand Nibbler
4 TP49-30 Drill Bits
4 TP49-3/32 Drill Bits
4 TP49-40 Drill Bits
4 TP49-1/8 Drill Bits
2 TP49-12 Drill Bits
2 TP49-3/16 Drill Bits
1 TPA5611 Unibit Drill
1 TP294HD Auto Center Punch
1 TP735K Hand Pack Trial Kit
1 TPFS6 Flat File
1 TP4263 Dimple and Die Set
1 TP4264 Dimple and Die Set
1 TP216 Tool Box

Kit w/ TP83 gun (3x).....P/N 12-00347 ..... **$937.00**
Kit w/ TP84 gun (4x).....P/N 12-00498 ..... **$1,063.00**

TO

TOOL KITS

AIRFRAME MECHANICS KIT



This kit was designed at the request of several FBO's and repair stations who desire their new hires to have a standard set of airframe tools that would allow them to do their required tasks. It features a set of common hand tools such as screwdrivers, hammers, and wrenches; as well as the more aviation specific tools such as a rivet gun, angle drill and die grinders.

Description	Part No.	Price
Airfram Mechanics Kit W/ Econ 3x Rivet Gun	12-04829	$1,863.00
Airframe Mechanics Kit W/ Pro 2x Rivet Gun	12-04830	$1,867.00
Amk-3x Airframe Mechanics Kit W/ Pro 3x Rivit Gun	12-04831	$1,873.00
Airframe Mechanics Kit W/ Pro 4x Rivet Gun	12-04832	$1,876.00

DELUXE RIVETING KITS



Deluxe Riveting Kit contains everything needed to build and maintain all metal aircraft. This kit is highly recommended for the professional mechanic or the experienced home builder.

Description	Part No.	Price
Deluxe Riveting Kit With Econ 3x Rivet Gun	12-04833	$970.00
Deluxe Riveting Kit With Pro 2x Rivet Gun	12-04834	$1,075.00
Deluxe Riveting Kit With Pro 3x Rivet Gun	12-04835	$1,000.00
Deluxe Riveting Kit With Pro 4x Rivet Gun	12-04836	$1,006.00

MASTER BUILDERS KITS



The Master Builder's Kit is the most comprehensive riveting kit. It contains the tooling needed to build some of the most popular aluminum airplanes, including the RV series, the Thorp T-18, the Midget Mustang, and many others. This kit is also very popular with airframe mechanics needing an all-in-one riveting kit.

Description	Part No.	Price
Master Builders Kit W/ Econ 3x Rivet Gun	12-04837	$1,926.00
Master Builders Kit W/ Pro 2x Rivet Gun	12-04838	$1,933.00
Master Builders Kit W/ Pro 3x Rivet Gun	12-04839	$1,936.00
Master Builders Kit W/ Pro 4x Rivet Gun	12-04841	$1,940.00

RANS S-19 BUILDERS KIT



The rans-19 kit is available as a quick build kit that requires considerably less tools than in the past. Redesigned kit complies with the tool requirements. This kit now contains only the essential tools you need to successfully construct this popular homebuilt.

P/N 12-04842 ..... **$1,384.00**

SONEX BUILDERS KIT



Sonex Builder's Kit contains all the recommended and most useful tools that you will need to build a SONEX kit built aircraft. This kit is ideally suited for the professional mechanic or the experienced home builder.

P/N 12-04843 ..... **$1,042.00**

ACU CENTER TOOL KIT



This Acu-Center tool is a precision measuring aid designed to provide fast, repeatable rod end service and replacement by providing its user with the most accurate rod end adjusted length measurement possible.

This is accomplished through the Acu-Center's precision fit, rod end / ball centering flange and absolute zero measuring point. So whether you're on the street, in the dirt, up in the air, on the job site or at play, the Acu-Center tool is guaranteed to make your rod end replacement faster, easier and 100% accurate.

P/N 12-05082 ..... **$168.42**

RV-12 QUICKBUILD TOOL KIT



This kit contains all the tools you need to build Van's exciting RV-12 Quickbuild Kit. The RV-12 has become an instant favorite of Light Sport Aviation (LSA) kitplanes because it's so remarkably easy to assemble. It requires virtually no sheet metal skills, and needs little more than a few hand tools. We've made your task even easier by bringing together all the tools you'll need into one complete kit, and priced it to be easy on your wallet. This kit is based on Van's recommended tool list, as well as recommendations from customers.

P/N 12-04849 ..... **$1,599.00**

ZODIAC BUILDERS KIT



Zodiac Builder's Kit contains all the recommended and most useful tools that you will need to build a Zodiac aircraft. This kit is ideally suited for the professional mechanic or the experienced home builder.

P/N 12-04844 ..... **$934.00**

MUSTANG BUILDERS KITS



These kits contain the majority of the tools needed in every phase of constructing the popular Kit Mustang. Designed to provide only the tools you will need to get the job done quickly and professionally.

Description	Part No.	Price
Mustang Builders Kit W/ Econ 3x Rivet Gun	12-04845	$874.00
Mustang Builders Kit W/ Pro 2x Rivet Gun	12-04846	$880.00
Mustang Builders Kit	12-04847	$885.00
Mustang Builders Kit W/ Pro 4x Rivet Gun	12-04848	$888.00

ENGINE SPECIALIST KIT



This kit is designed for the engine and powerplant specialist. It contains an array of tools and equipment to take apart, check, inspect, overhaul, and re-assemble just about any type of Aircraft Engine, including all models of Continental and Lycoming.

P/N 12-04824 ..... **$1,688.00**

JOURNEYMANS KIT



This Journeyman kit is for the aspiring A&P Mechanic or Homebuilder who needs a comprehensive professional kit, but is not yet ready for a Master Kit. It contains a broad selection of tools used frequently by the Airframe Mechanics at a price that's affordable to those Journey Mechanics starting out in the field.

Description	Part No.	Price
Jbk-2602a Journeyman Kit W/ 2602a Econ 3x Gun	12-04825	$1,019.00
Jbk-2x Journeyman Kit W/ Ats Pro 2x Rivet Gun	12-04826	$1,023.00
Journeyman Builders Kit W/ 3x Rivet Gun	12-04827	$1,028.00
Journeyman Builders Kit W/ Pro 4x Rivet Gun	12-04828	$1,033.00

AVIONICS MAINTENANCE KIT



This Avionics Maintenance Kit has all of the essential tools to work on every aspect of aircraft electronics systems. Whether it's a simple electrical repair or a complete system rewire, you'll find this kit indispensable in getting the job done quickly and professionally.

P/N 12-04823 ..... **$799.00**

LOYD'S RIVET DRILL GUIDE



This set is designed one size under bore and hardened C1144 steel for long life. The drill lube is to ensure smooth minimal friction between the drill bit and the guide, cooling the bit, keeping it from galling, which aids in longer drill and guide life. Dip drill bit in lubricant at least once for every rivet. The guides are easy to use. First select the appropriate guide for the rivet being drilled. The guides allow you to drill straight and center every time. They are compact, easy to grip and easy to spot if dropped. They were designed to eliminate double drilled holes and drill bits "skating" off of rivets.

P/N 12-03749 ..... **$129.95**

TO

Prices Subject to Change Without Notice

PRO X-SERIES RIVET GUNS



The standard tool used in aircraft manufacturing plants such as Boeing and Lockheed-Martin has just gotten better! The popular X-Rivet Guns have been retooled to make them smoother and more powerful, while still keeping them completely interchangeable with Chicago Pneumatic rivet guns. They are slow hitting with excellent finger tip control.

1/8" Aluminum (3/32" Steel) Rivet Capacity. Accepts all .401 shank rivet sets and attachments. Non-slip Powder Coat Finish. 1/4" NPT Inlet. Lifetime ATS-Pro Warranty.

Model No.	BPM	Capacity	Stroke	Part No.	Price
2X	2580	1/8"	2-1/4"	12-04857	$153.95
3X	2160	3/16"	2-7/8"	12-04858	$157.75
4X	1740	1/4"	3-1/16"	12-04859	$168.95

AHRS SYSTEMS TOOL KIT



The fittings capture the tubing with stainless steel retainers. By suppressing the release ring (around the tubing entry port on the fitting), the tubing is easily removed. Within just a few minutes, you'll be able to disconnect and reconnect tubing. O-ring seals, and maintaining precise tubing diameter during the manufacturing process, ensures a reliable seal. For Experimental Aircraft ONLY. Applicability and suitability of this kit is the responsibility of the builder. Kit Includes: • 2 x 102559-000, Static Port Alum 3/8" NPT • 2 x 102630-000, Fitting Tube Pneumatic Strt Female 1/4" OD PTC X 1/8" NPT • 6 x 102631-000, Fitting Tube Pneumatic Strt Male 1/4"OD PTC X 1/8" NPT • 2 x 102631-001, Fitting Tube Pneumatic Elbow Male 1/4" OD PTC X 1/8" NPT • 25' x 102632-000, Tube Pneumatic Polyethylene 0.17 ID X .25 OD BLU • 25' x 102632-001, Tube Pneumatic Polyethylene 0.17 ID X .25 OD GRN • 35' x 102632-002, Tube Pneumatic Polyethylene 0.17 ID X .25 OD Natural • 3 x 102639-000, Fitting Tube Pneumatic Y Union 1/4" OD • 1 x 102639-001, Fitting Tube Pneumatic T Union 1/4" OD • 1 x 102641-000, Tube Cutter • 30 x 102642-000, Snap Bushing • 2 x 102643-000, Sleeve Alum Coupling Tube 3/16" OD • 2 x 102644-000, Fitting Alum Flared Tube and Pipe Thread 3/16" OD

P/N 12-03283 ..... **$115.00**

PILOTS TOOL KIT



The fleet of general aviation aircraft is aging. Mandated maintenance promotes reliability, but experienced pilots know mechanical issues can still arise, sometimes far from an open FBO. This Pilot's Tool Kit provides the most common tools and other contents to help get you airborne, including a set of combination wrenches, 8" adjustable wrench, tire pressure gauge, locking pliers, 6-in-1 screwdriver, hex wrenches, and diagonal cutters. A special aviation spark plug socket handles most spark plug makes, and a way-cool mini-ratchet and socket set provide additional utility. Finally, a telescopic mirror, cable ties, and 30 feet of aviation-grade safety wire are included. Everything is nicely organized into a tough roll-up pouch.

P/N 12-03772 ..... **$94.95**

FINAL APPROACH COMPOSITES CURING BOX



The Final Approach Composites curing equipment provides most precise and economical heating solution for certified and non-certified aircraft on the market today. Designed to meet the requirements of Cirrus Aircraft's repair manual. Used by Epic Aircraft and ABARIS Training. Lightweight: Under 12 pounds. Portable: Designed to meet the airline's carry-on baggage requirements. Affordable: Less than half the price of the competitor. Easy to use: Comes with basic programing instructions as well as advanced instructions for controlling your cure and logging cure data for verification. Complete Solution: Everything you need is in the box. Multiple uses: Composite repairs, curing painted parts, bearing race replacements, etc. Use any heat source: You can use any heat source that will connect to 110 VAC current. (Off the shelf heat-gun, heat-blankets, heat-lamps,etc.) Calibrated data logger: Comes with a one-year calibration certificate. Surge Protection: Protects precision equipment from power surges. Circuit protection through switch: 15 AMP circuit protection to prevent overload. High flow cooling fan: High-flow fan cools equipment for longer life. One touch silencing alarm: When the alarm is active, simply hold your finger over the alarm for three seconds to silence it. K type thermocouples: Comes with two 15' thermocouples. Heat gun: Comes with a long lasting heat gun. SCEET tube: Comes with a one-foot piece of SCEET tube to slip over the heat gun for different repairs. P/N 11-13260 ..... **$2,799.00**



BLUE PNEUMATIC R AND D HAND TOOL KIT BP-738K METRIC

BP-738 Hand Tool. Mandrels including M3, M4, M5, and M6. Also includes 40 total pcs of assorted rivet nuts that match included mandrels. Comes in molded plastic case

P/N 12-04871 ..... **$51.75**



EFIS SYSTEMS TOOL KIT

The fittings capture the tubing with stainless steel retainers. By suppressing the release ring (around the tubing entry port on the fitting), the tubing is easily removed. Within just a few minutes, you'll be able to disconnect and reconnect tubing. O-ring seals, and maintaining precise tubing diameter during the manufacturing process, ensures a reliable seal. For Experimental Aircraft ONLY. Applicability and suitability of this kit is the responsibility of t • 1 - Union Tee • 2 - Union 90° • 2 - Synthetic Rubber Grommet • 30 - Snap Bushing • 2 - Female Connector • 2 - Static Port • 2 - AN Hardware Assembly • 1 - 25' 1/4" Green Tubing (Pitot) • 1 - 32' 1/4" White Tubing (Static) • 1 - 23' 1/4" Blue Tubing (AOA)

P/N 12-03284 ..... **$122.85**

ZENAIR HAND RIVETER



Hand Riveter with Custom Machined Heads. Riveter Heads (changeable Nose Bushing piece). ZENAIR blind (or pulled) rivets have been used to construct the all-metal Chris Heintz designs since the 1970s, and make riveting a quick and easy process! The ZENAIR riveting system forms the rivet head as the blind rivet is pulled, providing a low profile dome finish and high shear strength. Fast installation, simple tools and low cost make this a popular riveting system with homebuilders!
Note: The riveter is supplied with the custom machined heads, required for the Zenair blind rivets ((for use with Zenair blind rivets, sold separately) P/N 12-03713 ..... **$49.50**

ZENAIR PNEUMATIC RIVETER



Pneumatic Riveter with Custom Machined Heads for use with Zenair blind rivets, sold separately ZENAIR blind (or pulled) rivets have been used to construct the all-metal Chris Heintz designs since the 1970s, and make riveting a quick and easy process! The ZENAIR riveting system forms the rivet head as the blind rivet is pulled, providing a low profile dome finish and high shear strength. Fast installation, simple tools and low cost make this a popular riveting system with homebuilders!
Note: The riveter is supplied with the custom machined heads, required for the Zenair blind rivets, for use with Zenair blind rivets, sold separately. P/N 12-03712 ..... **$99.85**

ZENAIR BLIND RIVETS



These rivets are corrosion resistant, and the stem becomes locked in after being set. Also, not many different lengths are required for different diameters or thicknesses. In the Assembly Instructions, they are designated as A4 (1/8) and A5 (5/32).

Note: Sold in packages of 100.

Desc.	Length	Grip	Drill	Min. Single Shear Length	Part No.	Price
A4 Blind Rivet	1/8" / 3.2mm	1/4" / 6.4mm	#30	110 lbf / 50kg	12-03709	$13.65
A5 Blind Rivet	5/32" / 4mm	5/16" / 7.9mm	#20	180 lbf / 80kg	12-03711	$18.75

NUMATX HTS-C3K HYDRAULIC RIVET SQUEEZER



The Numatx HTS-C3K C-Squeezer System is a hydraulically operated hand held tool, designed to squeeze up to 1/8" diameter aircraft grade rivets (AD alloy). This unit is hydropneumatic operated (also known as pneudraulic). The system is comprised of an HTC-3 hand-held C-Squeezer unit and an HTI-10 Pressure Intensifier. The fully hydraulic C-Squeezer offers the advantages of decreased weight, smaller size, and constant force when compared to traditional pneumatic only squeezers. This reduces operator fatigue, allows for use in more confined areas, and improves control of the s2queezing action (feathering operation). The units are built from high-quality aircraft grade materials, with parts made on CNC machining centers and features held to close tolerances, for years of dependable operation.

Description	Part No.	Price
System Only - No Yoke	12-05135	$695.00
System with 1.5 in Yoke	12-05136	$750.00
System with 3 in Yoke	12-05137	$775.00
System with 4 in Yoke	12-05138	$810.00

BAHCO FLIGHT AID METRIC GENERAL AVIATION TOOL KIT



An essential companion to pilots, this 45-piece GA Tool Kit is designed to assist in minor maintenance tasks. In keeping with the range of pre-designed tool kits, the Flight Aid Kit has adopted the tool control aspect. The high quality BAHCO aviation tools are individually embedded into Skydrol resistant foam. These foams have red material backing which highlights a missing tool immediately, whilst also ensuring that tools are kept organised and free from the risk of damage. Supplied in a high quality nylon bag with a comfortable grip handle, this kit is easily transportable and can be stowed in any orientation. P/N 12-04983 ..... **$650.00**

BAHCO FLIGHT AID IMPERIAL GENERAL AVIATION TOOL KIT



n essential maintenance companion to pilots, this 47-piece GA Tool Kit is designed to assist in minor maintenance tasks. In keeping with our range of pre-designed tool kits, the Flight Aid Kit has adopted the tool control aspect. The high quality BAHCO aviation tools are individually embedded into Skydrol resistant foam. These foams have red material backing which highlights a missing tool immediately, whilst also ensuring that tools are kept organised and free from the risk of damage. Supplied in a high quality nylon bag with a comfortable grip handle, this kit is easily transportable and can be stowed in any orientation. P/N 12-04984 ..... **$650.00**

BAHCO AVIATION IMPERIAL TOOL KIT RBI9200C



The high quality 8 drawer BAHCO tool cabinets are built to last. The kit includes 243 BACHO hand tools. The two different colours of the inlay indicate lost tools instantly, making tool control much faster, easier and safer. 8 Drawers Pro Tool Trolley PSP.
P/N 12-04985 ..... **$4,695.00**

BAHCO AVIATION METRIC HAND CARRY KIT RBA2



A selection of 146 BAHCO tools, with a lifetime guarantee, fitted into a steel tool case. The case has 3 draws, 1 lid tray, and a selection of lid clips. The top is covered with corrugated sheet metal to enable the case to be used as a step stool. The tools are embedded into two-colour foam, offering a heightened level of tool control. The foam is hydraulic fluid and oil resistant. P/N 12-04986 ..... **$1,880.00**

BAHCO METRIC MECHANIC HAND TROLLEY CASE RBA3



A selection of 194 BAHCO tools, with a lifetime guarantee, fitted into a wheeled, synthetic resin, watertight, impact-resistant case with pressure equalizing valve. The tools are embedded into two-colour foam, offering a heightened level of tool control. The foam is hydraulic fluid and oil resistant. Synthetic resin tool case trolley in black. P/N 12-04987 ..... **$2,195.00**

BAHCO METRIC MECHANIC WORKSHOP CABINET WITH TOOLS RBA4



A selection of 114 BAHCO tools, with a lifetime guarantee, fitted into a 7 draw cabinet with 4 spare draws. The tools are embedded into two-colour foam, offering a heightened level of tool control. The foam is hydraulic fluid and oil resistant. The foam is hydraulic fluid and oil resistant. P/N 12-04988 ..... **$1,395.00**

BAHCO METRIC MECHANIC WORKSHOP CABINET WITH TOOLS RBA5

A selection of 164 BAHCO tools, with a lifetime guarantee, fitted into a 7 draw cabinet with 3 spare draws. The tools are embedded into two-colour foam, offering a heightened level of tool control. The foam is hydraulic fluid and oil resistant.
P/N 12-04989 ..... **$1,695.00**



METRIC MECHANIC WORKSHOP CABINET WITH TOOLS RBA6



A selection of 287 BAHCO tools, with a lifetime guarantee, fitted into a 7 draw cabinet with 2 spare draws. The tools are embedded into two-colour foam, offering a heightened level of tool control. The foam is hydraulic fluid and oil resistant.
P/N 12-04990 ..... **$3,395.00**

METRIC MECHANIC WORKSHOP CABINET WITH TOOLS RBA6



The Kit PN RBI9300 contains 68 pieces of conventional and Avionic specific test and measurement equipment for use in the aviation service field. The sturdy black polypropylene case is ideal for the service environment as it is resilient to scratches, dents and is shock resistant. The case is also airtight, waterproof, dustproof and will remain afloat should it end up in water. The kit contents which includes a DMM designed for avionic testing, it may also be used for insulation measurement, are contained within the case whereby each component space is labelled. This “Tool Control” facility is a vital part of the kit. The special Aero leads are displayed in the lid of the case for initial visual inspection but thereafter can be stored in the respective colour coded tool rolls, which are supplied within the kit. P/N 12-04991 .... **$4,795.00**

AVIONICS TOOLKIT RBI9600T



Tool case made out of synthetic resin, black, watertight, impact-resistant, with pressure equalizing valve, Inlays in two colours, red/anthracite, Skydrol resistant. 84 piece set, BAHCO aviation handtools integrated in four different layers. The two different colours of the Inlay indicates lost tools instantly this makes tool control much faster, easier and safer. P/N 12-04992 ..... **$6,495.00**

BAHCO AVIATION TOOL KIT RBI8000T



Tool case trolley made out of synthetic resin, black, watertight, impact-resistant, with pressure equalising valve, Inlays in two colours, red/anthracite, Skydrol resistant. Kit includes: • 240 BAHCO aviation handtools inch/metric, specialised for Helicopters integrated in six different layers. • The two different colours of the inlay indicate lost tools on the spot and makes the tool control much faster and easier and safer.
P/N 12-05068 ..... **$3,300.00**

BAHCO AVIATION TOOL KIT RBI8100T



Tool case trolley made out of synthetic resin, black, watertight, impact- resistant, with pressure equalizing valve, Inlays in two colours, red/ anthracite, Skydrol resistant. Kit includes: • 189 BAHCO aviation hand tools inch/ metric, specialised forBoeing engineers, integrated in six different layers. • The two different colours of the inlay indicate lost tools on the spot and makes the tool control much faster and easier and safer.
P/N 12-05069 ..... **$3,150.00**

BAHCO AVIATION TOOL KIT RBI9000TM



Top cap assembled with corrugated sheet metal to use the toolbox also as a step. Skydrol resistant. Kit includes: • 129 BAHCO aviation handtools integrated in four different layers and clips in the lid. • The two different colors of the Inlay indicates lost tools instantly this makes tool control much faster, easier and safer. P/N 12-05070 ..... **$2,450.00**

BAHCO AVIATION TOOL KIT RBI9100TM



Steel tool case red powder coated. Three trays. Top cap assembled with corrugated sheet metal to use the toolbox also as a step. Skydrol resistant. Kit includes: • 148 BAHCO aviation handtools integrated in four different layers and clips in the lid. • The two different colors of the Inlay indicates lost tools instantly this makes tool control much faster, easier and safer. P/N 12-05071 ..... **$2,250.00**

BAHCO AVIATION TOOL KIT RBI9500T



Tool case made out of synthetic resin, black, watertight, impact-resistant, with pressure equalising valve, Inlays in two colours, red/anthracite, Skydrol resistant. Kit includes: • 159 BAHCO aviation handtools integrated in four different layers. • The two different colours of the Inlay indicates lost tools instantly this makes tool control much faster, easier and safer. P/N 12-05072 ..... **$2,250.00**

BAHCO AVIATION TOOL KIT RBI9400T



Tool case made out of synthetic resin, black, watertight, impact-resistant, with pressure equalizing valve, Inlays in two colours, red/anthracite, Skydrol resistant. Kit includes: • 159 BAHCO aviation handtools integrated in four different layers. • The two different colours of the Inlay indicates lost tools instantly this makes tool control much faster, easier and safer. P/N 12-05073 ..... **$2,350.00**

TO



BAHCO AVIATION TOOL KIT RBI9400T

Steel tool case red powder coated. Top cap assembled with corrugated sheet metal to use the toolbox also as a step. Skydrol resistant. Kit includes: • 148 BAHCO aviation handtools integrated in four different layers and clips in the lid. • The two different colours of the Inlay indicates lost tools instantly this makes tool control much faster, easier and safer. P/N 12-05074 ..... **$2,300.00**



BAHCO AVIATION TOOL KIT RBI9900

Steel tool case red powder coated. Three trays Top cap assembled with corrugated sheet metal to use the toolbox also as a step. Skydrol resistant. Kit includes: • 193 BAHCO aviation handtools integrated in four different layers and clips in the lid. • The two different colours of the Inlay indicates lost tools instantly this makes tool control much faster, easier and safer.
P/N 12-05075 ..... **$2,220.00**



BAHCO AVIATION TOOL KIT RBI9650T

Tool case made out of synthetic resin, black, watertight, impact-resistant, with pressure qualizing valve, inlays in two colours, red/anthracite, Skydrol resistant. Kit includes: • 92 piece set, BAHCO aviation handtools. • Integrated in five different layers. • The two different colours of the inlay indicates lost tools instantly this makes tool control much faster, easier and safer.
P/N 12-05076 ..... **$6,900.00**



BAHCO AVIATION TOOL KIT RBI8300T

This kit includes 82 tools in HD rigid case. The case is designed to hold small tools in its drawers and medium tools in the upper tray. The toolkit lid is reinforced with an aluminum plate and internally with a metallic grid with clips for tools. Kit includes: • 82 BAHCO aviation hand tools inch/ metric. • The two different colours of the inlay indicate lost tools on the spot and makes the tool control much faster and easier and safer.
P/N 12-05077 ..... **$2,420.00**

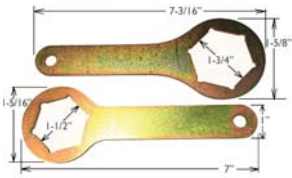


BAHCO AVIATION TOOL KIT RBI8200T

Tool case trolley made out of synthetic resin, black, watertight, impact-resistant, with pressure equalizing valve, Inlays in two colours, red/ anthracite, Skydrol resistant. Kit includes: • 57 BAHCO aviation hand tools inch/ metric, specialised for use in maintaining UAV. • The two different colours of the inlay indicate lost tools on the spot and makes the tool control much faster and easier and safer. P/N 12-05078 ..... **$4,500.00**

FOR A LIST OF TOOL KIT CONTENTS VISIT OUR WEBSITE

AXLE AND NOSE FORK NUT WRENCHES



These great little specialty tools are a must for all aircraft owners and mechanics as well. They are available in two sizes and will cover almost all GA aircraft. They are precision laser cut from 4130 chrome moly aircraft grade steel and heat treated to a 42 rockwell hardness so they are very strong. They then get zinc plated to prevent corrosion and provide many years of service. These are .135" thick so you can rotate axle nuts and test fit the keepers or cotter pins in place. These tools weigh 4 oz. each.

1-1/2 inch .....P/N 05-12377 ..... **$19.95**
1-3/4 inch .....P/N 05-12475 ..... **$19.95**

ULTIMATE PROPELLER WRENCHES



Unlike anything on the market at any price. This tool makes short work of R&R on your constant speed propeller. The one end ratchets without removal from the bolts and the other end is extremely strong fully reversible Crows Foot for torquing the propeller. Precision laser cut from 4340 Aircraft grade steel, heat treated to a 50 rockwell. Crows foot end is fully C&C machined for a perfect fit on the bolts. Utilizes both 1/2" & 3/8" ratchets, torque wrenches and extension tools. Crows foot end is offset 15° for double the versatility for difficult bolts behind prop blades. Black oxide plated for years of service and corrosion protection.

5/8 inch .....P/N 05-12481 ..... **$69.95**
3/4 inch .....P/N 05-12375 ..... **$69.95**



TRIM TAB ADJUSTMENT TOOL

Adjusts trim tabs evenly with less chance of scratching paint.
P/N 13-19791 ..... **$4.95**



SAFETY CABLE KIT

Safety Cable is a system used to secure hardware. Unlike traditional lock wire, Safety Cable is a much cleaner and faster way to secure hardware in critical areas of an aircraft. The system consists of a crimping tool and cables. **Specifications**: • .032" Diam. x 18" Cable Length • Type 321 CRES • Includes 50 cables with a magazine with 50 ferrules
P/N 12-04569 ..... **$89.95**



SAFETY CABLE NOSE TOOLS

The unique tensioning/crimping Terminator Tool tensions the cable, crimps the ferrule on the cable, and cuts the cable flush with the ferrule. This tool utilizes the best principals of ergonomic design, user-friendly features, and improved operational durability. It is so user friendly that an entry level technician can learn the Safety Cable installation method in less than 30 minutes. The short length of this tool allows the user to get into tight places where access is restricted. The ergonomic design comfortably fits the operator's hand. The robust construction and the precise dimensional quality of the tool provide the reliability and repeatability that you are looking for. The tool nose can be rotated 360° for the optimum position of each Safety Cable™ installation while allowing the tool to stay in a comfortable ergonomic position.

5 inch nose tool.....P/N 12-04570 ..... **$489.00**
7 inch nose tool.....P/N 12-04571 ..... **$489.00**



WASHER WRENCH SET

Washer Wrench Set. This is a (4) piece washer wrench set. It's used to hold AN/aircraft washers to reach into hard to reach areas.
P/N 12-04723 ..... **$38.75**

TO

RIVETING HAMMERS

RIVETING HAMMERS



US 3X

These high quality riveting hammers are excellent for all light aircraft metal riveting applications. They feature a convenient offset handle (except Model US3AA which is straight handle) and come complete with retainer spring and regulator. All models feature metered teasing trigger, made in U.S.A.

Part No.	Blows / Min.	Capacity Alum.	Capacity Bore	Stroke	Length	Weight (Lbs.)	Price
US1X	3600	1/8"	9/16"	1-1/2"	5-11/16"	2	**$191.75**
US2X	2580	1/8"	1/2"	2-1/4"	6-11/16"	2-1/4	**$238.95**
US5X	1560	1/4"	3/4"	2-11/16"	6-11/16"	4-3/4	**$359.00**
US7X	900	3/8"	3/4"	5-13/16"	8-5/16"	6	**$585.00**

"RECOILLESS" RIVETING HAMMERS



US 3R

In the early stages of developing a truly recoilless/fatigueless riveting hammer, it was determined that the tools must meet certain goals. The main goal being a reduction in low-frequency vibration in accordance with ISO Standard #5349-1986. In this standard are guidelines for the measurement and assessment of human exposure to hand-transmitted vibration. As a result, the following has been achieved: •Ergonomic design: To maximize user comfort by achieving a relaxing, comfortable, lightweight and balanced tool •Compact tool size: Since aircraft riveting is never standard, a tool that will allow the best overall access • Retain user touch: A metered trigger which provides single or multiple blows per minute while maintaining the ability to set rivets in seconds • Further dampen noise output. • Least amount of parts: No similar tool is produced with fewer parts, thus enhancing reliability, but keeping it simple enough so that maintenance can be done by anyone.
Independent testing* has shown these tools will greatly lessen job-related effects of prolonged exposure to vibration & boost user productivity.

SPECIFICATIONS

Part No.	Capacity Alum.	Capacity Steel	Bore	Stroke	Blows per minute
US3R	3/16"	5/32"	1/2"	3"	1900
US5R	1/4"	3/16"	1/2"	5"	1400

Part No.	Rivet Set dia	Overall Length	Weight	Air Inlet	Price
US3R	.401	7-7/8"	3 Lbs.	1/4 NPT	**$428.00**
US5R	.401	9-7/8"	3.5 Lbs.	1/4 NPT	**$495.00**

PNEUMATIC RIVET SQUEEZER



Heavy duty industrial tools are manufactured to exacting standards to insure long service life. All critical parts, including the yoke, are fabricated from 4130 steel and heat treated to Rc 42-46. These rivet squeezers have earned a reputation for durability and reliability through years of service on the production lines of major airframe manufacturers such as Grumman, Piper, Beech and Cessna. Easily operated by one hand. All replacement parts and other yoke designs available. Features feathering throttle.

SPECIFICATION	MODEL 3000	MODEL 6000
Max. Force	3000	6000
Rivet Capacity Dural	1/8"	3/16"
Steel	3/32"	5/32"
Standard Yoke Reach	2"	2"
Air Hose Size	1/4"	1/4"
Set Travel	9/16"	9/16"
Recommended Line Pressure	90PSI	90PSI
Weight	6 LBS.	6 LBS.

3000..... P/N 12-03400..... **$593.00**
6000..... P/N 12-03500..... **$688.00**

RIVET CONVERSION KITS

Converts your conventional hand pop riveter into an economical RivNut installer tool.



Size	Part No.	Price
6-32	12-13680	**$13.95**
8-32	12-13681	**$11.95**
10-32	12-13682	**$11.95**

AIRCRAFT RIVET GUNS



2X

The standard tool used in aircraft manufacturing plants such as Boeing, Rockwell, Lockheed etc., is completely interchangeable with Chicago Pneumatic. These tools are slow hitting with excellent finger tip control. Accepts all .401 shank rivet sets and attachments. All guns are brand new and carry a full 1 year warranty.

Part No.	Blows / Min.	Capacity Alum.	Bore	Stroke	Weight (Lbs.)	Price
2X	2580	1/8"	1/2"	2-1/4"	2.7	**$158.85**
3X	2160	3/16"	1/2"	2-7/8"	3.4	**$139.95**
4X	1740	1/4"	1/2"	3-1/16"	3.6	**$148.95**

TP82 AND TP84 RIVET GUNS



This "X" type feathering trigger riveter is the only rivet gun that allows you to slowly begin riveting without damage to the skin. This is critical in performing riveting operations. This gun is used by aircraft mechanics worldwide. It's also the perfect tool for kit builders. **NOTE:** Long term exposure to low frequency vibration caused by riveting may be harmful to your hands and arms. We suggest you take frequent breaks when riveting to reduce this exposure. Features: * Takes .401 shank rivet sets * Lightweight aluminum handle * Price includes spring retainer & regulator (TP97) * Precision machined hardened and ground valve * "Sure Grip" powder coated finish * Teasing trigger * Precision machined and hardened cylinder for long life. • Made in the U.S.A.
2X Rivet Gun (1/8" Capacity) ..... P/N 12-02004..... **$158.85**

3X RIVET GUN KIT



Virtually all the tools you need for riveting in kit form. Intended for professional sheet metal mechanics, serious home builder/students. Packed in a sturdy molded plastic case. #1 selling kit. Visit www.aircraftspruce.com for a complete list of kit contents.
P/N 12-00240..... **$299.00**

ATS ECONOMY RIVETING KIT (3X)



This cost-saving riveting kit features ATS's popular 2602A Rivet Gun , a selection of 4 Bucking Bars (141, 142, 148, and 149), plus a complete assortment of Rivet Sets to install Universal Head (AN470) or Flush (AN426) rivets in sizes 3/32" to 3/16". Comes to you in a stylish molded case to keep things neatly organized. This is the prefect "field" kit to take with you anywhere -- it has the riveting tools you need conveniently laid out in one handy ready-to-go package. P/N 12-03195..... **$259.00**

SPECIAL DIMPLING & RIVET SET

FOR RV4, RV6, RV8 AIRCRAFT



This 21-piece dimpling and riveting set was designed especially for use in the construction of the Vans RV aircraft series, however is ideal for a variety of other aircraft as well. All the riveting sets and dimple dies are made from heat treated stainless steel. Dimpling & Riveting Kit Contents: Set holder block, Cup sets, Flat sets, and Spring back dimple dies. Dimple Dies 3/32", 1/8" for rivets; 6-32, 8-32, 10-32 for screws. Cup Sets 3/32", 1/8", 5/32". Flat Sets 1/16", 1/8", 3/16", 1/4", 5/16", 3/8", 1/2". Polyethylene 4" X 4" storage block.
21-piece kit.....P/N 12-00450 ..... **$209.95**

7-PC RIVET SET



Holder includes 3/32", 1/8", 5/32 and 3/16 cups for AN470 rivets, plus 3 flat sets for AN426 rivets. To be used with pneumatic or hand rivet squeezer.
P/N 12-00555..... **$55.75**

6-PC DIMPLE DIE SET

RIVET SIZE



Holder includes springback dimple dies for 3/32", 1/8" and 5/32" rivets. To be used with pneumatic or hand rivet squeezer.
P/N 12-00560 ..... **$101.75**

6-PC DIMPLE DIE SET

SCREW SIZE



Holder includes springback dimple dies for 6-32, 8-32 and 10-32 screw sizes. To be used with pneumatic or hand rivet squeezer.
P/N 12-00565 ..... **$102.75**

TO

RIVET SETS FOR RIVETING HAMMERS



RIVET SETS STRAIGHT .401 SHANK (AN470)

Length "L"	Part Numbers					
	Rivet Size 3/32"	Rivet Size 1/8"	Rivet Size 5/32"	Rivet Size 3/16"	Rivet Size 1/4"	Price
3-1/2"	SM10-4703	SM10-4704	SM10-4705	SM10-4706	SM10-4708	$7.95
5-1/2"	SM11-4703	SM11-4704	SM11-4705	SM11-4706	SM11-4708	$14.50
7-1/2"	SM12-4703	SM12-4704	SM12-4705	SM12-4706	SM12-4708	$14.50
10-1/2"	SM13-4703	SM13-4704	SM13-4705	SM13-4706	SM13-4708	$34.50



RIVET SETS STRAIGHT .498 SHANK (AN470)

Length "L"	Part Numbers					
	Rivet Size 3/32"	Rivet Size 1/8"	Rivet Size 5/32"	Rivet Size 3/16"	Rivet Size 1/4"	Price
3-1/2"	SM30-4703	SM30-4704	SM30-4705	SM30-4706	SM30-4708	$19.50
5-1/2"	SM31-4703	SM31-4704	SM31-4705	SM31-4706	SM31-4708	$29.85
7-1/2"	SM32-4703	SM32-4704	SM32-4705	SM32-4706	SM32-4708	$25.90



FLUSH SETS STRAIGHT .401 SHANK (AN426)

Dia.	Length	P/N	Price	Dia.	Length	P/N	Price
1"	2-1/2"	SM90	$12.85	1-1/2"	5-1/2"	SM95	$34.75
1"	3"	SM91	$12.65	1-1/2"	3-1/8"	SM96	$31.65
1"	5-1/2"	SM92	$15.90	1-3/4"	3-1/4"	SM97	$39.75
1"	7-1/2"	SM93	$24.95	1-1/4"	2-1/4"	SM99	$26.50
1-1/4"	3"	SM94	$27.50				

NOTE: These flush sets are universal for any diameter rivet. Order by part number referencing the length and diameter of the flush set required.



FLUSH SETS STRAIGHT .498 SHANK (AN426)

Dia.	Length	P/N	Price	Dia.	Length	P/N	Price
1"	3"	SM101	$21.50	1-3/4"	3-1/4"	SM107	$42.80
1"	5-1/2"	SM102	$25.55	1-1/8"	2-1/4"	SM108	---

NOTE: These flush sets are universal for any diameter rivet. Order by part number referencing the length and diameter of the flush set required.

SETS FOR HIGH SHEAR RIVETS .401 SHANK



Length on all is 3-1/2"

Rivet Size	Part No.	Price
1/8"	SMHS10-4	$27.50
5/32"	SMHS10-5	$24.50
3/16"	SMHS10-6	$25.50
1/4"	SMHS10-8	$43.90



RIVET SETS OFFSET .401 SHANK (AN470)

Length "L"	Part Numbers					
	Rivet Size 3/32"	Rivet Size 1/8"	Rivet Size 5/32"	Rivet Size 3/16"	Rivet Size 1/4"	Price
3-1/2"	SM20-4703	SM20-4704	SM20-4705	SM20-4706	SM20-4708	$8.95
5-1/2"	SM21-4703	SM21-4704	SM21-4705	SM21-4706	SM21-4708	$16.50
7-1/2"	SM22-4703	SM22-4704	SM22-4705	SM22-4706	SM22-4708	$21.50
10-1/2"	SM23-4703	SM23-4704	SM23-4705	SM23-4706	SM23-4708	$32.85

FLUSH SETS OFFSET .401 SHANK (AN426)



DIA	Length	P/N	Price
1"	3-1/2"	SM140	$16.50
1"	5-1/2"	SM141	$23.85

NOTE: These flush sets are universal for any diameter rivet. Order by part number referencing the length and diameter of the flush set required.



OFFSET FLUSH MUSHROOM SETS

Model No.	Length	Description	Part No.	Price
07-140	3 -1/2" (89 mm)	Offset Flush Set .401 Shank 1" Face	12-03738	$12.85
07-141	5 -1/2" (140 mm)	Offset Flush Set .401 Shank 1" Face	12-03739	$23.50
07-142	7 -1/2" (191 mm)	Offset Flush Set .401 Shank 1" Face	12-03741	$25.75



OFFSET FLUSH SET

Excellent for limited access areas. Shank: 0.401. Surface Face: 1" x 1 1/2".

P/N 12-02892.....**$34.95**



''T'' FLUSH SET

T Flush Set. Surface: 1 1/2" x 1/2". Overall Length: 5 3/4". Weight: 0.50 lbs.. Shank: 0.401.

P/N 12-02894.....**$14.95**

BUCKING BLOCKS



Designed to be used with a riveting gun or by striking with a hammer. For aid with dimpling and/or riveting applications. Acts as a holding fixture for .187 shank dimple dies or rivet sets. Weight: 4 lbs. P/N 12-00805.... **$36.50**



SWIVEL DIMPLING TOOL .401 SHANK

*Can be used with TP93 Bucking Block

***Example: To order L = 3-1/2 - 1/8" Rivet specify: SM10SP-4264

Model #	"L"	Type	Price
SM10SP***	3-1/2"	Punch	$69.85
SM10SD	3-1/2"	Die	$39.30

Cuppings	3/32	1/8	5/32	3/16
For 100° Rivets (AN426)	4263	4264	4265	4266

KNOCKOUT PUNCHES FOR HIGH SHEAR RIVETS



Knockout punches for high shear rivets .40 shank. Made in the U.S.A.

Description	Length	Rivet Size	Part No.	Price
SMHS401K-4	3-1/2"	1/8"	12-01116	$9.65
SMHS401K-5	3-1/2"	5/32"	12-01117	$19.85
SMHS401K-6	3-1/2"	3/16"	12-01118	$19.85
SMHS401K-8	3-1/2"	1/4"	12-01119	$9.85

.401 SHANK RIVETING HAMMER ACCESSORIES



Description	P/N	Price	Description	P/N	Price
Twin Blade Cutter	12-05095	$18.75	Chisel	12-05099	$13.25
Moil Point	12-05096	$11.75	Rivet Buster	12-05101	$65.24
Body Ripper	12-05097	$10.25	Spotweld Breaker	12-05102	$13.75
Panel Cutter	1957	$85.25	Scraper	12-05103	$15.50
			Flush Set	12-01270	$39.75

RETAINER SPRINGS



Retainer springs comes in two styles: Quick Change Type: Designed to make possible speedy changing of rivet set in rivet gun. Beehive Type: Designed as a fixed type to securely hold rivet set in rivet gun.

Rivet Hammer Model #	Beehive Type		Quick Change Type	
	Part No.	Price ea.	Part No.	Price ea.
1X-2X-3X-4X	A1006-234X	$6.50		
5X-7X-9X	A1006-579X	$7.50	A1007-234X	$4.65
E3-E5	A1006-234X	$6.50	A1007-234X	$4.65
100B-200B,E3,E5			A1007-234X	$4.65
AVC 10,11,12,13	A1006-AVC	$7.75		
3R-5R	A1006-234X	$6.50		



STUBBY MICROSTOP

Stubby Microstop 1/4"-28 Threaded Shank for use in angle motors. Adjustable in 0.001" increments. 1/4"-28 female threads. 1/2" cutter capacity. Rated for 3,000 RPM use.

P/N 12-02893.....**$26.50**



SPRING LOADED CENTER PUNCHES

Spring loaded center punch for 1/8" OR 3/32" and larger rivet heads. This spring loaded center punch works great with universal aluminum head rivets, oval head and round head rivets.

1/8" .....P/N 12-02464.....**$38.95**

3/32" .....P/N 12-02934.....**$38.95**



BACK RIVETING RIVET SET

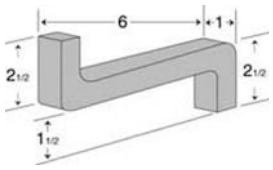
For back riveting flush rivets on RV control surfaces and other homebuilts. Has a plastic Delrin sleeve with spring to hold multiple sheets of aluminum together while riveting. 0.401 shank x 4-1/8 inches long.

Back Rivet Set 3-1/2" long .....P/N 12-07100-3.....**$34.99 ea.**

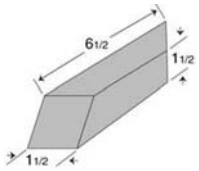
TO

BUCKING BARS

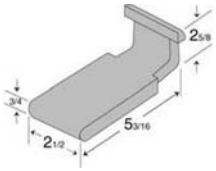
Our bucking bars are cast with ductile iron to insure non-porous finish which is very important in order to have a highly polished finished surface. They are heat treated to 38-42 RC and therefore can be repolished many times without changing hardness. This wide selection of sizes, shapes, and weights enables the aircraft builder to pick the proper bar for his job. Made in the U.S.A.



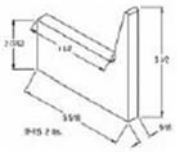
12-01302 2-3/4 Lbs. **$34.50**



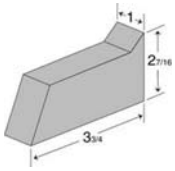
12-01303 3 Lbs. **$23.50**



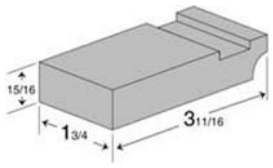
12-03768 3 Lbs. **$34.80**



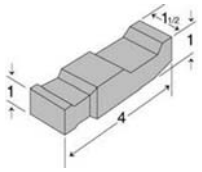
12-01306 2 Lbs. **$58.75**



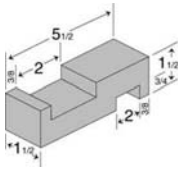
12-01307 1-3/4 Lbs. **$19.50**



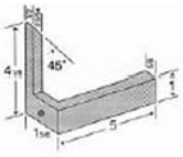
12-01308 1-1/2 Lbs **$19.50**



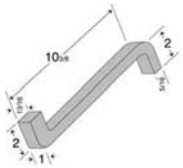
12-01309 1-1/4 Lbs. **$30.65**



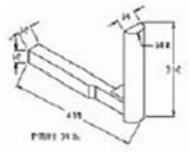
12-01310 2-3/8 Lbs. **$15.90**



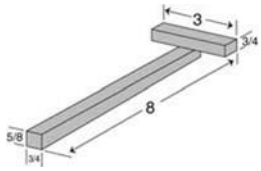
12-01311 1-1/4 Lbs. **$76.75**



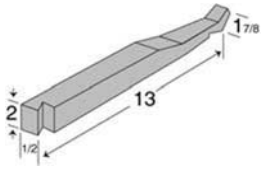
12-01312 3-5/16 Lbs. **$27.50**



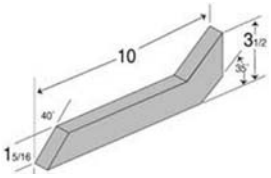
12-01313 1-1/4 Lbs. **$25.50**



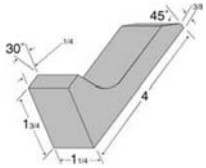
12-01315 1-1/2 Lbs. **$62.75**



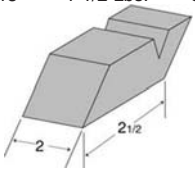
TP-683 3-1/4 Lbs. **$19.50**



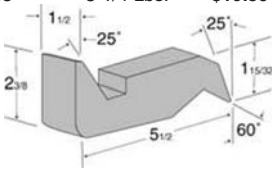
12-01319 1-3/4 Lbs. **$52.85**



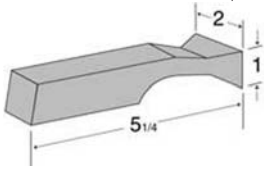
12-03736 1-1/4 Lbs. **$40.50**



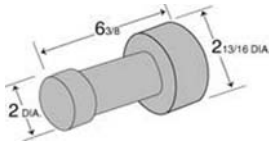
12-01280 1-3/8 Lbs. **$19.50**



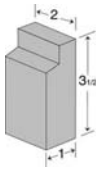
12-01281 3 Lbs. **$15.90**



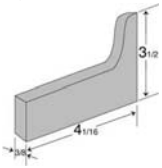
12-01282 1-3/8 Lbs. **$21.50**



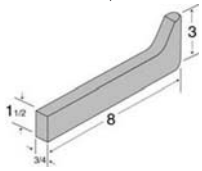
12-01284 6 Lbs. **$43.50**



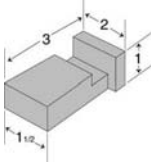
12-01285 1-1/2 Lbs. **$19.50**



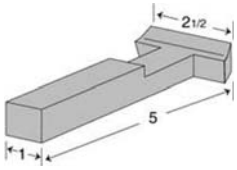
12-01286 3/4 Lb. **$36.85**



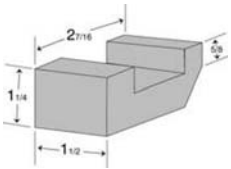
12-01287 2-3/4 Lbs. **$134.85**



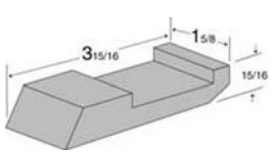
12-01288 1-1/4 Lbs. **$19.50**



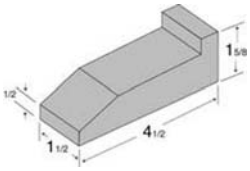
12-01289 1-1/4 Lbs. **$19.85**



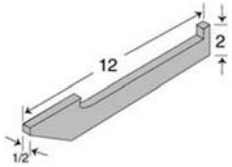
12-01290 1 Lb. **$17.95**



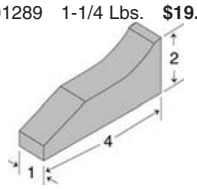
12-01291 1-1/4 Lbs. **$24.70**



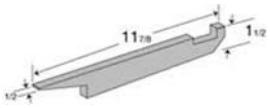
12-01292 2 Lbs. **$19.50**



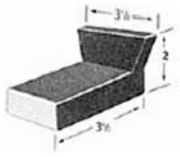
12-00828 2-1/4 Lbs. **$59.95**



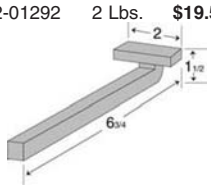
12-00841 1-1/2 Lbs. **$17.95**



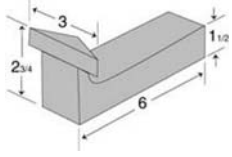
12-01294 2 Lbs. **$27.50**



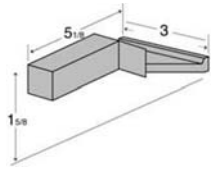
AT-618 2-1/4 Lbs. **$54.85**



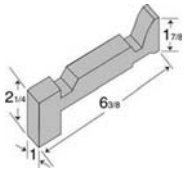
12-01295 1 Lb. **$19.50**



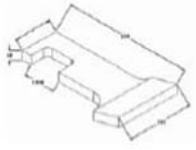
12-01296 4-1/4 Lbs. **$28.50**



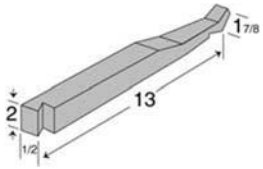
12-01297 1-3/8 Lbs. **$19.50**



12-01298 1-3/4 Lbs. **$23.75**



12-01299 2-1/4 Lbs. **$40.00**



12-01301 3-1/4 Lbs. **$19.50**

TO

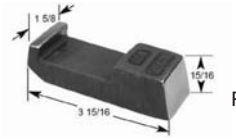
BUCKING BARS – V-DRILL – V-TAP GUIDES

BUCKING BAR 601



5.25 lbs. ..... P/N 12-02907.....**$19.95**

BUCKING BAR 638



1.25 lbs. Style B
P/N 12-02899.....**$15.95**

BUCKING BAR 670



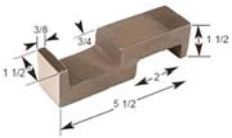
2 lbs. Style A
P/N 12-02898.....**$14.95**

BUCKING BAR 692



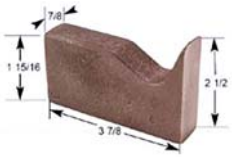
2.9 lbs..... P/N 12-02909.....**$16.95**

BUCKING BAR 736



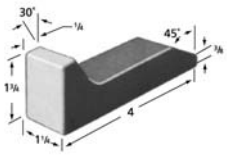
2.11 lbs..... P/N 12-02908.....**$15.95**

BUCKING BAR 750U-1



1.65 lbs.
P/N 12-02906.....**$11.95**

BUCKING BAR 763



1.25 1bs.
P/N 12-03736 .....**$40.50**

BUCKING BAR KIT



This starter kit contains the most commonly used bucking bars. Multi-finished surfaces for numerous applications. Heat treated for durability.
- 1 AT638 Bucking Bar
- 1 AT681 Bucking Bar
- 1 AT647 Bucking Bar
- 1 AT670 Bucking Bar

P/N 12-00840..... **$171.75**

V-DRILL PORTABLE GUIDES



The V-Drill Guide is like a portable drill press for precision alignment. V-groove along the bottom of the guide allows for perpendicular alignment with all drill sizes on round parts and corners. Bottom surface is precision ground to assure stability and accurate perpendicular alignment on flat surfaces. Drill guide is sized for drill bit sizes: 1/8" to 3/8", and made for 17 standard drill sizes (1/8 to 3/8 in 1/64 increments). Guides are made from special nickel alloyed steel that is heat treated for durability. Drill Straight - Every Time! Drill Guide comes with a handy plastic storage case and is 100% American Made Quality. Features: • Accurate - 90 degree V-groove along the bottom - automatically squares up the drill with the surface • Portable - Pocket size - Reusable plastic storage tube • Built to Last - Special nickel alloyed steel • High Quality - Natural steel finish - non-plated - Heat-treated for durability.

1/8" to 3/8" .....P/N 12-02937 .....**$22.85**
3/8" to 1/2" .....P/N 12-03455 .....**$24.50**

V-TAP GUIDES



The V-Tap Guides are for regular ground taps for hand tapping threads into pre-drilled holes. Works great on flat surfaces, round parts, and angled edges. Tap Straight - Every Time!

Standard: Guide holes are sized for ANSI Standard Ground Taps (0-80, 1-64, 1-72, 2-56, 2-64, 3-48, 3-56, 4-36, 4-40, 4-48, 5-40, 5-44, 6-32, 6-36, 6-40, 8-32, 8-36, 8-40, 10-24, 10-32, ¼-20, ¼-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, ½-13, ½-20, 5/8-11, 5/8-18). A protective plastic storage tube is included.
P/N 12-02938 .....**$22.50**

Metric: Guide holes are sized for ANSI Standard Ground Thread Metric Taps (1.6mm, 2mm, 2.5mm, 3mm, 3.5mm, 4mm, 5mm, 6mm, 8mm, 10mm, 12mm, 14mm, 16mm). A protective plastic storage case is included. P/N 12-02939 .....**$22.50**

STI V-TAP GUIDES (SCREW THREAD INSERTS)



The STI (Screw Thread Insert) V-Tap Guides are for Helicoil type taps to repair striped out threads.

STI V-TAP Guide (Unified Course Threads): Can handle standard ground STI hand tap sizes: 9/16-12, 1/2-13, 7/16-14, 3/8-16, 5/16-18, 1/4-20, 12-24, 10-24, 8-32, 6-32.
P/N 12-02940 .....**$22.50**

STI V-TAP Guide (Unified Fine Threads): Can handle standard ground STI hand tap sizes: 5/8-18, 9/16-18, 1/2-20, 7/16-20, 3/8-24, 5/16-24, 1/4-28, 10-32, 8-36.
P/N 12-02941 .....**$20.66**

TUNGSTEN BUCKING BARS



Dims: 5/8" long, 1" wide, 4" high
Weight: 1.6 lbs
P/N 12-04861 .....**$122.75**



Dims: 5/8" long, 1.5" wide, 2" high
Weight: 1.2lbs
P/N 12-04862 .....**$116.85**



Dims: 3/4" long, 1.5" wide, 2.5" high
Weight: 1.6 lbs
P/N 12-04863 .....**$165.75**



Dims: 2" x 1-1/2" x 5/8"
Weight: 1.33 lbs
P/N 12-04864 .....**$119.85**



Dims: 5/8" long, 1" wide, 1/4" high
Weight: 1.3 lbs
P/N 12-04865 .....**$136.75**



Dims: 1" long, 1" wide, 2.25" high
Weight: 1.4 lbs high
P/N 12-04866 .....**$118.75**

TO

RIVET TOOLS – SHEARS

RIVET REMOVAL TOOL



This quality tool enables the user to quickly and accurately remove rivets and blind fasteners. The tool comes complete with drill bits and guides, #40, #30, #21, and #10. Made in U.S.A.

P/N 12-00817 ..... **$48.85**

REPLACEMENT BITS

P/N 12-01128 - #10 ..... **$5.85**
P/N 12-01129 - #21 ..... **$3.85**
P/N 12-01130 - #30 .. **$2.85**
P/N 12-01131 - #40 .. **$3.45**

HAND RIVETING & DIMPLING TOOL



Used for hand dimpling of skins and small parts and for hand riveting of parts, assemblies, and spars. This tool maintains alignment of the dies to each other, and insures proper alignment to the work surface for superior dimpling results over either rivet gun or free-hand dimpling methods.

Features include: • 22" deep x 4" tall throat • Heavy wall 1" x 2" steel tube arm • Heavy wall aluminum channel base • Bronze 1/2" I.D. guide bushings for shafts • Heat treated and centerless ground stainless steel driver shaft (2)– one shaft has flat end for riveting with rivet gun & one shaft accepts 0.187" shanks for dimple dies & sets. •1.5" extension shaft for dies • Adjustable die holder block. Rivet Tool Return Spring Kit now included (Spring, collar and wrench). Great for one handed dimpling of skins and parts. Uses rivet, dimple and die sets with .187" shank. (Dies and sets sold separately)

P/N 12-00177 ..... **$233.95**

DRDT-2 RIVET DIMPLER



DRDT-2 (AKA Dash 2) is a welded steel c-frame rivet dimpler. Replaces the common impact c-frame rivet dimplers of the past. With its ample mechanical advantage, dimpling is fast, easy, less fatiguing and safe on the skins. With a fully adjustable set holder you can achieve consistent and accurate dimples. The DRDT-2 incorporates a new low force spring return system that prevents skin damage from the accidental release of the handle without increasing the force required to dimple. 22" throat depth allows dimpling of up to 44" wide sheets. The relief under the lower frame member provides dimpling access to spars, ribs, leading edge skins. Designed and analyzed using state of the art engineering tools the DRDT-2 can handle all your dimpling needs on your project. The DRDT-2 is painted with an industrial powder coat giving one of the toughest finishes available. Features: • Weight: 60 lbs • Size: 28"X16"X3" • Capacity: Up to 22" depth • Gap: 4" • Skin thickness: Up to 0.040" Aluminum. Dimple Dies: 3/16" shank Diameter.

Rivet Dimpler ..... P/N 12-00907 ..... **$468.00**
Dimple Die Rivet Set ..... P/N 12-00560 ..... **$101.75**
Dimple Die Screw Set ..... P/N 12-00565 ..... **$102.75**

LONG REACH PLIER KITS



(3) pieces for access into the most demanding applications. Each plier has a full 11" reach. Medium carbon steel, hardened, fully polished. Cushion PVC handles. Vinyl storage pouch. Model TP942.....P/N 12-00364 ..... **$51.85**

HOLE DUPLICATORS (BUSHING TYPE)



Provide an accurate means of drilling duplicate matching holes in overlapping sheets. Hole to be duplicated is drilled though bushing when pilot is in place..... **$17.50 ea**

Part No.	Pilot & Drill Size	Part No.	Pilot & Drill Size
AT532-61 #40	(.098")	AT532-63 #21	(.159")
AT532-62 #30	(.129")	AT532-65 #10	(.194")

DRILL STOPS



Lock on drill with set screw. Regulate hole depth, cushion the breakthrough. Eliminate surface marks & reduce drill breakage.

#40 Drill.....P/N 12-08800 ..... **$1.15**
#30 Drill.....P/N 12-08900 ..... **$1.15**
#28 Drill.....P/N 12-09000 ..... **$1.77**
#21 Drill.....P/N 12-09100 ..... **$1.15**
#20 Drill .....P/N 12-09200 .. **$1.15**
#12 Drill ..... P/N 12-09300.....**$1.55**
#10 Drill .....P/N 12-09400 .. **$1.15**
1/4" Drill ..... P/N 12-09500.....**$1.55**

ANGLE DRILL



One of the smallest angle head designs for close-quarter drilling operations. Made in USA. Features: • 90° Angle - 1/4" Capacity, 1/4"-28 Thread - 0.3 hp (0.22 kW) • 3200 RPM • 90PSI (MAX) • Overall Length 8-1/4" (210 mm) • xWeight 1.25lbs P/N 12-00241 ..... **$329.00**

OOPS HOLE SAVER RIVET KIT



"OOPS" Hole saver rivet kit. NAS 1097 rivets are 100º flush rivets with a smaller head. The 1/8" 1097 rivet head is the same size diameter as the normal 3/32" 426 Flush rivet. Easy fix on mistakes made on 3/32" flush rivets. The 3/32" NAS 1097 rivets are great for installing nutplates- you can deburr hole (instead of countersinking) and the reduced head on the NAS 1097 will fit.

3 sizes of 3/32": NAS1097AD-3-3, NAS1097AD-3-3.5, NAS1097AD-3-4
3 sizes of 1/8":, NAS1097AD-4-3.5, NAS1097AD-4.4, NAS1097AD-4.5
And also includes: Plastic divided storage box.

P/N 12-03781 ..... **$25.50**

HEAVY DUTY LOCKBOLT RIVETER



Powerful air-hydraulic riveter is designed specifically to install two-piece lockbolt fasteners of all types, including Avdel MaxLok, Huck Lockbolts, and Pop Lockbolts. Pulling Force 4,100 lbs (1,860 Kg). Stroke Length .9" (23 mm). Pulls 3/16" (4.8 mm) & 1/4" (6.4 mm) Lockbolts. Weight 6.38 lbs (2.9 kg). Requires 90 PSI at 3 CFM. Includes stem deflector

P/N 12-04812 ..... **$1,095.00**

ROUTER



This air-powered router is very light weight and features a straight handle and rear exhaust. Base is 1-1/2" and router guide is included. RPM: 20,000. Router shank: 1/4". Length: 6". Wt.: 1-1/2.12 Lbs. Made in U.S.A.

P/N 12-01321 ..... **$337.00**

CHIP CHASER



This handy, economical tool removes chips and burrs on metal between sheets after rivet holes have been drilled. A recommended tool for any aircraft builder involved with sheet metal work.Router

P/N 12-01304 ..... **$6.75**

WISS ANGLE SNIPS



The new M8R and M9R compound action snips possess the same outstanding durability as all the other products in the wide Wiss® compound action line, but feature a right-angle blade that allow greater reach in overhead and other awkward applications.

And like every other Wiss compound action snip, both the M8R and M9R have a unique blade edge, shaped to allow the material to set deeper and serrated to hold it tight during the cut.

M8R - Compound action right angle blade cuts straight to left
P/N 12-02007 ..... **$26.50**

M9R - Compound action right angle blade cuts straight to right.
P/N 12-02006 ..... **$26.65**

SMALL BODY RIGHT ANGLE DRILL



The ACAT 90 Degree Right Angle Drill is a high-precision, powerful, durable drill. 3200 RPM. Weight: 1.8 lbs. Length: 10 1/4". Accepts industry standard 1/4"- 28 threaded bits.

P/N 12-02859 ..... **$249.85**

AIR DRILLS (PISTOL TYPE)



These air powered pistol drills feature ergonomic design and use .90 H.P. motors. Sound level is a low 84 db while production output remains high with these high quality drills. Made in U.S.A.

Part No.	RPM	Capacity	Length	Wt.	Price
12-00816	4,500	1/4"	6"	2 lbs	$606.00

RIVET BUSTER



Rivet Buster for shearing all types of rivets. Shank: 0.401. Size includes 5/8".

P/N 12-03779 ..... **$15.95**

TO

Prices Subject to Change Without Notice

SHEET METAL TOOLS



MARVEL AIR TOOL OIL

MARVEL brand oil - - especially engineered for care of piston-type and rotary air tools. Prevents rust formation while providing lubrication for longer tool life and smoother operation. Keeps your air tools in top shape. A "must" for all air tools. 4 oz. bottle with spout. P/N 12-00872.....**$7.95**



COUNTERBORE

A 10" thread extension is used for boring holes in hard-to-reach places. Primary use is in the installation of the landing gear on the LongEZ and Cozy aircraft. 3/4" bore does not have 1/4" pilot and must use the pilot received with the 5/8" boring tool. 5/8" dia. w/1/4" pilot ....P/N 12-00219.....**$55.75**
3/4" dia. w/o pilot.....P/N 12-00220.....**$49.85**



MICRO-STOP COUNTERSINK CAGES & NYLON FOOT PIECE

2 Models available-one with NEEDLE bearing and one with BRONZE bushings. .001" increment depth adjustment. Positive adjustment lock. 1/4" dia. shank. 9/32" shaft travel. 9/16" cutter capacity. For 1/4-28 threaded cutters. Comes with "NO-MAR" foot piece. Rated at 3,000 RPM. Made in USA.
With Bronze Bushings .....P/N 12-01412.....**$36.50**
With Needle Bearings.....P/N 12-00940.....**$44.90**



SQUEEZER SET MIX

6 piece set of the most commonly used squeezer sets shown above: 3/32" & 1/8" cup sets; 1/8" modified cup set; 1/8" & 1/4" flush sets; & 1/16" by 3/8" dia. flush set; plus #4510 organizer block. P/N 12-00882 .....**$48.65**



90° ANGLE DRILL KIT

This angle drill kit includes a drill attachment with quality ball bearing construction for long life. Kit includes 12 threaded drills in assorted sizes and lengths, a mini 3-jaw chuck with 1/16" to 1/4" diameter capacity, and a molded storage case. Made in the U.S.A.

Drill Sizes:

1 ea.	#2140	#40 stubby	1 ea.	#2130	#30 stubby
2 ea.	#3140	#40 short	2 ea.	#3130	#30 short
1 ea.	#3127	#27 short	1 ea.	#3121	#21 short
1 ea.	#3112	#12 short	1 ea.	#3114	#1/4" short
1 ea.	#4140	#40 long	1 ea.	#4130	#30 long
1 ea.	#20379 Mini 3-jaw chuck				

P/N 12-00883 ..... **$192.90**



STOP COUNTERSINK CUTTERS - 100°

• Made in the U.S.A. • High Speed Steel • 1/4" -28 Threaded Shanks • 100° 3-Flute Precision Ground •For Use in Micro-Stop Countersink Units • 8 Sizes Available

Pilot Size	Decimal Equiv.	Body Dia.	Part No.	Price
#40 (3/32" rivet)	.0980"	3/8"	12-00879	**$12.85**
#40 (3/32" rivet)	.0980"	1/2"	12-00942	**$12.85**
#30 (1/8" rivet)	.1285"	3/8"	12-00880	**$12.85**
#30 (1/8" rivet)	.1285"	1/2"	12-03331	**$13.50**
#27 (#6 screw)	.1440"	1/2"	12-00943	**$12.85**
#20 (#8 screw)	.1610"	1/2"	12-00881	**$12.85**
#12 (#10 screw)	.1890"	1/2"	12-00944	**$12.85**
5/32" (5/32" rivet)	.1560"	1/2"	12-00945	**$12.85**
3/16" (3/16" rivet)	.1875"	1/2"	12-00946	**$12.85**
1/4" (1/4" rivet)	.2500"	1/2"	12-00947	**$12.70**



ECONOMY COUNTERSINK CUTTERS 100°

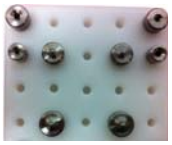
Economy High Speed Steel 3/8" and 1/2" dia in 8 different sizes • High Speed Steel • 1/4" -28 Threaded Shanks • 100° 3-Flute Precision Ground • For Use in Micro-Stop Countersink Units • 8 Sizes Available

Size	Decimal Equiv. (in.)	Body Dia. (in.)	Part No.	Price
#40 (3/32" rivet)	.0980	3/8	12-03249	**$7.50**
#40 (3/32" rivet)	.0980	1/2	12-03250	**$7.50**
#30 (1/8" rivet)	.1285	3/8	12-03251	**$7.50**
#30 (1/8" rivet)	.1285	1/2	12-03252	**$7.50**
#27 (#6 screw)	.14440	3/8	12-03253	**$8.90**
#20 (#8 screw)	.1610	3/8	12-03255	**$8.90**
#12 (#10 screw)	.1890	3/8	12-03257	**$8.90**
5/32" (5/32" rivet)	.1560	3/8	12-03259	**$8.90**
3/16" (3/16" rivet)	.1875	3/8	12-03261	**$8.90**

360° SWIVEL HAND POP RIVET TOOL



Stanley brand professional hand pop rivet tool. Unique head design swivels 360° for riveting in any position, at any angle. Extended nose for hard to reach places. Built in handle latch. Die-Cast aluminum & hardened steel construction. Molded grips. Includes (4) interchangeable steel nose-pieces for: 3/32", 1/8", 5/32", & 3/16" P/N 12-00889 .....**$47.50**



DELUXE DIMPLE DIE KIT W/ BLOCK

This deluxe dimple die kit has all the most commonly used dimple dies in one package--at a special price. This kit includes:

1- 3/32 Dimple Die Set
1- 1/8 Dimple Die Set
1- #6 Screw Dimple Die Set
1- #4520 Organizer Block for Dies
1- #14870 Female Die / 3/8" Dia.
1- #14871 1/8" Female Die / 3/8" Dia.
1- #8 Screw Dimple Die Set

P/N 12-00868 .....**$161.75**



DOUBLE OFFSET RIVET SET

Double offset rivet set for universal AN470 rivets, 5-1/2" long sets. Used for hard to reach rivets in corners. High alloy steel and heat treated. Shanks are precision ground. Cuppings are polished.

3/32" Double Offset Rivet Set .....P/N 12-00936 ..... **$29.95**
1/8" Dbl. Offset Rivet Set .....P/N 12-00873 ..... **$29.50**
5/32" Double Offset Rivet Set .....P/N 12-00937 ..... **$29.75**
3/16" Double Offset Rivet Set .....P/N 12-00938 ..... **$29.90**
4-PC Double Offset Rivet Set .....P/N 12-00939 ..... **$115.75**



AVERY CUTTING & POLISHING WHEEL KIT

Avery cutting polishing wheels are a uniform blend of minerals and resins molded into wheel form with rugged, dense construction that provides aggressive polishing and blending action without removing excess base materials. These wheels generate uniform finishes and can remove minor surface imperfections. Use these wheels with a die grinder for deburring holes and edges. Small wheels are more versatile than large (6") wheels. Can be used on hand held parts or parts in the jig. These wheels are the same density, grade, and mineral type as the 7A MED 6" wheel.

Kit Contents: (1) #936 Mandrel + (2) 1" x 1" x 3/16" Wheels (1) #932 Mandrel + (2) 2" x 3/4" x 1/4" Wheels ..... P/N 12-00876 .....**$65.75**
1" x 1" x 3/116" Hole Wheel ..... P/N 12-01997 .....**$9.80**
Mandrel for 3700 ..... P/N 12-01996 .....**$8.50**
2" x 3/4" x 1/4" Hole Wheel ..... P/N 12-01999 .....**$9.50**
Mandrel for 3719 ..... P/N 12-01998 .....**$10.90**

3M™ SCOTCH-BRITE™ DEBURRING WHEEL



Two Styles Available: Cut & Polish/Unitized Wheel-7A Medium grade (harder) Use to radius and deburr edges of aluminum parts. These wheels give a uniform brushed satin finish to parts and deburr quicker and easier than hand finishing. These wheels are discs of Scotch-Brite web compressed and bonded to form a rugged, dense wheel. Wheel size: 6" dia. x 1" wide x 1/2" thru hole. .....P/N 12-00875 .....**$88.75**

Light Deburring Wheel-7S Fine Grade (Softer)
Light deburring 7S Fin 6 x 1 x 1. This wheel has a 1" thru hole. To fit 1/2" order P/N 12-01585.....P/N 12-00948 .....**$77.75**
3M Flange Adapter 45035 1" to 1/2" .....P/N 12-01585 .....**$5.35**
3M Flange Adapter 45034 1" to 5/8" .....P/N 12-05134 .....**$3.80**



DRIVE PIN PUNCHES

Drive Pin Punch 1/16" .....P/N 12-00949 ..... **$10.50**
Drive Pin Punch 3/32" .....P/N 12-00870 ..... **$10.50**
Drive Pin Punch 1/8" .....P/N 12-00871 ..... **$10.50**



4-PIECE DRILL STOP SET

Use when drilling in sheet metal to help eliminate drill breakage & surface marks. Safely keeps drill from going too far through the work. Drill stops have a coiled spring to cushion the drill breakthrough & prevents the drill chuck from marring the work surface. Color coded for easy identification.

P/N 12-00867 .....**$10.75**

TO

SHEET METAL TOOLS

POLYETHYLENE DIMPLING MALLET



This custom made UHMW polyethylene plastic mallet is great for dimpling skins. Blows are more solid and much quieter than with steel hammers. Will outlast wood mallets. Hammer head measures 2.5" round x 4" long with 12" handle. Wt: 16oz. P/N 12-00605..... **$42.50**

PLASTIC FORMING MALLET



This custom made UHMW polyethylene plastic forming mallet is great for metal forming. Smooth radiused surfaces will not marr surface. Long life, split resistant. Mallet head measures 2.5" round X 5" long w/ 11" handle; Wt: 14 oz. Great combo to the shot bag.

P/N 12-00607 ..... **$39.65**

METAL FORMING SHOT BAG



For those builders that want to try their hand at metal forming this leather shot bag is a must have item. Leather shot bag made from 3/4 oz. top grain cowhide. The bag is double stitched and fills through a 1" opening sealed with Velcro. The bag is 12" round and 1-1/2" thick. Use lead shot #8 - #7.5; or sand - mortar quality type (shot can be purchased at local sporting goods or gun stores). P/N 12-00606 ..... **$53.75**

HAND SEAMER/3.5" JAW



Has VISE GRIP locking feature to aid clamping & holding work. Use for straightening and bending rib and bulkhead flanges. Made with 7" vise grip plier. Jaws are made from 3/16" X 1" X 3-1/2" stainless steel with machined radius. TIG welded & polished. P/N 12-00608 ..... **$50.95**

FLUTING PLIER



Make narrow & precise flutes for straightening ribs and bulkheads easier & better than pliers with molded jaws. Made with 7" VISE GRIP pliers. Pins are 3/16" dia. stainless steel. TIG welded & polished. P/N 12-00609 ..... **$49.99**

VISE GRIP DIMPLERS



Made for dimpling in restricted and hard to reach places where regular dimple dies won't fit. Made with 7" VISE GRIP plier. Machined tool steel dimple dies are T.I.G. welded to the VISE GRIP jaws then polished. 2 sizes available (3/32" and 1/8").

3/32".....P/N 12-00611 ..... **$49.99**
1/8".....P/N 12-00612 ..... **$49.99**

LEVER SNIPS



Offset cutting tool, leaves 2 clean, finished edges. 8.5" length, .75 lb.

Model TP133 - (Right hand snip, cuts left & straight)..... P/N 12-00366..... **$27.75**
Model TP134 - (Left hand snip, cuts left & straight)
P/N 12-00367..... **$27.55**

TEMPIL MARKERS



Marks easily on metal, ceramic, glass, plastic, wood and paper. Markings are fast drying, permanent, weatherproof. Won't rub off, run, fade, chip, peel or blister. The surface can be wet, dry, rough, smooth or oily. Efficient on any horizontal, vertical or inclined surface. Long-lasting 6" ball point tube with non-clogging paint.

Black..... P/N 12-11901.....**$13.75** Red..... P/N 12-11907...**$10.50**
White ..... P/N 12-11908.....**$9.50** Yellow..... P/N 12-11911.....**$9.50**

ADJUSTABLE SET HOLDER FOR PNEUMATIC SQUEEZERS



New improved design. Heat treated 4130 steel investment casting with rolled threads. This special set holder is made to replace the rigid (2-9/16") set holder standard to most CP214 style pneumatic squeezers. This adjustable set holder will eliminate the need to shim the dies and sets with shim washers. Adjustments are faster & easier.

P/N 12-00615 ..... **$84.75**

Note: Only for yokes with 1" thick base or less. Will not work in tandem units.

POP GRIP DIMPLERS AN-426 RIVETS



For dimpling in hard to reach places. Works with any hand pop rivet tool. Can be used over & over. Works for both 100 & 120 pop rivets. Extra nails included (Uses standard hardware store nails). 2 sizes available. 3/32".....P/N 12-00613 ..... **$23.50**
1/8".....P/N 12-00614 ..... **$24.50**

Note: The pop rivet dimplers show above are made with 100° angles, same as regular dimple dies. They will work with either solid flush rivets (AN-426 – 100°) or with pull type rivets such as a AVEX rivets (120°), etc. The dimple formed with these pop rivet dies will not be as 'sharp' as dimples formed with regular dimple dies. This is because you get more pressure with a squeezer or a hammer than with a pop rivet puller; however, the dimples formed with pop rivet dimplers are adequate for occasional use in tight or hard-to-use places.

FLUSH SWIVEL RIVET SET



U.S. MADE -- ATI Brand. New design flush rivet set with swivel action eliminates problem of rivet gun alignment with the work surface + rubber guard to reduce slippage while flush riveting. .401" shank X 1-1/4" dia. polished face. Built-in retaining spring.

P/N 12-00741 ..... **50.50**

BACK RIVETING PLATE



Back riveting requires a hard flat surface to act as a bucking bar while you set the shop head of the rivet. Our plate is a perfect hard & flat surface for "Back Riveting". 3/8" thick X 4" wide X 15" long. Low carbon steel plate with flat ground surface. Weight 10 lbs. P/N 12-00618..... **$68.75**

HOLE FLANGING TOOL



For forming flanges around lightening holes. Made from 2024 aluminum and hard black anodized. Ball bearing style rollers. Comes with spare set of rollers. P/N 12-00619 ..... **$19.75**

SPARE ROLLER-SET OF 2



Replacement rollers for our edge rolling & hole flanging tools (above).

P/N 12-00621 ..... **$2.93**

WISS COMPOUND ACTION SNIPS



12-01155



12-01190



12-01189

Famous for cutting ease, keeping their edge and making clean, sharp cuts. Hardened molybdenum steel blades, serrated jaws and vinyl comfort grips. Capacity 18 gauge (.049") steel. Length 9-3/4". Wt. 14 oz.

P/N 12-01155- Cuts left, from tight curves to straight..... **$21.50**

P/N 12-01189- Cuts right, from tight curves to straight..... **$20.95**

P/N 12-01190- Cuts straight (or wide curves left or right in light stock)....**$21.80**

IRWIN OFFSET SNIPS



Irwin offset snips handle virtually every cutting job in sheet metal - linoleum, carpet, tile and other materials. They are easier to use than conventional metal snips, and cut in 3 directions. Irwin snips feature forged steel blades, a unique curved handle for comfortable fit in the hand, and an exclusive pinchpoint wire cutter. They cut in three directions—straight, sharp angles in one direction, and 5" diameter circles in the opposite direction. Irwin offset snips make difficult cuts easy - they can make tight circular cuts, cut easily through corrugated metal, and cut solid and stranded wire. Available in right or left cutting models. IRWIN (Right Cutting) .....P/N 12-00187 ..... **$17.95**
IRWIN (Left Cutting).....P/N 12-00186 ..... **$17.95**

TO

Prices Subject to Change Without Notice

SPEED DEBURRING & C'SINKING TOOL



Swivel action - makes deburr & c'sink holes fast & easy. Molded handle with 2" long plated steel "Dog-leg" shaft with 1/4"-28 threaded holder. Includes (1) 3/8" X 100° 3-flute burring cutter (part #1050) + 8" extension shaft for deburring the inside of flanges & other hard to reach holes. .....P/N 12-00622 .....**$35.99**

Handle and Extension Shaft sold separately

Swivel handle only.....P/N 12-00623 .....**$17.75**

Extension Shaft only.....P/N 12-00624 .....**$8.50**

E-Z BURR - HSS SERIES



E-Z Burr High Speed Steel (HSS) tools are the industry standard for quick, effective and consistent front and rear burr removal. No other HSS deburring tool is this durable. By designing the blade to operate independent from springs and plungers, E-Z Burr has created a deburring tool with a flexible blade and a solid shank for optimum performance for deburring metal or plastic components. In addition, the patented E-Z Burr HSS deburring tool allows you to change chamfer settings, from extreme low to extreme high, and cutting blades without removing it from the holder. Once the desired chamfer is set, it won't change, even from blade to blade. The result is less downtime, more production, and higher profits.

E-Z Burr Tool Specifications:

Series L1A and L1B tools have a working range of -0.0 + .006 inches and -.03 + .15mm.

Series L2A and L2B tools have a working range of -0.0 + .016 inches and -.10 + .40mm.

Series L3A and L3B tools have a working range of -0.004 + .015 inches and -.10 + .40mm.

Note: All tools (front and rear cutting blade with positive rake)

** METRIC SIZES NOT LISTED, MAY BE AVAILABLE UPON REQUEST AS SPECIAL ORDER ONLY - CALL FOR QUOTE ON SIZES NOT LISTED: 1-877-477-7823 **

Hole Dia.	Shank Dia.	Blade Series	Part No.	Price
3/32 in. / 2.38mm	.236 in. / 6.00mm	L1A	12-02949	**$82.75**
1/8 in. / 3.17mm	.236 in. / 6.00mm	L1B	12-02951	**$82.75**
5/32 in. / 3.96mm	.250 in. / 6.35mm	L2A	12-02952	**$76.75**
3/16 in. / 4.76mm	.250 in. / 6.35mm	L2B	12-02953	**$76.75**
1/4 in. / 6.35mm	.359 in. / 9.10mm	L3A	12-02955	**$77.75**
2.50mm	6.00mm	L1A	12-02959	**$75.75**
3.00mm	6.00mm	L1A	12-02960	**$82.75**
4.00mm	6.00mm	L2A	12-02961	**$76.75**

EZ-BURR RIVET HOLE BUNDLE



The Rivet Hole Deburring Tool bundle by E-Z Burr includes 5 high performance HSS deburring tools for front and rear cutting. Sizes: 1/8, 5/32, 3/16, 7/32, & 1/4.

P/N 12-02956 ..... **$248.95**

HSS THREE FLUTE BURRING CUTTER - 100°



US made. High speed steel, precision ground, three flute burring cutter. 3/8" diameter X 100° with 1/4-28 threaded shank. Same style as a countersink but without the pilot. P/N 12-00625 ..... **$18.85**

SNAP RING PLIER KIT



Install or remove retaining rings of the Waldes Tru-Arc type with ease. Quality pliers made of heat-treated steel with vinyl covered handles. Kit includes two pair of pliers and two sets of four replacement tips to handle the most common sizes of both internal and external rings. Furnished in plastic box.

P/N 4440R.....**$29.80**

STRAP WRENCH



Heavy malleable iron body with latex-treated nylon webbing. For gripping and turning of round, hex or square parts without marring the surface.Indispensible tool for use in close quarters where ordinary pliers cannot be used. Tool is 11-1/2" long with 18" strap. Capacity 3". Wt. 1-1/2 lbs. P/N 3004 .....**$51.75**

DOUBLE EDGE DEBURRING TOOL



Used to quickly deburr edges of sheets up to 1/8" thick. Save time and motion deburring edges of parts. Precision ground Carbide "V" shape blade with hex aluminum handle. Non-removable cutter style.

P/N 12-00629 .....**$20.90**

EDGE MARKER BLOCK



This handy device holds a marking pen and has an adjustable stop for running along the edge of a part. The adjustable stop allows variable edge distance for rivet layout, etc. One thumbscrew holds the pen (pen sold separately) and the other thumbscrew holds the adjustable stop. Made from delrin (plastic) material. Comes ready to use with (1) Pilot marking pen.

P/N 12-00630.....**$18.95**

SHOP HEAD RIVET GAUGE SET



Set of four gauges for -3, -4, -5, & -6 rivets. Each gauge measures MINIMUM height and MINIMUM diameter of shop heads AFTER setting. Eliminates guessing if your rivets are properly set. Works for measuring both universal head and flush rivets. Precision machined to size from 2024 aluminum. Rivet size permanently stamped on each gauge. Color coded anodized finish. Instructions included. P/N 12-00631.....**$21.85**

EDGE ROLLING TOOL



For pre-bending skin edges on lap joints and butt joints before riveting. "Edge rolling" will prevent skin edges from curling up during riveting. Machined round body made from 2024 aluminum. Hard black anodized finish for wear resistance. Ball bearing style nylon rollers (non marking); + spare set of rollers and instructions included.

P/N 12-00632 .....**$22.50**

RIVET LENGTH GAUGE



One gauge measures -3, -4, -5, & -6 rivets. Used to check for proper length of rivets BEFORE setting. Eliminates measuring and guessing of rivet lengths. Works for both universal head and flush rivets. Precision machined to size from 2024 aluminum. Rivet sizes permanently stamped. Gold anodized finish. Instructions included.

P/N 12-00633 .....**$12.55**

TEMPORARY ASSEMBLY PINS



Initial fitting of control surfaces require multiple installation and removals of the parts to fit, trim, and adjust everything. These temporary assembly pins make the task quicker and easier. Pins are 3/16" diameter with tapered points and angle bends for easy installation. The pins are threaded so the pin holder can be removed — this is necessary to prevent damage should you move the control surface too far during fitting. To remove pins just screw holder back on pin and remove pin. Packaged in sets: 6 pins / 2 holders. P/N 12-00627 .....**$18.85**

INSTRUMENT HOLE PUNCH ATS-123C



Reversible cutter for both 2-1/4" and 3-1/8" instrument panel holes. Easy to use even with instrument panel installed in aircraft. Allows for close work with other instruments already installed. 4 lbs (2Kg) shipping weight.

P/N 12-02743 .....**$159.95**

BOLT GRIP



This new tool lightly grips the heads of bolts and screws for easier insertion into tight or blind spots. No more dropped or lost parts. Tool has one end for -3 (3/16") fasteners and one for -4 (1/4") fasteners. 12" overall length.

P/N 12-00628 .....**$19.50**

CHUCKING REAMERS



We stock straight shank and straight flute Chucking Reamers in a wide range of sizes.

SEE WWW.AIRCRAFTSPRUCE.COM FOR A COMPLETE LISTING OF OUR CHUCKING REAMERS.

BRASS PLUMB BOB



Precision machined brass with clear lacquer finish and hardened replaceable tip. Top unscrews for centered string installation.

Model : 6C235 **Size :** 8 oz, 4 7/8" L **Finish :** Clear Lacquer **Characteristics :** Replaceable Tip, Screw Top To Attach String (String Not Included) P/N 12-01711 .....**$16.50**

TO

SHOT BAGS



These shot bags are made out of .070/.090 thick top grain cowhide for extended life and to produce a blemish-free metal surface. These bags have suede outer or forming surface and a tanned inner surface to resist abrasive wear from the media. Convenient media filter and reinforced flap with velcro seal is provided. All bags are approximately 1.5" to 2" thick when filled. Can be filled with buckshot or silica sand (not included) found at most sporting good stores.

Model No.	Size (inches)	Part No.	Price
SB8	8"	12-02310	**$72.75**
SB12	12"	12-00996	**$41.75**
SB18	18"	12-00997	**$49.95**
SBR18 (rectangular)	18"x12"	12-02310	**$72.75**

PANEL BEATER HAMMER & DOLLY KIT



The most widely used selection of panel beaters and dollies for most metal shaping needs, provessional grade in a molded plastic box. Each hammer is color-coded for either shrinking (blue) or stretching (red) forming tasks. The 3 panel beaters included are the dinging, shallow-domed face a nd pick hammer combo. The dollies included are the thin toe, utility, curved and heel shapes, providing the user with the best combination kit on the market. See the individual sections on panel beaters and dollies for more specifications on each item. 8-piece kit includes: • DT2566, DT2560 & DDT2537 panel beaters • CP548, CP552, CP553, & CP554 dollies •All tools made from medium carbon steel, forged, heat treated and mechanically polished for years of continuous service. Weight: 16.5 lbs.; size: 16.5"L x 14"W x 4"H. P/N 12-01011.....**$149.75**

T-DOLLIES



Simple, but necessary forming tool allows you to create new flanges or straighten out damaged flanges. Can be used effectively by taking to an existing body panel or locked in bench vise and create an exact radius edge using any flat faced panel beater or wood slapper. T-dollies are fabricated out of carbon steel hardened and zinc plated to provide years of service life. Extra long flat handle. Heads have radius ends.

Model No.	Size (inches)	Part No.	Price
DCTD02	1"x 8"	12-01020	**$16.95**
DCTD03	3/4"x 6"	12-01021	**$17.85**
DCTD 3-pc. kit (8lbs.)	1"x 8"	12-01022	**$51.75**

ARC360 HOLE CUTTER



Panel knock put punches and hole saws work well for holes that are aren't too big but it gets harder and more expensive as the size of the hole increases.

You can cut holes with a router but cutting holes with a router is a cumbersome ordeal. The router is really just too big a tool to be swinging 360 degrees easily. You can set it to cut holes down to around 1.5 inches and up to around 10 inches. The tool's small size allows you to easily see your work as you are cutting. If you want an arc you can start and stop anywhere you want. It will cut any thickness of sheet aluminum.

The cutting speed in 032 thick 2024-T3 aluminum is around 40 inches per minute so you can cut a 4-inch diameter hole in less than 20 seconds.

P/N 12-01977 ..... **$149.75**

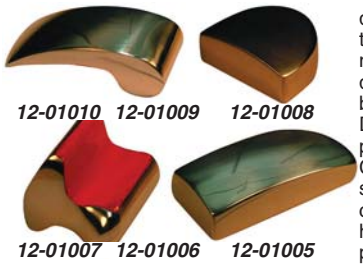
HARDWOOD SLAPPER



These slappers are made from grade A select midwestern grown hard maple for toughness, stiffness and durability. With an ergonomically designed grip area, the hand and wrist are positioned in a neutral and natural condition. Finished with protective oil that resists staining and guards against moisture penetration. 4 different shapes: gentle, medium, flat, and radius face. The new thinner cross-section of 2-1/4" allows working a tighter radius in more confined areas. Each slapper comes with a leather face cover to eliminate marring of the metal.

Model No.	Shape Style	Overall Length	Surface Length	Face Width	Weight (Lbs.)	Part No.	Price
SP1	Gentle	14"	8.5"	2.25"	1.3	12-02311	**$55.75**
SP2	Medium	14"	8.5"	2.25"	1.3	12-02314	**$58.75**
SP3	Flat	14"	8"	2.25"	1.3	12-02315	**$54.75**
SP4*	Radius	14"	8.5"	2.25"	1.3	12-01003	**$54.75**
SLP-001L Replacement leather cover & hardware						12-01004	**$7.50**

HAND FORMING DOLLIES



These professional series hand dollies are a complete selection of shapes and weights for most forming needs. These dolies can be used with panel beaters or wood slappers. Dollies weight and shapeimpacts the flow of the metal. Choose weights according to sheet metal thickness. Medium carbon steel, forged, ground, heat treated and mechanically polished for years of continuous use.

Model No.	Weight (lbs)	Part No.	Price
CP548	2.02	12-01005	**$27.50**
CP552	2.85	12-01006	**$26.50**
CP553	2.55	12-01007	**$26.50**
CP554	1.97	12-01008	**$29.60**

PANEL BEATER HAMMERS



These professional series panel beater hammers are uniquely balanced acting as a natural extension to the users own hand. Creating excellent feel and feedback each an devery time you contact the metal. Each hamer style is color coded for easy recognition: ***MODELS***: DT2537 & DT2566 are Stretching. ***MODELS***: DT2560 & D2569 are Shrinking.

Model No.	Head Wt./lbs	Overall Length	"A"	"L"	"B"	Part No.	Price
DT2537	.67	13"	1.6"	5.5"	-	12-01027	**$34.75**
DT2566	.57	13"	1.5"	5.4"	-	12-01029	**$34.50**
DT2560	.70	13"	1.6"	3.8"	1.5"	12-01028	**$34.65**
DT2569	.70	13"	1.6"	3.8"	1.6"	12-01030	**$39.50**

BOSSING MALLETS EXTENDED REACH



These extended depth plastic mallets allow deeper reach and a more aggressive and fuller finished shape. The UHMW polyethylene heads are lightweight, resistant to wear and non-marring. Hickory handles with full round shafts. When paired with shot bags, very creative, roughed out forms can be accomplished.

Model No.	Small radius dia.	Large radius dia.	Overall head lgth	Head dia.	Weight (lbs.)	Part No.	Price
DBM01D	5/8"	2-1/4"	7-1/2"	2"	2.8	12-01031	**$49.85**
DBM02D	7/8"	1-3/8"	8-1/2"	2-1/2"	3.0	12-01032	**$49.75**
DBM03D	1-1/4"	3"	7-1/2"	3"	3.8	12-01033	**$52.75**

TO

Prices Subject to Change Without Notice

MITTLER BROTHERS SHEET METAL TOOLS

POWER DRIVE BEAD ROLLER



The Industry Leading Power Drive Bead Roller Made In the U.S.A. Since 1984. Over 100 Bead Roll Profiles Available To Shape Or Strengthen Metal.

Max Capacity
16 Ga (.050") Aluminum
19 Ga (.040") Mild Steel
21 Ga (.035") Stainless Steel

Features Include:
0-9 FPM
Variable Speed Foot Pedal Control
Forward / Reverse Switch
Both Shafts Driven
Adjustable Depth Of Bead
& 1-1/8" Throat Height.

Used For Aircraft & Racecar, Construction & Repair.
Includes Choice of 1 Set of 2-1/2" OD ($65 value) Rolls

Description	Max Cap. Aluminum	Max Cap. Mild Steel	Max Cap. Stainless Steel	PN	Price
210-24 - 24" Power Drive Bead Roller	16 Ga (.050")	19 Ga (.040")	21 Ga (.035")	12-02744	**$925.00**
200-36 - 36" Power Drive Bead Roller	16 Ga (.050")	19 Ga (.040")	24 Ga (.025")	12-02745	**$1,100.00**

24" MANUAL BEAD ROLLER

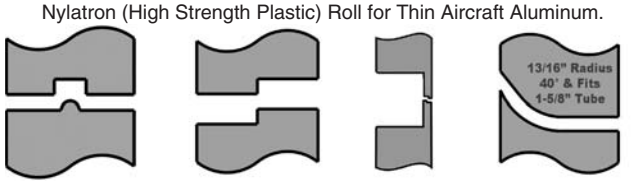


Bead Rolls Sets Sold Separately. Max Capacity: 19 Ga(.040") Mild Steel. 16 Ga(.050") Aluminum. 21 Ga(.035") Stainless Model 210-24M

P/N 12-02746....**$675.00**

BEAD ROLL SETS

Nylatron (High Strength Plastic) Roll for Thin Aircraft Aluminum.



Round Roll 1/8"-1" | ***Step Roll .062"-.250"*** | ***Art Pattern P/N 12-02764*** | ***Spoiler Roll P/N 12-02766***

SEE WWW.AIRCRAFTSPRUCE.COM FOR ROUND ROLL AND STEP ROLL PART NUMBERS.



Standard Tank P/N 12-02765 | ***Full Radius Tank P/N 12-02768*** | ***Tipping Roll P/N 12-02767***



Wire Bead Roll Step 1 | ***Wire Bead Roll Step 2*** | ***Wire Bead Roll Step 3***

Above Bead Rolls = **$75.75** Per Set

Model 201-125-WBS Wire Bead Roll (3pc. Set)
P/N 12-02769....**$257.95**

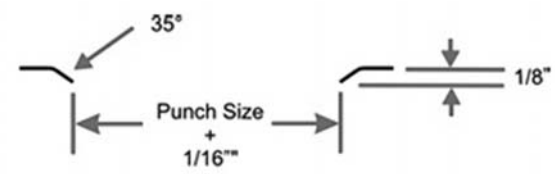
See www.aircraftspruce.com for 100+ Bead Roll Selection

AIRCRAFT PUNCH & FLARES 1"- 6" OD

Just drill a pilot hole for the 1/2" draw bolt, apply the tool and tighten the bolt for a smooth, flared hole in one easy step. Punch hole only by removing female flare ring and use punch and die. Easily mounts in our Bench Presses.







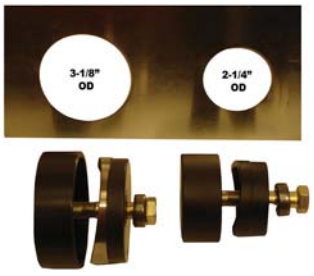
Aircraft Punch / Flare

Material Thickness Range
Aluminum - .020" to .040"
Mild Steel - .020" to .040"

OD	Part Number	Price
1"	12-02778	**$139.75**
1-1/4"	12-02779	**$130.00**
1-1/2"	12-02780	**$149.75**
1-3/4"	12-02781	**$145.00**
2"	12-02782	**$155.00**
2-1/4"	12-02783	**$155.00**
2-1/2"	12-02784	**$155.80**
2-3/4"	12-02785	**$170.00**
3"	12-02786	**$170.00**
3-1/8"	12-02787	**$231.95**
3-1/4"	12-02788	**$231.95**
3-1/2"	12-02789	**$230.95**
3-3/4"	12-02790	**$246.95**
4"	12-02791	**$246.95**
5"	12-02792	**$300.95**
6"	12-02793	**$355.00**
7pc Set 1"- 3" (MINUS 2-1/4" & 2-3/4")	12-02794	**$930.00**
9pc Set 1"- 3"	12-02796	**$2,050.00**
13pc Set 1"- 4"	12-02795	**$1,123.00**

INSTRUMENT HOLE PUNCH





OD	Part Number	Price
2-1/4"	12-02797	**$120.00**
3-1/8"	12-02798	**$130.85**

TO

SEE WWW.AIRCRAFTSPRUCE.COM FOR A COMPLETE SELECTION OF MITTLER BROTHERS TOOLS.

MITTLER BROTHERS SHEET METAL TOOLS

MANUAL BENCH PRESS

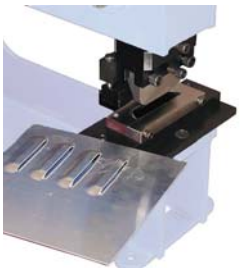


Economical & versatile. Bench press accepts tooling for punching round, square & oblong holes; punching louvers; creating radius corners; & shrinking or stretching metal. Punch/flare tooling & instrument hole punches. Easily mounted with included adapters. Can also Be used as arbor press.

Model 2200-M
P/N 12-02770 ....**$695.00**

LOUVER PUNCHES

LOUVER PUNCH START UP KITS WITH MOUNTING HARDWARE



Size	Part No.	Price
1”	12-02771	**$815.00**
2”	12-02772	**$815.00**
3”	12-02773	**$815.00**
4”	12-02774	**$835.00**
5”	12-02775	**$835.00**
3” Dome	12-02776	**$835.00**
4” Dome	12-02777	**$835.00**

ULTIMATE BOX & PAN BRAKE



The ultimate Box and Pan Brake has a unique 3-finger design. Incorporating moveable segmented bed fingers and apron fingers as well as upper radius fingers. Radius fingers allow forming aircraft and racecar panels using 3003 to 2024 T3 aluminum, .062 inch mild steel and .0375 inch stainless steel. Bend combinations easily that were extremely difficult if not impossible before. Features include wrenchless upper set back adjustments, 3-1/2” depth of box, 2” down leg, 1” front to rear adjustment and 1/4” reverse bend capabilities. A complete set of upper radius fingers. • Wrenchless upper set back adjustments • 3-1/2 inch depth of box • 2 inch down leg • 1 inch front to rear adjustment • 1/4 inch reverse bend capabilities. Along with the box and pan brake, you will receive a complete set of upper radius fingers (your choice), bed fingers, apron angle fingers, and counterweight(s). The total width of the upper radius finger kit will be 48”. You will receive the following fingers: qty 7 of 6” and one each of 3”, 2”, and 1” fingers totalling to 48”.
Model 2800-48-16 ..... P/N 12-02799 . **$3,834.00**

Upper Radius Finger Kits (radius is measured inside of bend)

WHEELING MACHINE
(BENCH MODEL)



Clearly, this is the most popular of in-home English Wheels. Metal Ace offers extensive anvil configurations to meet your needs. Plus, with the new gusseted frame, it’s the strongest benchtop wheel on the market. Trick out your custom-built bike or complete hobby projects without breaking the bank. These English wheeling machines provide outstanding performance on small jobs like motorcycle tanks, tank covers, seat cowls and aircraft fillets. Versatile use - mount on bench, clamp in vise or use with optional welded stand. Proudly made in the USA. **Features**: • Thickness capacity for steel is 18 gage;16 gauge with optional stiffener brace. • Features can be rolled into the center of a 44” panel. • Can be mounted to a bench, clamped in a vice or used with the optional welded floor stand. • Optional wheels and stand sold separately. • Anvil yoke is adjustable on both sides of the axle support with thumb screws so the anvil wheel can be trued with the upper wheel. **Specifications**: • 3.25” radius lower anvil • 8” upper wheel • 22” throat depth • Reinforced frame • 18 gauge mild steel capacity .080 AL capacity • Made in the USA.
Wheeling Machine MA 22B ..... P/N 12-00571 . **$700.00**

ACCESSORIES

Radius Wheel 5” 22B-5.00 ..... P/N 12-02026 .... **$98.00**
Radius Wheel 5” 22B-5.00 Narrow ..... P/N 12-02027 ... **$98.00**
Radius Narrow Offset Wheel 5” 22B-5.00NO..... P/N 12-02028 ... **$91.75**
Radius Wheel 5” Set of 3 22B-5.00SET ..... P/N 12-02029 .. **$291.20**
Optional Stand for the 22B Wheeling Machine MA22B-STAND
P/N 12-00575 .. **$200.00**

BENCH TOP ENGLISH WHEEL



A Rugged, Robust Machine for the occasional metalworking project to the professional craftsmen. All wheels (anvil & top) are heat treated, hard turned & ground for accurate precision metal forming. • 26-1/2” Deep Throat • 2-1/2” OD - 2” Wide Anvils • 7” OD - 2” Wide Top Wheel • Cam Action Release on Top wheel For Easy Anvil Change • Adjustable Anvil Wheel Angle • 3” x 4” x 1/4” Tube Construction For Minimum Deflection • Kick Wheel Manual Pressure Adjustment • Anvil Wheels In Radius Of 2-3/8”,3-1/4”,5”, 8-1/2”,12” & Flat
Model 2900..... P/N 12-02812 ..... **$1,500.00**

PLANISHING HAMMER



Speed up fabrication time on complex multi form aluminum and steel panels for making those impossible to find replacement parts. • • 4600 Hits Per Minute @ 90 PSI • • Rear Adjuster Sets Load Force & simplifies Anvil Changes • • Foot Pedal Control for Hands Free Operation • • 9 Radius Anvil Heads Included: 3/4” , 1-1/2”, 2”, 3”, 4”, 6”, 8”, 12” & Flat • 12”

Model 2700..... P/N 12-02813 ..... **$895.00**
24” Model 2700-24 ..... P/N 12-02814 ..... **$1,052.00**

AIRCRAFT SCALE SET



• 15 x 15” Cast Aluminum Pads • 1500 Lbs Per Pad Capacity Lbs. or Kg • Reads to 1 Lb. / 1/10% Accurate • Displays All Information at Once • Zero All Pads at Once or Individually • 40 Hr. Battery Life (rechargeable)

Certification Available At Optional Cost.

Deluxe Aircraft Scales include custom length cables with Deluxe Stainless Steel connectors and software to calculate center of gravity height.
4500 lbs.
Model 50297..... P/N 12-02816 ..... **$1,151.00**

WHEELING MACHINE
(U-WELD MODEL)



This English Wheel U-Weld Kit supplies the components to make your own English wheel, minus the steel tubing. A detailed assembly booklet is provided and the complete kit includes all the key components of the turn-key MetalAce 44F English Wheel. Other kits on the market come with smaller 2” wide x 2 1/2” diameter anvil wheels, smaller diameter upper wheels, and require more assembly. The screwlift quick release cam unit is fully assembled. Components proudly made in the USA.
Features: • Set of 6 lower anvil wheels, 3” wide x 3” diameter • Upper wheel, 3” wide x 8” diameter • Upper wheel yoke assembly with axle and spanner • Anvil yoke assembly • Screwlift quick release cam assembly • Set of 4 caster wheels • Assembly instruction manual • Made in the USA.
Specifications: • 8 x 3” upper wheel • 2.50 R, 3.75 R, 6.00 R, 12.00 R, 24.00 R and Flat lower anvil wheels.
MA44F-KIT - Components and bill of materials to build a 44F English Wheel. P/N 12-00570..... **$1,595.00**
MA44F - Fully assembled English Wheeling Machine
P/N 12-02294..... **$2,594.95**

SEE WWW.AIRCRAFTSPRUCE.COM FOR A COMPLETE SELECTION OF MITTLER BROTHERS TOOLS.

JACKCLAMP PARALLEL BAR CLAMP



The 12" JackClamp is a multi-use clamp for a variety of different projects. The JackClamp features standard and metric rulers and is capable of clamping over, under, inside and through different configurations. This tool does what other clamps are mechanically unable to do including re-configuring to function as a hoist , jack, or spreader. Features: • The JackClamp can be totally disassembled and then reassembled inside of a project • The JackClamp module design enables it to mate to a second JackClamp creating a tool capable of clamping and spreading simultaneously • By utilizing the optional accessory, V-Jaws (not included), the user can securely hold round stock or irregular shapes • By utilizing the optional accessory, Spreader Jaws (not included), the user can spread materials with a gap as small as 1/4" • Weight: 3 lbs.

Parallel Bar Clamp..... P/N 12-02846 .....**$59.75**
Replacement Pads Set..... P/N 12-02851 .....**$4.95**
Storage Bag..... P/N 12-02854 .....**$20.95**

JACKCLAMP 2 CLAMP KIT



The JackClamp 2 Clamp Kit includes 2 JackClamps, 2 Spreader Jaw Accessories, 2 V-Jaw Accessories, 2 JackClamp Foot Accessories, and a convenient carry-all bag. The JackClamp is a multi-use clamp for a variety of different projects. The 12" JackClamp features standard and metric rulers and is capable of clamping over, under, inside and through different configurations. This tool does what other clamps are mechanically unable to do including re-configuring to function as a hoist , jack, or spreader. The Spreader Jaws allow even more flexibility with the JackClamp including spreading materials with a gap as small as 1/4". The V-Jaws secure clamping and can hold round stock or irregular shapes. The Foot accessory allows for hand free jacking and works great for cabinet installation.

Note: JackClamp 2 Clamp Kit includes 2 JackClamps, 2 Spreader Jaw Accessories, 2 V-Jaw Accessories, 2 JackClamp Foot Accessories, and a convenient carry-all bag. ..... P/N 12-02852 .....**$186.95**

V-JAW JACKCLAMP ACCESSORY



The unique V-Jaw JackClamp accessory allows secure clamping including holding round stock and irregular shapes.

P/N 12-02848 .....**$14.75**

SPREADER JAW JACKCLAMP ACCESSORY



The Spreader Jaw JackClamp accessory allows more flexibility with your JackClamp including spreading materials with a gap as small as 1/4".

P/N 12-02849 .....**$14.75**

JACKCLAMP FOOT ACCESSORY



The JackClamp durable Foot accessory allows hands free jacking.

P/N 12-02847 .....**$9.75**

JACKCLAMP ACCESSORY KIT



The JackClamp Accessory Kit includes the Spreader Jaw, V-Jaw, and Foot accessories for the JackClamp. The Spreader Jaw allows even more flexibility with the JackClamp including spreading materials with a gap as small as 1/4". The V-Jaw secures clamping and can hold round stock or irregular shapes. The Foot accessory allows for hands free jacking and works great for cabinet installation.

Note: JackClamp Accessory Kit includes the Spreader Jaw (1 pair), V-Jaw (1 pair), and Foot (1) accessories for the JackClamp Parallel Bar Clamp. P/N 12-02853 .....**$41.95**

EASY OUT SCREW EXTRACTORS



Black Max spiral screw extractor grips screw firmly with its tapered, left-handed spiralflutes. Intended to remove screw manually with T-handle tap wrench or equivalent. Features: • Black oxide coating for maximum corrosion protection and cutting performance • Black oxide coating combined with a tough carbon tool steel construction ensures longer life • Extractor size is permanently etched on the tool for quick and easy reference. Specifications • To remove Bolts/Screws: 3/32" to 5/32" • Use Drill Bit Size: 5/64" • Shank Diameter: 1/8" • Point Diameter: 0.060"

Description	Part No.	Price
3/32" TO 5/32"	12-02873	**$2.45**
5/32" TO 7/32"	12-02874	**$2.45**
7/32" TO 9/32"	12-02875	**$2.45**
9/32" TO 3/8"AND 1/8" PIPE	12-02876	**$2.89**
3/8" TO 5/8"AND 1/4" PIPE	12-02877	**$3.45**
5 PIECE SET	12-02882	**$10.95**

RYOBI PLANER



The Ryobi cordless Hand Planer has the power of a corded hand planer when powers through the toughest jobs. The rear mounted "kickstand" keeps blades from contacting surfaces when the unit is placed shoe down between operations. The pommel front handle and rear handle designed with overmold for added comfort. Dust ejection adjusts for left or right exhaust. All these great features are a part of the Ryobi ONE+™ system which has have 40 tools and batteries. Depth adjustment knob adjusts from 0-1/64". Dual carbide blades for smooth, accurate planning. Rear mounted "kickstand" keeps blades from contacting a surface when the planner is set down between aperations. Extended front for balance and accuracy. MFG Brand Name : Ryobi. MFG Model # : P610. MFG Part # : P610

18 V Planer..... P/N 12-02824 .....**$100.00**
BI P100 ONE+ Nickel-Cadium 18-V Rechargable Battery
P/N 12-02825 .....**$77.75**
P131 ONE+ 18-V IN-Vehicle Charger. P/N 12-02826 .....**$57.25**

RYOBI PLANER KIT



Kit includes:

(1) 18 Volt Planer - The Ryobi cordless Hand Planer has the power of a corded hand planer when powers through the toughest jobs. The rear mounted "kickstand" keeps blades from contacting surfaces when the unit is placed shoe down between operations. The pommel front handle and rear handle designed with overmold for added comfort. Dust ejection adjusts for left or right exhaust. All these great features are a part of the Ryobi ONE+™ system which has have 40 tools and batteries.

(1) P100 ONE+ Nickel-Cadmium 18-Volt Rechargable Battery - The Ryobi ONE+ Nickel-Cadmium 18-Volt Rechargeable Battery provides extended run-time and works with all present and past Ryobi 18-volt ONE+ tools and chargers.

(1) P131 ONE+ 18-Volt In-Vehicle Charger - The Ryobi ONE+ 18-Volt In-Vehicle Charger is compatible with all past and present Ryobi 18-volt ONE+ NiCd and lithium-ion batteries. It plugs conveniently into a vehicle's 12-volt DC outlet and takes less than an hour to charge the batteries fully. ..... P/N 12-02827 .....**$234.95**

DECALPRO® KIT



DecalPRO® allows you to do what you have never been able to do before. It's now graphics and text "on demand" from your standard PC or Mac computer with any laser printer and do it all in under 10 minutes.

AIRCRAFT BUILDERS: ...freedom to stylize your main control panel any way you wish using any font, size and color right from your home computer before the panel is installed.

Also great for Avionics Shops and Upholstery Shops.

Description	Part No.	Price
Decalpro Kit	12-03204	**$89.95**
Accessories	**Part No.**	**Price**
Carrier TRF Packs	12-03209	**$8.95**
Toner Transfer Paper (TTP)Pack	12-03207	**$14.95**
Pigment Foils White	12-03210	**$8.95**
Pigment Foils Gray	12-03211	**$8.95**
Pigment Foils Black	12-03212	**$8.95**
Specialty Foils Clear Coat	12-03213	**$8.95**

TO

MICROMETERS

ELECTRONIC MICROMETER



Quick, accurate, easy-to-use and coolant, water and oil resistant to IP54 standards, Fowler's Electronic IP54 Outside Micrometers offer the same features as Fowler's standard electronic micrometers, but are robust enough to perform in situations where regular electronic micrometers fail.

P/N 12-03414 .....**$115.75**



P/N 12-03410



P/N 12-03411



P/N 12-03412

ELECTRONIC MICROMETERS

Quick, accurate, easy-to-use and coolant, water and oil resistant to IP54 standards, Fowler's Electronic IP54 Outside Micrometers offer the same features as Fowler's standard electronic micrometers, but are robust enough to perform in situations where regular electronic micrometers fail.

Description	Part No.	Price
2-3" Ip54 54-860-003-1	12-03410	**$145.75**
3-4" Ip54 54-860-004-1	12-03411	**$169.75**
1-2" Water Resistant 54-860-002-0	12-03412	**$133.75**



ELECTRONIC OUTSIDE MICROMETER SET

Quick, accurate, easy-to-use and coolant, water and oil resistant to IP54 standards, Fowler's Electronic IP54 Outside Micrometers offer the same features as Fowler's standard electronic micrometers, but are robust enough to perform in situations where regular electronic micrometers fail.

P/N 12-03413 .....**$379.00**



MARK VI ELECTRONIC INDICATOR

0-1"/25mm Mark VI Electronic Indicator.

P/N 12-03420 .....**$707.00**



MARK VI ANALOG ELECTRONIC INDICATOR

0-.500"/12.5mm Mark VI Electronic Indicator with Analog Display.

P/N 12-03424 .....**$744.00**



MARK VI ELECTRONIC MICROMETER

0-.500"/12.5mm Mark VI Electronic Indicator, 8mm stem model.

P/N 12-03425 .....**$818.00**



ADJUSTABLE MICROMETER STAND

A compact, well-constructed, folding micrometer stand with a unique locking mechanism that positions the micrometer over a 180° range for perfect use and viewing.

P/N 12-03423 .....**$35.50**

ELECTRONIC XTENDER



The industries two most popular bore gage ranges combined in one easy-to-use ELECTRONIC set! All the same benefits included in the X-Tender Dial Bore Gage are now available with an electronic indicator providing inch/metric reading capability, preset size of master for absolute reading and minimum hold feature to lock on the bore size as the gauge is rocked in the part to be measured.

P/N 12-03416 .....**$326.00**

METRIC BORE GAUGE SETTING MASTER



Using the new Fowler Bore Gage Setting Master and the included gage blocks you can now quickly and easily set virtually any bore gage from 0 to 150mm in diameter with an accuracy of .003mm. Gone are the numerous masters formerly required to accurately set your bore gage for use. Now with one setting master kit and the included gage blocks you can set your bore gage with ease. Each Fowler Bore Gage Setting Master Kit includes a bore gage setting master, and a 36 piece gage block set. Both come packaged in a high quality aircraft-style, shop-hardened aluminum case! All packaged in a high quality, shop-hardened aircraft-style aluminum case! Bore Gage shown is not included.

P/N 12-03421 .....**$317.00**



POLY-CAL ELECTRONIC CALIPER

Poly-Cal Electronic Caliper Inch/Metric/ Fraction. Range: 6"/150mm.

P/N 12-03426 .....**$26.60**



ELECTRONIC CALIPERS

Description	Part No.	Price
Iv 6"/150mm 54-100-330-1	12-03417	**$122.75**
Iv 12"300mm 54-100-332-0	12-03418	**$183.95**
Iv 8"/200mm 54-100-331-0	12-03419	**$143.75**

XTRA-VALUE CAL AND DEPTH ATTACHMENT COMBO



Accuracy: .001"/.02mm. Range: 6"/150mm. Large east to read display. Resolution: .0005"/.01mm. Direct inch/metric conversion. Absolute/incremental measurement. 4-way measuring

P/N 12-03427 .....**$86.75**

SHOCKPROOF DIAL CALIPER AND DEPTH ATTACHMENT COMBO



Tough shockproof design. 4-way measuring. Solid stainless steel construction. Silky-smooth movement throughout. 100" range per revolution. .001" reading dial face.

P/N 12-03409 .....**$101.85**

MASTER BORE GAGE SET



Setting Bore gages is a breeze with Fowler's new Bore Gage Setting Master Kit! Using the new Fowler Bore Gage Setting Master and the included gage blocks you can now quickly and easily set virtually any bore gage from 0 to 6" in diameter with an accuracy of .0001". Gone are the numerous masters formerly required to accurately set your bore gage for use. Now with one setting master kit and the included gage blocks you can set your bore gage with ease. Each Fowler Bore Gage Setting Master Kit includes a bore gage setting master, and a 36 piece gage block set. Both come packaged in a high quality aircraft-style, shop-hardened aluminum case! All packaged in a high quality, shop-hardened aircraft-style aluminum case! Bore Gage shown is not included.

P/N 12-03408 .....**$304.00**

TO

DIGITAL FRACTION CALIPERS



The Digital Fractional Caliper brings you three universal systems of measurement, making it an equally practical choice for both professional and do-it-yourself projects. The high-contrast digital display easily switches between inches, millimeters and fractions, with guaranteed accuracy to 0.001". In addition, the rugged stainless steel design delivers accurate readings of inside, outside, step and depth measurements. The Fraction+ comes with a foam padded plastic case for safe storage when not in use. Features * Stainless Steel Caliper. * Tri-Mode digital display – inches, millimeters, and fractions. * For making inside, outside, depth and step measurements. * Resolution 0.0005" (0.01mm). * Accuracy 0.001" (0.02mm). * Auto on/off feature preserves battery life. * Bar scale is graduated in inches and millimeters. * Free-wheeling friction roller advances and retracts slide. * Extendable depth gage for use in slots and small holes. * Etched and filled black graduations. * Convenient foam-padded case for storage.

Digital Fraction Caliper - 6" .....P/N 12-02012 ..... **$39.50**
Digital Fraction Caliper - 8" .....P/N 12-02013 ..... **$52.75**
Digital Fraction Caliper - 12" .....P/N 12-02014 ..... **$79.95**

FRACTIONAL DIGITAL CALIPER 3 INCH



Three universal systems of measurementGuaranteed accuracy to 0.001". Delivers accurate readings of inside, outside, step and depth measurements. This 3" caliper fits conveniently into your pocket for working in the field. Range 0-3" (0-76mm) Resolution 0.0005" (0.01mm or 1/64"). Accuracy 0.001" (+/- 0.02mm). Auto on/off feature preserves battery life.Free-wheeling friction roller advances and retracts slide. Extendable depth gage for use in slots and small holes. Replacement Battery - SR54 or LR54 P/N 12-02307 ..... **$16.75**

DIAL INDICATOR



0-1" Dial indicator with measuring resolution of .001"; equipped with mounting lug on back of body for multiple mounting options. P/N 12-02709 ..... **$26.95**

STANDARD AND METRIC DIAL INDICATOR



AGD 2 series. Dial face reads in inch (black) or metric (red). Range: 1"/25mm. Graduation: .001"/.01mm. Reading: 0—100. Separated dial for Inch and Metric. Rotating bezel with clamp. Lugback included.
P/N 12-03659 ..... **$78.75**

PROFESSIONAL GRADE MICROMETER



0-1" Professional grade micrometer with measuring resolution of .0001"; carbide anvil faces for long life and durability. Includes plastic case.
P/N 12-02707 ..... **$39.95**

DIGITAL SLIDING T-BEVEL



Takes the guesswork out of angle duplication and eliminates the problems associated with analog readings and manual measurement transfer. This is the first and only digital T-bevel on the market. It is ideal for measuring, storing and transferring inside and outside angles when building cabinetry, furniture and picture frames; installing tile and more. This highly accurate tool offers easy-to-read measurements via a large LCD display and integrates an 8" stainless steel blade with a steel locking knob. Practical function buttons make it ultra-convenient for setting and transferring measurements instantly.
P/N 12-03226 ..... **$29.75**

OFFSET KNOCKOUT PUNCHES (WITCHES FINGER)



Can be used to knock out those hard to reach stubborn fasteners. Available in 1/8", 5/32", 3/16", and 1/4" tip diameter. Also available in a 4 piece set.

Size	Part No.	Price
1/8"	12-02927	**$13.95**
5/32"	12-02926	**$13.95**
3/16"	12-02928	**$13.95**
1/4"	12-02929	**$13.95**
Set of 4	12-02925	**$66.80**

"CENTER IT" HOLE DRILLING JIG



"Center It" is a jig used to drill holes in pipe or tube stock. To use the Center It, simply place it on your drill-press table, run the bit down (with the motor off) to hold the centered jig on the bit, then bolt the jig to the press table. No clamping of the tube is necessary; the angled flats of the jig hold it in a centered position. Your holes are automatically centered on the tube with no center-punching necessary. If the tube is too fat to drill in a single operation, simply turn it over. The device is useful to kitplane builders who have to drill several holes in a single tube or many tubes because no clamping or center-punching of the tube is required. It also makes short work of drilling. P/N 12-20815 ..... **$13.85**

DRILL RITE PRECISION DRILL GUIDE



Light and portable, this tool provides straight and true holes every time. Your electric hand drill will perform like a professional drill press. The easy, accurate way to drill any curved surface: Simply place the Drill Rite VGuide™ on any type of pipe or round stock, from 1/2" to 2 1/2" in diameter. Swing the gate closed and lock it down. Insert the proper drill bit in the guide bushing and drill a precisely accurate hole. Includes super hardened drill bushings for popular 3/16" and 1/4" holes for rivets and aircraft hardware. Precision made in the U.S.A. from high quality aircraft grade aluminum. P/N 12-00836. ..... **$59.75**

PLATE NUT DRILL JIG



One piece heat treated tool steel jig. Use for accurate & fast drilling of rivet holes for plate nuts. Has flexible handle design. Use for both on lug (both holes on 1 side) & two lug (holes on both sides) style nut plates - K1000 & K1100 style nutplates.

#6 Plate Nut Drill Jig.....P/N 12-03041 ..... **$46.55**
#8 Plate Nut Drill Jig.....P/N 12-03042 ..... **$46.50**
#10 Plate Nut Drill Jig.....P/N 12-03043 ..... **$46.50**

DIGITAL PRECISION PROTRACTOR



Displays absolute and relative angle measurements in a large, easy-to-read LCD window. This display offers a hold function and can be inverted 180° for easy reading when the tool is upside down. It features a 6" (150mm) stainless steel pivoting protractor arm with a knurled locking nut and one-button zero calibration, which ensures accurate readings every time. Take the guesswork out of measuring, marking and reading angles on your next woodworking or home improvement project. The UltraTECH Pro-ANGLE Digital Protractor displays absolute and relative angle measurements in a large, easy-to-read LCD window. For user convenience and comfort, the display offers a hold function and is easily inverted, or flipped, 180 degrees for reading upside down. Angles in any plane can be measured with accuracy to 0.1 degree and 0.05 degree resolution anywhere within a 0.00 to 180 degree range, making this tool useful for many applications. P/N 12-03224 ..... **$24.85**

DIGITAL ANGLE FINDERS



These new angle finders combine the ruggedness of analog rulers (standard and metric) together with the digital technology needed for complete accuracy when measuring inside, outside and reverse angles. Precise measurements prevent waste by facilitating exact miter cuts. One button activates the reverse angle function, a hold button digitally saves the measurement and the large ergonomic locking knob saves the angle manually. A big LCD readout makes measurements extremely easy to read while an innovative center check notch enables exact ruler placement marking. The Models 822 (Patent Pending) are ideal for framing, custom furniture-building, stair and patio construction, flooring, tiling basically all woodworking, carpentry and contractor needs in the shop or in the field.

5 inch.....P/N 12-03223 ..... **$24.90**
10 inch.....P/N 12-03222 ..... **$33.50**

TO

ECONOMY AIRCRAFT TOOLS



HAND RIVET SQUEEZER

Features includes an all-steel construction, adjustable set holder (accepts all sets with 3/16" shank), and long handles for increased force. The yoke is made of the highest quality tool steel, and by simply removing 3 pins you can change the yoke to match your riveting or dimpling application. Each squeezer includes the yoke of the coordinating size

Description	Part No.	Price	Description	Part No.	Price
1" Squeezer	12-01460	**$76.75**	1" Yoke	12-01457	**$24.75**
2" Squeezer	12-01461	**$77.75**	2" Yoke	12-01458	**$25.70**
3" Squeezer	12-01462	**$81.75**	3" Yoke	12-01459	**$27.80**

STAINLESS STEEL HAND SQUEEZER



This stainless steel hand squeeze made of quality stainless steel construction. Features include an adjustable set holder (accepts all sets and dies with 3/16" shank) and a locking lever arm. Yokes are easily interchangeable by simply removing three roll pins and designed to accept yokes and parts made by other stainless steel hand squeeze manufacturers. Includes a 3" Yoke. 1.5" is sold separately.

S/S Hand Squeeser 3" .....P/N 12-01464 ..... **$129.00**
1.5" Yoke .....P/N 12-01547 ..... **$49.85**
3" Yoke .....P/N 12-01548 ..... **$61.75**



QUICK CHANGE PINS

Quick Change Pin. Makes changing yokes quicker & easier 3/4" .....P/N 12-01798 ..... **$2.50**

INTEGRAL WHOLE TYPE HAND SQUEEZER



A basic tool for all riveting operations. Quality steel construction with black oxide finish and all parts are heat treated. Adjustable set holder accepts dies and sets with 3/16" shank. 1-1/2" reach x 1-1/2" gap.

1-1/2" .....P/N 12-01465 ..... **$73.75**

RIVET SET FOR SQUEEZER



(FLUSH & CUPPED) - Made of steel and heat-treated for long wear and tool life. .187" (3/16") shank. *2 Flush sets required for Flush Head Rivets. 1 Flush and 1 Cup required for Round Head Rivets. *Sold as individual items / not a pair

Description	Part No.	Price
Flush 1/8	12-01466	$3.90
Flush 3/16	12-01554	$3.90
Flush 5/16	12-01556	$3.90
Flush 3/8	12-01557	$3.90
Flush 7/16	12-01558	$3.90

Descriptipn	Part No.	Price
Flush 1/2	12-01559	$3.90
Cupped 1/8	12-01561	$4.35
Cupped 5/32	12-01562	$4.35
Cupped 3/16	12-01563	$4.35



1-1/2" AND 3 YOKES

• Holds 3/16" die sets • Adjustable set holder • Stainless steel construction. 1-1/2" .....P/N 12-01547 ..... **$49.85**
3" .....P/N 12-01548 ..... **$61.75**



DIMPLE DIES

For any .187 shank diameter squeezer.

3/32" .....P/N 12-01468 ..... **$15.65**
1/8" .....P/N 12-01564 ..... **$16.50**
5/32" .....P/N 12-01565 ..... **$16.50**
3/16" .....P/N 12-01566 ..... **$16.50**

Economy Dimple Die Set Includes: 3/32", 1/8", 5/32", 3/16"
P/N 12-01467 ..... **$64.75**

SCREW REMOVAL TOOL



*Useful in removing screws that are corroded or have stripped heads *401 Parker taper shank for use in rivet gun *3/8" square socket end *Use standard Phillips or Slotted insert bits *Rivet gun required *1/4" hex adapter not included

4" Tool.....P/N 12-01567 .....**$18.95**



MICRO-STOP

This tool permits you to set the desired cut depth to help eliminate mistakes and skin damage. • 1/4" Shaft travel • Depth adjustable in .001" increments • 1/4"-28 Female Threads • Rated for 3,000 RPM P/N 12-01470 .....**$22.60**



HEAVY DUTY RIVET CUTTER

THis heavy-duty rotary cutter is designed to quickly and easily shear aluminum rivets. Just insert the rivet into the correct sized hole and set to desired length; adjustable for 1/4" to 3/4" long rivets in 1/16" increments. Cuts diameters of 3/32", 1/8", 5/32", 3/16", 7/32", and 1/4".

P/N 12-01471 ..... **$45.50**



ECONOMY RIVET SET

2.5" Straight & Offset Rivet. Made of steel and heat-treated for long tool life. The precision made cups are highly polished. • .401 shank • Length: 2.5" • Cup Sizes: 3/32", 1/8", 5/32" & 3/16" • For AN470 rivets

2.5" Straight 3/32".....P/N 12-02318 .....**$6.90**
2.5" Straight 1/8".....P/N 12-02319 .....**$7.50**
2.5" Straight 5/32".....P/N 12-02320 .....**$7.50**
2.5" Straight 3/16".....P/N 12-02321 .....**$6.90**



ALUMINUM BODY MINI AIR VACUUM

A handy air powered vacuum works off an air compressor and is simple to use. Attached 12" clear plasticflex tube can easily get into tiny spaces to clean. The canvas bag is easily removed for cleaning. P/N 12-01474 .....**$17.95**



CHIP CHASER

Ideal for removing chips and burrs from between metal after drilling rivet holes. Each chaser features a plastic molded handle and flexible steel blade with hook on the end. Blades are 5.5"and 2.5" long.

2.5".....P/N 12-01597 .....**$2.85**
5.5".....P/N 12-01476 .....**$3.25**



DOGLEG DEBURRING TOOL

Swivel action of this tool makes deburring holes fast and easy. Shaft includes a 1/4"-28 threaded holder. *Flute De-burring cutter sold separately - PN 12-00625.....P/N 12-01478 .....**$12.75**

Accessories

Replacement Deburring Bit .....P/N 12-03755 .....**$9.50**
Swivel Handle Only .....P/N 12-00623 .....**$17.75**
Extension Shaft only.....P/N 12-00624 .....**$8.50**
HSS 3 Flute De-burring cutter.....P/N 12-00625 .....**$18.85**



CLECO PLIERS

Used in limited access areas, requires less travel per activation. P/N 12-01480 .....**$6.50**

CLECALL STEEL UPRIGHT CLECO PLIERS



Clecall Upright Steel Cleco Pliers: Faster to use / Easier to Activate. Spring Loaded to open with less effort. Latest design accommodates 1/4" Cleco width. Forged steel for heavy duty use. Handle Compression distance reduced further for more comfort. Reduce fatigue and wrist pain. Vertical profile installs clecos in tight areas with ease. Install clecos on upside down surfaces easily. Economy Steel Pliers.....P/N 12-03756 ....**$19.95**



SPRING TENSION CLAMPS

(ZINC ALLOY YOKE OR STEEL YOKE)

Spring tension clamps can be applied in a fraction of the time required for ordinary screw clamps. The clamp, with 2" throat depth, has a Zamak alloy yoke and a steel spring which provides a 70 lb. clamping pressure. Designed for use with sheet holder pliers.

Description	Grip Range	Part No.	Price
Zine Alloy	0 - 1/2"	12-01481	$4.85
Steel 2"	0 - 1/2"	12-01482	$6.30
Steel 3"	1/4" - 5/8"	12-01483	$6.95



SIDE GRIP CLAMPS

Designed to hold two or more work pieces together where no holes exist. Clamping force is applied at edge of work. Spring loaded, plier actuated. The lack of a takeup screw makes it impossible to overtighten and damage the work surfaces or the clamp. There are 4 standard sizes : 1/2 x 1/2", 1/2 x 1", 3/4 x 1/2" , 3/4 x 1".

Description	Part No.	Price
1/2" x 1/2"	12-01484	$1.85
1/2" x 1"	12-01485	$1.95
3/4" x 1/2"	12-01486	$1.85
3/4" x 1"	12-01487	$1.95



DRILL STOPS

Use when drilling in sheet metal to help eliminate drill breakage & surface marks. Safely keeps drill from going too far through the work. Drill stops have a coiled spring to cushion the drill breakthrough & prevents the drill chuck from marring the work surface. Color coded for easy identification.

#10.....P/N 12-01488 .....**$1.45** #20..... P/N 12-01489 .....**$1.45**
#30.....P/N 12-01490 .....**$1.45** #40..... P/N 12-01491 .....**$1.45**
#1/4.....P/N 12-01492 .....**$1.45** #5/16..... P/N 12-01493 .....**$1.45**



CYLINDER BASE NUT WRENCHES

Where torque application accuracy is critical these tools meet the requirement. They offer excellent rigidity and surpass other wrenches in overall quality and efficiency. Wrench Type A is for sizes 1/2", 9/16", 5/8", and 3/4" hex nuts. Also available in a kit.

Type A 1/2".....P/N 12-01525 .....**$14.85**
Type A 9/16:.....P/N 12-01568 .....**$14.85**
Type A 5/8".....P/N 12-01569 .....**$14.85**
Cylinder Base Nut Wrench Set .....P/N 12-02302 .....**$44.50**

TO

Prices Subject to Change Without Notice

ECONOMY AIRCRAFT TOOLS

STRAP DUPLICATOR (BUSHING TYPE)



For drilling an accurate hole in overlapping sheets. The Bushing type duplicator is used by sliding the end with the pin between the sheets and locating the hole to be duplicated from inside. P/N 12-01498 is pictured.

Description	Part No.	Price	Description	Part No.	Price
#10 6-1/4"	12-01494	**$7.50**	#10 13-1/4"	12-01499	**$8.50**
#21 6-1/4"	12-01495	**$7.50**	#21 13-1/4	12-01501	**$8.50**
#30 6-1/4"	12-01496	**$7.50**	#30 13-1/4	12-01502	**$8.50**
#40 6-1/4"	12-01497	**$7.50**	#40 13-1/4	12-01503	**$8.50**
1/4" 6-1/4"	12-01498	**$7.50**	1/4" 13-1/4	12-01504	**$8.50**

STRAP DUPLICATOR (INVERTED TYPE)



For drilling an accurate hole in overlapping sheets. The inverted type duplicator allows you to locate a hole from the back of an overlaping sheet. #10 #21 #30 #40 1/4" drill sizes, 6-1/4" or 13-1/4". PN 12-01507 is pictured.

Description	Part No.	Price	Description	Part No.	Price
#10 6-1/4"	12-01505	**$7.50**	#10 13-1/4"	12-01510	**$8.50**
#21 6-1/4"	12-01506	**$7.50**	#21 13-1/4"	12-01511	**$8.50**
#30 6-1/4"	12-01507	**$7.50**	#30 13-1/4"	12-01512	**$8.50**
#40 6-1/4"	12-01508	**$7.50**	#40 13-1/4"	12-01513	**$8.50**
1/4" 6-1/4"	12-01509	**$7.50**	1/4" 13-1/4"	12-01514	**$8.50**

ECONOMY BLIND HOLE SPOTTERS



For inserting into drilled holes already bored and marking exact center for opposite hole. Available size: 5/16", 1/4", 3/16", 5/32" and 1/8"

Description	Part No.	Price
5/16"	12-01775	**$1.35**
1/4"	12-01774	**$1.30**
3/16"	12-01773	**$1.30**

Description	Part No.	Price
1/8"	12-01771	**$1.30**

EDGE BREAKER



This tool allows the quick removal of burrs and roughness from the edges of sheet metal. .25" or .187" in diameter grooved blade with safety shield. Safety-grip plastic handle. P/N 12-01527 ..... **$9.50**

AIR SWIVELS & REGULATOR TOOLS



Air Swivel Connector W/ Regulator (Pictured to the left) ..... P/N 12-01530 ..... **$11.50**
Air Swivel Connector ..... P/N 12-01529 ..... **$9.95**
Air Swivel Regulator ..... P/N 12-01545 ..... **$7.95**

BRASS RIVET SET



This rivet set has a soft face to prevent damage to the fastener when inserted or removed. Fits into any standard rivet gun or air hammer that supports .401" shank tooling, 3 1/8" overall length. ..... P/N 12-01543 .... **$11.50**

RIVET GUN SHAFT REDUCER



Rivet set adapter sleeve, .401 shank. Made of hardened steel (SKD11) and is open at both ends to allow maximum riveting power. P/N 12-01544 ..... **$14.90**

ECONOMY SAFETY WIRE TWISTERS



These top quality twisting lock pliers with automatic return are economically priced and extremely durable. Features a sharp cutting edge and will twist up to .060" dia. safety wire. Length 6"& 9". Foreign made.
6" ..... P/N 12-01472 ..... **$21.50**
12" ..... P/N 12-01473 ..... **$19.95**

CAMLOC PLIERS



These Camloc Pliers are used to depress #2600, #2700 and #4000 series Camloc (C-LOCK) studs so they can be properly installed. Pliers are manufactured from forged steel and feature polished bearing surfaces to avoid scratching the stud as it 's being installed. The grips are rubber cushioned for extra comfort and to reduce slipping. P/N 12-01475 ..... **$16.95**

CANNON CONNECTOR PLIERS



The tool features serrated jaws for improved gripping and a slip joint for improved leverage. Ideal for all common cannon connector applications.
P/N 12-01531 ..... **$15.70**

SHOP HEAD RIVET GAUGE SET



Set of four gauges for -3, -4, -5, -6 rivets. Each gauge measures Minimum height and Minimum diameter of shop heads AFTER setting. Eliminates guessing if your rivets are properly set. Works for measuring both universal head and flush rivets. Precision machined to size from 2024 aluminum. Rivet size permanently stamped on each gauge. Color coded anodized finish.
P/N 12-01533 ..... **$9.85**

RIVET LENGTH GAUGE



One gauge measure -3, -4, -5, -6 rivets. Used to check for proper length of rivets Before setting. Eliminates measuring and guessing of rivets lengths. Works for both universal head and flush rivets. Precision machined to size from 2024 aluminum. Rivet size permanently stamped. Blue anodized finish. P/N 12-01534 ..... **$5.50**

DRILL EXTENSION THREADED



These are used to extend a straight chuck drill to 1/4-28 female threads.
2" ..... P/N 12-01535 ..... **$5.70**
4" ..... P/N 12-01536 ..... **$5.70**
6" ..... P/N 12-01537 ..... **$5.70**

DRILL EXTENSION DUAL THREADED



Use these different length extensions in your 90°or 45° drills. 1/4"-28 male threads on one end and 1/4"-28 female threads on other.
2" ..... P/N 12-01541 ..... **$6.95**
4" ..... P/N 12-01542 ..... **$6.95**

SLIM MICRO-STOP



A slim design that's only 11/16" outside diameter. Used for those narrow areas that can't be reached with a standard micro-stop. • 1/4" Shaft • 1/4"-28 Female Threads • Adjustable in .001" increments • 1/2" Cutter Capacity • Rates for 3000 RPM use. P/N 12-01790 ..... **$19.95**

MICRO-STOP (LONG NOSE)



This micro-stop reaches into very confined areas. • 5/16" Quick-change Shaft or regular chuck • 1/4"-28 Female Threads • Adjustable in .001" increments • 3/8" Cutter Capacity • Rates for 3000 RPM use
P/N 12-01789 ..... **$39.75**

MICRO-STOP (NYLON FACE)



• 1/4" Shaft • 1/4" -28 Female Threads • Adjustable in .001" increments • 11/16" Cutter Capacity • Rates for 3000 RPM use P/N 12-01788 ..... **$25.50**

5.5" STRAIGHT & OFFSET RIVETS



Made of steel and heat-treated for long tool life. The precision made cups are highly polished. .401 shank. Length: 5.5". Cup Sizes: 3/32", 1/8", 5/32" & 3/16". For AN470 rivets

Size	Straight	Price	Offset	Price
3/32"	12-02326	**$8.50**	12-02330	**$8.85**
1/8"	12-02327	**$8.50**	12-02331	**$8.80**
5/32"	12-02328	**$8.50**	12-02332	**$8.80**
3/16"	12-02329	**$8.50**	12-02333	**$8.80**

ALUMINUM & NYLON RIVETS





This rivet set has a soft face to prevent damage to the fastener when inserted or removed. Fits into any standard rivet gun or air hammer that supports .401" shank tooling. • Surface: 1" • Length: 3 1/8"
Nylon Rivet ..... P/N 12-02342 ..... **$16.65**
Aluminum Rivet ..... P/N 12-02343 ..... **$8.90**

RADIUS CHECK



Radius Check is a hand-held tool which can be used to check the radius of parts and panels used in the construction or restoration of aircraft. Also used extensively in the restoration of antique and classic automobiles. P/N 12-21595 ..... **$38.50**

RADIUS OR FILLET GAUGES



16 leaves, especially for checking radius of inside and outside fillets and corners. Checks 1/32 to 17/64" by 64ths.
P/N 432A **$29.50**

TO

ECONOMY AIRCRAFT TOOLS



ECONOMY RIVET GUNS

These popular 2X /3X /4X rivet guns used in aircraft manufacturing plants worldwide. "X" series rivet gun has an incomparable teasing triggers, allowing you to slowly begin riveting without damaging the skin. A lightweight aluminum handle with powder coat finish for comfort. Hardened & precision ground steel piston, cylinder, spool valve for long life. Includes spring retainer & brass air regulator.

Length	BPM	Capacity	Bore	Shank	Stroke	Weight (lbs)	Part No.	Price
6-11/16"	2580	1/8"	1/2"	.401"	2-1/4"	3.1	12-02034	$138.75
7-5/16"	2160	3/16"	1/2"	.401"	2-7/8"	3.2	12-02035	$139.95
8-1/2"	1740	1/4"	1/2"	.401"	3-1/16"	3.4	12-02036	$139.95



ECONOMY FLUTING PLIERS

Narrow type fluting pliers are used for straightening out or coaxing sheet metal into the correct shape. This tool makes narrow and precise flutes in sheet metal. P/N 12-01782 ..... **$19.95**

RIVET HOLDER



This tool holds your rivet, small bolt, or screw so you can get into those hard-to-reach areas...
P/N 12-01791 ..... **$6.85**

RIVET ECONOMY COLLAR CUTTER



se with your rivet gun to easily remove Huck and Hi-Lok type collars. Shank: 0.401 Size includes 1/8", 5/32", 3/16" & 1/4" Overall Length: 5 1/2"

1/8..... P/N 12-02275 ..... **$15.95**
5/32..... P/N 12-02276 ..... **$15.95**
3/16..... P/N 12-02277 ..... **$15.95**
1/4..... P/N 12-02278 ..... **$15.95**

ECONOMY FLUSH SET



5.5" & 7.5" Flush Set Made of steel and heat-treated for long tool life. Faces are polished to a high luster for smooth, precise riveting. .401 shank Surface: 1" Length: 5.5" & 7.5"

5.5:" ..... P/N 12-02273 ..... **$15.95**
7.5" ..... P/N 12-02274 ..... **$16.95**

JIFFY RIVET SETTERS



ECONOMY JIFFY STRAIGHT RIVET SETTER - For use with "Jiffy" style rivet gun. Made of steel and heat-treated for long tool life. The precision made cups and highly polished. 401 shank, Length: 1-3/16", Cup Sizes: 3/32", 1/8", 5/32" & 3/16", For AN470 rivets

3/32" x 1-3/16" .... P/N 12-02381 ..... **$6.50**
1/8" x 1-3/16" ..... P/N 12-02382 ..... **$6.50**
5/32" x 1-3/16" .... P/N 12-02383 ..... **$6.50**
3/16" x 1-3/16" .... P/N 12-02385 ..... **$6.50**



ECONOMY JIFFY OFFET RIVET SETTER - For use with "Jiffy" style rivet guns. Made of steel and heat-treated for long tool life. The precision made cups are highly polished. 401 shank, Length: 1-3/4", Cup Sizes: 3/32", 1/8", 5/32" & 3/16", For AN470 rivets

3/32" x 1-3/4" ..... P/N 12-02387 ..... **$6.90**
1/8" x 1-3/4" ..... P/N 12-02388 ..... **$6.90**
5/32" x 1-3/4" .... P/N 12-02389 ..... **$6.90**
3/16" x 1-3/4" ..... P/N 12-02390 ..... **$6.90**



ECONOMY RIVET GUN PUNCH - For use to remove rivet after collar is split. Made of steel and heat-treated for long tool life. 401 shank, Length: 3-1/2", Punch size includes: 3/32", 1/8", 5/32" & 3/16" & 1/4"

3-1/2" x 1/8" ..... P/N 12-02392 ..... **$9.80**
3-1/2" x 5/32" ..... P/N 12-02393 ..... **$7.60**
3-1/2" x 3/16" ..... P/N 12-02394 ..... **$7.60**
3-1/2" x 1/4" ..... P/N 12-02395 ..... **$7.60**

ECONOMY JIFFY FLUSH RIVET SETTER - For use with "Jiffy" style rivet gun, polished flush surface Length: 1-3/16", For AN470 Rivets
P/N 12-02386 ..... **$6.50**



QUICK-CHANGE CHUCK

Allows tool change in seconds. Designed for drilling bits, countersinks, etc. with quick-change ends. 3/8" x 24 thread. P/N 12-01778 ..... **$19.95**



C-SET

This C-Rivet Set bends around obstacles and allows you to reach into awkward areas for riveting. • 3/16" diameter hole for any squeezer sets or dimple dies with 3/16" shaft • 401 shaft P/N 12-01776 ..... **$28.75**

RED BOX RIVET GUN TOOL KITS



RED BOX RIVET GUN TOOL KITS

* 1pc Rivet Gun (Choose Size 2X, 3X or 4X) * 1pc Brass Regulator * 1pc Beehive Retainer * 1pc Handi Retainer * 4pcs 3.5" Straight Rivet Set (3/32", 1/8" 5/32", 3/16") * 1pc Standard Flush Set (size: surface diameter 1", length 2-1/2") * 1pc Marvel Air Tool Oil (Made in USA) * 1pc Thread Seal Tape * 1pc Air Tool Fitting

2X Rivet Gun Tool Kit ..... P/N 12-02047 ..... **$189.95**
3X Rivet Gun Tool Kit ..... P/N 12-02048 ..... **$189.95**
4X Rivet Gun Tool Kit ..... P/N 12-02049 ..... **$189.95**



RED BOX FLUSH RIVET SET

P/N 12-02050 ..... **$7.70**

RED BOX 3.5" RIVET SET

Size	Straight	Price	Offset	Price
3/32"	12-02051	$6.50	12-02322	$7.50
1/8"	12-02052	$6.50	12-02323	$7.50
5/32"	12-02053	$6.50	12-02324	$7.50
3/16"	12-02054	$6.50	12-02325	$7.50



RED BOX 7.5" RIVET SET

Size	Straight	Price	Offset	Price
3/32"	12-02334	$8.50	12-02338	$9.50
1/8"	12-02335	$8.50	12-02339	$9.50
5/32"	12-02336	$8.50	12-02340	$9.50
3/16"	12-02337	$8.50	12-02341	$9.50



TURNBUCKLE WRENCH

2 inch diameter turnbuckle wrench easily rotates turnbuckle while chain tool holds the cable ends in precise alignment and prevents them from rotating.
P/N 12-01795..... **$28.75**

TURNBUCKLE CHAIN TOOL



This tool consists of two clamps joined by sprocket type (bicycle) chain. When clamped to cable and fittings at each side of the turnbuckle, anchor the cable to allow free adjustment of the turnbuckle. The adjustment becomes a two hand instead of three hand adjustment. P/N 12-01794..... **$25.75**

SPEED HANDLE 3/8"



Useful for quickly tightening and loosening a nut or bolt particularly where other types of wrenches will not reach. P/N 12-01797..... **$9.75**

PHENOLIC SCRAPER



Scraper Blade, 2" wide x 6.5" long x 3/8" thick. Designed for use with a rivet gun (.401 shank). Phenolic scrapers are perfect for safely removing sealant, adhesives, stickers, labels, grime, and more. P/N 12-01796..... **$16.85**

SKIN WEDGE



Made of 4140 steel and heat-treated to perfection. • 7" long x 1" wide • Body thickness 1/4"
P/N 12-01793..... **$9.85**

HEX KEYS



Designed to use when installing Hi-Lok style fasteners. Includes set screw and Allen key.

1/8"..... P/N 12-01785..... **$7.50**
5/64"..... P/N 12-01786..... **$7.50**
3/32"..... P/N 12-01787..... **$7.50**

ECONOMY DRILL EXTENSION THREADED



Has a 5/16" quick change shaft on one hand and 1/4" -28 female threads on the other. Allows you to chuck threaded drill bits or countersinks into a quick-change chuck. . P/N 12-01781..... **$6.25**

60° C-SET



Excellent for limited access areas. • 60° Angle • .401 shaft P/N 12-01777 ..... **$28.75**

FORD WRENCHES



• General-purose adjustable wrench • Sliding Jaw • Forged from Crescent special Analysis Tool Steel • Chrome-plated • Precision Machined

9" Wrench ..... P/N 12-03795 ..... **$23.75**
11" Wrench ..... P/N 12-01784 ..... **$27.95**
15" Wrench ..... P/N 12-03796 ..... **$42.65**

SEALANT MIXER



Designed to quickly and efficiently mix all types of pre-filled Semkit® packages. Has a 1/4' shank. Chuck it up in your drill to mix Semkit® sealant tubes.
P/N 12-01792 ..... **$16.85**

TO

Prices Subject to Change Without Notice

ATS AIR NIBBLER



ATS8300
• Cuts up to 16 ga (.060" / 15 mm) steel or aluminum
• Easily replaceable punch and die
• Weight 1.74 lbs (.79 kg)
P/N 12-01414 ..... **$109.95**

ATS PUNCH & FLANGING TOOLS



ATS8400
• Capacity 16ga (.060"/15mm) steel
• Punch Diameter 3/16" (5 mm)
• Flange width 1/2" (12 mm)
• Rubber comfort grip
• 9-3/4" (248 mm) Overall Length
• 2.75 lbs (1.25 kg)
P/N 12-01413. ..... **$75.95**

ATS AIR POWER RECIPROCATING SAW KIT



ATS8202K
• Cuts up to 16 ga (.060" / 15 mm) steel or aluminum
• .063" (16, mm) Stroke Length
• 10,000 Strokes Per Minute (SPM)
• Weight 2.1 lbs (1.35 kg)
P/N 12-01419 ..... **$99.95**

ATS 90 DEGREE ANGLE DRILL



ATS6132
• Spindle 1/4"-28 Thread
• Head Length 1.08" (2.7 mm)
• 2,800 RPM
• Head Width .65" (1.6 mm) .33 hp
• 10" (254 mm) Overall Length
• Variable speed control
1.6 lbs (.73 kg)
P/N 12-01422 ..... **$259.95**

ATS TOOLS

ATS MNI ANGLE DIE GRINDER



ATS5105
• 1/4" (6.4 mm) Collet Size
• 5-1/2" (140 mm) Overall Length
• 1.1 lbs (.5 kg)
• 20,000 RPM Free Speed)
P/N 12-01416. ..... **$85.95**

ATS MINI DIE GRINDER



ATS5101
• 1/4" (6.4 mm) Collet Size
• Front exhaust keeps work area cleanl
• Very light weight .79 lbs (.36 kg)
• 26,000 RPM Free Speed)
P/N 12-01417 ..... **$79.95**

ATS 3" CUT-OFF TOOL



ATS8502
• 3" (75 mm) disc capacity, 3/8" (15 mm) mount
• Free speed 20,000 RPM
• Weight 1.74 lbs (.79 kg)
P/N 12-01420 ..... **$49.70**

ATS AIR HYDRAULIC RIVETER



ATS8805
• Pulling Force 2,300 lbs (1,045 Kg)
• Rivet Capacity 3/16" aluminum or mild steel
• Stroke Length .63" (16 mm)
• Nosepieces: 3/32" (2.4 mm), 1/8" (3.2 mm), 5/32" (4.0 mm), 3/16" (4.8 mm)
• Weight 3.26 lbs (1.48 kg)
P/N 12-01423 ..... **$94.95**

ATS HEAVY DUTY AIR DRILL



ATS6101
• 3/8" (9.5 mm) Jacobs® Chuck
• Full Cage Gear
• 2,600 RPM
• Variable speed control
• .67 hp (.5 kw)
• Ergonomic Design for Maximum Comfort
• 7-1/2" (190 mm) Overall Length
• 2.07 lbs (.94 kg)
P/N 12-01418. ..... **$85.95**

ATS HD REVERSIBLE AIR DRILL



ATS6104
• 3/8" (9.5 mm) Jacobs® Chuck
• Full Cage Gear For Smooth Operation
• 2,400 RPM • Variable Speed Control
• Fully Reversible with Positive Stop
• 7-1/2" (190 mm) Overall Length
• .67 hp (.5 kw)
• 2.86 lbs (1.3 kg)
P/N 12-01421 ..... **$82.75**

ATS PALM DRILL



ATS6100
• 1/4" (6.4 mm) Jacobs® Chuck
• Two-stage (Low/High) Control Trigger
• 5-7/8" (150 mm) Overall Length
• 1.54 lbs (.7 kg)
• 2,800 RPM Free Speed
P/N 12-01424 ..... **$109.95**

TO

BOSCH POWER TOOLS



BOSCH 10.8V I-DRIVER

MODEL PS10-2A -*Features*: • 80 in. - lbs. of Torque — Drives 100 3-inch screws per battery charge • Ultra-Compact Head Length — 3.5" total head length - 3 times shorter than most popular competitor • 90-Degree Articulating Head • 7+1 Electronic Clutch • Forward/ Reverse Button — Equally useful at driving or removing screws • Quick Change Chuck- pull to insert or release 1/4" hex shank bits • Storage Hanger — Convenient tool storage between uses • Variable Speed Trigger — Revolutionary design provides increased sensitivity and control

P/N 12-01754 ..... **$159.75**

BOSCH 18 VOLT CORDLESS JIG SAW



18 V Cordless Jig Saw and L-BOXX™ Carrying Case. Up to 30% lighter weight than leading competitor. Up to 10% smaller than leading competitor. 1-handed blade insertion and ejection offers most convenience and ease of use. Smallest grip diameter reduces user fatigue during extended use applications. Always-on dust blower helps keep intended cut line visible. On-board tool storage for more convenience. Adjustable footplate for bevel cuts up to 45°. Battery and charger sold separately. In the box: • Jig Saw • L-Boxx-2 • Exact-Fit Insert Tray • Battery and Charger Not Included - Sold Separately.

P/N 12-03737 ..... **$223.95**

BOSCH TOP HANDLE JIGSAW



Toolless Blade-Change System – Fast insertion, blade ejection lever eliminates need to touch hot blade. Most secure jigsaw clamping system.

Features: • Powerful 7.0-Amp Jigsaw – Top jigsaw amp rating. • Variable speed - Dial sets maximum speed and accelerator trigger controls operating speed. • Constant Response™ circuitry – Maintains desired speed for consistent performance and precision. • Aluminum gearbox with insulated cover • Toolless Blade-Change System – Fast insertion, blade ejection lever eliminates need to touch hot blade. Most secure jigsaw clamping system. • Internal Precision Control - Precision-machined plunging system and low-vibration design for enhanced accuracy and extremely smooth operation. • Large, sturdy die-cast foot with steel insert and on-board bevel wrench. • Exclusive multi-directional blade clamp provides superior grip of T-shank blades. (JS470E does not accept U-Shank blades) • Four orbital-action settings -Different blade strokes for smooth to aggressive cuts. • Adjustable dust blower keeps cutting line clear. • Ergonomic top handle with soft-grip areas for solid, comfortable grip. • Ambidextrous lock-on button – For steady long cuts and user comfort and control.

P/N 12-03215 ..... **$175.95**

BOSCH TOP HANDLE JIG SAW 5 INCH RANDOM ORBIT SANDER



MODEL NO. ROS20VSK - Features: • Best all-around sanding performance and convenience. • Twist-off translucent dust canister shows dust level and detaches easily. Ant-spillback design prevents dust from spilling on removal. • Bosch Microfilter system traps dust particles as small as 1/2 micron. • Hook-Tight™ hook-and-loop disk attachment ensures firm grip of standard hook-and-loop sanding discs. • Comfortable, ergonomic soft-grip top and body • Integral pad dampening system prevents swirl marks • Soft microcellular backing pad ensures smooth, fine finish on flat or contoured surfaces. • Variable-speed dial allows matching of speed to work piece and task.

P/N 12-01766 ..... **$99.85**

AIRCRAFT STATIC TEST ADAPTER



SA3Y-P-UNI-2 Aircraft Static Test Adapter. • Automatically attaches to aircraft fuselage • High pressure hoses with quick release fittings • Press to release button for static adapter removal • Safety check valves for power failure and system leaks • High impact yellow case with internal electric vacuum pump • Designed to fit most general & military aircraft static ports • Comes with 1/2 in center suction cup. Accessory kits are available for specific static ports • Power input: 115 V AC 50/60 Hz. Continuous operation • Custom voltages available: 12vdc, 28vdc, 115 vac & 220 vac • Size: 12" x 10" Wt. 8.5lbs.

P/N 13-20266 ..... **$1,115.00**

BOSCH 4-1/2 INCH ANGLE GRINDER



Features: 6 Amps, 11,000 RPM• Lock-on/off switch — for extended use applications • Service MinderTM brushes — Eliminates guesswork, stops the tool when preventative maintenance is required • Epoxy Coated Field Windings — Provides ultimate protection against abrasive dust and metal debris • 5/8" -11 Spindle — wide flexibility for mounting most popular accessories • Spindle Lock — For quick wheel changes • Double insulated, UL listed, complies to OSHA • 2-Position auxiliary handle — specifically designed and angled to a "natural" position for maximum comfort and control.

P/N 12-02685..... **$169.85**

BOSCH 3-1/4 INCH PLANER 120V



Powerful 6.0 amp motor, 16,500 RPM for fast stock removal and a smooth finish. Electronically-counterbalanced, single-blade system automatically positions blade at ideal cutting angle. Reduces drag and provides fast operation and a smooth finish. Eliminates uneven planing caused by misaligned blades. Equipped with Bosch Woodrazor™ micrograin carbide blades. Ratcheting depth knob that allows for fool-proof setting of depth increments from 0" to 1/16" (1.5 mm). Also features an edge guide fence. A protective shield covers the section of blade not in use. Amperage: 6.0. Cord Length: 10'. Country of Origin: Malaysia. No Load RPM: 16,500. Planing Depth: 0 - 1/16" (1.5 mm). Planing Width: 0" to 3-1/4". Rabbet Depth: 5/16". Rating: 120V AC. Shoe Length: 11 - 1/8"

P/N 12-02823..... **$129.90**

TO

SUNEX TOOLS



SUNEX IMPACT WRENCH SX4335

3/8" Impact Wrench SX4335
P/N 12-02610 ..... **$239.95**



SUNEX IMPACT WRENCH SX4345

1/2" Impact Wrench. 750 ft.lbs. of quiet power. 1100 ft.lbs. of breakaway torque. One hand forward/reverse. Quiet Tech™ exhaust system delivers 82 dBA. Weighs only 4.3 lbs..
P/N 12-02611 ..... **$229.95**



SUNEX IMPACT WRENCH W/ ANVIL SX4345-2

1/2" Impact Wrench with 2" extended anvil. 750 ft.lbs. of quiet power. 1100 ft.lbs. of breakaway torque. One hand forward/reverse. Quiet Tech™ exhaust system delivers 82 dBA. Weighs only 4.3 lbs.
P/N 12-02612 ..... **$250.95**



SUNEX IMPACT WRENCH SX4355

3/4" Impact Wrench. 1400 ft.lbs. of quiet power. One hand forward/reverse. Quiet Tech™ exhaust system delivers 90 dBA. Weighs only 7.55 lbs...
P/N 12-02613 ..... **$544.00**



SUNEX AIR RATCHET SX3825

1/4" Air Ratchet. 30 ft. lbs. of quiet power. 84 dBA makes it the quietest in it's class. Weighs only 1.45 lbs....
P/N 12-02614 ..... **$138.75**

SUNEX SHORT AIR HAMMER



SX821A Specification	
Blows Per Minute	4,500
Bore (In.)	1-5/8
Stroke (In.)	1-5/8
Air Inlet (NPT)	1/4
Min. Hose Size (I.D.)	3/8
Recommended Air Pressure (PSI)	90
Average Air Consumption (CFM)	4
Sound Level (dBA)	105
Length (In.)	5.5

* Built-in regulator
* Accepts .401" Parker taper shank chisels
* Ideal for standard duty applications
* 3 pc. chisel set included
* Quick change retainer sprping

P/N 12-01934 ..... **$52.75**



SUNEX AIR RATCHET SX3830

3/8" Air Ratchet. 50 ft. lbs. of quiet power. 80 dBA makes it the quietest in it's class. Weighs only 2.7 lbs.
P/N 12-02615 ..... **$145.75**



SUNEX IMPACT RATCHET SX3835

3/8" Impact Ratchet Wrench. 300 ft. lbs. of quiet power. One hand forward/reverse. Quiet Tech™ exhaust system delivers 79 dBA. Weighs only 2.75 lbs.
P/N 12-02616 ..... **$238.95**

SUNEX 1/4'' 0.5HP DIE GRINDER



Sunex HD ®1/4" 0.5hp line of Die Grinders provides all of the durability, features, and power required for today's demanding applications. With the powerful 0.5hp motor, you are given the torque to get through even the toughest material and twice the horse power of the average die grinder. The speed control dial and soft composite handles enhances your ability to complete any job quickly and efficiently. With these top of the line products, you will find all of the features and speed you need to get the job done right the first time. 2 Year Limited Warranty. Weight lbs.(kg): 1.3 (6)
P/N 12-03190 ..... **$89.75**

SUNEX 1/4'' 0.5HP ANGLED DIE GRINDER



Sunex HD ®1/4" 0.5hp line of Die Grinders provides all of the durability, features, and power required for today's demanding applications. With the powerful 0.5hp motor, you are given the torque to get through even the toughest material and twice the horse power of the average die grinder. The speed control dial and soft composite handles enhances your ability to complete any job quickly and efficiently. With these top of the line products, you will find all of the features and speed you need to get the job done right the first time. 2 Year Limited Warranty. Weight lbs.(kg): 1.5 (0.7)
P/N 12-03192 ..... **$117.75**

SUNEX 1/4'' 1.0HP SUPER DUTY DIE GRINDER



The new Sunex HD ® 1/4" 1.0hp Super Duty Die Grinder has all the durability, features, and power mechanics want in an industrial die grinder. With the powerful 1.0hp motor, you're provided with the torque needed to get through the toughest of materials. The no slip Erickson Industrial Collet, allows you to work efficiently, as it holds your accessories securely without slippage. You would normally pay twice as much for a tool of this caliber. 2 Year Limited Warranty. Weight lbs.(kg): 1.7 (0.77)
P/N 12-03193 ..... **$134.50**



SUNEX ANGLE DIE GRINDER SX5203

1/4" Angle Die Grinder. 20,000 max. RPM of quiet speed. Only 82 dBA. Weighs only 1.1 lbs.
P/N 12-02618..... **$114.75**



SUNEX REVERSIBLE CUT OFF TOOL SX6210

3" Reversible Cut-Off Tool. Reversible spark direction with 18,000 max. RPM. Strong 0.9 horsepower motor. Only 83 dBA. Weighs only 3.6 lbs.
P/N 12-02619 ..... **$117.75**

TO

SUNEX SOCKET SETS

1/2" DRIVE STANDARD 13 PIECE SAE IMPACT SOCKET SET



* CR-MO alloy steel for long life
* Fully guaranteed
* Heavy molded storage tray

2650 Includes: 7/16" 1/2" 9/16" 5/8" 11/6" 3/4" 13/16" 7/8" 15/16" 1" 1-1/16" 1-1/8" 1-1/4"

P/N 12-01945.....**$53.85**

1/2" DRIVE DEEP 13 PIECE SAE IMPACT SOCKET SET



* CR-MO alloy steel for long life
* Fully guaranteed
* Heavy molded storage tray

2651 Includes: 7/16" 1/2" 9/16" 5/8" 11/6" 3/4" 13/16" 7/8" 15/16" 1" 1-1/16" 1-1/8" 1-1/4"

P/N 12-01946.....**$89.75**

1/2" DRIVE STANDARD 14 PIECE METRIC IMPACT SOCKET SET



* CR-MO alloy steel for long life
* Fully guaranteed
* Heavy molded storage tray

2652 Includes ;10mm 11mm 12mm 13mm 14mm 15mm 16mm 17mm 18mm 19mm 21mm 22mm 26mm 27mm

P/N 12-01947.....**$52.75**

1/2" DRIVE DEEP 14 PIECE METRIC IMPACT SOCKET SET



* CR-MO alloy steel for long life
* Fully guaranteed
* Heavy molded storage tray

2653 Includes: 10mm 11mm 12mm 13mm 14mm 15mm 16mm 17mm 18mm 19mm 21mm 22mm 26mm 27mm

P/N 12-01948.....**$89.75**

1/2" DRIVE DEEP SPINDLE NUT 4 PIECE METRIC IMPACT SOCKET SET



* Deep design for GM & Chrysler spindle nut applications
* CR-MO alloy steel for long life
* Fully guaranteed
* Heavy molded storage tray

2838 Includes: 30mm 32mm 34mm 36mm

P/N 12-01951.....**$79.95**

1/2" DRIVE WHEEL LOCK REMOVAL KIT



* CR-MO alloy steel for long life
* Fully guaranteed
* Heavy molded storage tray

2840 Includes: GM Hubcap Lock Remover, GM Sprocket Hubcap Remover, Ford & Chrysler Hubcap Lock Remover, Large Univ. Locking Lug Nut Remover, Large Wheel Cover Lock Remover, Remover for Stripped 18mm Lug Nuts, Oversize Wheel Lock Remover, GM "M" & "F" Body Wheel Lock Remover, Lug Nut Remover Punch

P/N 12-01952.....**$67.75**

3/8" DRIVE DEEP 25 PIECE SAE IMPACT SOCKET SET



* CR-MO alloy steel for long life
* Fully guaranteed
* Heavy molded storage tray

3325 Includes: 12 Standard Sockets: 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 11/16" 3/4" 13/16" 7/8" 15/16" 1"
12 Deep Sockets: 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 11/16" 3/4" 13/16" 7/8" 15/16" 1"

P/N 12-01954.....**$123.75**

3/8" DRIVE MASTER 29 PIECE METRIC IMPACT SOCKET SET



* CR-MO alloy steel for long life
* Fully guaranteed
* Heavy duty blow mold case

3329 Includes: 14 Standard Sockets:: 8mm 9mm 10mm 11mm 12mm 13mm 14mm 15mm 16mm 17mm 18mm 19mm 21mm 22mm 14 Deep Sockets:: 8mm 9mm 10mm 11mm 12mm 13mm 14mm 15mm 16mm 17mm 18mm 19mm 21mm 22mm

P/N 12-01955.....**$121.75**

3/8" DRIVE MASTER DEEP 28 PIECE SAE & METRIC IMPACT SOCKET SET



* CR-MO alloy steel for long life
* Fully guaranteed (excludign adapter)
* Heavy duty blow mold case

3360DD Includes: 14 Deep SAE Sockets:: 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 11/16" 3/4" 13/16" 7/8" 15/16" 1" 14 Deep Metric Sockets:8mm 9mm 10mm 11mm 12mm 13mm 14mm 15mm 16mm 17mm 18mm 19mm 21mm 22mm 1/2" (F) x 3/8"(M) Adapter 3" Extension

P/N 12-01956.....**$127.75**

1/2" DRIVE DEEP MASTER 29 PIECE SAE & METRIC IMPACT SOCKET SET



* CR-MO alloy steel for long life
* Fully guaranteed
* Heavy duty blow mold case

5153DD Includes: 13 Deep SAE Sockets: 7/16" 1/2" 9/16" 5/8" 11/16" 3/4" 13/16" 7/8" 15/16" 1" 1-1/16" 1-1/8" 1-1/4" 14 Deep Metric Sockets: 10mm 11mm 12mm 13mm 14mm 15mm 16mm 17mm 18mm 19mm 21mm 22mm 26mm 27mm 2 Deep Flip Sockets: 3/4" x 13/16 19mm x 21mm

P/N 12-01949.....**$251.95**

1/2" DRIVE MASTER 39 PIECE METRIC IMPACT SOCKET SET



* CR-MO alloy steel for long life
* Fully guaranteed
* Heavy duty blow mold case

2669 Includes 19 Standard Sockets: 9mm 10mm 11mm 12mm 13mm 14mm 15mm 16mm 17mm 18mm 19mm 20mm 21mm 22mm 23mm 24mm 26mm 27mm 30mm 19 Deep Sockets: 9mm 10mm 11mm 12mm 13mm 14mm 15mm 16mm 17mm 18mm 19mm 20mm 21mm 22mm 23mm 24mm 26mm 27mm 30mm

P/N 12-01950.....**$205.95**

1/2" DRIVE EXTRA THIN WALL 9 PIECE SAE & METRIC WHEEL PROTECTOR IMPACT SOCKET SET



* Durable outer sleeve and insert protects high polished wheels and lug nuts from damage
* Fully guaranteed
* Heavy duty blow mold case
* CR-MO alloy steel for long life

2849 Includes 6 SAE Sockets: 3/4" (light green) 13/16" (purple) 7/8" (green) 15/16" (brown) 1" (silver) 1-1/16" (black) 3 Metric Sockets: 17mm (blue) 19mm (yellow) 21mm (red)

P/N 12-01953.....**$112.85**

SUNEX 1/2'' SUPER DUTY IMPACT WRENCH



The Sunex HD® ½" Super Duty Impact Wrench has all of the durability, features, and power that mechanics have come to expect. From the powerful 7 vane motor to the composite blades, you have access to an unheard of breakaway torque of 1,300 ft.lbs. With an Easy Touch variable speed trigger, you can harness this power to complete any job quickly and efficiently. Top it off with the reliable twin hammer clutch, this product will last for years to come. 2 Year Limited Warranty. Weight lbs.(kg): 4.2 (1.9)

P/N 12-03188 ..... **$276.95**

SUNEX 5'' REVERSIBLE HI-SPEED SANDER



The Sunex HD ® 5" Reversible High-Speed Sander has all of the durability, features, and power that customers have come to expect from the HD product line.
This product sets itself apart by being the only composite High-Speed Sander available that gives you light weight comfort and durability, as well as the added feature of a reversible direction control. If you are in a tight spot or need to control sparks or debris, this tool is exactly what you need. For paint removal, weld smoothing, shaping filler patches, to rust removal, there is no equal in the market. 2 Year Limited Warranty. Weight lbs.(kg): 2.2 (1.0)

P/N 12-03189 ..... **$119.85**

TO

SUNEX TOOLS

SUNEX WRENCH SETS



7 PIECE JUMBO SAE COMBINATION WRENCH SET

* High density, dropped forged alloy steel for strength
* Raised panel design
* Comes with sturdy metal clip for storage

9707 Includes: 942-1-5/16", 956-1-3/4", 944-1-3/8", 960-1-7/8", 948-1-1/2", 964-2", 952-1-5/8"

P/N 12-01967 .....**$135.75**

14 PIECE SAE COMBINATION WRENCH SET



* Canvas pouch included
* Raised panel design
* High density, dropped forged alloy steel for strength

9714 Includes: 712-3/8", 726-13/16, 714-7/16", 728-7/8", 716-1/2", 730-15/16", 718-9/16", 732-1", 720-5/8", 734-1-1/16", 722-11/16", 736-1-1/8", 724-3/4", 740-1-1/4"

P/N 12-01970 .....**$69.75**

14 PIECE ANGLE HEAD SAE WRENCH SET



* Canvas pouch included
* Fully polished drop forged alloy steel
* 15° and 60° angled ends for added convenience

9914 Includes: 991401-3/8", 991408-13/16, 991402-7/16", 991409-7/8", 991403-1/2", 991410-15/16", 991404-9/16", 991411-1", 991405-5/8", 991412-1-1/16", 991406-11/16", 991413-1-1/8", 991407-3/4", 991414-1-1/4"

P/N 12-01975 .....**$78.75**

14 PIECE ANGLE HEAD METRIC WRENCH SET



* Canvas pouch included
* Fully polished drop forged alloy steel
* 15° and 60° angled ends for added convenience

9914M Includes: 991404M-6mm, 991408M-13mm, 991403M-7mm, 991409M-14mm, 991402M-8mm, 991410M-15mm, 991401M-9mm, 991411M-16mm, 991405M-10mm, 991412M-17mm, 991406M-11mm, 991413M-18mm, 991407M-12mm, 991414M-19mm

P/N 12-01976 .....**$56.75**



8 PIECE FLARE NUT CROWFOOT WRENCH SET

* 3/8" Drive
* Fully polished drop forged alloy steel
* Mounted on a convenient storage rail

9708 Includes: 970802-3/8", 970810-5/8", 970804-7/16", 970812-11/16", 970806-1/2", 970814-3/4", 970807-9/16", 970818-7/8"

P/N 12-01968 .....**$29.95**

7 PIECE JUMBO STRAIGHT CROWFOOT WRENCH SET



* Fully polished drop forged alloy steel
* 1/2" Drive
* Reusable blow mold storage tray

9720 Includes: 97732-1", 97734-1-1/16", 97736-1-1/8", 97738-1-3/16", 97740-1-1/4", 97760-1-3/8", 97744-1-1/2"

P/N 12-01971 .....**$69.85**



6 PIECE JUMBO METRIC CROWFOOT WRENCH SET

* Fully polished drop forged alloy steel
* 1/2" Drive
* Reusable blow mold storage tray

9722 Includes: 97746-1-5/8", 97752-2", 97748-1-3/4", 97754-2-1/8", 97750-1-7/8", 97756-2-1/4"

P/N 12-01972 .....**$99.75**



10 PIECE METRIC FLARE NUT CROWFOOT WRENCH SET

* Fully polished drop forged alloy steel
* 3/8" Drive
* Mounted on a convenient storage rail

9710M Includes: 971010-10mm, 971015-15mm, 971011-11mm, 971016-16mm, 971012-12mm, 971017-17mm, 971013-13mm, 971018-18mm, 971014-14mm, 971019-19mm P/N 12-01969 .....**$36.70**



8 PIECE JUMBO METRIC STRAIGHT CROWFOOT WRENCH SET

* Fully polished drop forged alloy steel
* Mounted on storage rail for convenience
* Reusable blow mold storage tray

9730 Includes: 97324-24mm, 97328-28mm, 97325-25mm, 97329-29mm, 97326-26mm, 97330-30mm, 97327-27mm, 97332-32mm

P/N 12-01973 .....**$61.75**



SX-230A DIE GRINDER & ACCESSORIES

1/4" air die grinder. Built-in regulator. Exhaust directed away. Lever throttle for positive lever control.

Die Grinder ..... P/N 12-01124.....**$62.75**



X-227B HEAVY DUTY METAL SHEARS

Muffled handle exhaust. Heavy-duty, ball and needle construction. Pneumatic.

P/N 12-01122.....**$123.95**

SUNEX PNEUMATIC TOOLS



1/4" DRIVE MINI AIR RATCHET WRENCH

SX1068 Specification	
Free Speed(RPM) @90PSI	230
Torque (ft.lbs.) @90PSI	25
Square Drive	1/4
Min. Hose Size	2/8
Recommend Air Pressure (PSI)	90
Average Air Consumption (CFM)	3
Sound Level (dBA)	87
Length(In.)	8

* Lever throttle for positive speed control
* Ball detent socket retainer
* Rear exhaust
* Also available: 1/4" head kit P/N 12-01932 ..... **$89.75**



3/8" DRIVE PISTOL GRIP IMPACT WRENCH

SX821A Specification	
Square Drive (In.)	3/8
Max. Torque (ft. lbs @90PSI)	75
Working Torque (ft.lbs.)	30-60
Free Speed (RPM@90PSI)	10,000
Air Inlet (NPT)	1/4
Recommended Air Pressure (PSI)	90
Average Air Consumption (CFM)	4
Sound Level (dBA)	84
Length (In.)	5

* Ring socket retainer for rapid socket changes
* Front bumper for added protection
* Built-in regulator for added protection
* Reliable dog clutch mechanism for dependable service
* Reliable dog clutch mechanism for dependable service

P/N 12-01937 ..... **$91.75**



MEDIUM DUTY AIR HAMMER

SX275B Specification	
Blows Per Minute	3,000
Bore (in.)	11/16
Stroke (In.)	2-5/8
Air Inlet (NPT)	1/4
Min. Hose Size (I.D.)	3/8
Recommended Air Pressure (PSI)	90
Average Air Consumption (CFM)	4
Sound Level (dBA)	105
Length (In.)	6.75

* Built-in regulator
* Accepts .401" Parker taper shank chisels
* An excellent general purpose hammer
* Quick change retainer spring P/N 12-01935 ..... **$47.50**

TO

SUNEX TOOLS

SUNEX 20 TON CAPACITY AIR BOTTLE JACK



* Designed for operating either manually or pneumatically * Air hose can swivel in any direction * Fitted with safety valve to prevent overloading * Two piece handle allows for easy pumping * Extension screw gives added height when necessary * Minimum air pressure required is 90 PSI, 7 Bars * Double spring return 4920BAH Specifications: Capacity (Tons)-20, Power Lift (In.) -7, Closed Height (In.) -10.5, Raised Height (In.) -20.1, Add. Screw Adj. (In.)-3.5, Base Dimensions (In.)-6.5 x 8.9

P/N 12-01958 .....**$296.95**

4 PIECE 3/8 INCH DRIVE UNIVERSAL SPARK PLUG SOCKET SET



* All four sized spark plug sockets in one convenient set * Fully polished chrome vanadium alloy steel for durability * Universal joint design for easy access in confined areas * Rubber inserts hold spark plug securely during installation and removal * Includes new 9/16" size * Convenient blow mold case * Fully guaranteed. 87602 Specifications: 8844-9/16, 8844-5/8, 8844- 3/4, 8844-13/16

P/N 12-01966 .....**$43.50**

SUNEX DELUXE CREEPER



* 1" Rugged steel tube construction * Oversize frame for added comfort * Tapered frame and head reast for extra clearnace in tight areas * 3-1/2" Heavy duty chrome finished casters with rubber tread * 5-Position stick shift headrest adjustment sytem * Rear drop frame design for extra leg comfort
8515 Specifications: Length (In.)-45.5, Width (In.)-19, Height (Headrest Down)-5, Height (Headrest Up)-9.5, Shipping Weight (lbs)-29.0, Bed Size-30.625 x 16.5 x 2.5 P/N 12-01964 .....**$199.75**

SUNEX SERVICE CART WITH LOCKING TOP & DRAWER



* 8016 - 3 Drawer Unit * 8011 - Large Locking Screwdriver/Pry Bar holder * 8004 - Side Work Bench * 8014 - Leg extension Drawer liner sold separately Note: This item is purchased as a complete unit with the accessories listed above.
8013ADLX Specifications: Load capacity (lbs.)-350, Shipping weight (lbs.)-115.5, Color: Blue-8013ABLDLX, 8844-13/16-13/16"

P/N 12-01962 .....**$470.00**

SUNEX SOCKET DRIVES



Radius corner design causes the socket to grab the sturdy wall, or flat, of the fastener instead of grabbing the corners, resulting in less corner wear on the fastener. CR-MO alloy steel for long life.

Drive	Socket	Description	Part No.	Price
3/4"	41mm	Sunex 441MD	12-03448	**$24.50**
3/4"	46mm	Sunex 446MD	12-03450	**$24.55**
1"	46mm	Sunex 546MD	12-03451	**$35.95**

SUNEX REDUCING SOCKETS



CR-MO alloy steel for long life. Steel ball retainer on male end. Will meet a variety of needs. Lifetime warranty. Fully guaranteed.

Description	Part No.	Price
Sunex 2302 1/2"(f)x3/4"(m)	12-03452	**$10.50**
Sunex 4300 3/4"(f)x1"(m)	12-03453	**$20.55**

SUNEX SERVICE CART WITH LOCKING TOP & DRAWER



* This combination makes for the ultimate cart * The locking drawer and locking top are keyed the same, so the user only has one set of keys * Clip-on roller-bearing slides on drawer * Large, easy to maneuver 4" wheels: 2 locking and 2 standard, Chrome 16 gauge steel frame, Durable powder coated finish, 3" deep shelves, Available colors: red, blue, black & yellow
8013A Specifications: Load capacity (lbs.)-350, Shipping weight (lbs.)-69.5 P/N 12-01963 .....**$255.95**

SUNEX 3/8 INCH CUTTING WHEEL - 5 PCS.



* For general purpose metal cutting 3" x 1-/16" double reinforced * Use with 3/8" arbor * Do not exceed 20,000 RPMs * Comply with ANSI B7.1/OSHA regulations. 87602 Specifications: Diameter (In.)-3, Qty. Included -5, Max RPM -25,000 P/N 12-01965 .....**$12.95**

6 INCH BENCH GRINDER WITH LIGHT



* Bright, flexible work light * Has two 6" grit wheels: coarse 36 and medium 60 * Each wheel has protective spark guard and adjustable eye shield * Mounting holes and rubber feet make grinder easy to mount on a stand (optional - part #5003 or 5005) or use on an approved worktable or workbench * Conveniently placed, easy to use on/off switch * Long, 6-foot power cord * Cast iron base for durability * Ball bearing construction for smooth operation * 1/2" Arbor accepts standard 6" wheel * UL & CSA Listed * Includes: eye shields (RS500119B) & tool rests (RS500135B)
5001A Specifications: Power-1/2 HP Motor, No Load speed .3450 RPM Motor -3.5 Amp, Voltage -115V/60Hz, Shipping Wt. (Lbs) -22

P/N 12-01959 .....**$177.75**

5 TON CAPACITY 8-WAY, 2-3 JAW REVERSIBLE PULLER



* Can be assembled to make a two or three jaw puller when additional stability is needed * Reversible jaw design for added versatility and a broader range of pulling capability * Ideal for pulling gears, bearings, pulleys and other press fit parts 3908 Specifications: Maximum reach (in.)-5.5, Maximum spread (in.) -7

P/N 12-01957 .....**$41.50**

3/16 INCH HEAVY DUTY RIVET GUN



* Sets all conventional, standard blind rivets and all structural blind rivets, mono bolts and t-rivets up to and including 3/16" diameter in all materials * Comes with nose pieces in 3/32", 1/8", 5/32", and 3/16" sizes * Features a pulling (traction) power of 1,983 lbF @90PSI * Forged aluminum handle * Nose pieces stored conveniently underneath base of gun * Minimum air pressure required is 90 PSI, 7 Bars * Includes blow molded storage case SX0918T Specifications: Air Pressure (PSI) -75-90, Stroke Length (In.) -11/16, Height (In.) -12-3/8, Weight (Lbs.) -3.70, Min. Hose Size (I.D.) -3/8, Air Inlet Size (NPT) -1/4. * Tips available on special request. P/N 12-01933 .....**$273.95**

SUNEX 3 PIECE PROFESSIONAL ANGLE BLADE PRY BAR SET



Includes angle blade pry bars in lengths of 12", 17" and 25" and boast a handle specifically designed to ensure a "no slip" grip allowing the user maximum leverage and control. Each pry bar also has hardened, tempered blades for unmatched strength and durability. Specifications • Weight: 4.1lbs • Length: 25.8" • Height: 1.9" P/N 12-02451 .....**$56.75**

SUNEX 3PC FLEXIBLE PICKUP TOOL



Helps to get you into those tight spots and help you with removal, fastening, and pick up of fasteners and parts. **Features**: Includes: 1/4" Magnetic Bit Driver, 1/4" Socket Driver, and a 2 in 1 Magnetic Claw Pick-Up Tool. Flexible ends bend to desired angles. Extra long 24" length shafts. 1/4" Bit Socket accepts all standard bits. 1/4" Socket Driver can be used with all 1/4" sockets and bit sockets. P/N 12-02450 .....**$48.50**

SUNEX CABLE SPRING CLAMP PLIERS



24" flexible neck cable for hard to reach areas. Clamps lock in open position. Removes plastic and metal self-tightening (11/16" - 2-1/2" diameter) hose clamps. Extended clamp on allows for added extension. Lifetime warranty (does not include cable and spring).

P/N 12-03454 .....**$67.75**

TO

SUNEX TOOLS – METAL WORKING TOOLS

SUNEX 12 PIECE METRIC V-GROOVE COMBO RATCHETING WRENCH SETS



12 Piece Metric V-Groove Combination Ratcheting Wrench Sets Include: 8mm, 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, and 19mm.
12 pc. Wrench Set..... P/N 12-03333.....**$129.99**

SUNEX 6 PIECE METRIC EXTRA LONG DOUBLE BOX RATCHETING WRENCH SETS



6 Piece Set Includes: 8mm x 9mm, 12mm x 13mm, 16mm x 18mm, 10mm x 11mm, 14mm x 15mm, and 17mm x 19mm.
6 pc. Wrench Set..... P/N 12-03337.....**$192.85**
6 pc. Wrench Set with Flex Head
P/N 12-03335.....**$223.95**

HAND SHEARS



Throatless design, adjustable work hold down, arched top blade allows for effortless cutting throughout the stroke and indexable bottom blade. Up to 3/16" steel, up to 3/8" round bar.

Description	Part No.	Price
Hand Shear 5" Model SPHS5	12-03459	**$110.75**
Hand Shear 8" Model SPHS8	12-03460	**$125.99**
Hand Shear 10" Model SPHS10	12-03457	**$159.99**
Hand Shear 12" Model SPHS12	12-03458	**$190.75**



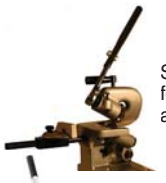
MANUAL SHEET METAL CORNER NOTCHER

Heavy cast iron frame, adjustable work stops, 4 x 4 blades adjustable blade gap, high chrome blades, adjustable gibs for long life.
P/N 12-03461.....**$1,295.00**



52 INCH FOOT SHEAR

52" Blade length, cast iron frame, front arm supports, high carbon blade, adjustable blade gap, front squaring arm with scale, back gauge with inch and metric scale.
P/N 12-03462.....**$2,197.00**



ROTARY SHEAR

Shape cutter, easily cut any shape up to 1/8" thick, forged steel frame, ratcheting head, adjustable cutter, adjustable work stop.
P/N 12-03463.....**$199.99**



HAND SHEAR MULTI PURPOSE CUTTER

5" Top length, throatless design, adjustable work hold down, geared reduction handle makes cutting easy.
P/N 12-03464.....**$240.95**



3-IN-1 SHEET METAL ROLLER

This Sheet Metal Roller Press is 12" length with 5 adjustable hardened fingers, material hold-down, back gauge, 1-1/4" slip rolls with 1/16", 1/8" and 3/16" grooves for wire forming. Works up to 20 gauge sheet metal.
P/N 12-03466.....**$296.95**



SQUARE NOTCHER

Foot operated, 3" x 3" blades, adjustable work stops, adjustable blade gap. 16 Gauge.
P/N 12-03465.....**$704.00**



3-IN-1 SHEET METAL ROLLERS

These Sheet Metal Roller Presses have 6 adjustable hardened fingers, spring loaded sheet hold-down, heavy cast iron frame, grooves for wire rolling, 1 1/4" slip rolls, adjustable back gauge. Works up to 20 gauge sheet metal. Stand not included but available for the 30" Roller only.

Model	Size	Part No.	Price
SP3-1-3	30"	12-03467	**$696.00**
SP3-1-40	40"	12-03469	**$996.00**
SP3-1-52	52"	12-03470	**$1,796.00**
Roller Stand for 30" Roller.....P/N 12-03468.....			**$159.99**



POWER BEAD ROLLER MACHING

Heavy Duty Power Bead Roller, works off 110v gear drive motor and has a 43" throat depth with an adjustable fence and includes floor stand, die rack, 2 step dies, 2 bead dies and a 45 degree tipping die.
P/N 12-03472.....**$2,295.00**



ENGLISH WHEEL THROAT DEPTH

Heavy Duty Construction, Quick Release Lower Anvil and Includes Floor Stand. * Part Number 12-03474 - Can Be Used For Rolling, Beading And Forming Foot Operated Height Adjustment.

Model	Description	Top Wheel	Ball Bearings	Includes	Part No.	Price
WFEW-2	English Wheel 28" Throat Depth With Stand	8"	Precision	5 Pieces Radius Anvils And One Flat Anvil	12-03473	**$681.00**
WFEW45T	English Wheel 43" Throat Depth	6"	Super Wide 3" Anvils Precision	4 Top Wheels And 10 Lower Anvils	12-03474	**$2,495.00**

TO

METAL WORKING TOOLS



PLANISHING HAMMER

26" Throat depth, quick adjust anvil height. Includes floor stand with handy retractable wheels, industrial hammer at 4600 beats per minute, includes in line oiler, pressure regulator and foot pedal. Up to 1/16" steel.
P/N 12-03475.....**$1,599.00**



PLANISHING HAMMER

Uses shop air 50-100 psi 4 cfm, 19-5/8" throat depth, features quick adjust anvil height/pressure, includes floor stand, 3 anvil, air motor, foot pedal. 16 Gauge Mild Steel.
P/N 12-03476.....**$295.95**



SHRINKER / STRETCHER MACHINE



Ideal for creating repair panels for wheel openings, winshields, etc., Produce curves as tight as 3" radius, drilled bottom for bench mounting or clamp in a bench vise. Cast iron frame. 18 Gauge mild steel, 16 gauge aluminum.
P/N 12-03477.....**$197.75**



DEEP THROAT SHRINKER STRETCHERS

8" Throat Depth. 18 Gauge Mild Steel, 16 Gauge Aluminum. P/N 12-03478.....**$500.00**
Adjustable Stand.... P/N 12-03479.....**$129.99**



WOODWARD-FAB BOSS 16 BOX & PAN BRAKE

Maximum box depth 4", removable fingers - 2", 3", 4", bend angle stop 0 to 130 degrees, floor stand included, counterweight included, upper beam is adjustable for radius bending. 16 Gauge Mild Steel, 20 Gauge Stainless Steel.
P/N 12-03480.....**$1,309.00**



12 INCH 20 GA BOX & PAN BRAKE

12" Length, 5 hardened, removable fingers, cam lock handle. 20 Gauge. P/N 12-03481.....**$249.99**



24 INCH 20 GA BOX AND PAN BRAKE

Solid heavy duty construction, reinforced frame, hardened and ground fingers, finger to bend leaf gap can be adjusted, maximum box depth, 5 removable fingers. 20 Gauge. P/N 12-03482.....**$400.00**



EURO BRAKE

50" Box and Pan Brake, 14 Gauge Capacity Mild Steel, Air Cylinder Assist "No Need for Weights", Adjustable Hold Down Force, Adjustable Bend Gap, Foot Operated Locking Hold Down, Hardened and Ground Fingers plus removable lower fingers for custom bends. 14 Gauge. P/N 12-03483.....**$3,295.00**



MODEL S TURBO BURR

55,000 rpm, 1/4" air hose connection, 60 to 120 psi, 5 to 11 cfm, feed up to 2" per second. Ideal for deburring and edge finishing, puts a safety edge on sheet metal in one pass. .015" Minimum material thickness.
P/N 12-03484.....**$479.00**



WELD SHAVER

Removes both flat "butt" welds and inside 90 degree corner "fillet" welds. Uses carbide inserts , milling type cutter head. Remove weld beads up to 1/2".
P/N 12-03485.....**$985.00**



SLIP ROLL

12" Length, 1" diameter hardened rolls, 1/16", 1/8" 3/16" wire grooves. 20 Gauge.
P/N 12-03486.....**$228.95**



24 INCH 20 GAUGE SLIP ROLL

24" Length, 1-1/2" diameter rolls, solid precision ground rollers, heavy cast iron frame, quick release top roll, hardened steel gears, wire grooves for wire rolling. 20 Gauge.
P/N 12-03487.....**$401.00**

WOODWARD-FAB ELITE SHEET METAL / WIRE SLIP ROLLER 24 INCH



24" Length, 2-3/8" diameter drive rolls, 2-1/2" rear adjustable roll. Uses single front mounted hand wheel for adjusting the rear roll. Uses single hand wheel to adjust the bottom roll for material thickness, roll tapers up to 15 degrees, fully enclosed gear box, cast iron end plates, wire grooves for wire rolling. Floor stand included. 16 Gauge. P/N 12-03488.....**$995.00**

WOODWARD-FAB ELITE SHEET METAL / WIRE SLIP ROLLER 50.5 INCH



50-1/2" Length, 2-3/8" diameter drive rolls, 2-1/2" rear adjustable roll. Uses single front mounted hand wheel for adjusting the rear roll. Uses single hand wheel to adjust the bottom roll for material thickness, roll tapers up to 15 degrees, fully enclosed gear box, cast iron end plates, wire grooves for wire rolling. Floor stand included. 16 Gauge.
P/N 12-03491.....**$1,746.00**



TON SHOP PRESSES

Hydraulic hand pump, press plates included 7" stroke, easy read gauge. 10 Ton - 14 1/2" inside clearance.

Model	Description	Stroke	Inside Clearance	Part No.	Price
PR102	10 Ton Shop Press	7"	10 Ton - 14 1/2"	12-03492	**$349.00**
PR103	12 Ton Shop Press	7"	12 Ton - 18 1/2"	12-03493	**$340.00**
PR104	20 Ton Shop Press	7 1/2"	20 Ton - 19 1/2"	12-03494	**$499.00**



2 INCH PIPE NOTCHER

Use with any hand held drill motor or drill press, create any angle saddle notch on pipe for weld fit up, uses standard hole saw blades up to 2 1/2", compound angle adjustment. Holds up to 2" pipe, uses up to 2 1/2" hole saws.
P/N 12-03495.....**$92.75**



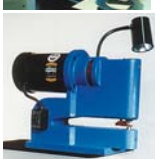
PIPE / TUBE NOTCHER

Solid steel construction, use with any 1/2" hand drill, accepts standard hole saw cutters, hardened and ground spindle, superior needle bearing support, adjustable angle to 50 degrees mount to bench top or clamp in vise. 3/4 - 3" O.D. Pipe/ tube.
P/N 12-03496.....**$249.95**



TRACE-A-PUNCH NIBBLER

1 1/2 Hp, 110 V, 6 3/4" Throat Depth, Cuts Any Shape Metal Or Plastic. 1/8" Maximum Thickness.
P/N 12-03497.....**$1,985.00**



TRACE-A-PUNCH NIBBLER

3 HP, 220/440 V, 3 phase, 16" throat depth, cuts any shape metal or plastic. 3/16" Maximum thickness.
P/N 12-03498.....**$3,850.00**

TO



ROTARY SHEAR

Shape cutter, easily cut any shape up to 1/8" thick, forged steel frame, ratcheting head, adjustable cutter, adjustable work stop.

P/N 12-03463.....**$199.99**



HAND SHEAR MULTI PURPOSE CUTTER

5" Top length, throatless design, adjustable work hold down, geared reduction handle makes cutting easy.

P/N 12-03464.....**$240.95**



3-IN-1 SHEET METAL ROLLER

This Sheet Metal Roller Press is 12" length with 5 adjustable hardened fingers, material hold-down, back gauge, 1-1/4" slip rolls with 1/16", 1/8" and 3/16" grooves for wire forming. Works up to 20 gauge sheet metal.

P/N 12-03466.....**$296.95**



SQUARE NOTCHER

Foot operated, 3" x 3" blades, adjustable work stops, adjustable blade gap. 16 Gauge.

P/N 12-03465.....**$704.00**



3-IN-1 SHEET METAL ROLLERS

These Sheet Metal Roller Presses have 6 adjustable hardened fingers, spring loaded sheet hold-down, heavy cast iron frame, grooves for wire rolling, 1 1/4" slip rolls, adjustable back gauge. Works up to 20 gauge sheet metal. Stand not included but available for the 30" Roller only.

Model	Size	Part No.	Price
SP3-1-3	30"	12-03467	**$696.00**
SP3-1-40	40"	12-03469	**$996.00**
SP3-1-52	52"	12-03470	**$1,796.00**

Roller Stand for 30" Roller.....P/N 12-03468.....**$159.99**



POWER BEAD ROLLER MACHING

Heavy Duty Power Bead Roller, works off 110v gear drive motor and has a 43" throat depth with an adjustable fence and includes floor stand, die rack, 2 step dies, 2 bead dies and a 45 degree tipping die.

P/N 12-03472.....**$2,295.00**



ENGLISH WHEEL THROAT DEPTH

Heavy Duty Construction, Quick Release Lower Anvil and Includes Floor Stand. * Part Number 12-03474 - Can Be Used For Rolling, Beading And Forming Foot Operated Height Adjustment.

Model	Description	Top Wheel	Ball Bearings	Includes	Part No.	Price
WFEW-2	English Wheel 28" Throat Depth With Stand	8"	Precision	5 Pieces Radius Anvils And One Flat Anvil	12-03473	**$681.00**
WFEW45T	English Wheel 43" Throat Depth	6"	Super Wide 3" Anvils Precision	4 Top Wheels And 10 Lower Anvils	12-03474	**$2,495.00**



GARLAND NON-MARRING MALLETS AND HAMMERS

Since 1866, Garland Manufacturing has been supplying America with top-quality products made from the finest water buffalo rawhide. Today, they're the leader in the manufacture of soft-faced mallets and hammers of unsurpassed quality. All Garland products are manufactured in the U.S.A. to ISO 9002 international quality standards. They combine superior craftmanship with the best materials and then field-test their products extensively on a range of surface finishes to meet the requirements of the industries in which they're used. Industries ranging from foundries and electrical manufacturing to jewelry and woodworking. Their mallets and soft-faced hammers are preferred by both craftsmen and production workers.

RAWHIDE AND WEIGHTED RAWHIDE MALLETS

Garland's all-rawhide mallets are made of tough, long-wearing, water buffalo rawhide. They're ideal for use on broad-faced striking surfaces in a broad range of applications.

RAWHIDE MALLETS

Size	Face Dia. (Inches)	Head Length (Inches)	Weight (oz.)	Part No.	Price
0	1"	2"	2	12-00749	**$17.50**
2	1-1/2"	3"	6	12-00750	**$33.60**
4	2"	3-1/2"	11	12-00751	**$34.75**
6	2-3/4"	4-3/4"	24	12-00752	**$64.90**

WEIGHTED RAWHIDE MALLETS

Size	Face Dia. (Inches)	Head Length (Inches)	Weight (oz.)	Part No.	Price
7	1-1/4"	2-1/2"	8	12-00753	**$39.90**
10	2"	3-1/2"	20	12-00754	**$58.75**

RUBBER MALLETS

Garland's rubber mallets are designed for general-purpose applications. All sizes deliver solid, mar-free blows.

Size	Face Dia. (Inches)	Head Length (Inches)	Weight (oz.)	Part No.	Price
1	2-1/4"	3"	17	12-00755	**$37.75**
2	2-1/4"	3-7/8"	19	12-00756	**$39.90**
3	2-1/2"	4-1/2"	32	12-00757	**$47.55**



NYLON MALLET

Nylon mallet works great for shaping metal. Head Length: 3 1/2". Face Diameter: 1 1/2". Hammer Length: 10"

P/N 12-02895 ..... **$8.95**



SPLIT-HEAD HAMMER - NO FACE

The split-head hammer does the work of six different hammers because the face can be easily changed. Available in two sizes. Many materials & surfaces. Die moving or positioning. Assembly. Electric Motor Repair. Propeller Repair. Foundry.

Face Dia.	Head Length	Weight	Part No.	Price
1-3/4"	3-1/4"	2.5 lbs	12-00965	**$41.50**
2-3/4"	4"	5.25 lbs	12-00966	**$62.75**



SOFT FACE DEAD BLOW BOSSING MALLET MODEL

Soft Face Dead Blow Bossing Mallet Model TCBM1. Specifications: • Weight: 1.5 lbs. • Head Diameter: 2 5/16" • Head Length: - • Overall Length: 13"

P/N 12-03290 ..... **$35.85**



SOFT FACE DEAD BLOW SLIMLINE HAMMER MODEL #S2

Soft Face Dead Blow Slimline Hammer Model #S2 Specifications: • Weight: 1.375 lbs. • Face Diameter: 1 1/2" • Head Length: 4 1/4" • Overall Length: 12 1/8"

P/N 12-03295 ..... **$20.85**



SOFT FACE DEAD BLOW BOSSING MALLET MODEL

Soft Face Dead Blow Bossing Mallet Model TCBM3. Specifications: • Weight: 3 lbs. Head Diameter: 2 11/16" Head Length: - Overall Length: 14".

P/N 12-03292 ..... **$48.50**

TO



1/4 INCH AIR DIE GRINDER - VT3000

- 1/4" Air Die Grinder - VT3000
- Lightweight - powerful compact design
- VT3000- 25,000 RPM
- All ball bearing construction for longer tool life
- Self-locking safety throttle lever to prevent accidental starts
- Ergonomic positive grip
- Rear exhaust

P/N 12-02550 ..... **$39.85**



1/4 INCH AIR DIE GRINDER - VT3000A

- 1/4" Angle Type Air Die Grinder VT3000A
- Lightweight - powerful compact design
- All ball bearing construction for longer tool life
- Self-locking safety throttle lever to prevent accidental starts
- Ergonomic positive grip
- Rear exhaust

P/N 12-02551 ..... **$89.75**



1/4 INCH AIR DIE GRINDER - VT3001

- Industrial duty
- Durable precision machined and hardened steel gears
- Precision air motor with exceptionally high turning force
- High quality ball bearings for longer tool life
- Safety throttle lever
- Ergonomic square handle design for positive grip
- Rear exhaust

P/N 12-02552 ..... **$89.50**



1/4 INCH AIR DIE GRINDER - VT3001A

- 105° angle type head
- Direct drive - no bevel and pinon gears to maintain
- One piece casting
- Ergonomic design for operator convenience
- Safety throttle lever
- Rear exhaust

P/N 12-02553 ..... **$96.75**



1/4 INCH HEAVY DUTY MINI ANGLE GRINDER - VT3003A

- Heavy duty performance and power in a light weight grinder
- Ergonomic rubber grip for greater operator com fort and safety
- Precision machined and hardened steel gears
- Precision air motor with exceptionally high turning force
- High quality ball bearings for longer tool life
- Safety throttle lever
- Front exhaust

P/N 12-02554 ..... **$192.95**



7" ANGLE POLISHER

- Polisher is ergonomically form fitting, light weight and easy to use
- Ball bearing mounted motor
- Includes reversible side handle for left or right hand operation
- Built-in regulator for adjusting free speed range from 1,500 to 2,500 RPM
- RPM: 2,500
- CFM: 6
- Pad Size: 7"
- Noise dB: 93
- Air Inlet: 1/4"
- Max Pressure: 100
- Length: 13"
- Weight: 4.8lbs

P/N 12-02555 ..... **$175.95**



RIGHT ANGLE POLISHER

The V716P is ideal for polishing and buffing paint, metal, wood or plastic. It has an adjustable speed control and a unique muffler design. Side handle is standard equipment and fits either the left or right side of polisher.

- Free Speed: 0-4,000 RPM
- Motor: 1 HP
- Average Air Consumption: 8 CFM
- Air Inlet Size: 1/4" NPT
- Spindle Size: 5/8"-11
- Sanding Pad: 7"
- Weight: 6 lbs.

P/N 12-02556 ..... **$207.95**



1/4" BELT SANDER

- Rear exhaust directs air away from work surface
- Equipped with silencer to reduce noise
- Precision air motor with exceptionally high turning force
- Precision ball bearings for longer life
- Can be used for internal and external finishing
- Quick change belt replacement system
- Built-in speed regulator
- Reaches normally inaccessible areas
- Light weight ergonomic handle design for control and comfort
- Rubber grip for non-slip feel and insulates from cold air
- Grind off contact wheel or platen
- 360° head rotation provides versatility for every job
- RPM: 16,000, CFM: 14.2, HP: .37, Noise dB: 80, Air Inlet: 1/4, Max Pressure: 85, Vibration: 3.8, Length: 10-7/16, Weight: 2, Warranty: 1 yr.

P/N 12-02558 ..... **$249.95**



3/8" REVERSIBLE ANGLE DRILL

- Compact, low profile angle head enables easy access to tight areas
- Light weight and powerful
- Comfortable lever throttle
- One hand quick reverse lever
- Ergonomic design with elastomer handle grip for improved comfort
- Heavy duty ball and needle bearing construction
- Planetary gear reduction balances the drilling load and maximizes performance
- Precision air motor with exceptionally high turning force

P/N 12-02559 ..... **$148.95**

TO

BAILEIGH METAL TOOLS

BAILEIGH MANUAL BENDER FB-4



Baileigh's FB-4 form bender is a useful tool for press bending ornamental iron, mild steel, aluminum and other metals. This flat bar bender is a manual press brake and can create 90 degree bends by simply turning a hand lever until the desired angle is accomplished.

This metal bender is perfect for hobbyists, ornamental iron artists, and much more. Of course this is not a production bender, but is perfect for small runs or those one off applications. • Capacity: 3/16" • Shipping Dimensions (L/W/H): 17"/7"/8" • Shipping Weight: 19 lbs P/N 13-08987.....**$195.00**

BAILEIGH MANUAL ROLL BENDER R-M3



Baileigh The R-M3 metal ring roller is perfect for any typical sheet metal shop for bending small rod up to ¼". Metal artists, technical schools, and home shops can find hundreds of uses to keep this well built angle roll in use.

This single pinch metal ring roller can be bench or pedestal mounted. It has fine adjustment for the top roll and to power this machine there is a manual hand crank.

• Capacity Solid Round: .25" • Capacity Flat Bar: 1" (.1875 • Minimum Diameter: 3" • Handle Length: 13.5" • Power Requirement: Manual • Shipping Dimensions (L/W/H): 15" / 7" / 8" • Shipping Weight: 18 lbs

P/N 13-08975.....**$145.00**

BAILEIGH MANUAL ROLL BENDER R-M7



Baileigh Industrial's Roll Bender R-M7's small size makes it highly portable and versatile. Although not for rolling complete circles, it makes quick work of large radius bends. Many different tooling options are available as well.

Capacity / Size / Diameter: • Pipe - 1.5" / 20" dia • Round Tube - 1.25"(.078") / 31.5" dia • Square Tube - 2" / 70" dia • Rectangle Tube - 1x2" / 30" dia • Flat bar - Easy Way / 10" dia

Specifications: • Roll adjustment: Manual • Pinch: Single • Shaft Center Distance (lower rolls): Adjustable • Driven Rolls: 1 • Speeds: N/A • Motor: N/A • Power Requirements: Manual •Shipping Weight: 150 lbs P/N 13-08976.....**$695.00**

BAILEIGH MANUAL ROLL BENDER R-M10



Baileigh's R-M10 tube roller has a powerful manual drive system that has a maximum capacity of 1-1/4" (.078" wall) round tubing capacity (mild steel). It comes standard with segment rolls that allows for many different types of flat bar, some angle iron and some square to be rolled. This roll bender has optional rolls for round tube and pipe, as well as other profiles.

This tube roller is typically in stock for fast deliveries. For further information on the R-M10 roll bender, please contact your Baileigh representative.

Capacity / Size / Diameter: • Pipe - 1 " (Sch.40) / 28" dia • Round Tube - 1.25"(.078") / 31.5" dia • Square Tube - 1.2" (.078") / 35" dia • Angle Iron - 1.25" (.157") / 30" dia • Solid Square - .75" / 20" dia • Solid Round - .875" / 20" dia • Flat Bar Easy Way - 2" / 15.75" dia • Flat Bar Hard Way - .75" / 6.5" dia

All Specs based on 60,000 PSI (42 kg/mm2) Tensile Strength - Mild Steel. Specs are to be used as a base line for purchase purposes only. Baileigh Industrial cannot control Variations in Material.

Technical Specifications and Standard Equipment: • Two rolls are manually powered • Special cast frame • Shafts are hardened with special steel material • Rolls are special steel material hardened and ground • Gears milled with full material • Standard rolls, guide rollers, manual working • Users manual. P/N 13-08977.....**$2,595.00**

BAILEIGH MANUAL TUBE BENDER RDB-10



The RDB-10 manual hand tube bender is the perfect bending machine for bending air lines, brake lines, fuel lines, and general hydraulic lines. Thus, if you're into building or repairing race cars, auto and airplane repair or restoration, an automated machinery builder, or much more, the RDB-10 manual bender will save you time and money from the moment you use it.

This manual tube bender comes standard with 10 different size combinations from 1/4" to 5/8" OD in either 3 or 5 times the diameter radiuses. This manual tube bender works great with mild steel, certain coppers and aluminums, as well as stainless steel. It comes standard with a heavy pedestal, tooling rack, and bending machine.

The RDB-10 hand bender is easy to use and can bend tubing up to 180 degrees. Because of the design, this bending machine can do serpentine bends with ease at very tight radiuses depending on the OD, material and wall thickness. P/N 13-08971.....**$695.00**

BAILEIGH MANUAL TUBE BENDER RDB-25



The RDB-25 manual tube bender is the perfect machine for hose hobbyists that need to bend tube on a budget. It is made from a sturdy cast iron frame and can be bench or pedestal mounted with the included pedestal. The RDB-25 from Baileigh Industrial was designed to bend the most common sizes of tubing on safe centerline radii to ensure great looking bends. This manual tubing bender comes standard with the following round tube die sets: • 3/8" OD x 2" CLR • 1/2" OD x 2.25" CLR • 9/16" OD x 2.5" CLR • 5/8" OD x 3" CLR • 3/4" OD x 3.5" CLR • 7/8" OD x 4.25" CLR • 3/4" Square x 3.75" CLR • 1" Square x 4.25" CLR

Also included is a very nice carrying case, which allows the bender to be stored when not in use. Contact a Baileigh Industrial representative for more information on the RDB-25 manual tube bender.

P/N 13-08972.....**$210.00**

BAILEIGH MANUAL TUBE BENDER RDB-050



The RDB-050 manual tube bender was designed as an affordable bender that has enough capacity for just about any chassis fabrication shop. Can bend up to 2-1/2" OD mild steel with a wall thickness of .120" and 2" OD Chromalloy with a wall thickness of .120". The most unique feature of the RDB-050 is that it has three selectable bending speeds. The proper speed for each application depends on the material type, OD and wall thickness. The RDB-050 manual tube bender has no dis-assembly or assembly needed to produce a bend. Simply walk up to the RDB-050 and put your tubing into the hook arm insert and begin bending. When the bend is complete, return the machine to the home position and pull your bend out, or position it for the next bend. The RDB-050 tube bender can bend up to 200 degrees and an anti spring back mechanism holds each bend in place as the operator ratchets forward. ***Tooling List - Sold separately - Call 1-877-477-7823 for pricing.*** P/N 13-08973.....**$995.00**

BAILEIGH MANUAL TUBE BENDER RDB-100



This bending machine can be fitted with hundreds of round and square tubing die sets as well as round pipe dies sets with a maximum center line radius up to 7". This manual tube bender uses a large diameter indexing plate that allows the fabricator to bend up to 206 degrees (180 degrees plus spring back) in one shot without having to re-index and re-pin common on most other manual pipe benders on the market. Each pull of the handle bends the material approximately 8 degrees. When requirements are for lighter gauge materials this tube bending machines indexing unit can be shut off and the handle can be put into a manual override housing that allows the operator to simply walk around the manual bender and bend without the power of the indexing unit. Includes the stand, degree dial, and handle. P/N 13-08974.....**$2,395.00**

BAILEIGH ENGLISH WHEEL EW-28



This quality English wheel is a heavily built floor stand unit that can handle smoothing compound curves into mild steel and aluminum sheet metal for restoration or bodywork on autos, planes, cycles and much more. This machine has an 18-gauge mild steel capacity and has an ample 28" throat depth. The EW-28 English wheel comes standard with an 8" X 2" upper roll and includes six lower anvil rolls with varying crowns. The radius included for the six lower rolls are 2", 3", 4", 6", 8", and 12". Like other Baileigh English wheels, the machine comes intact with only minor assembly required (no welding required). The frame members are constructed of heavy walled square tubing that is electro welded to a truss system offering little flex at maximum capacity.

Specifications: • Capacity (Mild Steel): 18 ga • Throat Depth: 28" • Shipping Dimensions(L/W/H): 36"/34"/15" • Shipping Weight: 191 lbs

P/N 13-09001.....**$795.00**

BAILEIGH ENGLISH WHEEL MANUALLY OPERATED EW-40



Baileigh's quality English Wheels have a generous 40" throat depth, and ship complete with five bottom anvils and one 7" upper wheel. It has a rugged electro welded frame and stand for ease of use and years of quality shaping and forming metal. The EW-40 English wheel has an 18 gauge mild steel capacity and a 13 gauge aluminum capacity. Like all Baileigh metal forming machines the EW-40 is a quality machine for a reasonable price. This machine is in stock for quick deliveries.

Specifications: • Capacity (Mild Steel): 18 ga • Throat Depth: 40" • Shipping Dimensions(L/W/H): 72"/36"/15" • Shipping Weight: 388 lbs

P/N 13-09003.....**$1,495.00**

TO

BAILEIGH METAL TOOLS



BAILEIGH MANUAL MULTI-PURPOSE BENDER MCB-650

Baileigh's MCB-650 flat bar benders are ruggedly built to bend up to 5/16" X 1-1/4" mild steel or ¼" X 2" mild steel as the maximum capacity. This is a fantastic ornamental bender to have for railings, fences, gates and for hundreds of additional applications. This flat bar bender comes standard with 7 die sets from 1" up to 3" for flat metal. Other solid applications such as wire, rod, and bar can be bent as well up to 200 degrees. Specifications: • Bend Capacity: 2" x .236" • Angle Capacity: 0 - 200 deg • Shipping Dimensions (L/W/H): 35"/10.5"/10.5" • Shipping Weight: 53 lbs

P/N 13-08988.....**$195.00**



BAILEIGH MANUAL HOLE SAW NOTCHER TN-200H

This coping machine can be vertically mounted in a drill press, or for larger pieces it can be horizontally mounted on a weld bench and powered by a portable drill.

This hole saw tube notcher is made of thick 3/8 inch aluminum with a heavy bronze bushing that is replaceable if ever need be. The spindle is made of a ½" hardened shaft for longevity and less vibration. This coping machine can notch at angles up to 45 degrees in less than 30 seconds and has a capacity of up to 2" round tube.

Specifications: • Notch Capacity (OD): 2" • Spindle Size: 1/2" • Spindle Adapter: 1/2" – 5/8" • Shipping Size (L/W/H): 12" / 7" / 5" • Shipping Weight: 10 lbs

P/N 13-08978.....**$210.00**



BAILEIGH MANUAL HOLE SAW NOTCHER TN-250

This is the most revolutionary hole saw pipe notcher on the market and is perfect for chassis, roll cages, and much more. This is the only hole saw tubing notcher that is always centered left to right and up and down. This coping machine is constructed of heavy steel plate to reduce vibration, uses a 1-1/4" Thompson® shaft that rides in a sealed needle bearing for longevity of the machine and hole saw. The TN-250 tube notchers vise has a powerful screw with a built in hand wheel that opens and closes the unique six radial clamping jaws. Can notch up to 2-1/2" OD and allows for steep angles as the hole saw can pivot up to 230 degrees making it the most versatile notching machine on the market. This tubing notcher can easily offset in seconds for off center notches and does not require crazy shims or spacers common on inferior models.

P/N 13-08981.....**$695.00**



BAILEIGH MANUAL HOLE SAW NOTCHER TN-300

This tubing notcher can notch from 1/2" to 3" tube and 1/2" to 2-1/2" Schedule 40 Pipe in materials such as aluminum, mild steel, chromoly, and stainless steel. The tube notchers vise has a quick release so different notch angles can be set up in a second or two and locked in with a solid taper lock. Can notch up to 60 degrees as standard, but with extended hole saws and the right size OD, notches up to 75 degrees can be attained. The vise is a self centering that is on an acme screw for quick tightening and releasing of the material. An offset adjustment is standard for those jobs where more strength is needed like on some hand railing or chassis frame applications. The drive carriage on the TN-300 pipe notcher houses an industrial grade motor tied to a direct drive gear reducer that turns the hole saw with ease, even at full capacity. This tube notchers carriage rides on a solid V-block roller assembly that is coupled to a large drive wheel for pushing the hole saw into the material with limited vibration and ease. This simple unique design on this tube notcher makes notching tube and pipe a breeze.

P/N 13-08983.....**$2,695.00**



BAILEIGH MSS-18 MANUAL 18GA SHRINKER STRETCHER

Baileigh's MSS-18 sheet metal shrinker stretcher has one complete shrinker and one complete stretcher both in their own cast iron housings. The heavy casting assures a quality function at full capacity, which is 18-gauge in mild steel and 16-gauge in aluminum. Both units are foot operated and come with a heavy steel stand as standard.

Specifications: • Capacity Mild Steel: 18 ga • Capacity Aluminum: 16 ga • Minimum Forming Diameter: 4.5" • Stand: Included

P/N 13-08984.....**$495.00**



BAILEIGH MSS-16 MANUAL 16GA SHRINKER STRETCHER

Baileigh's MSS-16 sheet metal shrinker stretcher has a heavy cast iron frame with a deep 8" throat. It comes standard with two sets of jaws, one for shrinking and one for stretching. This is a manually operated machine that has a heavy engagement lever that allows perfect control of the function at hand. This sheet metal shrinker stretcher has a mild steel capacity of 16 gauge and an aluminum capacity of 14 gauge. No other sheet metal stretcher shrinker on the market has such a generous throat depth with a heavy maximum capacity for such a good price.

Specifications: • Capacity Mild Steel: 16 ga •Capacity Aluminum: 14 ga • Throat Depth: 8"

P/N 13-08985.....**$595.00**



BAILEIGH MSS-16F SHRINKER STRETCHER

This model is a heavy duty foot operated shrinker stretcher for shrinking or stretching mild steel sheet metal down to 16-gauge (14-gauge aluminum) in thickness. This is the perfect machine for working metal for auto, cycle or airplane body work. This machine is ruggedly built and can shrink or stretch metal with ease at full capacity.

Our MSS-16F metal shrinker stretcher has a rugged floor stand with foot pedal control to actuate the jaws allowing the hands to be free to properly work the material. An ample 6" throat depth allows for hundreds of applications to be worked on compared to smaller throat depth models. The rugged base has wheels allowing for mobility in any cramped shop environment.

This metal stretcher shrinker has quick jaw change over features built in so changing from shrinking metal to stretching metal takes only a couple seconds. This machine comes standard with jaws to stretch metal and shrink metal (note: optional aluminum jaws are available).

Specifications: • Capacity Mild Steel: 16 ga • Throat Depth: 6" • Weight: 78 lbs

P/N 13-08986.....**$1,095.00**



BAILEIGH VARIABLE SPEED POWER HAMMER

The Baileigh Industrial PH-19 power hammer is the little brother to the MH-19 Power Hammer . The PH-19 can do many of the same functions as the MH-19, shrink, stretch, dome, edge turn, bead, offset, but at a price that fits any budget. The PH-19 also accepts all readily available MH-19 tooling.

Specifications: • Capacity Mild Steel: 16 ga • Capacity Aluminum: 12 ga • Throat Depth: 19" • Tooling Height Adjustment: 5" • Speed: 0 - 1700 beats/minute • Power Requirement: 120V

P/N 12-02646.....**$9,795.00**



BAILEIGH ONE PHASE POWER HAMMER

MH-19 power hammer is the most revolutionary metal forming machine on the market. In summary you can achieve stretching, shrinking, planishing, and doming with critical adjustments on the fly while in operation. This is the ultimate metal shaping and forming power hammer on the market. No other machine is as versatile as the MH-19. The MH-19 includes the following tooling to get you up and running quickly at no extra charge: (1) set of thumbnail shrink dies, (1) flat top die, and (1) Lower planishing die.

Specifications: • Capacity Mid Steel: 16 ga • Capacity Aluminum: 12 ga • Throat Depth: 19" • Length of Stroke: .177 - .550 (adjustable) • Tooling Height Adjustment: 2" • Speed (variable): 0 - 1500 beats/minute • Power Requirement: 220v / 1 phase • Shipping Dimensions: (L/W/H)60"/60"/84" • Shipping Weight: 1600 lbs

P/N 12-02645.....**$23,395.00**

TO

DE-ICE EQUIPMENT – DIGITAL THERMOMETERS

HANDHELD ANTI-ICING AND DEICING SPRAYERS



Handheld Deicing Sprayers are aircraft-portable pressure sprayers appropriate for defrosting and light deicing operations. They are commercial grade, polyurethane, controlled-pressure sprayers designed to spray hot SAE Type I deicing fluid directly on your aircraft to remove frost, and light snow & ice. They are equipped with a 2 piece brass wand, flat-fan spray pattern, high-capacity, interchangeable nozzle tip that sprays 1.2 gpm of deicing fluid at 20 psi. They will also accept our optional 120-volt, 1100 to 1700 watt electrical immersion heaters to quickly heat the fluid within the sprayer tank to 160. Following are the specifications on the Handheld Deicing Sprayers:

Description	Dimensions	Part No.	Price
1 Gal Sprayer	7" Dia. x 17" H	12-21605	**$89.95**
2 Gal Sprayer	8.5" Dia. x 19.5 " H	12-21610	**$112.95**
3 Gal Sprayer	9.5" Dia. x 21" H	12-00499	**$139.95**

To heat Deicing fluid you need to purchase a heater below.

Heaters					
Voltage	Watts	Amps	Application	Part No.	Price
120	1,100	9.2	12-21605 Sprayer	12-02087	**$580.00**
120	1,400	11.7	12-21610 Sprayer	12-02088	**$694.00**
120	1,700	14.2	12-00499 Sprayer	12-02089	**$645.00**

DEICING CARTS



Aircraft Deicing Gasoline Engine Powered Carts are designed for outdoor deicing operations . These carts use either a 5.0 or a 5.5 hp air-cooled gasoline engine, providing adjustable fluid flow rates and pressures of up to 6.0 gpm/150 psi and 10.0 gpm/300 psi respectively -- sufficient to deice all general aviation, corporate & charter aircraft. The standard carts range in capacity from 40 to 110 gallons, and all can be equipped with an electric immersion heater to heat the deicing fluid to a maximum of 160° F to help melt frost, snow & ice from your aircraft's surfaces. All carts are supplied complete, including steel frame, straight pin hitch, mainwheels, power source, pump, tank, adjustable pressure valve, pressure gauge, high-pressure hose, pistol-grip handgun w/ extension, and adjustable brass nozzle.

Gas powered engines		
Description	Part No.	Price
40 Gallon 3.5 Hp gas Engine with 2500 watt heater and pintel ring.	12-02083	**$3,867.00**
60 Gallon 3.5 HP gas engine with 2500 watt heater and pintel ring.	12-02084	**$4,368.00**
Electric powered engine		
Description	Part No.	Price
25 Gallon 12 volt Electric Cart with self Containment kit and pintel ring.	12-02085	**$1,369.00**
60 Gallon 12 volt Electric Cart with self Containment kit and pintel ring.	12-02086	**$2,189.00**

NYLON FLANGES IN BATTERY BOX MODIFICATION KIT



-Improve Starting Performance. -Easier Removal & Installation of Battery. -May prolong life of battery and starter. -Less expensive to modify existing box than to replace. -Compatible with our famous "Low Loss" Cable Kits! -Eliminate extra connection on outside of the battery box. -Do away with the troublesome braided negative strap.

Experimental.....P/N 11-02892 ..... **$38.75**
STC'd/PMA'd .....P/N 11-02893 ..... **$78.75**

BATTERY TERMINAL TOOL



The Right Tool for the Job. * Prevents damage to battery posts. * Steel frame, fits battery wing nuts securely. * Insulated to eliminate shorting, sparks or possible explosions. * Foam grip handle eliminates slipping. * Great gift for pilot or mechanic. P/N 12-16200 ..... **$21.95**



WIDE RANGE DUAL PORT DIGITAL THERMOMETER

Features: • Jumbo Display with four digit LCD • Dual Channel K type ports T1/T2 • Accepts K/J thermocouples • Fast response • Hi/Lo temperature alarm • Temperarture hold • Min./Max./Avg. • Clock setting • Relative temperature mode • Low Battery and Overload indicators • Auto Power off • Protective rubber housing • Instrument displays in °F/°C/Kelvin-absolute temperature

P/N 12-01893 ..... **$109.95**



MINITEMP PORTABLE INFRARED THERMOMETER

Diagnose problems faster and more easily with the Raytek MiniTemp MT6 infrared (IR) thermometer. The laser point sighting on the MT6 unit helps to direct measurements toward the target, and the large backlit display shows both the current and maximum readings simultaneously. With a protective boot for added durability, award winning ergonomic design and Raytek quality and accuracy, the MT6 model is the perfect introduction to infrared temperature measurements in automotive diagnostics. P/N 12-03153 ..... **$127.75**



HEAVY-DUTY IR DUAL-LASER THERMOMETER

Features of the IR Long Range Professional Thermometer include a bright, built-in dual laser which provides easy aiming and defines target area, amber back-light LCD display, programmable HI and LOW audible temperature alarms, and high intensity white LED flashlight. Uses 2 x AAA batteries (incl) to provide 180 hours of use. Weight and Dimensions: 16 ounces (with batteries,magnets); 8 x 8 x 2.8 inches. Temp Range: -76° to 1832°F.

P/N 12-03152 ..... **$273.95**

INFRARED THERMOMETER WITH STAR BURST LASER TARGETING



Ideal for isolating overheated electrical components and hot spots, trouble-shooting HVAC/R and automotive systems, and performance-testing motors and boilers. Features: • 12:1 distance-to-spot (D:S) ratio • IRT measurement range -58° to 1202°F (-50° to 650°C) • "K" type thermocouple measurement range: -146° to 2498°F (-99° to 1370°C) • Includes "K" type thermocouple with 0° to 500°F (-18° to 260°C) range • Automatically stores last 10 readings for recall • Automatically holds measurements and displays Min/Max/Avg/Dif session values • Settable high and low temperature alarms • Adjustable emissivity from 0.1 to 1.0 (in 0.01 steps) • Auto Power Off • Power Source: 1 "9V" battery (included) P/N 12-03355 ..... **$79.85**

NICHOLSON HACKSAW BLADES



Nicholson Bi-Metaloy hacksaw blades last twice as long as high-speed steel and 10 times longer than carbon steel. Can operate 20%-50% faster. Practically unbreakable.

GENERAL RECOMMENDATIONS FOR BLADE SELECTION

14 TOOTH – For cutting heavy cross section and for soft materials where maximum chip clearance is needed. P/N 12-19514 ..... **$1.94**

18 TOOTH – For general shop use, where blade is used on several jobs. P/N 12-19518 ..... **$2.45**

24 TOOTH – For cross sections of 1/16" to 1/4", such as pipe, angles, small drill rod. P/N 12-19524 ..... **$2.45**

32 TOOTH – For cutting stock up to 1/16" thick, such as 4130 tubing, sheet metal, BX. P/N 12-19532 ..... **$2.45**

TO

ENGINE TOOLS



VALVE WOBBLE TEST FIXTURES

The Valve Wobble Test Fixture for parallel valve Lycoming engines is used to comply with LycomingSB–388a. Quality made of aluminum and alloy steel, it is easy to use with no set screws or feeler gauges required. Allows direct reading of wobble from dial indicator. Note: Will work on a angle valve engine.

Fixture without indicator ...P/N 12-21500 .....**$159.75**
Fixture with indicator .....P/N 12-21505 .....**$197.50**



DISTRIBUTOR BLOCK SPRING INSTALLATION TOOL

This tool facilitates the proper installation of contact springs on Bendix magnetos. The O–ring locator ring assures proper location of the tool in the contact tower. Features knurled body grip and ball plunger grip. Made of alloy steel P/N 12-21510 .....**$105.75**

VALVE SPRING COMPRESSOR



This tool is used to compress valve springs during valve removal and installation. It is ergonomically designed for shop and field use and comes with special pivot pin. Features alloy steel construction with nickel plating. P/N 12-00202 .....**$87.75**



VALVE LASH ADJUSTING TOOL

This tool greatly reduces the time required to adjust valves and improves the accuracy of the adjusting operation. Used on Lycoming O 235 and O 290 series engines. Quality constructed of alloy and toolsteel.

P/N 12-21550 .....**$218.95**

PROPELLER SHAFT OIL SEAL INSTALLER



Installs one piece stretch seals without damaging surface on seal or crankshaft. For all flange shafts per Continental Bulletin M-70-2. Also fits Lycoming. For installing one piece stretch seals without damaging surface on seal or crankshaft. 1 lbs (0.5Kg) shipping weight.

P/N 12-04566 .....**$89.90**



ROCKER ARM SHAFT REMOVAL TOOL

These simply bolt to the head and the knurled knob screws down to compress the valve spring allowing the shaft to be slid out with no spring pressure.

P/N 12-03227 .....**$42.65**

TO



THROTTLE SHAFT BUTTERFLY SCREW STAKING TOOL

This quality made alloy steel tool facilitates the proper staking of throttle shaft butterfly screws and eliminates the possibility of damaging the carburetor during staking. The tool can easily be operated by one person on the bench without chisels, special fixturing or hammers. All wear components are easily replaceable for long service life.

P/N 12-21528 ...**$129.50/ea.**



BENDIX MAG LOCK

This Bendix Mag Lock works on S4 and S6 and other Bendix Mags. To use simple place a cotter pin loosely into lower plunger hole. Screw sleeve into magneto case. Align red slot in plunger parallel to mag tooth gear. Remove cotter pin to engage gear tooth. Dimension: 2-3/4" x 1/2" x 3/4"

P/N 12-02243 ..... **$54.75**



SAFETY MAGNETO LOCK TOOL

This handy tool fits most Bendix magnetos and prevents damage to distributor gear teeth brought about by accidental turning of the engine during magneto installation. Use for E gap or engine timing. Body taper locks into timing window. Polyurethane rubber throughout.

P/N 12-21535..... **$9.95**



LYCOMING TIMING POINTER

This tool is used to align timing numbers and marks to the crankcase parting line on Lycoming engines. It permits timing from the marks on the aft side of the flywheel. A spring clip holds the tool to the flywheel.

P/N 12-21540..... **$52.75**



CONTINENTAL O–200 TIMING POINTER

This tool is used to align timing numbers and marks to the crankcase parting line on the Continental O–200 engine. It is held to the propeller flange with magnets, and eliminates the need for all other timing angle devices and TDC indicators. Quality made from delrin and tool steel. Greatly simplifies the timing of new magnetos and periodic timing checks. P/N 12-21545..... **$42.75**



SIDEWINDER SPEED WRENCH

The Sidewinder Speedwrench specialty tool was developed to counter the frustrations of using standard socket wrenches especially in applications where excessive repetitions are required to install or remove long bolts; or where there is not enough resistance involved to allow the ratchet to function; or where there is not enough working space for efficient use of the standard ratchet wrench. The sidewinder can cut work time in half for professional mechanics and aircraft builders. Now being used by major racing teams, the Sidewinder is a revolutionary addition to every tool box.

1/4" .....P/N 12-21109 ..... **$38.90**
3/8" .....P/N 12-21100 ..... **$38.90**
1/2" .....P/N 12-21110 ..... **$38.90**



ENGINE OVERHAUL STAND

This bolt together Engine Overhaul Stand, ideal for actual overhaul of engines. Constructed of heavy duty steel, it features three legs which allow it to sit level on uneven floors. Predrilled adapter for Continental & Lycoming engines. Sturdy tripod design. Assembles in minutes with a 1/2" wrench. Assembled dimensions: 24" (61cm) high, 36" (91cm) distance between legs. Includes a set of locking casters for easy mobility. Supports up to 1200 lbs (545 Kg) (static tested to 2500 lbs (1136 Kg). Includes Adapter for Continental and Lycoming engines. MADE IN USA.

Overhaul Stand ..... P/N 12-21555.....**$269.95**
Wheel Set for Stand ..... P/N 12-00919.....**$59.75**

ENGINE OVERHAUL STAND KIT



The engine stand kit has all of the components to construct an engine stand. Beginning at the top; the engine stand kit includes (1)The top plate. Designed to bolt down the engine flange to the stand. (2) Three legs that are pre-cut to the proper angle. (3)Three spreader bars to hold the base of the stand from spreading apart. (4) Three feet to stabilize the base and allow installation of casters. The kit is ready to weld. 24" tall when finished..

P/N 12-01364..... **$209.95**

CONTINENTAL ENGINE MAG TIMING TOOL



Aluminum CNC tool manufactured in Alaska for simple and perfect magneto timing. Simply position engine on #1 TDC compression stroke. Lube grommets. Put this tool on the top two propeller nuts and sight down top case halves to see exact mag timing. Now there's no need for propeller protractor cones! P/N 12-02817 ..... **$39.95**

15-IN-1 STANDARD SCREWDRIVERS



This standard driver is loaded with 7 double end Professional quality bits. This assortment provides the 14 most popular tips for driving screws. The shaft opening also serves as 1/4" hex driver. Retractable bit cartridge™, Palm Saver Cap™, EZ-Guide™ Collar.

Standard.....P/N 12-03693 ..... **$19.95**
Tamper Proof.....P/N 12-03694 ..... **$23.50**

Prices Subject to Change Without Notice

LYCOMING BAFFLE SPRING COMPRESSOR



Our top quality Lycoming Baffle Spring Compressor speeds up the removal & installation of cylinder baffle springs. It eliminates the danger of broken or bent cylinder fins caused by use of screwdrivers and punches. This tool is easy to use and features 2 pivot locations for parallel and angle valve cylinders.

P/N 12-30200 ..... **$86.75**

VALVE SPRING COMPRESSOR TOOL



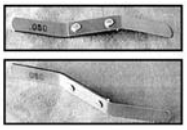
This unit will work on Continental 65 thru 0300, and some 0-470's. Lycoming 0320 & 0360, and most any cylinder with a vertical valve constructed head.
It is extremely simple to use. Place Spring Compressor in drill press, and a length of wood in cylinder (to keep valve seated). Depress and remove valve stem clips, and spring. Removes valves in a minute. P/N 12-02072 ..... **$54.75**

LYCOMING VALVE SPRING COMPRESSOR



This cast aluminum alloy valve spring compressor fits Lycoming parallel valve and angle valve horizontally opposed engines. An excellent tool at an economical price. P/N 12-21520..... **$71.75**

LYCOMING TAPPET GAUGE



Similar to Lycoming Gauge ST23, this tappet gauge is Rockwell hardened to 48-52 and precision ground to .028 and .080. This gauge is a must for professional aircraft mechanics.

P/N 12-00918..... **$42.75**

EAR ISLAND REMOVAL TOOL



When substantial quantities of material have to be removed from the exhaust port, it may be necessary to also remove the island around the exhaust stud area. The ear island removal tool and pilot can be used to accomplish this without the use of power tools.....P/N 12-17608 ..... **$119.75**

MAGNETIC SHEET METAL CLAMPS



Great general purpose discs. They are excellent for arts and crafts applications that require a strong, thin disc. Just 1/16" thick, but still a sturdy disc. They are an excellent choice for magnetic therapy. The D81 is deceptively strong for it's size.

P/N 12-05104..... **$0.99**

REAL GASKET SPRING COMPRESSOR TOOL



TCM 4-Cylinder Spring Compressor. (A good tool for PRT Installation)
05-11186 - OEM P/N 530162: (Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300)

P/N 08-13615..... **$62.75**

DRILL PILOT SLEEVE & BOLT HOLE BULLET



BOLT HOLE BULLET - Every tool box should have a set. Simply tap bullet into bolt hole requiring alignment, and tap bullet on through with proper AN Bolt Set of 5 (1/4, 5/16, 3/8 7/16 and 1/2inch)

P/N 12-02093 ..... **$26.90**

HANDY BEARING PACKER



Quickly Flushes Out Old Grease and Repacks Bearings with Less Mess. The Handy Packer works on bearings up to 3 1/2" O.D. The grease stays in the tool cavity, not on your hands. To pack a bearing, place the bearing on the piston. Press down on the cap until the old grease is forced out and the new grease shows on top of the bearing.

P/N 12-02578..... **$28.50**

MAGNETIC FINGER TOOL



This snug and stretchy glove slips on your finger and turns it into a professional tool. The powerful magnet at your fingertip allows you to hold and retrieve any small metal object with precise control. Use it to easily start a variety of fasteners in tight-fitting or difficult to reach places. At work. At home. Anytime your finger needs a magnetic grip on things.

P/N 12-04565 ..... **$9.95**

NUT PLATE DRILL JIGS



Nut Plate Drill Jigs are designed to facilitate accurate rivet hole drilling for standard plate nuts. Nut Plate Drill Jigs are known as Anchor Nuts Or Nut Plates. Hand-held Nut Plate Drill Jigs are manufactured to precise tolerances and include drill bushings to reduce wear and assure consistent hole-spacing. Every Nut Plate Drill Jig features an ergonomically designed handle with a flexible stainless spring blade, allowing for clearance while the jig is in use.

SINGLE LUG PLATE NUT DRILL JIGS

Nut Thread Reference	(C) Hole Spacing	(P) Pilot Diameter	(K) Drill Size	Part No.	Price
6-32	.344	.1390	#40	12-04781	**$34.50**
8-32	.344	.1640	#40	12-04783	**$34.50**
10-32	.344	.1910	#40	12-04784	**$34.50**
1/4-28	.344	.2480	#40	12-04785	**$34.50**

SINGLE MINI LUG PLATE NUT DRILL JIGS

Nut Thread Reference	(C) Hole Spacing	(P) Pilot Diameter	(K) Drill Size	Part No.	Price
6-32	0.218	0.1660	#40	12-04786	**$34.50**
8-32	0.234	0.1930	#40	12-04787	**$34.50**
10-32	0.250	0.2180	#40	12-04788	**$34.50**
1/4-28	0.281	0.2810	#40	12-04789	**$62.75**

TWO-LUG PLATE NUT DRILL JIGS

Nut Thread Ref	(C) Hole Spacing	(P) Pilot Dia	(J) Hole Spacing	(K) Drill Size	Part No.	Price
6-28	0.344	0.688	0.1390	#40	12-04790	**$34.50**
8-32	0.344	0.688	0.1640	#40	12-04791	**$34.50**
10-32	0.344	0.688	0.1910	#40	12-04792	**$34.50**
1/4-28	0.344	1.000	0.2480	#40	12-04793	**$34.50**

TWO-LUG MINI PLATE NUT DRILL JIGS

Nut Thread Ref	(C) Hole Spacing	(P) Pilot Dia	(J) Hole Spacing	(K) Drill Size	Part No.	Price
6-32	0.2180	0.4360	0.1390	#40	12-04794	**$34.50**
8-32	0.2340	0.4680	0.1640	#40	12-04795	**$41.95**
10-32	0.2500	0.5000	0.1910	#40	12-04796	**$34.50**

CORNER LUG PLATE NUT DRILL JIGS

Nut Thread Ref	(C) Hole Spacing	(P) Pilot Dia	(J) Hole Spacing	(K) Drill Size	Part No.	Price
8-32	0.344	0.486	0.1640	#40	12-04797	**$34.50**
10-32	0.344	0.486	0.1910	#40	12-04798	**$34.50**
1/4-28	0.500	0.707	0.2480	#40	12-04799	**$34.50**

MECHANICS EYEBALL DRILL JIG



The eyeball drill jig was designed to help eliminate time consuming manual layout of the holes for the firewall eyeball. It's a great accessory! The drill sequence is started with the center hole for the eyeball, drilling a #30 hole. Once this hole is drilled, a #30 cleco is placed in the center hole. Next, drill all of the perimeter holes with the drill jig and remove the #30 cleco. Take the drill jig off, and increase the center hole to the size of the eyeball. P/N 12-04593 ..... **$6.75**

SCREWGRAB ANTI-SLIP GEL FOR STRIPPED SCREWS



Helps remove or tighten all types of fasteners – damaged or rusted. A single dab of ScrewGrab creates a positive grip between metal surfaces (tests have shown as high as 800%), that virtually eliminates tool wear or rounding and deforming of fasteners. • Not a glue • Works instantly • Wipes clean after use • Non-corrosive.

P/N 12-04568 ..... **$5.95**

TO

ENGINE TOOLS

PRECISE-GAP SPARK PLUG GAPPING TOOL



Precise Gap is a simple tool to gap two-, three- or four electrode 18 mm sparkplugs. Only 2" overall - comfortably handheld. Precision made of stainless steel. "T" handle adjusters move the ground electrodes closer to the center electrode until wire feeler identifies proper gap. Adjusters have fine thread with ball tips for precise movement. Don't buy an inferior imitation at a higher price! P/N 12-11600 ..... **$25.50**

GAP PLUG GAUGE .014 TO .018



Many customers have indicated that they have had difficulty obtaining setting wires for gaging the plug gap. We now provide a handy tool at reasonable cost. No need to buy extra gauge sizes that you don't need. Furnished with protective end caps. P/N 12-17100..... **$11.75**

THREAD CLEANOUT TOOL



In servicing spark plugs, a common problem is carbon accumulation in the jug threads. Cleaning these threads regularly can save big money by preventing thread damage and the need to pull the jug and install thread inserts. This specially designed tool works very well to limit this problem. It provides maximum depth penetration and its unique spring action assures that there will be no enlargement of the existing thread pitch diameter. P/N 12-17200 ..... **$39.70**

COMPASS ADJUSTING TOOL



The compass screwdriver is a great little tool that is totally non-magnetic, but also overcomes the shortcomings of solid brass or aluminum tools. This tool has a nice hex aluminum handle and a stainless steel driver insert. No need to worry about damaging the tip on a frozen compensator screw, and you can also remove the cover plate screws with the same tool
P/N 12-17300 ..... **$11.90**

ENGINE TOOL TRAY



The engine tool tray is designed for aviation enthusiasts who do maintenance on their own aircraft, as well as full time mechanics. This tool tray sits on top of the push rod tubes and is protected by rubber trim on the bottom to eliminate any damage to the aircraft engine. Instead of dropping a screwdriver or a nut down between cylinder baffling, this tool tray will give the mechanic great organization. It allows for spark plug placement, tool placement, as well as all of those pesky nuts and bolts. P/N 12-04592 ..... **$149.00**

TEMPEST AA472 OIL FILTER TORQUE WRENCH



The Tempest AA472 oil filter torque wrench is a great addition to any toolbox. Its 1" hex allows easy installation or removal of all oil filters. The torque wrench also comes present to 17 foot pounds and is easily recalibrated
P/N 08-07023 .....**$62.30**

TEMPEST AA473 OIL DRAIN TOOL



Tired of messy oil filter changes? Tempest oil drain tool with a twist of the knob drills a hole in the filter and allows the oil to drain out of the filter into your container. No mess, easy to do and inexpensive. Tempest improved the popular AA473 Oil Filter Drain Tool by redesigning the swivel fitting to a smaller, more compact design. The new fitting also allows for easier use of the tool because of its "true" swivel characteristics. If you want to upgrade your previously purchased AA473 Oil Filter Drain Tool you can purchase the fitting individually.
Can only be used on Tempest Oil Filters.
Oil Drain Tool .P/N 12-02248 ..... **$39.50**

S4-1 RACE REMOVAL TOOL



A & P mechanics will find this S4 outer bearing race removal tool to be very effective and well priced. Hemispheres held together by the "O" ring are inserted together behind the bearing race. The pilot is then inserted to expand and lock the halves & push out the race. You'll like its simplicity and ease of use.
P/N 12-17601 ..... **$99.75**

S4-2 RACE REMOVAL TOOL



The S4 magneto drive end inner race removal tool works in conjunction with a standard bearing puller. The split gripper ring fits behind and around the race and is captured in the puller ring by 2 opposing set screws. A groove on the puller ring provides the point of attachment for the puller arms. P/N 12-17602..... **$168.75**

S4-3 RACE REMOVAL TOOL



The S4 magneto seal installation, inner and outer race installation tool is three tools in one and is proportioned in such a way that it is easily accommodated by most small bench arbor presses.
P/N 12-17603..... **$89.75**

TIMING JUMPERS



The timing jumpers are easily used for timing magnetos without removing the breaker box cover. Simply remove the "P" lead and replace with timing jumper. Then hook up timing light leads. These handy devices have proven to be a real time saver and, in some cases, an outright necessity. ***SOLD IN PAIRS***
Bendix S4/S6..... P/N 12-17700..... **$46.80/pr.**
Bendix D2200, D3000, D3200 ..... P/N 12-17710..... **$46.95/pr.**

MAGNETO ROTOR BEARING SETTING GAUGE



Determines condition of excess bearing clearance and allows for precise adjustment of new bearings to prevent over or under preload. Available with or without dial indicator. Choice of 3/8-16 or 3/8- 24 threaded shaft fittings.

Kit Description	Thread	Part No.	Price
Setting Gauge & Ind.	3/8-16	12-17801	**$149.65**
Setting Gauge & Ind.	3/8-24	12-17802	**$150.95**
Setting Gauge & Ind.	Both	12-17803	**$191.75**
Setting Gauge, No Ind.	3/8-16	12-17901	**$98.75**
Setting Gauge, No Ind.	3/8-24	12-17902	**$69.85**
Setting Gauge, No Ind.	Both	12-17903	**$108.50**

THROTTLE SHAFTBUSHING KNOCKOUT



The throttle shaft bushing removal tool is very competitively priced and will help you avoid a jury-rigged operation that could damage an expensive carburetor body. Now there is no reason not to have one. They are available and affordable.
P/N 12-17400 ..... **$190.75**

SPRING TOOL



Get a handle on those springs! The "C" shaped tip fit the bend in spring end and won't slip. Can be used to install and remove springs on anything!
P/N 12-16945 ..... **$13.95**

ENGINE VALVE COMPRESSION / VALVE TOOL



AEROTOOL'S dual-purpose aircraft engine valve compression and valve tool is manufactured specifically for use on Continental C65/C75/C85/C90/0200/C0300 series cylinders, allows both intake and exhaust valve springs to be compressed simultaneous to ease removal and installation of cylinder rocker arms and rocker shaft. For removal of valve stem split locks, if that is part of the maintenance, follow the Continental Manual for instructions.
While there are other cylinder valve compression tools available, and have been for many years, they only compress a single valve (spring) at once that can make removal of the rocker arm shaft difficult especially if the shaft is stuck, which is often the case. Compressing just one valve spring can impede the process as the opposite rocker arm shaft remain constrained by valve spring tension.
When either installing or removing rocker arms and the rocker shaft, applying the C-01 tool will ease and simplify the process by depressing both valve springs together, maintaining consistent and equal pressure. This process also assists shaft/rocker arm alignment during assembly.
P/N 12-04563 ..... **$127.75**

TO

ATS PISTON RING COMPRESSOR KIT



The ATS Piston Ring Compressor features a quick-change design to speed up piston ring installation. It includes the famous Hastings Ring-O-Matic® pliers and bands that operate in all positions: not just vertically or horizontally. The pliers incorporate a precision locking action for exact holding and quick release. The complete kit includes the Ring-O-Matic® pliers and one of each of the following size bands: 3-7/8" to 4-1/8", 4-1/8" to 4-1/2", 4-1/2" to 4-3/4", 4-3/4" to 5", 5" to 5-1/4", & 5-1/4" to 5-3/4"

Description	Part No.	Price
Kit	12-03154	**$167.95**
Compressor Pliers	12-03155	**$39.95**
Piston Ring Compressor Band 3-7/8"TO 4-1/8"	12-03156	**$21.95**
Piston Ring Compressor Band 4-1/8"TO 4-1/2"	12-03157	**$21.95**
Piston Ring Compressor Band 4-1/2"TO 4-3/4"	12-03158	**$25.75**
Piston Ring Compressor Band 4-3/4"TO 5"	12-03159	**$25.70**
Piston Ring Compressor Band 5"TO 5-1/4"	12-03160	**$25.75**
Piston Ring Compressor Band 5-1/4"TO 5-3/4"	12-03161	**$31.95**

PISTON RING COMPRESSOR SET



The most efficient, versatile and dependable tool of its kind on the market. Designed to operate both vertically and horizontally. Fine-tooth ratcheting lock permits bands to be contracted in extremely small increments. Positive lock insures a free hand. Eliminates broken rings during installation. Set includes compressor pliers and the two bands (1123, 1125).

P/N	Size	Engine Application
1123	3-7/8" to 4-1/8"	Cont. A-65, C-85, C-90, 0-200, 0-300
1125	4-3/8" to 4-5/8"	Cont. E-225, IO-470

Set ..... P/N 12-10900 ..... **$93.50**
Piston Ring Pliers #1114 ..... P/N 1114 ..... **$51.75**
Individual band # 1123 for 3-7/8 ..... P/N 1123 ..... **$22.70**
Individual Band # 1125 for 4-3/8 ..... P/N 1125 ..... **$19.50**



CYLINDER BASE NUT WRENCHES (CONTINENTAL)

Made of top quality tool steel. 12 Point with 1/2" square drive, 13" long.
Set of 4 ..... P/N 12-11200 ..... **$68.50**
or order individual wrenches below.

LYCOMING & CONTINENTAL CYLINDER BASE NUT WRENCHES

Wrench Part #	Size	Engine Application	Price
2882	9/16"Hex	C-85, 0-200, 0-300, G0-300, E-185, E-225, 0 & IO-470, IO-360, IO-520	**$18.95**
2882-2	1/2" Hex	A-65, C-85, 0-200, 0-300, G0-300, E-185, E-225, IO-360	**$18.95**
2882-3	5/8" Hex	A-65, 0-470, IO-520	**$18.95**
2882-4	3/4" Hex	No longer used on Cont.; Used on Lyc. 0-390D, D2 and all wide deck Lyc engines	**$18.95**



CYLINDER BASE NUT WRENCHES

1/2" Allen Head Hex ..... P/N 64942 ..... **$38.95**
3/8" Allen Head Hex ..... P/N 64943 ..... **$38.95**
Set of both ..... P/N 12-04722 ..... **$74.50**



ATS LYCOMING AND CONTINENTAL CYLINDER BASE NUT WRENCHES

Description	Part No.	Price
ATS 3882 9/16 Cylinder Base Wrench	12-04977	**$35.65**
ATS 3882 1/2 Cylinder Base Wrench	12-04975	**$35.65**
ATS 3882 5/8 Cylinder Base Wrench	12-04976	**$31.50**
ATS 3882 3/4 Cylinder Base Wrench	12-04978	**$34.85**



ATS SPARK PLUG GAP GAUGE

Convenient Gap Gauge for all Champion and Tempest massive electrode spark plugs. Slider design keep gauge wires stowed away when not in use.
- Retractable slider design
- Includes wires for .015", .019", .018", and .022"
- Works with all Champion and Tempest Massive Electrode Spark Plugs
- Replacement Wire Gauges are available. 1lbs shipping weight.

P/N 12-01692 ..... **$17.55**



ATS SPARK PLUG GAPPER & GAUGE 415K

A low-cost efficent gap setting tool for closing gaps on massive-electrode Aviation Spark Plugs. Great design allows it to clamp on to your workbench for easy gapping. Features: • Manufacturued from 4160 Tool Grade Steel • CNC Machined surfaces for exact alignment • Includes ATS450 Feeler Gauge • Clamps to workbench for easy one-handed operation • Compatible with all Champion, and AutoLite Massive Electrode Spark Plugs • 2lbs shipping weight.

P/N 12-01691 ..... **$47.96**

ATS SPARK PLUG THREAD CHASER



Chaser cleans threads in spark plug hole of dirt, carbon build-up, and metal particles. Double ended for both 14mm and 18mm threads. Neoprene band on hex drive holds tool securely in any 13/16" deep-well spark plug socket. 1lbs shipping weight.

P/N 12-01683 ..... **$7.95**

ATS MAGNETIC SPARK PLUG SOCKET



The new Spark Plug Socket features a thin-walled design to get into to the tightest confines. Magnetic interior guarantees that you won't accidentally drop the plug during installation or removal. Works with all Champion and Tempest Aviation Spark Plugs. Works with all Champion and Tempest Aviation massive electrode Spark Plugs. Thin-Walled design to get to the tightly spaced plugs. Magnetic interior holds spark plugs and keeps them from falling out. 7/8" Socket. 3/8" Drive. 3-1/2" Overall Length. Made of Chrome Vanadium Steel. 1lbs shipping weight. P/N 12-01693 ..... **$24.95**

AVIATION SPARK PLUG SOCKET



Aviation spark plugs have special needs; using a non-standard 7/8" hex, and exhaust manifolds can get in the way of wrench access. A thin-wall socket is necessary for many applications. To ensure compatibility with all makes of plugs including Champion and Tempest, a deep well is called for. Developed specifically for general aviation aircraft. Compatible with Tempest and Champion Spark Plugs. Thin wall for fit into narrow cavities. Combined built-in 1" hex and 3/8" drive permits added flexibility in manifold access. Lifetime guaranteed and professional quality. P/N 12-03771 ..... **$19.95**

ATS SPARK PLUG CLEANER



Cleans any size plug without changing grommet. Has 2-way valve (blast or air) and comes complete with abrasive powder. Ready to use.

P/N 12-01684 ..... **$25.85**

Replacement Abrasive X-Fine 600 Grit

P/N 12-04897 ..... **$3.95**

AIRCRAFT SPRUCE PLUG MAINTENANCE KIT



The Aircraft Spark Plug Maintenance Kit includes an aircraft spark plug tray, air-powered spark plug cleaner, feeler gauge, spark plug gap setting tool, aircraft spark plug socket, a set of 8 spark plug gaskets and a bottle of spark plug thread lubricant and anti-seize compound.

P/N 12-02250 ..... **$119.95**

HEAVY DUTY SPARK PLUG GAPPER



This professional heavy-duty spark plug gap setting tool is completely portable for field use, yet precise enough to set gaps to within 0.001". The precision screw drive with its comfortable knurled knob gaps any type of Massive Electrode Aviation Spark Plug reliably and without any danger of damaging the spark plug. Simply screw the spark plug into the base of the tool and turn the knob to the required gap width. Very easy to use. Sets gaps to within 0.001". Precision CNC Machined from 4160 Tool Grade Steel. Attractive Nickel-Cadmium finish resists rusting . Knurled palm grip keep the tool from slipping in hands. Compatible with all Champion, and AutoLite Massive Electrode Spark Plugs.

Gapper ..... P/N 12-03389 ..... **$39.95**
Gapper with Gauge ..... P/N 12-03390 ..... **$45.95**

TO

SPARK PLUG & FILTER TOOLS

CT-415AV GAP SETTING TOOL



A low-cost efficient gap setting tool for closing gaps on massive electrode type aviation spark plugs. May be used as a hand tool, mounted on a bench or held in a vise. Furnished with one adapter for 18mm spark plugs. (P/N GT-204) and one CT-450 gap gauge. Wt. 1-1/2 lbs., 7-1/2" high. P/N 12-00796 ..... **$198.75**

CT-450 RETRACTABLE GAP GAUGE



High-impact red plastic case contains four sets of accurate, retractable "go" and "no go" wire gauges: 2 sets .015-.019 (.016 Nom.) 2 sets .018-.022 (.019 Nom.) Length: 3-1/2". Wt. 1-1/4 oz

P/N 12-00797 ..... **$29.85**

CT-457 FINE WIRE GAP SETTING TOOL



Designed exclusively for adjusting fine wire electrode spark plug gaps. Slot fits iridium ground electrodes for quick, safe adjustment. Size: 2-1/4" x 2" x 1/4" (5.7 x 5.0 x 0.63 cm) Weight: 1/2 oz. (14 g). Packed individually.

P/N 12-00798..... **$49.50**

ATS SPARK PLUG GAPPER



Sure-Gap is designed for use on all massive electrode aircraft spark plugs. Saves time and money, eliminates guessing of plug gap, prolongs plug life and ensures peak performance. 18mm. 1lbs shipping weight.

P/N 12-01682..... **$10.95**

LEAD-MASTER WRENCH SETS



Reduce time to remove and install spark-plug ignition leads. Permit shortarc turning due to 12-point grip head.

CT911 3/4" "T" Handle Box Wrench ..... P/N12-00799..... **$108.75**
CT912 7/8" "T" Handle Box Wrench ..... P/N12-00801..... **$108.85**
3/4" & 7/8" Open End Box..... P/N12-00802..... **$220.95**

CT906 CHAMPION PLU MASTER RATCHET WRENCH



CT-906 Plug Master Ratchet Wrench. Designed especially to make spark plug removal and installation easier and faster. Flex-handle allows 30-degree angle travel in either direction. Extra fine reversible ratchet action requires only 6-degree travel for next bit. Popular 3/8 in./0.95cm square drive fits Model CT-907 and other standard sockets. Knurled handle, rust-resistant chrome finish. P/N 12-04957 ..... **$69.75**

SCREEN CLEAN SPARK PLUG CLEANER



The new Screen Clean tool works great for field cleaning of spark plugs. It is non-abrasive and can be used for several cleanings. Simple to use—just work the bi-fold edge through the gap with several strokes before setting the gap. Actually removes deposits blasting cannot reach.

P/N 12-15610 ..... **$7.50**

CT-446 SPARK PLUG TRAY



Steel tray holds up to 12 plugs. Speeds handling of used or new plugs. Holes numbered to correspond with engine cylinders. Protects against shielding barrel contamination. Dims: 5"H x 8"L x 3.5"W. Wt. 1 lb.

(12 plug tray) ..... P/N 12-00795..... **$51.75**
(18 plug tray) ..... P/N 12-00162..... **$119.75**

TEMPEST AA446 SPARK PLUG TRAY



Constructed of high quality metal protecting the spark plugs from damage. Tray design is sturdy and balanced. Rubber feet on the bottom of the tray help keep the tray in place. Numbered spark plug slots. P/N 07-02510 ..... **$75.95**

SPARK PLUG TRAY



This unique spark plug tray is quality made of PVC plastic. Each holding position has 18 mm thread so that plugs screw in for positive holding. This tray permits simultaneous inspection of either the electrode or barrel end of plugs, protects plugs from damage, and can be stored in any position. Optional carrying strap attaches to ends. P/N 12-30185 ..... **$39.70**

PLUG-A-LONG SPARK PLUG TRAY



Holds 12 spark plugs each hole stamped with cylinder number also marked top and bottom so each plug can be identified easily, no mix-ups. Plugs can be serviced and returned back to where they were removed. a must for aircraft mechanics. Made from 18 gauge steel. Blue powder coat finish. Dimensions: W=4.0", L=8.0", H=2.6. P/N 12-00974 ..... **$29.75**

RADIAL ENGINE SPARK PLUG HOLDER



18 plug holder is made out of steel. Powder coated federal yellow.

P/N 13-11617 ..... **$52.75**

HEAVY DUTY SPARK PLUG GAPPER KIT



A complete spark plug gapping solution for field or bench use includes the Heavy Duty Spark Plug Gapping Tool to accurately set your spark plug gaps to within 0.001". You also get a set of wire feeler gauges to verify gap size. If you should happen to accidentally over-gap the plug, then the included Gap Expansion Tool will get you back on track. And finally, included in the Kit is an Electrode Erosion Gauge to make sure that your gapped plugs are still in serviceable condition. P/N 12-03359 ..... **$65.75**

SLICK T150 GAP GAUGE



Tool Gauge Gap. Will work on Lycoming and Continental engines.

P/N 12-00302 ..... **$15.65**

AVIATION OIL FILTER DRAIN TOOL



This oil filter drain tool permits draining only aviation spin-on oil filters prior to removal from the engine. Just clamp on to rear of aviation oil filter with cutter, punch small air bleed at the top of the housing with an ice pick, remove cutter and oil will drain freely in-can or hose-extended funnel. For aviation oil filters only! P/N 08-04200 ..... **$51.75**

MODEL 2500A GAP SETTING TOOL



A precision gap-setting tool for all massive-electrode Champion spark plugs. Permits simultaneous adjustment of two opposite prongs without removing the spacing gauge. Designed for permanent installation on bench or heavy wooden board.

P/N 12-15500 ..... **$525.00**

SEE OUR WEBSITE FOR REPLACEMENT PARTS.

SPARK PLUG GAP EXPANSION TOOL



Expands the spark gap of any massive electrode aviation plug safely and efficently.

P/N 12-03391 ..... **$18.95**

TO

SPARK PLUG & IGNITER TOOLS

AVIATION SPARK PLUG SERVICE UNIT



For Cleaning: Two flexible rubber adapters handle 14 and 18mm plug types. For Testing: Steel adapters of 14 and 18 mm are standard equipment and conveniently stored on the top of the cleaner for ready availability. Molded of rugged A.B.S. plastic which is durable, oil resistant and easy to clean. An aluminum-base frame is included, which permits easy mounting to a work bench and quick removal. The solid state ignition system pro-duces a stable ignition test voltage providing greater accuracy and reliability. Its lack of moving parts eliminates the major cause of tester failures. Cleaning is by a dry-abrasive air blast, which quickly and effectively removes conductive deposits. All compressed air for both cleaning and testing passes through a "built-in" automatic water trap to stop harmful air line moisture.

110V.....P/N 12-00794 ..... **$1,790.00**
220V.....P/N 12-00902 ..... **$1,895.00**
110V Replacement Coil .....P/N 12-03773 ..... **$78.95**

SEE OUR WEBSITE FOR REPLACEMENT PARTS.

SPARK PLUG CLEANER TESTER DUAL-VOLTAGE



Works with both 120V and 220V sources, and has advanced circuitry to prevent thermal overload during heavy use. Uses a powerful blast of air and abrasive to thoroughly remove carbon deposits from plugs. Manufactured to the rigorous ISO 9002 standard and carries a full one-year warranty. **Specifications**: • Operating voltage: 115V or 220V AC Single-phase 50/60Hz • Dimensions: 19.3" (49cm) x 11" (28cm) x 10.4" (26cm) • Weight: 22.5 lbs (10.2kg) • Accessories included: 12mm, 14mm and 18mm spark plug adapters (2pcs each); 12mm, 14mm and 18mm cleaner gaskets (1 each); Adapter case (1pcs); Aviation Massive Electrode adapter plug (1pcs), Abrasive 1 lbs (900g)

P/N 12-03184 ..... **$588.00**
Replacement Abrasive Bag.....P/N 12-03329 ..... **$41.50**

MODEL 2600A VIBRATOR/CLEANER



Champion now makes it easier than ever to clean heavily lead-fouled spark plugs with this new, improved Vibrator/Cleaner. Each unit is shipped with all accessories required for cleaning fine-wire and 2-prong massive electrode aviation spark plugs. This unit features quick-change cleaning head assemblies, easy and inexpensive replacement of single cutter blades, improved heavy duty top-mounted switch and improved vibrator motor for faster cleaning and maximum durability.

Model 2600A ..... P/N 12-15600 ..... **$695.00**
Full Cutter Single Blade (CT-435F)..... P/N 12-01147 ..... **$2.35**
Damper For Vibrator Cleaner..... P/N 12-04953 ..... **$482.95**

NO. 91893 ABRASIVE COMPOUND



For use in CT-475AV Dry Abrasive Cleaner/Tester. Contains 1 full charge (15oz.). Note: This main item no longer ships with a tip unless it is ordered separately.

P/N 91893. .....**$8.75**

622 CHAMPION RUBBER TIP



P/N 12-94023.....**$5.35**

TEMPEST SPARK PLUG RESISTANCE TESTER



Tempest has developed an easy-to-use tester that makes it very efficient for IA/AP's to test the resistance in all aviation spark plugs. The IA/AP simply places the spark plug, barrel side down over the contact post and touches the other lead end to the firing end of the center electrode. If the light is green, the spark plug resistance is below 4kÙ (thousand ohms). If both the green and red lights are on, then the plug is between 4 - 5kÙ. This is acceptable for serviceable plugs. If the red light is on alone, this indicates a resistance value in excess of 5kÙ and the plug must be discarded and replaced.

P/N 08-07462 ..... **$133.95**

CHAMPION CT466 GAUGE

Champion CT466 Gage. P/N 12-04924..... **$28.95**



CHAMPION CT-482 SPARK PLUG EROSION GAUGE

Champion CT-482 spark plug erosion gauge provides an easy, accurate method of determining whether your plugs have reached their maximum wear limit. Calibrated to reject plugs after their electrodes have eroded to at least one-half their original thickness.

P/N 12-00791.....**$4.35**



SPARK PLUG EROSION GAUGE

Makes it easy to determine if you plugs have reached the end of their useful life. Simply gap your plug per manufacturer's recommentation and then check to see if the electrodes fit through the hole of the gauge. If they enter the hole, then your plug is too worn and must be replaced.

P/N 12-03392 .....**$8.95**

CT492 CHAMPION IGNITER EROSION GAUGE

A special tool designed specifically to measure the erosion-wear of Champion AA series igniters. Calibrated in colored scale segments to determine the extent of erosion of the undercut area of the steel shell, not easily visible to the eye. Measuring tips shaped to reach into the undercut, true-wear area. Instructions for use included in special plastic box. P/N 12-04954 .....**$846.00**



CT-494 CHAMPION EROSION GAUGE

CT-494 Igniter Erosion Gauge. The CT-494 accurately determines wear on 10 different Champion surface gap igniters, insuring maximum igniter life without exceeding safe wear limitations. P/N 12-04929 .....**$36.50**

CT-496 IGNITER LEAD CONNECTOR WEAR GAUGE



Igniter lead connector wear gauge for ARP670 type 2M fittings common to PT6 leads and others. Features a calibrated pin to measure connector wear. Opposite end sized to measure neoprene grommet expansion.

Note: Many leads incorporate type 2M and 3M connectors at opposite ends.

P/N 12-04959 .....**$89.95**

CT449 CHAMPION THREAD CLEAN OUT TOOL



CT-449 Thread Clean-Out Tool. For cleaning aircraft engine spark plug 18mm bushings to assure correct installation of new or overhauled spark plugs. Regular 7/8"/2.22cm hex fits spark plug sockets. Precision ground threads, three deep flutes retain carbon debris. Packed individually with instructions for use.

P/N 12-04950 .....**$286.95**

52243 CHAMPION CRIMP TOOL



A special tool used to crimp turbine ignition lead contacts to the unshielded center wire.

P/N 12-04951 .....**$313.00**

CHAMPION 52241 HOOK

Champion 52241 Hook. P/N 12-04925..... **$31.95**

TO

UNIVERSAL SPARK PLUG GAP GAUGE



This gap gauge provides easy accurate spark plug adjustment. Features flanged edge for electrode bending and beveled round hole for opening gap. 1-1/2" diameter. Wt.: 0.8 oz. Scaled from .020" to .100". Pewter plating makes the inches more legible for user to read. Also available in metric scale (0.5 mm to 2.4 mm).Gap gauge (inches)

P/N 12-21375.....**$1.75**

SPARK PLUG VIBRATOR CLEANER



Anyone that cleans a lot of spark plugs knows that a spark plug vibrator cleaner is the only way to go to break up and clean out stubborn lead deposits. A spark plug abrasive cleaner is great for the finish cleaning, but it just won't take care of the lead deposits found down around the plug porcelain. Aircraft Spruce now offers an inexpensive way to professionally clean spark plugs. This 115V vibrator cleaner is small, light weight, easy to use. It is great for the pilot or mechanic that wants to carry one along — just in case. 90 day guarantee.

Cleaner.....P/N 12-21355 ..... **$26.50/ea.**
Extra Cutter Blades .....P/N 12-01147 ..... **$2.35/ea.**

FAP 18 HOLE SPARK PLUG TRAY



FAP-18 Aircraft Spark Plug Tray holds 18 plugs. Made from 18 gauge steel.

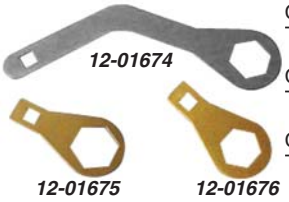
P/N 12-03809 .....**$49.95**

CT-709 OIL FILTER ADAPTER WRENCH



The CT- 709 tool, designed by a professional aircraft mechanic makes the job easier. Manufactured from tool quality steel, the wrench features both 3/8" and 1/2" drives, as well as "flip over" reversibility. For Cessna adapter for 150 Series through 300 Series Aircraft. P/N 12-00792 .....**$99.75**

CHALLENGER OIL FILTER TORQUE WRENCH



Challenger CP102 Oil Filter Wrench Torque Wrench Adapter 1" L
P/N 12-01674 .....**$16.85**
Challenger CP103 Oil Filter Wrench Torque Wrench Adapter 30 MMS
P/N 12-01675 .....**$16.25**
Challenger CP102 Oil Filter Wrench Torque Wrench Adapter 1" ST
P/N 12-01676 .....**$13.95**

OIL EASY WRENCH



The "Oil Easy Wrench" is specifically designed to remove the oil filter on any aircraft using the Teledyne Continental IO-520 or IO-550 engine. In fact, it is a universal oil filter wrench that works great on any piston engine airplane! Recommended at the Malibu Mirage Owners and Pilots Association (MMOPA) maintence seminar!!! On IO-520's & IO-550's engines, it's the only wrench that can get between the top of the oil filter and the pressure pump and still provide enough leverage to remove the old (usually stuck) oil filter by hand. And because you are able to remove the old filter without any damage, your inspections of the old filter are more accurate, without any contamination from more extreme filter removal methods. P/N 12-01552 ..... **$42.70**

ACS OIL CAN CUTTER



This unit has the capacity of both P/N AFC-470 & 12-21395. It also uses the same replacement blade as the 12-21395. Anodized "Red" for corrosion resistance. Base can be clamped in a bench vise if desired. s black anodized.

P/N 12-01048 ..... **$70.75**

TEMPEST AA474 OIL FILTER WRENCH EXTENSION



Some aircraft applications create an environment that does not allow adequate clearance to get a torque wrench or even an open-end wrench around the install nut on oil filters. Even though Tempest has recently introduced the Dash II filter, which is the shortest oil filter on the market, the clearance is still not enough on some applications, such as Beech Barons and Bonanzas. To eliminate this problem Tempest producs the AA474 oil filter wrench extension. Features: Chrome-plated steel provides a high quality tool.Easy to use torque conversation label on back of tool. P/N 10-03929 .....**$37.95**

TEMPEST OIL FILTER CAN CUTTER



This universal cutter from Tempest is easy to use and is a great addition to any toolbox. It's made from high quality aircraft aluminum, making it lightweight and very durable. Works on all aircraft spin-on oil filters. Adapter pin easily removed for 'male' filters.

P/N 12-01392 ..... **$112.75**
Tempest Oil Can Cutter Blades. .....P/N 12-01393 ..... **$8.95**

AIRWOLF AFC-470 OIL CAN CUTTER



Every A&P knows the importance of cutting every single oil filter open after an oil change. The problem up to now was oil filters were difficult to open and the tools to open them were expensive. This is no longer the case with the Airwolf AFC-470 oil filter cutter. The AFC-470 is the easiest and quickest way to determine the current health of your engine. The Airwolf AFC-470 oil filter cutter is constructed out of a solid 6" billet of super strong 6061-T6 aluminum, hard anodized to resist scratches and wear. Stainless steel rollers allow the oil filter to spin effortlessly during cutting. And finally, our specially designed razor sharp cutter wheel hardened to 60 Rockwell, will make quick work of opening any oil filter. This filter is designed to last a lifetime. Fits new style oil filters. Champion/Tempest/Kelly Filters from 3.75" - 3.00" Dia

Opens oil filters from 3.75" - 3.00" Dia P/N 12-00789-1 ..... **$99.95**
Rotax Filters From 3.25" - 2.375" Dia .....P/N 12-02295 ..... **$89.95**
Large Fram Filters (Radial) .....P/N 08-07191 ..... **$129.50**
Replacement Cutting Wheel.....P/N 08-13957 ..... **$8.65**

HAND CRANK OIL FILTER CUTTING TOOL



This tool was designed to eliminate much of the mess that occurs with small handheld oil filter cutting tools. Very simple to operate, it is excellent for individual aircraft owners as well as FBO's and maintenance shops where a lot of filters need to be cut. Simply clamp in a vise, screw on the filter, turn the cutter into the filter and hand crank to open the filter. The rugged construction enables this tool to operate trouble free for years. P/N 12-00122 ..... **$114.85**
Replacement Cutting Wheel.....P/N 12-01685 ..... **$6.75**

AVIATION OIL FILTER CUTTER



This aviation oil filter cutter will open any size oil filter canisters for your inspection. To use the tool, place the filter in a vice, attach the tool to the top of the filter, and rotate 4 to 6 turns to open the canister. The cutting wheel will stay sharp for about 50 uses, and is easily replaced when dull. The tool is made from 6061 aluminum with a purple anodized finish. The tool is ready to use on any oil filter with a male or female thread. Oil filter cutter P/N 12-21395 ..... **$63.75**
Replacement cutting wheel .....P/N 12-21396 ..... **$9.75**

TEMPEST AA471 OIL FILTER MEDIA CUTTER



Tempest's new AA471 provides a low cost, efficient and safe tool that every mechanic will want to put in their tool box. Strong guard and non-retractable blade to secure the media and ensure an accurate cut. P/N 12-01854 .....**$41.50**

TO

Prices Subject to Change Without Notice

AUTOLITE SPARK PLUG TOOLS



SPARK PLUG DEEP SOCKETS - T-558
1/2" drive w/o magnet
P/N 12-00712 .....**$25.50**



ATS VIBRATOR CLEANER PA01 - It will clean heavy deposits in and around the electrodes with absolutely no risk of damage to the plug. 1 lbs (0.5Kg) shipping weight.
P/N 12-00714 .....**$39.95**



SPARK PLUG SERVICE KIT

Kit Contains: 1 TP12 cleaner, 1 TP164 extra bag, 1 TP163 extra powder, 1 TP298 Go &No Go wire gauge, 1 TP339 spark plug tray, 1 TP340 gapper
P/N 12-02351 .....**$162.95**

ATS DELUXE SPARK PLUG KIT



Kit Includes: • SPCT100A Spark Plug Cleaner Tester Unit (120V/240V) • ATS415 Bench Gapping Tool with Gap Gauge • #12 Spark Plug Cleaner • PA01 Spark Plug Vibrator Cleaner to remove lead deposits • Spark Plug Tray • 10X Inspection Magnifier • A 4oz Bottle of ATS Anti-Seize Lubricant • 100ea Copper Gaskets • Spark Plug Thread Chaser • ATS950 Magnetic Spark Plug Socket
P/N 12-02410 .....**$728.00**

TEMPEST SPARK PLUG GAP TOOL



This grip tool made from aircraft grade, 6061-T6 aluminum. The vice mount design is a more convenient way to mount the tool, while at the same time providing a more ergonomically correct height for the technician. The ST508394 is angled to properly distribute the gap setting pin load over the spark plug's outer electrode. This high quality tool made in the U.S.A.! P/N 12-04715 .....**$66.75**

FC-2000 OIL FILTER CAN CUTTER



Features: • Cuts all Champion, Hartzell, and Tempest 3.7" Dia. oil filters • Rugged 6061-T6 aluminum construction • Roller bearings provide smooth rolling action • Hardened hardware throughout • No parts to change • Can cut in either direction • Made in USA Lifetime Warranty. ..... P/N 12-00923-1 .....**$96.75**
Replacement Cutter Wheel ..... P/N 12-01689 .....**$6.50**

FC-3000 OIL FILTER CAN CUTTER



This an cutter incorporates a longer plate that allows cutting filters from 3.7 to 4.7 inches in diameter. Roller bearings provide smooth cutting action. Ideal for cutting racing filters too! Black anodized finish P/N 12-02628 .....**$106.75**

FMC-2000 OIL FILTER MEDIA CUTTER



This patented tool is designed to hold Champion Aerospace brand Aviation oil filter spools, and to allow cutting the paper filter media at each end of the spool without holding the filter spool by hand. Using this tool reduces the risk of cutting one's hands while cutting the filter media as well as reducing the time necessary to accomplish this task. The filter media is rotated in a special holder that is supported by roller bearings. A knife, with a retractable safety cover is brought into position to make a clean cut of the filter media at each end. The filter media can then be removed for inspection.Patented.
FMC-2000 Oil Filter Media Cutter.....P/N 12-00925-1 ....**$349.00**
FMC-2000BL Media Cutter Blades (3 pack)..P/N 12-01688 .....**$17.95**
FMC-2000BA Base to mount to bench.....P/N 12-01690 .....**$49.50**
FMC-2000K Kelly Filter Cutter Adapter.....P/N 12-01686 .....**$98.95**
FMC-2000T Tempest Filter Cutter Adapter...P/N 12-01687 .....**$104.95**

FMC-2010 OIL FILTER MED CUTTER



The Model FMC-2010 is a "Tool Box" version of the original Oil Filter Media Cutter that allows cutting and removing the filter media while reducing the chances if getting cut. The FMC-2010 can be mounted on the top of a toolbox or held in a vice for operation. Black powder coated finish. For Champion 3.7 diameter filters. Tempest and Kelly Aerospace filters are special order..... P/N 12-02629.....**$213.95**

TOMS OIL FILTER CUTTING TOOL



Tom' s oil filter cutting tool will allow you to inspect your aircraft's oil filtering material for trapped debris in a quick and easy manner. Oil filter inspection is a critical measure of your engine's health and should always be a part of your aircraft's regular maintenance program. Most filter cutters work like a pipe or tubing cutter in that you have to go around and around the filter, adjusting cutter depth with each pass. Although you could do that with this tool, the real beauty of this new product is that the cut can be easily made in one pass. The tool is designed primarily for Lycoming oil filters that have a threaded insert protruding from the end of the filter. A few Lycoming oil filters and most Continental oil filters do not have this insert. For these filters, an adapter insert is supplied with the tool. Tom's oil filter cutter may also be used on smaller filters such as found on Rotax or automotive engines. Simply remove the cutter handle and reposition the pivot bolt to the inner hold on the base handle. The adapter insert may be needed on these filters as well. Made in USA.
P/N 12-01697.....**$56.85**

CHAMPION OIL CAN CUTTER



The Champion CT923 Cutter allows for oil filters to be cut in either direction. This is a complete tool with no parts or adapters to change. It is very easy to use, and will provide a simple effective means of cutting open oil filters. This also cuts the Champion filters used on the Rotax 912 and 914 engines.
CT923.....P/N 12-04948 .....**$227.95**

OIL FILTER WRENCH



This very versatile, revolutionary oil filter wrench is for the aviation community and aircraft enthusiasts. This wrench was created specifically for you and your airplane. This tool is small, lightweight and easy to use making your filter servicing and installations fast and easy. With very little effort your oil filter can be removed or run in and torqued. This super wrench is constructed with materials that are very strong, (4130 heat treated steel) then electroplated to meet our standards and will provide you with years of service. P/N 05-12376 ..... **$19.95**

TALON OIL FILTER REMOVAL TOOL



The Talon Oil Filter Tool was created to remove stubbornly stuck oil filters. It is 50% stronger than the standard 10M-OFT type. The tool is safe in tight quarters and unable to slip, attempting to minimize damage to nearby components. This is still a messy process but this tool is your best chance of removing stuck filters without damaging anything else. Features: • Three pin (TALON) engagement in oil filter plate for stability and strength • Good for up to 1500 in. lbs. of torque • Works in tight spaces! • Works on Aircraft, Automotive, Marine, and Recreational Vehicle applications • Made in the USA
P/N 11-11556 ..... **$48.75**

BB PRODUCTS FH 2000 OIL FILTER HOLDER



Rigidly supports Champion, Hartzell, and Tempest 3.7" dia. aviation filters for cutting. After opening the filter, it keeps the oil inside the cup of the holder, instead of on your vice or shop floor. It holds the filter much more rigidly allowing you to cut the filter much faster while reducing side loads on your cutting tool.
P/N 12-00924-1.....**$103.75**

TO

ULLMAN MAGNETIC PICK-UP TOOLS


HT-3


HT-2


HT-1

These Ullman pick-up tools with Powercap offer a unique combination of features which make them ideal for work around aircraft. The stainless steel telescoping handle is strong, long, and lightweight, and the comfortable, textured cushion grip keeps handle secure even in wet or oily hands. The head features a compact industrial strength magnet for retrieving heavy objects in tight places. The powercap shields magnet side so that the head can be easily guided past ferrous metal objects. Available in 3 convenient sizes.

HT-1 lifts 1-1/2 lbs, over 2 lbs with POWERCAP™ telescopes from 6-5/8" to 33-1/4" P/N 12-21385 ..... **$10.95**

HT-2 lifts 3-1/2 lbs, over 5 lbs with POWERCAP™ telescopes from 6-5/8" to 33-1/4" P/N 12-21386 ..... **$12.95**



CHP4-L HOOK & PICK SET - has picks that are 9.75" long with textured cushion grips. These longer picks are ideal for working in hard to reach awkward areas.
P/N 12-00716 ..... **$12.95**



GMC-2 DUAL PURPOSE TOOL - contains a MegaMag Pickup Tool that lifts 16 lbs. and a 2.25" Inspection Mirror with a metal base that mounts in seconds and brings hidden areas into full view.
P/N 12-00718 ..... **$22.85**

STEELMAX MAG-IT MAGNETIC PICK-UP TOOL



Safely remove metal chips and debris from machinery and work areas using SteelMax Mag-It® magnetic pick-up tool. The Mag-it® slide action lever quickly demagnetizes the tool, which releases chips for disposal.
15 inch Pick-up.....P/N 12-01715 ..... **$56.99**

EXHAUST PORT RESURFACING TOOL



The exhaust port resurfacing tool is designed to recondition port surfaces where no more than .010" of material need to be removed. It is easily bracketed and aligned to the port in reference to the rocker cover surface. Execution of the cutting operation only requires hand power. No air or electrical power is required. Mounting bracket adapters are available for the following engines: A&C series continentals, Lycoming Parallel Valve, Lycoming Angle Valve, others on request.....P/N 12-17605 ..... **$433.00**

A & C Series Continental Bracket .....P/N 12-17609 ..... **$199.75**
Lycoming Parallel Valve Bracket.....P/N 12-17610 ..... **$184.80**
Lycoming Angle Valve Bracket .....P/N 12-17611 ..... **$276.95**
Cutter Head Inserts .....P/N 12-17607 ..... **$28.75**

EAR ISLAND REMOVAL TOOL – When substantial quantities of material have to be removed from the exhaust port, it may be necessary to also remove the island around the exhaust stud area. The ear island removal tool and pilot can be used to accomplish this without the use of power tools. .....P/N 12-17608 ..... **$119.75**

THE CORE RECESSOR



The core recessor is a new product with the purpose of serving as an efficient tool that makes the process of removing core cells in Nordam Panels and composite fiberglass more efficiently. Thus, it reduces time for edge fillers, which are necessary procedures to customize aircraft cabinets, floorboard, vanity's headliners, valance panels, etc. Is light weight, easy and safe to use. Core panels from 1/8 to 3/4 inch with no adjusting. Requires no electricity.

Core Recessor .....P/N 12-02270 ..... **$106.95**
Core Recessor Mini.....P/N 12-02271 ..... **$73.50**

UNI-MAG WRIST BAND MAGNET



Uni-Mag is a wrist worn magnet that allows craftsmen to keep parts close to hand while working rather than in your pocket, on a ladder, or in your mouth. It holds nuts, bolts, screws, nails, tools, etc. A specially created magnetic field allows parts to lay flat on the face of Uni-Mag rather than upright. Save time and put an end to fumbling for small hardware with Uni-Mag. Comes complete with magnet and wristband. P/N 12-30110.....**$18.50**



SUPER HANDY MAGNETIC RETRIEVAL TOOL ST-225

The Super Handy Magnetic Retrieval Tool extends 26" and picks up five pounds.
P/N 12-02932.....**$9.75**

2-IN-1 MAGNETIC TIP PICKUP TOOL



This pickup tool helps you retrieve ferrous metal objects from tight spaces your arm won't fit into. It's easy to use - just squeeze the handle to open and close the jaws. The 24 in. arm, 4-claw grabber and powerful magnetic tip on the pickup tool will quickly have your wayward part back in your hand where it belongs.....P/N 12-03707 ..... **$4.95**

AMAZING ROD SAW



Tiny particles of tungsten carbide, one of the toughest and hardest substances in the world, have been bonded to a steel rod to produce the Rod Saw. Fits standard 12" hacksaw frame. Use when regular hacksaw will not work. Lets you cut steel, rock. Not recommended for soft materials. P/N 12-01180..... **$6.95**

HANDEE CLAMP



This innovative tool solves the problem of that out of reach grasp. Have you ever been working on a job where you needed to put a clamp, nut, or bolt on something that was just out of reach of your fingers or another bulky tool? The Handee Clamp makes that job easy. Simply put that nut, clamp, or bolt on one end and then tighten the nut on the other end to secure. Designed to firmly hold nuts, bolts, and clamps in its easily adjustable jaws, the Handee Clamp acts as a small, versatile vise grip enabling you to focus on the job at hand. You won't have to worry about dropping that nut or bolt into that pesky floor drain ever again, or fight with that hose clamp as you work on that transmission line. From a professional auto or aviation mechanic, to a do-it-yourselfer that always has a project on deck in your garage at home, you need this tool in your inventory.
P/N 13-20594 .....**$18.75**

HIGH CAPACITY EXHAUST DESICCATOR



2.5 times the desiccant capacity of previous design, One piece construction allows the dessicant to be contained in the core of the plug. Made of durable high quality urethane rubber that will last almost indefinitely
P/N 12-01057 .....**$50.90/ea**

GOLDENROD DEHUMIDIFIER



This compact, low-voltage dehumidifier is an ideal way to eliminate dampness and mildew in aircraft which can cause mildew growth in carpet and upholstery and wreak havoc with electrical systems. In stall under the instrument panel or on the deck between seats. If installed in the engine compartment, Goldenrod will eliminate moisture which leads to rust, keep ignition wiring dry, and facilitate cold weather starts. In the hangar, Goldenrod can protect parts, tools, supplies, and components. Operates on standard 110V current 24 hours per day but uses four times less power than a standard light bulb. Safe and effective. Available in four lengths.

Part No.	Length	Watts	Approx. Coverage Up To	Price Ea.
12-30225	12"	8	100 cubic feet	$38.50
12-30230	18"	12	200 cubic feet	$40.50
12-30235	24"	15	300 cubic feet	$42.50
12-30240	36"	25	500 cubic feet	$47.95

EVA-DRY® HIGH CAPACITY DRY DEHUMIDIFIER



Designed to absorb moisture from small enclosed areas. It will help protect clothes and valuables from the damaging effects of mold/mildew and moisture rot. It is 100% renewable and needs no power to operate. Place the Eva-Dry unit in a closet or any small, enclosed space, and it will start to absorb moisture immediately. There is an indicator window with special "Color Changing Crystals" that change from orange (when dry) to green (when wet) to indicate when the unit needs to be "renewed". The unit will absorb approx. 6-8 ounces of moisture (depending on humidity levels this should take approx. 4-8 weeks). Once the moisture has been absorbed it cannot leak or spill. This unit uses a specially engineered, crystallized silica gel that is odorless, non-toxic, Eco-Friendly and completely safe. P/N 12-01621 ..... **$29.95**

TO

Prices Subject to Change Without Notice

WING STAND



This wing stand is ideal for aircraft homebuilders or restorers needing to safely store and protect aircraft wings during the project. It accommodates virtually all shapes and sizes of wings and is available at a very economical price. We ship this wing stand direct to you from the factory (freight collect). Dims: 72"l x 44"h x 36"w. Assembly req. Each stand holds 2 wings.

P/N 12-21390 .....**$199.00/ea**

AEROROLLER-1000



AeroRoller makes movement of your aircraft or wheeled equipment easy. Aircraft can be loaded on AeroRoller without jack and minimum effort is required to move aircraft when on rollers. AeroRoller is constructed of Industrial 1/4" steel plate. Heavy duty Duraform 360° swivel castor wheels means no flat spots. Brake castor lock parking location. Each unit can carry 1000 lbs. Manufacturer's warranty covers defective parts & labor.

2-Roller Set.....P/N 13-00071 .....**$339.00**
3-Roller Set.....P/N 13-00072 .....**$289.00**

TENNSMITH BRAKES & SHEARS



HAND BRAKE & STAND - Versatile, economical hand brake designed for straight forming of mild steel in thicknesses of 22 gauge & lighter. Made in the U.S.A by Tennsmith. Bends material up to 48" wide. Wts: brake: 280 lbs. Optional stand: 95 lbs. Ideal for bending materials used in light aircraft construction. Shipped direct to you from factory in Tennessee.

Model S48-22 hand brake.....P/N 12-20700 .....**$680.00**
Optional Stand.....P/N 12-20705 .....**$241.95**

UNIVERSAL HAND BRAKE & STAND - Tennsmith's heavy duty universal hand brake is a great tool for a wide range of sheet metal binding and forming operations in 12 gauge and lighter mild steel. The brake is ideal for both box and pan and straight bending in hold and cold rolled plate, stainless steel, aluminum, and heavy plastic. Welded steel plate construction for strength and rigidity. Bends material up to 48" wide Wts: brake: 1330 lbs. Optional stand: 95 lbs. Shipped truck collect direct to you from factory in Tennessee.



Model HBU48-12 Hand Brake.....P/N 12-20710 .....**$3,733.00**
Optional Stand.....P/N 12-20705 .....**$241.95**

FOOT SQUARING SHEAR - Tennsmith squaring shears offer precision shearing and rugged construction. These shears feature traction, ground alloy tool steel blades to prevent material movement during shearing. Will shear material up to 16 gauge mild steel and up to 20 gauge stainless steel. Both blades are adjustable and back gauge gives highly accurate readings. Wts: Model 36: 700 lbs. Model 53: 950 lbs. Shipped truck collect to you direct from factory in Tennessee.



Model 36 Shear (Max. Cutting Width 37") P/N 12-20715 .....**$2,034.00**
Model 52 (Max. Cutting Width 52").....P/N 12-20720 .....**$2,995.00**

TENNSMITH - ***These products are shipped truck, priced F.O.B. McMinnville,TN. Allow 4-6 weeks for delivery***

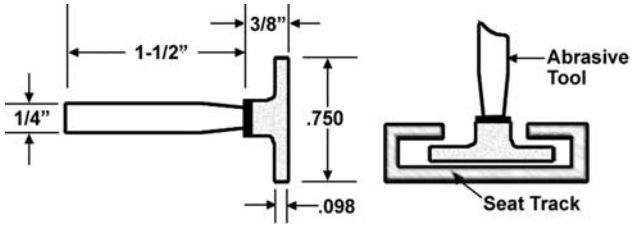
NON-CONTAMINATING SCRAPER



Our Non-Contamination Scraper is suitable for all airframe scraping operations. It will not contaminate delicate aluminum parts with steel particles which can induce corrosion. It is easily resharpened with a mill file and the .060" thick heat treated aluminum blade is easily replaceable. Features positive wood grip handle.

P/N 12-30205 .....**$21.60**

SEAT TRACK CLEANER



Maintaining adjustable cockpit seats, or passenger seating secured in notched tracks, requires removing the dirt and grit that have become embedded in the tracks. Rex-Cut Products has developed a thin-profile mounted wheel specially designed to accomplish this job efficiently and safely. The seat track cleaners are manufactured using layers of reinforced nonwoven cotton fiber and abrasive grain which are bonded into discs. When mounted on a die grinder they are able to fit inside the seat tracks. Designed for cleaning all the interior surfaces of the track without having to change discs, one disc will remove caked on sludge, dirt and grit while removing minor burrs and rough edges. The seat track cleaners are non-loading on aluminum and leave superior surface finishes. Available in 54 and 80 grits in aluminum oxide grain mounted on a 1/4 x 1/2" shank.

54 Grit Seat Track Cleaner ..... PN 12-00955..... **$9.80**
80 Grit Seat Track Cleaner ..... PN 12-00952..... **$9.50**

SLIDE HAMMER



Blue vinyl hand grip over steel handle reduces sting on technicians hands and provides 100% grip. 3 lb. slide weight is mounted on 1/2" plated steel shaft. Broached hex in nose cone locks pulling screw in place...ends breakage. Supplied with two hardened pulling screws and "L" puller hook fabricated of aircraft quality steel. Nose cone and shaft threads are 1/2" - 20.

P/N 15-08252 .....**$51.75**

MACHINIST HOOK SCRIBE



Machinist Hook Scribe New. 2-point scriber has hardened, ground steel points. Features a straight point and a 90 degree point. Length: 9".

P/N 12-02896 .....**$3.95**

PIG TAIL HOOK SCRIBE



Both the 45 degree and pig tail points of the scribe are made of hardened, ground steel. Both ends of the tool unscrew from the body.

P/N 12-02897 .....**$3.95**

ELECTRIC ENGRAVER



Use like a pencil to write, draw, engrave on wood, metals, plastics, and glass. Variable stroke adjustment for heavy or fine engraving. Tungsten carbide tip for long life and clean lines. Soft-Grip neck for control and comfort and 6' Cord.

P/N 12-21355-1 .....**$14.75**

TO

NOTCHERS



SWISS PATTERN NEEDLE FILE SET

Swiss Pattern Needle File Sets have been designed to meet the needs of hobbyists, craftsmen, tool makers and jewelers. Every file is made from alloy steel and machined into distinctive shapes for various small scale and finishing applications. Also included is a 700 series Versa-Grip handle with a locking screw chuck.

P/N 12-03351 ..... **$19.95**

MAGNETIC BIT CADDY



A non-spill bit holder at your fingertips. 36 individual 1/4" and 5/16" screwdriver bits may be stored in this magnetic-based organizer. Remains solid at any angle placement while holding bits in their respective slots.

P/N 12-01083 ..... **$19.90**



STRIPMASTER WIRE STRIPPER

Stripmaster wire Sstripper #16 to #26 AWG. Knife-type blades Cleanly strips wire up to 7/8 in. (22mm). One-third less hand pressure for each strip Eliminates nicking, cutting, and fraying of wire. Wire gripper holds wire centered in hole.

P/N 12-03714 ..... **$61.75**



IDEAL COAX STRIPPER

3-step coaxial stripper. Adjustable coaxial wire stripper. For popular dual crimp BNC and TNC connectors. Strips braid 0.240 inch (6mm) and dielectric 0.240 inch (6mm). Replacement cassettes available.

P/N 12-03716 ..... **$33.50**



SCREW PAINT CUTTERS

For AN4 Screws. You know how frustrating it can be to remove a painted over screw only to wind up chipping up the paint job. But you wouldn't have that problem if you had a set of these innovative paint cutters. They work by slicing through the paint around the head of the screw so you can remove it without chipping the paint. They have a 1/4x28 thread to fit into any angle drill or you can get the optional arbor (p/n 12-02460) for use in a drill chuck. Does not work on dome head rivets. 1 lbs (0.5Kg) shipping weight.

Size	Part No.	Price	Size	Part No.	Price
AN4	12-02452	**$23.65**	AN6	12-02453	**$23.65**
AN8	12-02454	**$23.65**	AN10	12-02456	**$23.65**
1/4"	12-02459	**$24.50**	6 pc. Set	12-02461	**$124.80**



Arbor .....P/N 12-02460 ..... **$24.50**



INSTRUMENT MOUNTING HOLE DRILL JIG

Aircraft instrument mounting hole drill jig for standard 2-1/4" & 3-1/8" diameter instruments. Accurate and simple tool to use, drill jig made of hardened steel for long life. P/N 12-00975..... **$34.85**

MAGNETIZER / DEMAGNETIZER



This versatile tool saves you time and trouble by instantly magnetizing or demagnetizing you tools & parts on the job. Reliable, powerful permanent magnets for a super long life, and its compact size,shatterproof plastic shell, this tool will fit easily in you tool box. This tool allows easy, precise handling of small steel parts in confined spaces, collects metal items from inaccessible places, leaves 1 hand free for positioning the work piece, demagnitizes instruments & electronics components. Size: 2.1"x2"x1.1". Wt. .22 lb. P/N 12-16835..... **$19.80**

OL' JOINT JIGGER



OL' JOINT JIGGER MODEL RTN-100 TUBING NOTCHER -

Ol' Joint JiggerTM quickly notches tubing of up to 2" O.D. in less than 30 seconds. Great for assembling and welding tubing in your garage or workshop. Adjusts in single degree increments to make up to 60º angle notches. Automatic round tubing centering and alignment. CNC machined steel construction. Bi-metal hole saws not included. Use with your 1/2" hand drill. U.S.A. Ship Wt. 9 lbs.

P/N 12-01107..... **$159.95**



RTN-BASE (UNIVERSAL DRILL PRESS MOUNT) -

For use with RTN100 only. Allows for set up and dedication of a small drill press for tube notching. Adjustable for out-of-square tables, the RTN-Base also makes it easy to lay the notcher over horizontally, still bolted to the table, to handle long or cumbersome tubing that can't be notched in a vertical position. Minimum requirements: 1/3HP drill press with 3-1/2" to 4" of travel and 14" from the table or base to the chuck. (Bolts for attachment included) U.S.A. Ship Wt. 3 lbs. P/N 12-00691..... **$34.65**



OL' JOINT JIGGER MODEL RTN-1000 DELUXE ALUMINUM TUBING NOTCHER -

Ol' Joint JiggerTM combines precision performance, versatility and comfort for quickly notching tubing of up to 2" O.D. in less than 30 seconds. Enhanced vibration-reducing design and dual-axis base allow for either work bench or drill press mounting to provide the professional or hobbyist with the ultimate in tubing notchers. Laser-engraved protractor allows adjustments in single degree increments to make up to 60º angle notches. Automatic tube centering and alignment. Anodized aircraft-grade aluminum construction. Bi-metal hole saws not included. Use with your 1/2" hand drill or drill press. U.S.A. Ship Wt. 9 lbs.

P/N 12-01108..... **$237.95**

RTN NOTCHER REPLACEMENT PARTS & HOLESAWS

Description	Part No.	Price
5/8"-18 Thread Adapter	12-00020	**$6.50**
Main Arbor/Shaft (1/2"-20 Thread)	12-00021	**$16.35**
Bushings for Arbor Support (pair)	12-00022	**$6.00**
5/8" Holesaw	12-00023	**$14.75**
3/4" Holesaw	12-00024	**$14.75**
7/8" Holesaw	12-00025	**$14.75**
1-1/2" Holesaw	12-00030	**$15.25**
1-3/4" Holesaw	12-00032	**$18.75**
2" Holesaw	12-00034	**$18.75**

HOLESAW ASSORTMENTS

Description	Part No.	Price
1", 1-1/8", 1-1/4", 1-3/8", & 1-1/2"	12-00035	**$69.85**
1-1/8", 1-1/4", 1-3/8", 1-1/2" & 1-5/8"	12-00036	**$69.85**
1-1/4", 1-3/8", 1-1/2", 1-5/8", & 1-3/4"	12-00037	**$75.25**
1-3/8", 1-1/2", 1-5/8", 1-3/4" & 1-7/8"	12-00038	**$79.50**

PIPEMASTER WELDER'S TOOL FOR CONTOUR FITS



Pipemaster gives aircraft builders the ability to cut a piece of tubing on both ends and have it fit its intended location on the first try. Tedious hours of grinding and misfit joints can be eliminated producing exact welds and stronger airframes. Features spring temper stainless steel pins, aluminum inner shell, and rugged ABS housing. Simply slip over the pipe, push down, transfer and cut, and the tubing is ready to weld. Pipemaster transfers the exact outline of the pipe joint in just seconds. Use for penetration cuts as well.

Part No.	Tubing O.D.	Price
12-00102	3/4"	**$39.65**
12-00103	7/8"	**$39.95**
12-00104	1"	**$41.75**
12-00105	1-1/8"	**$50.25**
12-00106	1-1/4"	**$41.75**
12-00107	1-5/16"	**$49.80**
12-00108	1-3/8"	**$57.25**

Part No.	Tubing O.D.	Price
12-00109	1-1/2"	**$46.95**
12-00111	1-5/8"	**$57.25**
12-00112	1-3/4"	**$62.50**
12-00113	1-7/8"	**$65.50**
12-00114	2"	**$65.50**
12-00116	2-3/8"	**$66.50**

TO

Prices Subject to Change Without Notice

SANDERS - SURFACE TREATMENT KITS

3M™ ELITE PNEUMATIC ORBITAL SANDER



Features an alloy steel curved-throttle lever with built-in wrist support. 3M gripping material molded into the interchangeable comfort grip conveniently located speed control dial and internal muffler. Precision Balanced for Smooth Operation Meet or exceed highest performance standards Optimize to work with 3M abrasives. Multiple grips sizes available for improved operator comfort. P/N 05-11839..... **$249.00**

ADJUSTABLE FLEXIBILITY SANDERS (AFS)



Countless prototypes were built and tested for three years on performance, comfort, and durability to bring forth a line of finely tuned sanding tools that have been refined to perfection. Adjustable Flexibility Sander available in 4.5", 6", 9", 15", 21", 27", and 36".

Size (inches)	Part No.	Price
4.5	12-02862	**$24.85**
6	12-02866	**$14.90**
9	12-02867	**$41.90**
15	12-02868	**$67.75**
21	12-02869	**$73.65**
27	12-02870	**$104.50**
36	12-02871	**$199.75**



P-KIT AIRCRAFT WINDOW INSPECTION PRISM KIT

The "P-KIT" (Inspection Prism Kit) is packaged as a completely self contained aircraft window inspection tool kit. It comes in a waterproof lockable case and includes Instructions, Inspection Prism, Coupling Agent and a 6000 Candlepower Flashlight with batteries. It's ready to use to inspect your aircraft windows for possible bolt hole damage. P/N 12-01333..... **$1,936.00**

MBX KITS AND ACCESSORIES

MONTI

MBX Surface Treatment Systems

PATENTED TECHNOLOGY - MBX Systems are different from conventional surface treatment systems in that MBX Systems are based on several physical principles. Flexible brush-belts are inserted loosely into a cage-like adaptor system and secured with safety arms. The centrifugal force created by rotation causes the brush-belt to tighten and work as if suspended on a cushion of air. Advantages:Vibration-free operation: The vibration of the wire bristles that occurs when the bristles strike the target surface is absorbed by the air-cushion. The bristles re-strike the target surface at rest (without vibration). This achieves the maximum kinetic energy.

MBX BRUSH-BELT TECHNOLOGY - MBX Belts consist of individual, U-shaped crimped wire bundles anchored in a polyamide fabric. Made of spring steel, the wires have hardened tips that strike the target surface individually during rotation.

ADVANTAGES - High safety level: The U-shaped anchor points of the individual crimped bundles prevent wire bristles from being thrown clear. No heat development: Avoid toxic fumes and no smearing during the removal of sticky materials. No grinding: No removal of healthy material, no deformations. Flexibility: High degree of adaptability when working on contoured areas or areas with sharp edges.Optimal performance: Because of their design, each wire tip strikes the target surface twice per rotation.Long service life: Specially hardened wire tips with a hardness up to 68 HRC (Rockwell hardness) provide for a level of hardness never before achieved with conventional brush technology.

MBX PNEUMATIC DRIVE UNIT - Easy handling, lightweight - 1.1 kilograms, high torque, safe to use!Specially developed for the MBX brush-belt and MBX Vinyl Zapper systems. The high output rpm of the compressed-air turbine (21,000 rpm) is reduced to 3,500 rpm by means of a planetary gear and toothed belt; torque increases. This gives our MBX pneumatic drive units an optimised power profile. MBX brush-belts and MBX eraser wheels work as a direct extension to the drive shaft, i.e., there is no lateral centre of gravity and MBX drive units operate in-line. Work in hard-to-reach areas or in the removal of tough, thick, sticky materials (e.g. compounding materials, underbody corrosion) with optimal ventilation.

MBX PNUEMATIC STARTER SET



For the removal of seam sealant, corrosion, paint, vinyl decals, glue on aluminum and alloy.

SET 1 - • MP-3500 - MBX Pneumatic Power Tool S (3500 rpm) with adapter system for 23mm belts/31mm rubber eraser. • AA-0011 - Adapter for 11mm wire belts • BS M11X - V2A Wire Belt, Med., 11mm angled tips • BS-F11 - V2A Brush Belt, Fine, 11mm • RE-0023 - Rubber Eraser, 31m P/N 12-01394..... **$495.00**

MBX ELECTRIC STARTER SET



For the removal of seam sealant, corrosion, paint, vinyl decals, glue on aluminum and alloy.

ME-3200 - MBX ELECTRIC POWER - Tool A (3200 rpm) with adapter system for 23mm belts/31mm rubber eraser • AA-0011 - Adapter for 11mm wire belts • BS-M11X - V2A Wire Belt, Med., 11mm angled tips • BS-F11 - V2A Brush Belt, Fine, 11mm • RE-0023 - Rubber Eraser, 31mm P/N 12-01396 ..... **$495.00**

MBX BRUSH BELTS



Medium (11 or 23 mm) For the removal of seam sealant & corrosion on alluminum bodies



Fine (11 or 23 mm) For the removal of paint on aluminum bodies.

MBX Belts are made of a high-performance polyamide fabric - tension resistant up to 440 kilograms. Individual bristles made of spring steel or stainless steel are anchored U-shaped in the flexible polyamide fabric. The materials used for the production of MBX Belts offer top safety and durability due to the high flexibility of the MBX Belts. No clogging - no heat built-up - no grinding. The high masses due to centrifugal force during rotation are absorbed safety by MBX Adapter Systems.MBX Medium have angled tips to create a sandblast effect. 11mm is for expecially hard-to-reach-areas such as a 90° angles.

BS-M11X Med. Blue 11mm Brush P/N 12-01402 ..... **$29.85**

BS-M23X Med. Blue 23mm Brush P/N 12-01403 ..... **$29.85**

BS-F11 Fine Blue 11mm Brush P/N 12-01404 ..... **$29.85**

BS-F23 Fine Blue 23mm Brush P/N 12-01405 ..... **$29.95**

MBX VINYL ZAPPER



"The rotating toothed eraser wheel", patented For the removal of self-adhesive foils and materials, wide-area decoration, adhesive residue on decorative strips and lettering on OEM-painted surfaces made of metal, aluminium, glass, fibreglass (gel coats) - and most amazing: NO PAINT DAMAGE.The centrifugal force created by rotation makes the MBX Vinyl Zapper work as if suspended on a cushion of air. Advantages: Faster working speeds of up to 3,500 rpm Conventional rubber eraser wheels operate only at circa 1,500 rpm. No paint damage, no smearing despite speeds of 3,500 rpm Toothed wheel design. Easy handling. Vibration-free, smooth running (compare a solid rubber tire with an air-filled tire). Increased performance. The working surface of the MBX Vinyl Zapper is strongly enlarged by the application of pressure to the work surface. This improves performance (compare to a car tire containing only a small amount of air). Long service life Wide construction. Vinyl Zapper 31mm Toothed Wheel Construction Removal of elements such as vinyl decals & DOT tape from metal surfaces, fiberglass, plate glass, wood, aluminum, OEM paint finish.

P/N 12-01406 ..... **$31.95**

MBX VINYL ZAPPER KITS



MBX Vinyl Zapper Kit is for removing vinyl decals and graphics on metal glass and fiber glass. It is available with either a pneumatic tool or an electric tool.

Description	Part No.	Price
MBX Electric Vinyl Zapper Kit USSE-01-05 MBX Electric Tool, 1-23mm Adaptor, 3 Vinyl Erasers	12-02037	**$469.50**
MBX Pneumatic Vinyl Zapper Kit USSP-01-05 MBX Pneumatic Tool, 1-23mm Adaptor, 3 Vinyl Erasers	12-02038	**$466.00**

STORAGE STATION



For storage of up to 15 wire belts or 9 rubber erasers and one MBX Power Tool (machine, belts, erasers not included).

P/N 12-01399 ..... **$52.75**

TO

CLECOS - HOLE SAWS

CLECO SHEET HOLDERS



K-SERIES SPRING CLECOS - Sheet holders provide the quickest method for holding sheets together for drilling or riveting. Drill the size hole needed for the rivet and insert the sheet holder. The holders listed comprise the most common sizes. Material thickness range 0" - 1/4". Use with sheet holder pliers. ***10% discount on 50 pcs., 15% discount on 100 pcs.***

Description	Size	Part No.	Price
M-3/32 CLECO	3/32"	12-01140	**$0.65**
M-1/8 CLECO	1/8"	12-01138	**$0.67**
M-5/32 CLECO	5/32"	12-01141	**$0.65**
M-3/16 CLECO	3/16"	12-01139	**$0.65**

KK-SERIES SHORT BODY SPRING CLECOS - A shorter overall body to use in areas of limited space. 0-1/4" grip range. Made in USA

Description	Size	Part No.	Price
CC-3/32 CLECO	3/32"	12-02073	**$1.10**
CC-1/8 CLECO	1/8"	12-02074	**$1.07**
CC-5/32 CLECO	5/32"	12-02075	**$1.10**
CC-3/16 CLECO	3/16"	12-02076	**$1.10**

KHD-SERIES LONG REACH SPRING CLECOS - Designed for clamping thicker material. 0-1/2" grip range. Made in USA

Description	Size	Part No.	Price
CHD-3/32 CLECO	3/32"	12-02077	**$1.10**
CHD-1/8 CLECO	1/8"	12-02078	**$1.07**
CHD-5/32 CLECO	5/32"	12-02079	**$1.07**
CHD-3/16 CLECO	3/16"	12-02080	**$1.07**

CL SERIES - The "CL" series fasteners are the standard plunger type Cleco with an extended grip range. Spring type Fastner

Description	Size	Part No.	Price
1/4"-1/2" Grip, Zinc	#40	12-02425	**$1.10**
1/4"-1/2" Grip, Copper	#30	12-02426	**$1.10**
1/4"-1/2" Grip, Black	#21	12-02427	**$1.10**
1/4"-1/2" Grip, Brass	#10	12-02428	**$1.06**

CLECO KEEPER



Fabricated of durable polypropolene, the Cleco Keeper is prepunched to hold up to fifty sheet metal fasteners. Allows the builder to extract and install Clecos from the storage bin to the work with one hand. Compact, the Cleco Keeper measures 8"L x 3"W. Helps eliminate misplaced fasteners and makes inventory of available fasteners quick and accurate.

For 3/32" clecos .....P/N 12-10116 ..... **$7.95**
For 1/8" clecos .....P/N 12-10117 ..... **$7.95**
For 5/32" clecos .....P/N 12-10118 ..... **$7.95**
For 3/16" clecos .....P/N 12-00604 ..... **$9.95**

NO-MAR" REUSABLE CLECO BOOTS



Eliminates surface marring both on painted and unpainted surfaces. Easily slips on plier operated style clecos, one size fits all. Yellow polyurethane color. 25 pcs./pkg.

P/N 12-00626 ..... **$10.70**

CLECALL UPRIGHT CLECO PLIERS



The world's lightest and most comfortable cleco pliers!™ Clecall Upright Cleco Pliers: Faster to use / Easier to Activate. Spring Loaded to open with less effort. 70% lighter than normal cleco pliers at 4.3 oz. (aluminum version) Latest design accommodates 1/4" Cleco width. Vertical profile installs clecos in tight areas with ease!. Reduce fatigue and wrist pain. Install clecos on upside down surfaces easily. Designed by Zenith Builder and EAA Lifetime Member. Economy Steel Pliers

P/N 12-03756 ..... **$19.95**

SPRING LOADED CLECO PLIERS



Due to significant demand, Clecall has developed the first spring loaded traditional cleco pliers with a very affordable price point. P/N 12-03807 ..... **$10.95**

CLECO SHEET HOLDER PLIERS



These pliers are designed to grip and actuate all standard sizes of sheet holders and tension clamps. New manufacture. P/N 12-10105 ..... **$5.65**

CLECO REVERSE PLIERS



Used in limited access areas. requires less travel per activation. Model TP74B.P/N 12-00370 ..... **$30.50**

PNEUMATIC CLECO INSTALLATION TOOL



Features: • Lever throttle• 360° swivel mount• For use on button type and side grip temporary fasteners• Quiet operation• Straight handle• 5'8" polyurethane lead hose with 1/8" Male NPT• 5-3/8" Length of tool with 1/4" Female NPT Threaded for air fitting• Made in the U.S.A

P/N 12-01120 ..... **$89.50**

CLECO GRIP POWER DRIVEN SHEET HOLDERS



Power-Hex Nut Style -Standard Grip 0-1/2". Hex Nut Fasteners are recommended for high production applications that require a consistent clamping force. They are pneumatic driven with the US7381HX Power Nut Runner.

Description	Size	Part No.	Price
0-1/2" Grip Power Driven Hex Nut Fastner, Copper	#30	12-02430	**$3.65**
0-1/2" Grip Power Driven Hex Nut Fastner, Black	#21	12-02431	**$3.75**
0-1/2" Grip Power Driven Hex Nut Fastner, Brass	#10	12-02432	**$3.75**



Power-Hex Nut Style -Long Grip 0-1"

Description	Size	Part No.	Price
1" Grip Power Driven Hex Nut Fastner, Zinc	#40	12-02433	**$4.35**
1" Grip Power Driven Hex Nut Fastner, Copper	#30	12-02434	**$4.35**
1" Grip Power Driven Hex Nut Fastner, Black	#21	12-02435	**$4.35**
1" Grip Power Driven Hex Nut Fastner, Brass	#10	12-02436	**$4.35**



Manual Wing Nut Style - Standard Grip 0-1/2". Wing Nut Fasteners are recommended for low production applications where high clamping force is required. The clamping force ranges from zero to 300 lbs.

Description	Size	Part No.	Price
0-1/2" Grip Manual Wing Nut Fastner, Zinc	#40	12-02437	**$3.80**
0-1/2" Grip Manual Wing Nut Fastner, Copper	#30	12-02438	**$3.90**
0-1/2" Grip Manual Wing Nut Fastner, Black	#21	12-02439	**$3.90**
0-1/2" Grip Manual Wing Nut Fastner, Brass	#10	12-02440	**$3.80**



Manual Wing Nut Style - Long Grip 0-1"

Description	Size	Part No.	Price
1" Grip Manual Wing Nut Fastner, Zinc	#40	12-02441	**$4.35**
1" Grip Manual Wing Nut Fastner, Copper	#30	12-02442	**$4.35**
1" Grip Manual Wing Nut Fastner, Black	#21	12-02443	**$4.55**
1" Grip Manual Wing Nut Fastner, Brass	#10	12-02444	**$4.35**

HEAVY-DUTY BI-METAL HOLE SAWS



Milwaukee hole saws provide an economical means of extending the useful range of portable drills, drill presses and lathes. High speed cutting edges welded to steel bodies produce clean, accurate holes All hole saws listed cut to standard 1.25" depth. Order appropriate arbor for use with each size hole saw.

Hole Dia.	Part No.	Use w/Arbor No.	Price
5/8"	49-56-0620	12-01993	**$8.45**
3/4"	12-02001	"	**$9.65**
7/8"	12-01992	"	**$9.60**
1"	49-56-1000	"	**$8.90**
1-1/8"	12-01991	"	**$8.50**
1-3/16"	49-56-1180	"	**$7.95**
1-1/4"	49-56-1250	49-56-7055	**$9.90**
1-3/8"	49-56-1370	"	**$9.50**
1-1/2"	12-01990	"	**$9.75**
1-5/8"	49-56-1620	"	**$8.95**
1-3/4"	49-56-1750	"	**$9.95**
1-7/8"	49-56-1870	"	**$9.55**
2"	49-56-2000	"	**$11.50**
2-1/4"	49-56-2250	"	**$15.50**
3-1/8"	49-56-3120	"	**$15.85**

HEAVY-DUTY SHOE SAW ARBORS



ARBOR - Use for hole saw sizes 5/8" through 1-3/16". 3 milled flats prevent slipping in chuck. Pilot hole size 1/4". Has 1/4" shank.

P/N 12-01993 ..... **$12.45**



QUICK CHANGE ARBOR - Use for hole saw sizes 1-1/4" and larger. The Quick Change 7/16" shank prevents slipping in chuck. Pin drive construction permits fast interchanging of hole saws without removing arbor from chuck. Pilot drill size 1/4".

P/N 49-56-7055 ..... **$22.75**

TO

Prices Subject to Change Without Notice

5 INCH SERRATED EDGE SCISSORS



5" stainless steel scissors are ideal for consumer and industrial applications. High quality stainless steel blades meet perfectly for precision cutting. The material being cut is held in place by one blade which is slightly serrated providing maximum control. Scissors so sharp, they can cut through electrical wiring, plastic, aircraft composites, Kevlar® and more. P/N 12-02975 ..... **$18.95**

UTILITY SCISSORS



These 5.5" stainless steel utility scissors can cut through heavy materials, while the black plastic handle and ergonomic design make using the tool comfortable. These scissors are not only useful in the medical field, but in the industrial world as well, and its strong safety tip can offer peace of mind to medics and industrial workers alike. P/N 13-03015 ..... **$3.65**

CERAMIC SAFETY SCISSORS



With a proprietary finger-friendly ceramic grind, these scissors cut materials effectively, but they resist cutting skin. Used in industrial, institutional, and educational settings alike, these lightweight scissors are ambidextrous and durable. Soft-touch finger grips line their tough glass-filled nylon handles for the ideal mix of strength and comfort. They are also non-sparking and chemically inert.

P/N 12-04970 ..... **$29.99**

NO NICK TOOL CABLE TIE REMOVAL TOOL



No nick tool cable tie removal tool

P/N 12-03169 ..... **$26.60**

PLASTIC / LAMINATE CUTTER



Olfa Heavy-duty plastic/laminate cutter, designed to produce a fine score line to precisely break plastics, acrylic and laminates. Features built-in room for spare blades, and blade retractable function. Comes with 2 spare blades in handle with shipment. P/N 12-02973 ..... **$11.50**

RATCHET-LOCK UTILITY KNIFE



This heavy-duty knife features an all-over rubber grip for professional comfort and control. An acetone resistant, elastomer handle with a polyacetate blade-lock makes it an official acetone resistant cutter. It features a ratchet-wheel blade lock and a heavy-gauge stainless steel blade channel that holds blade tight. A new sharp edge with each snap.

P/N 12-03654 ..... **$8.45**

FIBERGLASS RUBBER GRIP UTILITY KNIFE



This heavy-duty auto-lock utility knife is a powerful anti-slip utility knife, featuring a professional grade Fiberglass rubber grip and automatic blade lock for maximum comfort and control. Heavy-gauge stainless steel blade channel protects and holds blade tight. Acetone resistant handle for easy cleaning. Built in versatile metal pick for opening paint cans, removing switch plates and more. Easy, tool-free blade change. Includes the double-honed UltraSharp Black snap-blade. P/N 12-03655 ..... **$10.95**

OLFA SNAP BLADE KNIFE



Features a convenient detachable built-in blade snapper/disposal container in a heavy-duty ABS plastic handle. Storage container can hold up to 26 9mm AB blade segments for thousands of cuts before emptying is needed. Easy, tool-free blade change. Blade is made of high-quality Japanese grade carbon tool steel. P/N 12-03656 ..... **$5.85**

CERAMIC CRAFT KNIFE



The Slice craft knife is ideal for precision cutting, scraping, and handling. Its ceramic safety blade is non-sparking, chemically inert, safe to 1600 degrees Celsius, never rusts, and requires no oil coating. With a textured grip for superior control, this precision knife allows the user to make accurate, delicate cuts. Its ambidextrous no-roll design is weighted for balance and stability. Includes one rounded-tip ceramic safety blade with patented finger-friendly edge.

P/N 12-04971 ..... **$12.95**

SELF HEALING ROTARY CUTTING MATS



Self-healing, double-sided large mat protects and covers work. Green, self-healing professional quality rotary mat. Double-sided with yellow grid lines on one side for precision cutting, solid on opposite for general cutting. 1.5mm thick for a variety of applications. Store flat.

24" x 36" .....P/N 12-02403 ..... **$43.50**
23" x 70" - with clip set (RM-clips/2) .....P/N 12-02404 ..... **$93.75**
35" x 70" - with clip set (RM-clips/3) .....P/N 12-02405 ..... **$133.95**

ROTARY CUTTER



Ergonomic 45mm rotary cutter features a unique comfortable handle design for both left- and right-handed use.

Rotary Cutter .....P/N 01-00302 ..... **$23.50**
RB45-1 Replacement Blade only .....P/N 01-00300 ..... **$6.95**
RB45-1 Replacement Blade pk of 5.....P/N 01-00301 ..... **$27.75**
Rotary Pinking Blade.....P/N 12-01709 ..... **$9.75**

Good For: general quilting, sewing and craft projects. Great for cutting out patterns, reduces fraying. Can be used in industrial applications.

STAINLESS STEEL SCISSORS



The OLFA stainless steel scissors (7" overall length) are extremely high quality stainless steel blades perfect for precision cutting. Ideal for use on such varied materials as paper, fabrics, plastic, rubber, & aircraft composites. .....P/N 01-00303 ..... **$18.95**

MULTIPURPOSE PLASTIC UTILITY KNIFE - Auto-Lock-featured standard-duty model with a pocket clip/blade snapper. For both right- and left-handed uses. Handle and all plastic parts made from 100% recycled materials. Easy disassembly for next recycling. 9mm..... P/N 12-03652..... **$5.95**



L-2 CUTTER - 18MM heavy-duty cutter features a ratchet wheel blade lock, heavy gauge stainless steel blade channel, highest grade carbon tool steel blade and anti-slip rubber grip insert..... P/N 12-00258..... **$8.50**



NOL-1 CUTTER - Heavy-duty 18mm "HandSaver" Acetone resistant cushion grip with ratchet wheel blade lock and high-carbon tool steel snap-off OLFA blade.

Cutter .....P/N 12-00257 ..... **$8.95**



SNAP IT 'N' TRAP IT CUTTER - 18mm heavy duty cutter features an innovative design for performance and functionality. Developed for professionals looking for a convenient way to snap-off and securely store their dull blade segment for increased on-the-job productivity. Features a convenient detachable built-in blade snapper/disposal container in a heavy-duty ABS plastic handle. Cutter.....P/N 12-02696 ..... **$10.95**
10 Pack Blade .....P/N 12-02697 ..... **$7.95**



ULTRAMAX CUTTER - Heavy-duty utility knife / cutter is an auto lock cutter includes a stainless steel blade channel with a unique cushion handle provides a comfortable and positive grip.

P/N 12-02367..... **$8.95**



H-1 CUTTER - 25mm Extra heavy-duty cutter features largest blade available, ratchet lock to prevent slipping, rubber grip insert for positive control, and a rope loop to secure cutter to belt or work table. Cutter..... P/N 12-00259 ..... **$13.70**
Replacement blades (5 pack) .... P/N 12-02970 ..... **$8.50**



AUTO-LOCK STAINLESS PROFESSIONAL KNIFE - Accomodates both left- and right-handed users. Features locking slide blade, stainless steel handle and built-in pocket clip/blade snapper. A perfect steel cutter where rust is a concern. Lifetime Guarantee.

Cutter .....P/N 12-00339..... **$7.50**
Replacement blades (10 pack)...P/N 12-00340..... **$4.85**

EXTRA HEAVY DUTY RACHET LOCK CUTTER - 25mm Extra heavy-duty cutter features: *anti-slip cushion handle for exceptional comfort and safety *chemical resistant handle for easy cleaning * Heavy guage stainless steel blade channel holds blade tight * ratchet wheel blade lock *rope loop * high-quality carbon tool steel snap-off blades for sharpness and durability.



P/N 12-02368..... **$14.75**

EXTRA HEAVY DUTY SNAP-OFF BLADE, 20 PACK - Snap-off black blades, are made from high quality carbon tool steel. Blade container locks for safety. Fits most Extra Heavy-Duty handles. 7 cutting edges per blade. 20 blades per pack. P/N 12-02369..... **$26.50**



EXTRA HEAVY DUTY RATCHET LOCK CUTTER - Anti-slip grip cutting tool. Features an automatic blade lock, cushion grip for maximum comfort and control, and a heavy gauge stainless steel blade channel that holds blade tight. Chemical resistant handle for easy cleaning. Includes a pocket clip for convenience, and the premium, ULTRAMAX® ultra sharp durable snap-off blade.



P/N 12-02370..... **$6.50**

TO

GENERAL SPECIALTY TOOLS

CIRCULAR HOLE CUTTER



General's circle cutters produce precision circles in sheet metal, brass, copper, soft steel, aluminum, plastic, wood and composition materials. Bodies are constructed of heat treated tool steel for durability. All Circle Cutters have replaceable pilot points. The replaceable cutter blades are made of high-speed steel for precise and clean cuts. Circle Cutters are adjustable for cutting variable diameter holes. A hex wrench is included for diameter and depth adjustments.

#4 Cutter..... P/N 12-10600 ... **$13.75**
Extra 3/16" Blade..... P/N 12-10700 ..... **$3.75**
Pilot Drills for #4 Cutter ..... P/N 12-10800 ..... **$3.50**

JEWELERS' SCREWDRIVER KITS



The Screwdriver and Hobby Kit includes five interchangeable blades and a heavy duty knurled handle. Loaded with the most popular jeweler's-sized Slotted and Phillips tips and a scratch awl, this modestly priced set is great for model making and other small-scale applications.

P/N 12-19600.....**$5.95**

SWIVEL HEAD PIN VISE



The Swivel Head Pin Vise provides fingertip control of small tools when working with jewelry, electronics or models. The double-ended collet offers two distinct sizes for holding a variety of drill bits, reamers and taps. For added control, this Pin Vise has been design with a knurled aluminum body for a sure grip while the swivel head turns smoothly against your palm. P/N 92.....**$9.95**

STEEL PROTRACTORS



Trusted by machinists and draftsmen worldwide to deliver crucial measurements with unwavering accuracy. The 6" adjustable arm is ideal for setting bevels, taking measurements and transferring angles. Ultra-fine etched graduations read from 0 to 180 degrees in forward and reverse directions, and will not wear or rub off. Made of ground stainless steel for precision and durability. P/N 17.....**$13.75**

POCKET CALIPERS



Although small in stature, these 4" Slide Calipers deliver the same accuracy and precision as some of our larger models. The rugged, stainless steel construction, coupled with a compact design makes these Slide Calipers a great addition to any workbench or toolbox. This item provides inside and outside readings in both 1/16" and 1/32" graduations. In addition, there is a decimal equivalents chart on the caliper's back side for help in making measurement calculations.16ths & 32nds P/N 729 ..... **$11.75**
16ths & MM.....P/N 12-01633 . **$12.25**

DIGITAL FRACTIONAL CALIPER



The Carbon Fiber Digital Fractional Caliper brings you three universal systems of measurement, making it an equally practical choice for both professional and do-it-yourself projects. The high-contrast digital display easily switches between inches, millimeters and fractions, with guaranteed accuracy to 0.001". In addition, the lightweight, non-marring carbon fiber construction delivers accurate readings of inside, outside, step and depth measurements.

3" Caliper .....P/N 12-02307 .....**$16.75**
6" Caliper .....P/N 12-03201 .....**$24.95**

WIRE STRIPPERS & CUTTERS



Just dial the size and avoid damaging wire, especially when used repetitively. Spring opening jaws can be locked in closed position to protect cutting edges. Made of tool steel, equipped with vinyl cushion grip handles. Individually carded. P/N 69 .....**$9.95**

FEELER GAGES



Blades are made of tempered steel of exacting tolerances. Each blade has its size printed in both decimals of an inch and millimeters. Nickel plated case has knurled locking nut. No. 230 has 26 3x1/2 in. leaves of the following sizes: .0015, .002, .0025, .003. .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, .024 and .025 in. P/N 230 .....**$7.75**

BRASS CALIPERS



For measuring rod diameters, plate thickness, inside and outside of tubing. 4" outside and inside measuring capacity. Heavy guage solid brass. Inside and outside graduations in 16ths and millimeters. Close tolerance dovetail design. Smooth brushed finish with lacquer coating. Finely stamped numbers and graduations.

P/N 12-03782 .....**$8.50**

LOCKING WING ACADEMIC DIVIDER



This 6" drafting compass is most commonly used to measure inside or outside diameters and reproduce circles and arcs. Often used with maps or architecture, the wing divider features a pencil holder to easily plot curves and lines. Lockable wing for repeat measurements. P/N 12-04896 .....**$7.95**

STEEL RULES



General's industrial quality Steel Rules are precision made with etched fine black graduations for easy reading and long life. The two finishes available are polished stainless steel or satin chrome. Front graduated in 10ths, and 100ths, back in 32nds and 64ths. Quality 12 inch (30cm) flexible stainless steel rule. Precision made. Fine black etched graduations. 6" Long, 15/32" Wide .....P/N 616 .....**$5.35**
12" Long, 15/32" Wide .....P/N 1216 .....**$8.95**

12 INCH/300MM STEEL RULER



The #CF1227ME Industrial Precision 12 In./300mm Rigid Steel Rule can make very precise measurements. P/N 13-20643 .....**$15.75**

PERMANENT ALNICO MAGNETS



These industrial grade Alnico (Aluminum/Nickel/Cobalt) Magnets are built for heavy duty use and will not naturally demagnetize over time like other magnets. They are handy in a plethora of applications and work settings. The horseshoe-shaped Power Alnico Magnets are available in 2 distinct sizes with extraordinarily strong pull capacities ranging up to 13 lbs.No. 370-1 Pocket Magnet, 3/4 oz., approx. 1 lb. pull P/N 370-1..... **$5.95**
No. 370-2 Power Magnet, 2 oz., approx. 13 lb. pull
P/N 370-2.....**$12.95**

WIRE & SHEET METAL GAUGES



#20 WIRE GAUGE - The Wire Gage helps you to accurately determine the thickness of American Standard wire from 0 to 36. The Gage works with all non-ferrous wires, metals and rods such as copper, brass and aluminum. This heavy duty tool is made from hardened and tempered steel, and is stamped with wire sizes on the front and their decimal equivalents on the back

#20 American Standard Wire Gauge - For gauging non-ferrous wire & metal like copper, brass, aluminum, etc.

P/N 12-02384.....**$22.65**



#21 U.S. STANDARD SHEET METAL GAUGE - The Sheet Metal Gage is for gauging uncoated sheet, plate iron and steel, based on weights in ounces per square foot. gauge numbers are in U.S. Standard. Numbers 0-36 (.325"-.007"). Made of hardened steel, with a satin finish for easy reading. Decimal equivalents on the back side. Measures 3-1/4" in diameter. P/N 21 .....**$21.85**

SCREWDRIVER HANDLE SCRATCH AWL



If you're looking for a quality, yet economic awl, then check out our Screwdriver Handle Scratch Awl. Featuring a 3-5/8" steel blade and a durable plastic handle, this Scratch Awl makes a great addition to any workbench of toolbox.

P/N 12-01873 .....**$5.95**

UTILITY AUTOMATIC CENTER PUNCH



The Utility Automatic Center Punch is our most economical model, offering a lightweight aluminum body and a hardened steel point. The punch is great for use on various metals and woods, and is impact adjustable. P/N 12-01874 .....**$11.85**

STAINLESS STEEL AUTOMATIC CENTER PUNCH



Provides accurate center punches to prevent drill bits from traveling. It has a one-hand spring impact operation, no hammer needed. This is used for marking, punching & staking and it has a durable stainless steel body that will not rust. P/N 12-03515 .....**$13.65**

TRAMMEL POINTS



General's adjustable trammels accurately measure and mark distances that are too great for conventional compasses and dividers. Trammels will accurately transfer measurements, scribe arcs and lay out circles. Points can be replaced with pencils, ballpoint pens, crayons or soapstone sticks for marking various materials

P/N 520 .....**$34.75**

DRILL GAUGES



General's Drill Gages help you to quickly and accurately identify the sizes of stray drill bits in your workshop. These gages can be extremely useful with older, unmarked bits or ones that are too small for markings. Each heat treated, heavy steel gage is machined to close tolerance for spot-on accuracy. The bit sizes and decimal equivalents are permanently etched to the face to provide years of dependable use.

Part No.	No.	Description	Price
12-00519	14	Fractional size drills 1/16" – 1/2" x 64ths	$12.75
12-00378	15	Number size drills 1 to 60	$12.95

TO

GENERAL SPECIALTY TOOLS

COTTER PIN PULLER



General's Cotter Pin Puller helps you to easily and safely remove steel cotter pins from confined areas. The compound bend design facilitates use of the tool with either a pull or a twist motion. In addition, the heavy duty screwdriver handle provides a familiar, comfortable grip.
P/N 12-01892 ..... **$6.95**

PRECISION MAGNETIZER/ DEMAGNETIZER



Our Precision Magnetizer and Demagnetizer transforms standard screwdrivers, tweezers and tool bits into powerful magnetic pickups. This dual-sized device can magnetize screwdrivers for installing small screws in jewelry, or demagnetize a set of tweezers for working with sensitive electronics. In addition, the innovative step design allows you to control the level of magnetism that is imposed upon your tools.
P/N 12-01890 ..... **$3.95**

ARCH PUNCH SET



Our extensive selection of Arch Punches are machined to close tolerances for creating precise holes in gasket material, rubber and soft metals. These industrial-quality tools are hand forged to ensure the longevity and accuracy of the cutting edge. This seven-piece set includes some of our most popular punch sizes and is conveniently packaged in a vinyl storage pouch.
P/N 12-01891 ..... **$76.85**

INSPECTION MIRRORS



General's Inspection Mirrors are known for their seemingly limitless uses both around the home and in the shop. For instance, an Inspection Mirror can be used to check behind an armoire for lost keys or beneath an engine block for a missing bolt. The Inspection Mirrors come in a variety sizes and lengths, and feature dual ball-and-socket joints for infinite angle adjustments of the mirror.

1-1/4 Diam.....P/N 12-01887 ..... **$6.75**
2-1/4 Diam.....P/N 12-01888 ..... **$9.75**
3-1/2 Oblong.....P/N 12-01889 ..... **$10.75**

LED-LIGHTED TELESCOPING INSPECTION MIRROR



2 extra bright LED lights facilitate the inspection of hard-to-see and hard-to-reach areas. Easily peer into the dark crevices of your work space in search of leaks, breaks or lost tools. Telescoping shaft extends to 33 in. (840mm). Fully polished, shatter-resistant glass mirror sits on a 360° swivel, double ball joint for accurate positioning and infinite angle adjustments. Non-slip cushion grip. CE Approved.

Round Mirror.....P/N 12-03197 ..... **$14.65**
Rectangular Mirror.....P/N 12-03199 ..... **$13.95**

TELESCOPING ALLIGATOR CLIP



The Telescoping Alligator Clip is often used as a third-hand tool in electrical repair for holding and positioning wires. It is also commonly employed around the home for lighting pilot lights and barbeques. The extendable shaft reaches up to 24-1/2" for working in cramped areas, or to provide a safety buffer for lighting a gas grill or furnace. The tool condenses to 5-1/2" and is equipped with pocket clip for those on the go.
P/N 12-01884 ..... **$5.75**

DECAL ERASER WHEEL



For quick and easy removal of decals, pinstripes, bumper stickers, reflective tapes etc from glass and OEM painted surfaces without any damage. Also very effective in removing adhesive tapes and glue from the back of moldings. Best result at 1500 - 3000 rpm. Let the wheel do the work, apply light pressure only. Start at the top of the decal and move side to side. For faster results, use entire width of the wheel, do not tilt on angle. Remove any residue with appropriate mild solvent. Natural Rubber. Diameter: 4 Inch. Width: 1 Inch. Max RPM: 4000 Universal arbor, no special tool needed. Use with electric or pneumatic tools
P/N 12-02401 ..... **$16.50**

REVOLVING PUNCH



General's revolving punch plier is a convenient spring tension, self-opening tool for punching round holes in leather, plastic, rubber, canvas, cardboard and similar materials. The snap ring pliers are used for the installation or removal of exterior and interior snap rings. Revolving turret with six hardened steel punches: 5/64", 3/32", 7/64", 1/8", 5/32", and 3/16"
P/N 72 ..... **$9.90**

5PC EXTRA LONG DRIVE PIN PUNCH SET



These Drive Pin Punches have been machined to exacting tolerances for accurate driving without damaging the pin or hole. The punch ends are ground square to sit flush on the top of the pin. Made of hardened tool steel with a knurled body, General's Drive Pin Punches can either be held by hand or with our Punch and Chisel holder. This five-piece set features extra-long 3-1/2" shafts for reaching deeply recessed pins.
P/N 12-01875 ..... **$29.85**

5-PC PRECISION ULTRAREACH STAR SCREWDRIVER SET SLOTTED & PHILLIPS



These UltraTech Precision Screwdriver Sets were assembled in conjunction with industry tradesmen to offer the most comprehensive and reliable solutions. This five-piece set includes Slotted and Phillips screwdrivers in two distinct handle sizes. The color-coded ring on each screwdriver helps you to easily identify the blade type when working arduously in the field.
P/N 12-01881 ..... **$17.95**

5-PC PRECISION ULTRAREACH STAR SCREWDRIVER SET



These UltraTech Precision Screwdriver Sets were assembled in conjunction with industry tradesmen to offer the most comprehensive and reliable solutions. This five-piece Torx set features a great assortment of blades in two distinct handle sizes. The color-coded ring on each screwdriver helps you to easily identify the blade type when working arduously in the field.
P/N 12-01882 ..... **$20.75**

PICK AND HOOK 4 PIECE SET



Get into tight places to retrieve small parts, "O" rings, and gaskets. Great for household and hobby use. Includes straight pick, 90° pick, 120° hook, and round angle hook. High-visibility handles. Screwdriver-style handles give better control. Specifications: Includes straight pick, 90° pick, 120° hook, and round angle hook, High-visibility handles, Screwdriver-style handles give better control, 5-1/4" average length, Handle: 5/8" square, 2-1/2" L, Approximate weight: 0.20 lbs.
P/N 12-02642 ..... **$3.50**

BULLSEYE PICKS





The bullseye pick was originally used in the dent repair/collision trade, but also works great for restoration work. These are ideal to reach in around the edge of a panel, around a gusset, or into a blind area to repair the dent from the backside. By sighting the low area through the open sight, the tool will deliver accurate light blows to raise the low area. This tool includes both a regular pick and a blunt tip. The blunt tip works great for aluminum and prevents unattractive pick marks in the metal.

15" ..... P/N 12-02292 ..... **$109.75**
25" ..... P/N 12-02293 ..... **$119.95**

THREAD REPAIR FILE



The Thread Repair Files help breathe life back into bolts, screws or fittings that have been damaged due to cross-threading or corrosion. Made of high carbon steel, the Repair Files offer eight different thread pitches. In addition, the Thread Repair Files can also be used as a screw pitch gage.
P/N 12-01879 ..... **$10.95**

PRECISION PENCIL COMPASS



The Precision Pencil Compass is a robust scribing and marking tool with a jaw capacity of up to 9". The fulcrum spring handle makes this tool great for making contours, circles and edge marks. A carpenter's favorite.
P/N 12-01872 ..... **$5.95**

LIGHTED MAGNETIC PICK UP



Powerful Bright White LED Flexible Obedient Gooseneck. Heavy-duty Anodized Aluminum Body Magnet easily lifts 3 lbs. (1360g) Telescopes from 6 in. to 14 in. (152 – 356mm) 3 "LR44" batteries included.
P/N 12-03783 ..... **$10.85**

TO

M-4 PIPER / CESSNA / MOONEY TAPER PIN TOOL

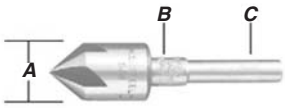


Sweating the Piper Control Wheel AD? Relax, this patent pending M-4 tool makes the hardest part of compliance with this AD easy. This specialty tool was designed to counter the frustration of removing the Piper control wheel taper pin. With the aid of the M-4 tool even the most stubborn taper pin can be removed in minutes, not hours, without vibration or stress being induced on your aircraft or the surrounding delicate instruments and avionics. The tool is self-indexing, locking the taper pin in position and securing itself in place for easy pin removal. Quality made in the USA and precision milled from bar stock for maximum strength, the body is Cad Plated for corrosion resistance and the press screw is Grade 8 to assure long life. The tool is shipped with detailed instructions.

P/N 12-02620 ..... **$195.00**

5 FLUTE ROSE PATTERN COUNTERSINKS





Designed with the perfectionist in mind, these Rose Pattern Countersinks are a must have for any close-tolerance woodworking or machinist project. The 5-flute design reduces chatter and easily pierces steel, brass, aluminum, plastic and wood. The stepped shank can be used with either a 1/4" or 3/8" chuck.

A	B	C	PN	Price
1/2"	3/8"	1/4"	12-01863	**$3.85**
5/8"	3/8"	1/4"	12-01865	**$3.95**
3/4"	3/8"	1/4"	12-01864	**$4.95**

6 INCH CONTOUR GAGE



General's 6" Contour Gage is designed for precise surface duplication in woodworking, fine carpentry and other professional genres. The 35 ultra-thin leaves per inch assure that you are getting an exact replication of your copied shape. The Contour Gage is capable of duplicating surfaces up to 3-1/2" deep. Instructions: 1. Press Contour Gage against surface to be copied. 2. Trace the formed contour gage onto your cutting material. 3. Cut the material. 4. Fit into place. P/N 12-01870 ..... **$8.95**

UTILITY TUNGSTEN CARBIDE TIP SCRIBER/ETCHING PEN



The power of our Utility Scriber and Etching Pen is eclipsed only by its affordability. This durable scriber is a terrific pickup for making quick and accurate marks in the hardest work pieces. In addition, the Utility Scriber includes a permanent magnet affixed to the cap for retrieving and cleaning loose metal shavings. P/N 12-01876 ..... **$3.60**

PLAIN TAP WRENCHES



The standard Tap Wrenches are perfect for creating straight and accurate thread holes in your work piece. The fixed T-Handle provides a large gripping surface for generating maximum leverage. This versatile tool can also be used with reamers, drill bits, screw extractors and other hand-turned tools.

Tap Capacity	Length	Part No.	Price
NO. 0 TO 1/4" (1.6 TO 6.3mm)	2-1/4" (57mm)	12-01877	**$11.85**
NO. 12 TO 1/2" (6 TO 12mm)	3-3/4" (95mm)	12-01878	**$14.75**

TO

RATCHET OFFSET SCREWDRIVER



An Offset Ratchet Screwdriver is a useful tool to have on hand as it provides greater leverage compared to a traditional screwdriver. The swift ratcheting motion allows you to remove and install screws with ease, and the offset head provides odd-angle access in obstructed areas. This item features two Slotted screwdriver blades and a reversible ratchet. P/N 12-01883 ..... **$8.95**

CESSNA SEAT RAIL GAUGE



Allows for quick limit checking of seat rail hole and wear dimensions Gage elements are made from heat treated blue tempered steel Each element is marked to correspond to the limits set forth in the relevant ad The three gage elements are linked together on a universal spiral key ring.

P/N 12-01056 ..... **$30.85**

LIGHTED POWER PRECISION SCREWDRIVER



These lighted cordless precision screwdriver (502) from general tools & instruments (general) is a first-of-its-kind tool that can handle all of those difficult, repetitive fastening jobs involving tiny screws in tight spaces where it is difficult to see. it s perfect for on-the-go technicians and anyone who works with small parts and micro assemblies. Super Bright LED Light 6+ Hours of Power 100+ RPM Super-Torque Drive Cordless (2 AAA alkaline batteries included)

Screwdriver..... P/N 12-03517 ..... **$26.90**
Replacement Bit Set..... P/N 12-03516 ..... **$4.60**

PRECISION OILER



These Precision Oiler is a highly accurate lubrication tool intended for anyone working with small mechanical parts. The needlepoint tip allows for the precise placement of oil in confined areas. The smooth thumb actuator lets you control the release of lubricant from the reservoir in small droplets. In addition, the Precision Oiler includes a screw-on cover and pocket clip for use on the go. P/N 12-01894 ..... **$9.75**

REPLACEMENT BLADE OIL CAN CUTTER



General Tool's Gold Standard Cutting Wheels are made from tempered, bearing tool steel for smooth, exact pipe cuts. The slim-line surface geometry ensures fewer inner surfaces burrs and less chance for outer surface distortion. The RW122 is designed for larger capacity cutters on iron pipe and other tough surfaces P/N 12-01159 ..... **$6.50**

CUTTER PLUG WOODWORKING



General's Plug Cutters produce accurate plugs for covering screw holes in decking, flooring and fine furniture. Plug cutters are great for creating a decorative effect in any woodworking project and can also be used to repair nicks, scratches and dents. Each cutter is made from hardened alloy steel and will fit in both hand-held power drills and drill presses.

3/8.....P/N12-01866 ..... **$4.60**
1/2.....P/N 12-01867 ..... **$4.70**
5/8.....P/N 12-01868 ..... **$4.85**

AARC BEARING GREASE PACKER



The Quick, Easy, Efficient way to Grease Wheel Bearings! Experience has shown that the inspection and cleaning of wheel bearings is time consuming and messy. Likewise, the AARC Bearing Packer utilizes similar principles to hand pressurize grease through the individual roller bearings for a complete – total – pack of the bearings. The use of the cone or the plates assures that the grease totally encompasses the rollers in grease. This simple method is accomplished quickly with minimal waste.

P/N 12-03753 ..... **$85.00**

AARC BEARING CLEANER



The Quick, Easy, Efficient way to Grease Wheel Bearings! Experience has shown that the inspection and cleaning of wheel bearings is time consuming and messy. The AARC Bearing Cleaner was developed to expedite this process by using a system designed to aggressively flush cleaning solvent through the roller bearings to loosen and rinse the accumulated worn grease from the bearings. This cleans the rollers, making inspection more efficient. P/N 12-03754 ..... **$109.00**

JOGGLE-360 FABRICATION TOOL

Noah Industries has introduced the Joggle-360 into its lineup of innovative metal aircraft fabrication tools. The Joggle-360 will joggle round openings for inspection plates with joggle widths up to 0.562 inch and straight joggle offsets up to 0.625 inch. The tool features hardened steel rollers that form the joggle while gliding around the opening or along the edge by ball bearings that eccentrically adjust for joggle width.



Instruction:

1. Adjust the guide rollers to the desired set back or width of joggle by rotating the Eccentric Guide Roller Adjustment Screws with an Allen wrench.
2. Place the Joggle-360 onto the work that you are going to joggle and tighten the Tension Knob.
3. For straight joggles, run the Joggle-360 back and forth along the work tightening the Tension Knob as required until you achieve the desired joggle depth. Joggling a hole is the same process. Be sure to keep the Guide Rollers in contact with the edge of your work.
4. When the joggle is finished, loosen the Tension Knob and remove the tool from from your work.

Note: You may need to tighten the Eccentric Lock Screws from time to time in order to keep the Eccentric Guide Rollers from rotating during use. P/N 12-02252 ..... **$178.85**

Prices Subject to Change Without Notice

KNIPEX PRECISION TOOLS



KNIPEX PRECISION-SNAP-RING PLIERS SET

Contains common Precision Circlip Pliers for highest requirements in sturdy plastic packaging, also suitable for storage of the pliers. From 12-25 to 19-60 Straight Tip and 12-25 to 60 Bent Tip.

P/N 15-08431 .....**$231.95**



KNIPEX HIGH LEVERAGE COMBINATION PLIERS

35 % less effort required than with conventional combination pliers easier work due to optimised leverage with cutting edges (hardness approx. 63 HRC) for soft and hard wire and piano wire. Long cutting edges for thicker cables with gripping zones for flat and round material, suitable for versatile use. High-grade special tool steel, forged, oil-hardened, 200mm length. 8 inch.

8 inch Pliers(pictured).....P/N 15-08432 .....**$30.95**
8 inch Pliers with Comfort Grip.....P/N 15-08433 .....**$36.50**

KNIPEX COMBINATION PLIERS



Gripping zones for flat and round material, suitable for versatile use with cutting edges for soft and hard wire. Long cutting edges for thicker cables cutting edges additionally induction hardened, cutting edge hardness approx. 60 HRC Special tool steel, forged, oil-hardened, 8 inch. P/N 15-08434 .....**$26.90**

KNIPEX HIGH LEVERAGE COMBINATION PLIERS COMFORT GRIP



Gripping zones for flat and round material, suitable for versatile use with cutting edges for soft and hard wire. Long cutting edges for thicker cables cutting edges additionally induction hardened, cutting edge hardness approx. 60 HRC Special tool steel, forged, oil-hardened, 6.25 inches.

P/N 15-08435 .....**$55.75**

KNIPEX DIAGONAL CUTTERS



The indispensable diagonal cutter for all-round use with high quality material and precise workmanship for long service life. Precision cutting edges for soft and hard wire, clean cutting of thin copper wires, also at the cutting-edge tips cutting edges additionally induction hardened, cutting edge hardness approx. 62 HRC narrow head style for use in confined areas. Vanadium electric steel; forged, oil-hardened, 7.25 inches.

7.25 inch Pliers (pictured).....P/N 15-08436 .....**$31.95**
7.25 inc Pliers with Comfort Grip..P/N 15-08437 .....**$34.95**

KNIPEX COBRA PLIERS QUICK SET STYLE



Adjustment at the touch of a button directly on the work piece with fine adjustment for optimum adaptation to different sizes of work pieces and a comfortable handle width. Self-locking on pipes and nuts: no slipping on the work piece and low hand force required. 61 HRC: low wear and stable gripping. Just position the upper jaw to the workpiece, push button and move close the lower jaw, ingeniously simple. 10 Inch

P/N 15-08438 .....**$44.90**



KNIPEX AUTO ADJUSTING WATER PUMP PLIERS

Automatic adjustment per one-hand operation both for right-handed and left-handed use with good access to the workpiece thanks to the slim dimensions in the head and joint area and flush joint bolt. Self-locking on pipes and nuts: no slipping on the workpiece and low handforce required. Gripping surfaces with special hardened teeth, teeth hardness approx. 61 HRC: low wear and stable gripping box-joint design: high stability because of the double guide. Guard prevents operators' fingers being pinched and locking lever for space saving transport with reliable closed handles. Chrome vanadium electric steel, forged, oil-hardened 10 inch. P/N 15-08439 .....**$74.75**

KNIPEX PLIERS WRENCHES



Adjustable tightening tool, also excellent for gripping, holding, pressing and bending work pieces. Replaces the need for sets of metric and imperial spanners, with smooth jaws for damage free installation of plated fittings Zero backlash jaw pressure prevents damage to edges of sensitive components. Adjustment at the touch of a button directly on the work piece and parallel jaws give a more solid grip; the construction gives infinite adjustment of all widths up to the specified maximum size.

6 Inch .....P/N 15-08440 .....**$62.75**
7.25 Inch .....P/N 15-08441 .....**$62.75**
10 Inch .....P/N 15-08442 .....**$69.95**
12 Inch .....P/N 15-08443 .....**$84.75**

KNIPEX PLIERS WRENCH-COMFORT GRIP



Adjustable tightening tool, also excellent for gripping, holding, pressing and bending work pieces. Replaces the need for sets of metric and imperial spanners, with smooth jaws for damage free installation of plated fittings Zero backlash jaw pressure prevents damage to edges of sensitive components. Adjustment at the touch of a button directly on the work piece and parallel jaws give a more solid grip; the construction gives infinite adjustment of all widths up to the specified maximum size.

6 Inch .....P/N 15-08444 .....**$69.80**
7.25 Inch .....P/N 15-08445 .....**$69.95**
10 Inch .....P/N 15-08446 .....**$79.75**

KNIPEX COBRA PLIERS



Adjustment at the touch of a button directly on the work piece with fine adjustment for optimum adaptation to different sizes of work pieces and a comfortable handle width. Self-locking on pipes and nuts: no slipping on the work piece and low hand force required. Gripping surfaces with special hardened teeth, teeth hardness approx. 61 HRC. Box-joint design. Reliable catching of the hinge bolt: no unintentional shifting and guard prevents operators' fingers being pinched. Chrome vanadium electric steel, forged, oil-hardened. Pliers Pictured are without the comfort grip. Pictured without Comfort Grip.

5 inch .....P/N 15-08447 .....**$37.85**
6 inch .....P/N 15-08448 .....**$39.00**
7.25 inch .....P/N 15-08449 .....**$39.95**
7.25 inch with Comfort Grip .....P/N 15-08452 .....**$45.50**
10 inch .....P/N 15-08450 .....**$42.70**
10 inch with Comfort Grip .....P/N 15-08453 .....**$48.50**
12 inch .....P/N 15-08451 .....**$59.95**
12 inch with Comfort Grip .....P/N 15-08454 .....**$68.75**

KNIPEX ALLIGATOR PLIERS



More output and comfort compared to conventional water pump pliers of the same length: 9-notch adjustment positioning for 30 % more gripping capacity. Self-locking on pipes and nuts. Gripping surfaces with special hardened teeth, teeth hardness approx. 61 HRC. Box-joint design. Particularly suitable for outdoor work. Guard prevents operators' fingers being pinched. Chrome vanadium electric steel, forged, oil-hardened. Pictured without Comfort Grip.

7.25 inch .....P/N 15-08455 .....**$29.75**
7.25 inch with Comfort Grip .....P/N 15-08458 .....**$34.80**
10 inch .....P/N 15-08456 .....**$32.90**
10 inch with Comfort Grip .....P/N 15-08459 .....**$38.55**
12 inch .....P/N 15-08457 .....**$49.50**
12 inch with Comfort Grip .....P/N 15-08460 .....**$53.75**



KNIPEX 3PC UNIVERSAL PLIERS SET & ALLIGATOR PLIERS

This 3pc Professional Pliers Set includes: Angled High Leverage Diagonal Cutter 8", Knipex Alligator Water pump Pliers 10", Long Nose Pliers with Cutter 8".

P/N 15-08461 .....**$102.75**



KNIPEX 3PC COBRA PLIERS SET

Knipex 3pc Cobra Pliers Set 7", 10", 12". Adjustment at the touch of a button directly on the work piece with fine adjustment for optimum adaptation to different sizes of work pieces and a comfortable handle width. Self-locking on pipes and nuts. Gripping surfaces with special hardened teeth, teeth hardness approx. 61 HRC. Box-joint design. Reliable catching of the hinge bolt. Chrome vanadium electric steel, forged, oil-hardened. P/N 15-08462 .....**$133.75**

KNIPEX 3 PC ALLIGATOR PLIERS SET



Knipex 3pc Alligater Water pump Pliers 7", 10", 12". More output and comfort compared to conventional water pump pliers of the same length. Self-locking on pipes and nuts. Gripping surfaces with special hardened teeth, teeth hardness approx. 61 HRC. Box-joint design. Particularly suitable for outdoor work. Guard prevents operators' fingers being pinched. Chrome vanadium electric steel, forged, oil-hardened. P/N 15-08463 .....**$102.75**



KNIPEX 3PC UNIVERSAL PLIERS SET & COBRA PLIERS

This 3pc Professional Pliers Set includes: Angled High Leverage Diagonal Cutter 8", Knipex Cobra Water pump Pliers 10", Long Nose Pliers with Cutter 8"

P/N 15-08464 .....**$111.90**



KNIPEX 2 PC MINI PLIERS WITH BELT POUCH

Knipex 2pc Mini Pliers Set includes: Knipex Pliers Wrench 6", Knipex Cobra Pliers Wrench 5".

P/N 15-08465 .....**$128.75**

TO

DRILLS - TAPS - DIES

AIRCRAFT GRADE SUPER COBALT DRILLS



These super cobalt hi-speed jobber length aircraft drill bits feature heavy duty construction to Type J aircraft specifications. Use to drill hard, tough metals, stainless steels, iron based and titanium alloys, and certain plastics. Hardness of cobalt permits speeds 30% over regular H.S.S. drills. Cobalt drills demand rigidly held, positive feed drilling equipment.

Part No.	Drill Size	Price Ea.
12-03791	55	$1.65
12-03698	51	$1.35
12-03792	44	$1.35
12-04212	42	$1.35
12-04213	41	$1.35
12-04214	40	$1.35
12-04215	36	$1.55
12-04216	33	$1.55
12-03793	37	$1.70
12-04217	30	$1.65
12-04218	28	$1.75
12-04219	27	$1.95

Part No.	Drill Size	Price Ea.
12-04220	23	$2.15
12-14221	21	$2.25
12-04221	19	$2.15
12-04222	12	$2.65
12-04223	10	$2.65
12-04224	"D"	$3.95
12-04225	1/8"	$1.85
12-04226	5/32"	$1.95
12-04227	3/16"	$2.50
12-04228	1/4"	$3.65
12-04229	5/16"	$5.25
12-04235	#35	$1.65

12" LONG DRILL BITS



These 12" long drill bits are for use with standard electric drills for the hard to reach jobs.

Drill	Size	Part No.	Price
3/32"	(.094")	12-05200	$5.50
1/8"	(.125")	12-05300	$5.75
3/16"	(.188")	12-05400	$6.95
#10	(.194")	12-05500	$7.75
1/4"	(.250")	12-05600	$8.50

MALE THREADED DRILL BITS



Male threaded drill bits of high speed steel screw into female spindle of angle drill or snake drill.

Drill Size	10-32 Thread Part No.	10-32 Thread Price	1/4-28 Thread Part No.	1/4-28 Thread Price
#10	12-05701	$10.95	12-05702	$2.80
#20	12-05801	$11.85	12-05802	$2.95
#21	12-05901	$12.75	12-05902	$2.95
#30	12-06001	$11.75	12-06002	$2.50
#40	12-06101	$11.95	12-06102	$2.90

ANGLE DRILL ATTACHMENT



Quickly connects to any drill chuck. Makes a convenient, inexpensive close-quarter tool. 3/16 drill capacity.

Specify threaded spindle size: 5/16-24 (P/N 12-18503), 1/4-28 (P/N 12-18501) or 10-32 (P/N 12-18502) **$78.85**

Angle Drill w/ Key Chuck (1/4-28 Only).....P/N 12-18511 ..... **$194.00**

ANGLE DRILL KIT - Includes tool case, 24" flexible attachment, 4 threaded drills, collet adapter, 90° angle drill, straight drill attachment, 4 collet drills. P/N 12-18505 ..... **$330.00**

SNAKE DRILL ATTACHMENT





Heavy-duty 90° flexible drilling attachment. Overall length 26". 3 Female threaded spindle sizes.

1/4-28 .....P/N 12-06500 ..... **$108.95**

10-32 .....P/N 12-06600 ..... **$219.95**

W/Key Chuck (5/32"cap.) .....P/N 12-06800 ..... **$136.95**

CONE JAW CHUCK



Heavy duty yet mini size fits any angle drill or attachment with 1/4" x 28 threads. It's just what you need for close quarter drilling. Features: •Capacity from 1/16" to 1/4" 3/4" length, 0.13 lbs •Wrench included.

P/N 12-00245 ..... **$21.50**

ANGLE DRILL COLLET & CHUCK KIT



This 10-piece kit gives you 3 different methods of drilling in tight spots. Each shank is 1/4" x 28 which will thread into most drill spindles that angle attachments and angle drills are supplied with. 0.25 lb. KIT INCLUDES: • (4) #200 collets & adapters - drill sizes 11, 21, 30, & 40 • (4) threaded drill bits (1-1/4" length) - drill sizes: 10,21,30,40 • (1) Cone jaw chuck Model TP258.....P/N 12-00368 ..... **$36.75**

TAP EXTRACTOR SETS



Remove broken taps and save the threads! Walton Tap Extractors let you remove broken taps without drilling, lasers, damaged threads, scrapped parts or repair inserts. The hardened steel fingers of Walton Tap Extractors fit in the flutes of a broken tap to back it out simply and safely. This effective method has been used since 1908. They are available in every tap size, both inch and metric, as handy sets or individual pieces. The Tap Extractors will fit both NC and NF taps. Sizes: 3/16", 1/4",5/16",3/8",7/16",1/2"

P/N 12-02352 ..... **$82.75**

HAND THREAD TAPS

There are three basic types of straight thread taps:

PLUG TAPS – used for ordinary threading and have a 3 to 5-thread chamfer, or relief, at the point.

TAPER TAPS – have 8 to 10 threads chamfered for easy starting and are used for tough threading jobs.

BOTTOMING TAPS – with their short chamfer (1 to 1-1/2 threads),are used where the thread must go to the bottom of the hole.

Specify Plug, Taper or Bottoming Tap.



PLUG TAPS

Die Size	Left-Hand		Right-Hand	
6-32	12-07601	$4.85	12-07701	$2.75
8-32	12-07801	$5.25	12-07901	$2.90
10-32	12-08001	$5.65	12-08101	$2.95
1/4-28	12-08201	$6.50	12-08301	$2.95
5/16-24	12-08401	$6.85	12-08501	$3.60
3/8-24	12-08601	$6.50	12-08701	$3.90



TAPER TAPS

Die Size	Left-Hand		Right-Hand	
6-32	12-07602	Call for price and availability special order	12-07702	$2.75
8-32	12-07802		12-07902	$2.85
10-32	--		12-08102	$2.85
1/4-28	12-08202		12-08302	$2.95
5/16-24	12-08402		12-08502	$3.60
3/8-24	--		12-08702	$3.95



BOTTOMING TAPS (HIGH-SPEED STEEL)

Die Size	Left-Hand		Right-Hand	
6-32	--	Call for price and availability special order	12-07703	$2.75
8-32	--		12-07903	$2.85
10-32	12-08003		12-08103	$2.95
1/4-28	--		12-08303	$2.85
5/16-24	--		12-08503	$3.75
3/8-24	--		12-08703	$3.90

DRILLING & TAPPING SETS



13-Piece drilling and tapping set made from special high speed steel. Contains 6 screw machine length drill bits (Nos. 43, 35, 29, 25, 21 and 7), 16 NC taps (4-40, 6-32, 8-32, 10-24, 10-32 and 1/4-20) and one tap wrench. Choice of 135° split point or spiral point drill bits. Set with Split-Point Drill Bits.

P/N 41095 ..... **$49.75**

ADJUSTABLE ROUND SPLIT DIES



Die Size	Die Dia.	Left-Hand		Right-Hand	
6-32	13/16"	12-07001	$11.85	12-07002	$8.75
8-32	13/16"	12-07101	$11.85	12-07102	$7.95
10-32	13/16"	12-07201	$13.50	12-07202	$8.75
1/4-28	1"	12-07301	$12.85	12-07302	$8.75
5/16-24	1"	12-07401	$13.75	12-07402	$7.95
3/8-24	1"	12-07501	$13.75	12-07502	$9.50

ROUND "KNOCK-OUT" PUNCHES & DIES

Save hours of tedious drilling, sawing, filing and hand-fitting. Produce clean, true holes for sockets, controls, instruments. Cut clean, burr-free holes with these easy-to-use tools. Can be operated by ordinary wrench. One punch required for each hole size.



Punch Size	Model 730 P/N	Price	Model 730 P/N	Punch Size	Price
1/2"	12-20905	$77.75	12-20945	1-3/8"	$94.75
5/8"	12-20910	$73.75	12-20950	1-1/2"	$122.75
3/4"	12-20915	$73.80	12-20955	1-5/8"	$134.75
7/8"	12-20920	$68.85	12-20925	1"	$85.75
2"	12-20970	$179.95	12-20975	2-1/4" w/ 304AVBB	$235.95
1-1/8"	12-20930	$91.75	3-1/8"	12-20980	$519.00
1-7/32"	12-20935	$103.75			
1-1/4"	12-20940	$123.85			

Additional Sizes Available.Drive punches with a ball bearing drive for faster, easier hand operation are available for the 2-1/4" & 3-1/8" knockout punches.

Drive for 2-1/4" Punch .....P/N #304AVBB..... **$39.85**

Drive for 3-1/8" Punch .....P/N #1433AVBB..... **$85.75**

ROUND DIE STOCK HANDLES

For holding adjustable round split dies. Three set screw pattern. Single piece construction. Die diameter 1" or 13/16".

13/16".....P/N 12-04875 ..... **$8.85**

1".....P/N 12-04876 ..... **$9.65**

TO

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

DRILL BITS

CARBIDE DRAGGER DRILL BITS



Reference NAS 965 specification with special geometry for drilling composite and composite stack ups.

Size	Carbide	4" Part No.	Price	6" Part No.	Price
#40	3000-0980	12-04547	**$29.75**	12-04548	**$24.85**
1/8	3000-1285	12-04549	**$28.95**	--	**--**
#21	3000-1590	12-04551	**$32.50**	12-04552	**$27.50**
#13	3000-1875	12-04553	**$26.50**	12-04554	**$30.55**
#11	3000-1935	12-04555	**$35.50**	12-04556	**$31.70**
#2	3000-2210	12-04557	**$33.85**	--	**--**
1/4	3000-2500	--	**--**	--	**--**
G	3000-2610	--	**--**	12-04560	**$35.90**

HSS EXTENSION DRILL BITS



NAS 907 Type "B" and Type "J" 135° Split Point
These aircraft extension drills are manufactured to provide long life. Our cobalt drills are used for drilling in tough, high tensile strength materials like stainless steel titanium and inconel. A heavy duty flute design is incorporated and a 135° split point.

Size	Length	Part No.	Price
3/32	6 inches	12-04202	**$3.35**
40		12-04204	**$3.60**
1/8		12-04234	**$2.95**
#30		12-04236	**$2.95**
#21		12-04247	**$3.65**
#10		12-04260	**$4.35**
1/4		12-04274	**$5.35**
3/32	12 Inches	12-04391	**$9.55**
40		12-04393	**$8.50**
1/8		12-04404	**$7.50**
#30		12-04405	**$8.50**
#21		12-04417	**$8.50**
#10		12-04430	**$8.50**
1/4		12-04444	**$12.50**

VISIT WWW.AIRCRAFTSPRUCE FOR A FULL LIST OF AVAILABLE SIZES.

COBALT EXTENSION DRILL BITS



Size	Length	Part No.	Price
3/32	6 inches	12-04307	**$4.35**
40		12-04309	**$4.25**
1/8		12-04320	**$4.70**
#30		12-04321	**$4.35**
#21		12-04332	**$5.60**
#10		12-04345	**$5.35**
1/4		12-04359	**$8.70**
3/32	12 Inches	12-04476	**$13.80**
40		12-04478	**$13.80**
1/8		12-04489	**$14.50**
#30		12-04490	**$13.50**
#21		12-04501	**$13.75**
#10		12-04514	**$14.65**
1/4		12-04528	**$16.50**

VISIT WWW.AIRCRAFTSPRUCE FOR A FULL LIST OF AVAILABLE SIZES.

ECONOMY COBALT 115 PC DRILL SET



Each of these 115 cobalt drill bits comes organized in a metal indexed storage case for easy transport to your worksite. These cobalt drill bits retain their hardness up to 1000 degrees Fahrenheit making them ideal for drilling cast iron, heat-treated steel, stainless steel and other hard materials. With aggressive 135 degree tips, these cobalt drills bits not only last longer but also cut faster than your standard high speed steel bits! Imported. P/N 12-04806 .....**$159.95**

HSS 1/4-28 MALE THREADED DRILL BITS



High Speed Steel
- Type B Threaded Hex Shank HSS Adaptor
- Drill - NAS 965 1/4-28 UNF Class 2A Thread
- Surface Treated-Steam Oxide
- Drills are manufactured to NAS 965 Type B construction.
- High Speed Steel drills are for drilling general to medium duty, low tensile strength materials in confined areas.

Size	Length	Part No.	Price
3/32	1/2 inch	12-04065	**$5.35**
#40		12-04066	**$2.70**
1/8		12-04077	**$3.45**
#30	9/16 inch	12-04078	**$2.85**
5/32		12-04087	**$4.35**
#21		12-04089	**$2.95**
#10		12-04103	**$4.35**
#9	5/8 inch	12-04104	**$7.70**
13/64		12-04107	**$7.70**
7/32		12-04112	**$6.50**
1/4		12-04120	**$5.35**
3/32	1 inch	12-03941	**$4.75**
#40		12-03942	**$2.55**
7/64		12-03947	**$9.50**
1/8		12-03954	**$3.55**
#30	1-1/4 inch	12-03955	**$2.65**
5/32		12-03964	**$4.80**
#21		12-03966	**$2.75**
#10		12-03979	**$3.35**
3/32	2-1/8 inch	12-03814	**$4.90**
#40		12-03815	**$2.80**
1/8		12-03826	**$5.35**
#30		12-03827	**$2.75**
#21		12-03838	**$2.95**

VISIT WWW.AIRCRAFTSPRUCE FOR A FULL LIST OF AVAILABLE SIZES.

COBALT 1/4-28 MALE THREADED DRILL BITS



Cobalt
- Type D Threaded Square Shank Cobalt Adaptor
- Drill NAS 965 1/4-28 UNF Class 2A Thread
- Surface Treated-Steam Oxide
- Drills are manufactured to NAS 965 Type D construction.
- Cobalt drills are for drilling hard, tough, high tensile strength materials in confined areas.

Size	Length	Part No.	Price
3/32	1/2 inch	12-04127	**$5.35**
#40		12-04128	**$2.85**
#30	9/16 inch	12-04140	**$2.95**
5/32		12-04149	**$4.75**
#21		12-04151	**$3.35**
#10		12-04166	**$3.60**
5/16	3/4 inch	12-04187	**$6.95**
3/8		12-04188	**$10.65**
3/32	1 inch	12-04004	**$4.85**
#40		12-04005	**$2.65**
7/64		12-04010	**$6.70**
1/8		12-04016	**$3.80**
#30	1-1/4 inch	12-04017	**$2.70**
5/32		12-04026	**$4.80**
#21		12-04028	**$3.35**
#10		12-04041	**$3.85**
3/32	2-1/8 inch	12-03875	**$4.50**
#40		12-03876	**$3.35**
1/8		12-03887	**$3.80**
#30		12-03888	**$3.35**
#21		12-03899	**$3.35**

VISIT WWW.AIRCRAFTSPRUCE FOR A FULL LIST OF AVAILABLE SIZES.

COBALT REAMER SETS

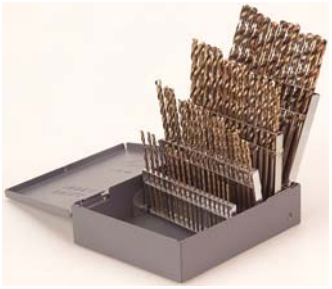


Cobalt Steel straight flute reamer set 1/16" - 1/2" by 64ths with case. 29 piece set includes sizes 1/16; 5/64; 3/32; 7/64; 1/8; 9/64; 5/32; 11/64; 3/16; 13/64; 7/32; 15/64; 1/4; 17/64; 9/32; 19/64; 5/16; 21/64; 11/32; 23/64; 3/8; 25/64; 13/32; 27/64; 7/16; 29/64; 15/32; 31/64; 1/2.
Fraction Set ..... P/N 12-04821 .....**$329.00**
Number Set ..... P/N 12-04822 .....**$516.00**

TO

COBALT DRILL BIT SETS

COBALT DRILL BIT SET 1-60 PIECES



Numbered 1 - 60 Drill Bit Set Cobalt. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 60 total pieces plus index box. 135 degree split point (Note: Bits smaller than .0625 have no split point) P/N 12-05110 .....**$124.95**

COBALT DRILL BIT SET 1/16-1/2 INCH 29 PIECES



Fractional 1/16" - 1/2" 60 Drill Bit Set Cobalt. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 29 total pieces plus index box. 135 degree split point
P/N 12-05111 .....**$158.85**

DRILL BIT SET A-Z COBALT 26 PIECES



Letters A - Z Drill Bit Set Cobalt.. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 26 total pieces plus index box. 135 degree split point
P/N 12-05112 ..... **$169.95**

DRILL BIT COMBO COBALT ALL BITS 115 PIECES



Combo Set Includes Cobalt: Numbers, Letters & Fractional. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. Complete set in Index Box. 135 degree split point (Note: Bits smaller than .0625 have no split point)
P/N 12-05113 ..... **$399.00**

DRILL BIT SET 1-60 NUMBERS HIGH SPEED



Numbered 1 - 60 Drill Bit Set High Speed. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 60 total pieces plus index box. 135 degree split point (Note: Bits smaller than .0625 have no split point) P/N 12-05114 .....**$89.95**

DRILL BIT SET 1/16-1/2 INCH FRACTIONS 29 PIECES



Drill Bit Set Fractions 1/16-1/2 High Speed. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 29 total pieces plus index box. 135 degree split point (Note: Bits smaller than .0625 have no split point) P/N 12-05115 .....**$158.85**

DRILL BIT SET A-Z HIGH SPEED USA 26 PIECES



Letters A - Z Drill Bit Set High Speed. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 26 total pieces plus index box. 135 degree split point (Note: Bits smaller than .0625 have no split point) P/N 12-05116 ..... **$89.95**

DRILL BIT COMBO HIGH SPEED ALL BITS 115 PIECES



Combo Set Includes High-Speed: Numbers, Letters & Fractional. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. Complete set in index box. 135 degree split point (Note: Bits smaller than .0625 have no split point)
P/N 12-05117 ..... **$239.95**

TO

DRILL BIT SETS - CARBIDE DRILLS & BURS



DRILL BIT SET – SIZES 1-60

This jobber length drill bit set includes high speed steel (HSS) drill bits in sizes 1-60. The set comes complete with a steel storage box. Ideal as a pre-drill for tapping of holes and for many other aircraft building applications.

P/N 12-00227 ..... **$58.85**



29-PC BRITE FLUTE DRILL SET

This 118° point, high speed steel (HSS) drill set performs well in a wide variety of drilling applications. It is recommended for non-ferrous metals, wood, and plastics. Set includes 29 pcs (1/16 to1/2" in 64ths) in metal index.

P/N 12-00537 ..... **$108.99**



115-PC HSS JOBBER LENGTH DRILL SET

This 118° point, high speed steel (HSS) drill set performs well in a wide variety of drilling applications. It is recommended for non-ferrous metals, wood, and plastics. Set includes 115 pcs (1/16 to1/2" by 64ths and #1-60 and A-Z in metal index).

P/N 12-00536 ..... **$189.00**

STRAIGHT FLUTE CARBIDE DRILLS



For use on hardened, treated, and abrasive materials, stainless steel, cryogenic alloys.

P/N	Cutting Dia.	Decimal Equiv.	Flute Length	Overall Length	Price
12-00538	13/64	.2031	1-3/16	2-1/4	**$18.75**
12-00539	7/32	.2188	1-1/4	2-3/8	**$18.75**
12-00540	1/4	.2500	1-3/8	2-1/2	**$22.70**
12-00541	9/32	.2812	1-1/2	2-11/16	**$26.90**
12-00542	5/16	.3125	1-5/8	2-13/16	**$32.90**
12-00543	3/8	.3750	1-13/16	3-1/8	**$45.25**
12-00544	1/2	.5000	2-1/4	3-3/4	**$72.95**
12-00545	1/8	.1250	7/8	1-7/8	**$11.80**
12-00546	9/64	.1406	15/16	1-15/16	**$12.75**
12-00547	5/32	.1562	1	2-1/16	**$13.95**
12-00551	3/16	.1875	1-1/8	2-3/16	**$16.95**

CARBIDE TWIST DRILLS



For use on non-ferrous alloys, cast iron, plastics, aluminum, and highly abrasive materials

P/N	Cutting Dia.	Decimal Equiv.	Flute Length	Overall Length	Pice
12-00579	1/16	.0625	3/4	1-1/2	**$8.95**
12-00580	5/64	.0781	7/8	1-3/4	**$8.75**
12-00581	3/32	.0938	1	2	**$7.85**
12-00582	7/64	.1094	1-1/4	2-1/4	**$9.25**
12-00583	1/8	.1250	1-1/4	2-1/4	**$9.95**
12-00584	9/64	.1406	1-3/8	2-1/2	**$12.85**
12-00585	5/32	.1562	1-3/8	2-1/2	**$12.75**
12-00586	11/64	.1719	1-5/8	2-3/4	**$14.50**
12-00547	3/16	.1875	1-5/8	2-3/4	**$13.95**
12-00548	13/64	.2031	1-3/4	3	**$17.95**
12-00549	7/32	.2188	1-3/4	3	**$18.25**
12-00552	15/64	.2344	2	3-1/4	**$21.50**
12-00553	1/4	.2500	2	3-1/4	**$22.50**
12-00554	17/64	.2656	2-1/8	3-1/2	**$26.50**
12-00557	9/32	.2812	2-1/8	3-1/2	**$27.50**
12-00558	5/16	.3125	2-3/8	3-3/4	**$33.60**
12-00561	11/32	.3438	2-1/2	4	**$37.70**
12-00563	3/8	.3750	2-3/4	4-1/4	**$47.50**
12-00564	7/16	.4375	2-7/8	4-1/2	**$62.75**
12-00567	1/2	.5000	3	4-3/4	**$75.75**

CARBIDE ROTARY - RADIUS END



Rotary files have a 1/4" shank and a double-cut (self-cleaning) burrs for quicker cutting speed and less chip build-up. Style: Cylindrical Radius End (SC-5). Diameter of cut: 1/2". Length of cut: 1". P/N 12-02917 ..... **$12.95**

CARBIDE ROTARY FILE - BALL END



Rotary files has a 1/4" shank and a double-cut (self-cleaning) burrs for quicker cutting speed and less chip build-up. Style: Round ball (SD-1). Diameter of cut: 1/4". Length of cut: 7/32"

P/N 12-02918 ..... **$7.95**

SPIRAL FLUTE CHUCKING REAMER



High speed steel straight shank spiral flute chucking reamer. Diameter tolerance thru 1/2 diameter + .0002.0000. Decimal Equivalent: 0.0980. Shank Type: Straight Shank. Flute Type: Spiral Flute. Size Type: Wire Gage Size. Flute Length: 7/8. Overall Length: 3-1/2. Material: High Speed Steel. Size: 40. Type: Straight Shank / Spiral Flute. Number of Flutes: 4 Flute. Brand Name: Quality Import.

Size 30 ..... P/N 12-02930 ..... **$8.85**
High Speed, Size 30 ..... P/N 12-02931 ..... **$6.65**

ALUMINUM CUT

Designed for use on aluminum, non-ferrous metals, soft steel, reinforced plastics, and other soft materials.

CYLINDRICAL BALL NOSE CARBIDE BURS



Aluminum Cut. 1/4" shank.

Part No.	Dia.	Flute Length	Price
12-00588	1/4	5/8	**$13.50**
12-00589	3/8	3/4	**$17.75**
12-00590	1/2	1	**$27.50**

CYLINDRICAL CARBIDE BURS



Aluminum Cut. 1/4" shank.

Part No.	Dia.	Flute Length	Price
12-00591	1/4	5/8	**$12.60**
12-00592	3/8	3/4	**$16.75**
12-00593	1/2	1	**$26.50**

ROUND NOSE TREE CARBIDE BURS



Aluminum Cut. 1/4" shank.

Part No.	Dia.	Flute Length	Price
12-00594	1/4	5/8	**$14.75**
12-00595	3/8	3/4	**$17.75**
12-00596	1/2	1	**$25.60**

MEDIUM TOUGH CUT

Engineered specifically for tough applications. Tough cut insures faster, splinter-free cutting in weld & alloy castings with increased tool life.

CYLINDRICAL BALL NOSE CARBIDE BURS



Medium Tough Cut. 1/4" shank. 6" Long.

Part No.	Dia.	Flute Length	Price
12-00597	3/8	3/4	**$21.50**
12-00598	1/2	1	**$26.95**

ROUND NOSE TREE CARBIDE BURS



Medium Tough Cut. 1/4" shank. 6" Long.

Part No.	Dia.	Flute Length	Price
12-00599	3/8	3/4	**$19.95**
12-00601	1/2	1	**$25.95**

14° INCLUDED ANGLE CARBIDE BURS



Medium Tough Cut. 1/4" shank. 6" Long.

Part No.	Dia.	Flute Length	Price
12-00602	3/8	1-1/16	**$24.50**
12-00603	1/2	1-1/8	**$28.50**

CARBIDE ROTARY FILE - 8 PIECE SETS



8 Piece Carbide Rotary File Set. 1/4" or 1/8" shaft available.

1/8" Set..... P/N 12-02916 ..... **$26.95**
1/4" Set..... P/N 12-02915 ..... **$58.95**

TO

VISE GRIPS - UNIBITS



Locking Pliers, two straight jaws



Locking Pliers, two curved jaws



Locking Nose Jaw with wire cutter



"C" Clamps



12 LC Large Jaw Locking Pliers

Vise-Grip Style	Size	Part No.	Price
Locking Pliers with Two Straight Jaws	7"	12-00196	**$12.60**
Locking Pliers with Two Curved Jaws and Wire Cutter	4"	4WR	**$15.90**
	5"	12-00194	**$13.50**
	7"	12-00189	**$12.70**
Long Nose Jaws with Wire Cutter	4"	12-00190	**$12.95**
	6"	12-00192	**$13.95**
	9"	12-00198	**$17.50**
Locking "C" Clamps	6"	12-00188	**$13.70**
	11"	12-00195	**$21.75**
Large Jaw Locking Pliers, Opens to 3-1/8"	12"	12-00197	**$23.50**

TIGHT-FIT DRILL KIT



Space, every inch of it, is at a premium in aircraft design as shape and weight is critical to function. Also, airplanes are riveted together which requires thousands of holes to be drilled in difficult locations without scratching or marring the work surface. So, engineers needed to design a versatile "chuck-less" drill attachment that could reach into very confined areas. The answer was found in putting threads on the shanks of drill bits. The benefits are significant. Threaded drill bits eliminate the need for a chucking mechanism. Freed of this restriction, it is possible to do a wide variety of jobs in places with extreme space limitations (less than 1" x 2"). Chuck slippage is all but eliminated while the precision mating angle between threaded drill and drive spindle insures concentricity. Drill bit change times are reduced, an exact working drill bit length is insured and the chance of marring or scratching the work surface is greatly reduced. The Model 00105 Kit includes: a versatile close-quarter Right Angle Drill Attachment capable of drilling up to 1/4" diameter holes and compatible with all standard power drills, a 6" Threaded Extension for those deep hard-to-reach spots, a Chucking Spud which allows direct use of threaded TightFit® drill bits and extensions with your standard drill motor, five aircraft quality threaded TightFit® drill bits (Short Drill Bit Set, 00133), a Tight Fit® 3-Way Wrench, and is packaged in a red, heavy-duty, blow-molded storage case. Features: Attaches to any power drill; Recommended operating speed not to exceed 2500 rpm. • Light weight; Right angle drill weighs 1/3 of a pound and rotates 360 degrees for tight-spot access. • Threaded components allow for fast, easy tool changes; Drill over, under or around obstructions. • Design allows "deep reach" in confined areas; Provides utility of extension drill bit set.

P/N 12-01334 ..... **$52.85**

ACCESSORIES

Stub Drill Kit - 5 Drills 9/16" long in 3/32", 1/8",5/32",3/16",1/4" Dia.
P/N 12-20310 ..... **$19.85**

Short Drill Kit - 5 Drills 1-1/8" long, in same diameters as above
P/N 12-20320 ..... **$20.50**

Long Drill Kit - 5 Drills 2" long in same diameters as above.
P/N 12-20330 ..... **$19.85**

Screwdriver Set - #1 & #2 Phillips bits, small & large slotted bits.
P/N 12-20340 ..... **$2.95**

Extension Set - 4 Extensions in 1/2", 3" 6" & 9" (can be combined for a work length of 18") P/N 12-20350 ..... **$16.70**

Collet Adapter - Designed to hold all 1/4" shank accessories (countersinks, rotary files, sanding drums). P/N 12-20360 ..... **$8.50**

DELUXE TIGHT FIT TOOL KIT
PROFESSIONAL MODEL



Includes right angle drilling attachment, 6" extension rod, chucking spud, threaded countersink, (6) stub drill bits (9/16" long) & (6) short drill bits (1-1/2" long) in the following diameters: 1/16", 3/32", 1/8", 5/32", 3/16", 1/4". (1) threaded apex socket adapter to fit the angle head & extension rod. (4) screwdriver bits Number 1 & 2 slotted and Number 1 & 2 Phillips. (1) 1/4" threaded collet adapter to fit the angle head, extension rod or spud adapter. (1) 5/16" combination wrench. All above items are packed in a hard blow molded "everything in its place" aircraft mechanic style carrying case. The case even floats when fully packed. There is also a special internal tray for other drills or accessories.

P/N 12-11215 ..... **$69.75**

CARBIDE TIPPED HOLE CUTTERS



Multiple tungsten carbide tips for long life and smooth cutting. Cut fast, accurate, high quality holes in stainless steel, copper, aluminum, steel. Flange stop prevents over drilling. Replaceable cobalt steel pilot drill, with split point tip design, to improve performance and resist walking; eliminates need for "center punch." Size :7/8in. 22.2mm Min. Chuck Size:1/4in. 6.4mm PG 13 Coduit Size :1/2" Maximum Cutting Depth: 8 Ga. (4 mm)

P/N 12-03715 ..... **$45.50**

BLAIR HOLE CUTTER



The Blair hole cutter fits any 1/4" drill and set includes 7 blades (1/4" to 5/8" arbor), pilot and holder. The blades are threaded onto arbor and precise control of the depth of cuts is provided by adjusting screws. Over 3000 holes in sheet metal can be cut by each blade.

Model TP147.....P/N 12-00243 ..... **$105.75**

FLANGING-360 TOOL



This is a companion tool to the ARC-360 lightning hole cutter. The Flanger-360 will form a 30 degree flange on 2024-T3 aircraft aluminum up to .032" thick and in diameters from 2 to 6 inches. Its polished hardened steel rollers gently and effortlessly form the flange as the operator rotates the tool around the lightning hole. Unlike other flanging tools that rely on the skill and eye of the operator, the Flanger-360 stays in constant position with the lightning hole via guide rollers as it progressively forms the flange.

P/N 12-02030 ..... **$199.00**

UNIBIT STEP DRILL



The UNIBIT Step Drill uses a unique single flute design to drill perfectly round holes in thin materials quickly and with less effort than any other bit on the market today. UNIBIT incorporates cutting steps of progressively larger diameter, making it possible to drill up to 13 different hole sizes with a single bit. Once the desired hole diameter is obtained, the hole is automatically deburred by the cutting edge of the next larger step. UNIBIT #1 drills 13 holes in 1/32" increments from 1/8" through 1/2" and has a shank size of 1/4". UNIBIT #2 drills 6 sizes of holes from 3/16" through 1/2" and has a 3/8" step thickness with a 1/4" shank. UNIBIT #3 drills 9 sizes of holes from 1/4" to 3/4" and has a step thickness of 1/8" with a 3/8" shank. UNIBIT #5 drills holes 1/4" - 1-3/8". 10 steps. UNIBIT #21 drills 13/16"-1-3/8". 10 steps.

UNIBIT #1 Step Drill .....P/N 12-03700 ..... **$22.70**
UNIBIT #2 Step Drill .....P/N 12-03800 ..... **$22.70**
UNIBIT #3 Step Drill .....P/N 12-03900 ..... **$43.75**
UNIBIT #4 Step Drill .....P/N 12-03164 ..... **$48.50**

LOCKING C-CLAMP WITH SWIVEL 6 INCH



Locking C-Clamp W/Swivel Pad, 6 In, Specifications: Size: 6", Capacity (In.): 2, Throat Depth (In.): 1 1/8, Clamping Force (Lb.): 500, Locking Mechanism : Release Lever, Screw Mechanism: Adjusts Clamping Pressure, Pliers Length (In.): 7 11/16, Finish: Nickel Plated, Material: Hardened Carbon Steel, Standards: ASME B107.36-2002 P/N 12-02422..... **$12.50**

TO



INDUSTRIAL FABRIC SHEARS

Wiss No. 20W heavy-duty shears, ideal for cutting fiberglass cloth and all fabrics. Hot drop-forged steel.

Right Hand Shears.....P/N 01-00397 ..... **$32.75**
Left Hand Shears.....P/N 01-00398 ..... **$32.75**

FISKARS 9" PINKING SHEARS



These orange handled pinking shears keep your projects from unraveling at the seams. Ergonomic handles give comfort and control, extended lower blade to help lift fabric while cutting. Adds functional pinking edge to prevent fabric fraying. Tested to ensure clean cutting even through multiple layers of cloth to the tip. P/N 12-02942..... **$23.50**

OFFSET KEVLAR CUTTING SHEARS



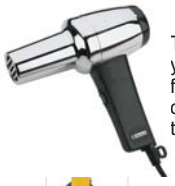
Although Kevlar has many advantages over conventional fiberglass weaves, it is very difficult to cut. Special scissors have been developed to facilitate cutting. These scissors have a wear -resistant coating which is metallurgically bonded to the steel substrate. The coating will not chip or peel off and can be sharpened.

Model WR-10E-4 Shears ..... P/N 01-00341 ..... **$85.75**



ECONOMY KEVLAR SCISSORS - GINGHER® Scissors cut Kevlar exceptionally well. Lightweight, extremely sharp and comfortable, these 2 1/2 oz. scissors are perfect for use during the lay-up. Soak in acetone for easy clean-up. We recommend saving one pair for only cutting Kelvar®, and keep ing a second pair for general use. P/N 01-00342..... **$47.85**

TOP FLITE HEAT GUN



This Top Flite Heat Gun is a handy tool that gives you a fast, drum-tight, mirror smooth finish. It's ideal for MonoKote, EconoKote and other heat-shrinkable covering films to get a professional finish with less time & effort. This heat gun has a One-Year Warranty.
P/N 12-03703..... **$23.50**

QUICK GRIP BAR CLAMPS



From the makers of Vise-Grip tools comes the amazing new Quick-Grip bar clamp. The unique pistol-grip handle lets woodworkers hold the clamp and adjust jaw pressure with just one hand. One finger unlocks the Quick-release trigger. Features include positive locking action to hold work tight, strong, lightweight high-tech construction, instant adjustable clamping pressure, large, pliable pads that won't mar work, and a variety of jaw openings. It will "single-handedly" change the way you think about bar clamps!

Part No.	Jaw Opening Size (mm)	Price
12-03910	6"/150	**$20.50**
12-03920	2"/305	**$22.75**

Part No.	Jaw Opening Size (mm)	Price
12-03950	36"/915	**$33.50**

STEEL SPRING CLAMPS



This nickel-plated steel spring clamp is ideal for gluing, assembly and welding work. The comfortable vinyl coated handle makes it easy to open the clamp for 2" wide placement and the tempered spring ensures a strong hold. Keep several on hand for all projects.
P/N 12-03778..... **$3.45**

ADEL HAND "NIBBLING" TOOL



Cuts sheet metal like punch and die. Cuts holes to any size and shape. Start with 7/16" hole then "nibble" to size required. Capacity 18 Ga. steel. Wt. 8 oz. ..... P/N 12-10400 ..... **$45.80**
Replacement Punch ..... P/N 12-10500 ..... **$31.50**

CUSHIONED CABLE CLAMP (ADEL CLAMP) INSTALLATION PLIERS



These special pliers allow for greatly simplified installation of single or multiple Adel type cushioned clamps. The pliers securely hold the aligned clamps in position, allowing for easy installation of securing hardware. Each kit includes special plier, alignment awl, and simple instructions.
P/N 12-02017..... **$34.75**

KETT PORTABLE POWER SHEARS



DOUBLE-CUT SHEARS KD-400– Variable-speed, double-cut shears feed quickly and quietly, without warping or bending your finished piece (distortion is in the waste strip). It easily follows a scribed line. The materials edges are not hardened or burred, so you get maximum use of a sheet. The swiping action of blades seals the edge of coated metals. These shears cut C.R. mild steel up to 18 gauge in straight or contour lines at over 300 inches per minute, most grades of stainless, aluminum to .080 and plastic or Formica up to 3/32" thick. These shears are also available with a contour cutting blade 60-21C to cut tighter curves and the HS blade 60-21HS for cutting foam filled doors. P/N 12-03806 ..... **$258.00**



ELECTRIC MODEL K-442 – Kett's all-purpose 16 gauge power sheers cut up to 16 gauge mild steel, cleanly and easily, without burring or buckling the material. These lightweight shears, designed for durability, feature a variable speed motor and fill the gap between Kett's light duty and heavy duty power shears.
P/N 12-01153 ..... **$262.95**



PNEUMATIC MODEL P-500 – Equipped with air-metering trigger for variable-speed cutting, so that initially the blade can be operated slowly to prevent chattering at start of cut. 2600rpm. Maximum cutting speed, 180" per min. Wt. 3 lbs. Over-all length, 9". P/N 12-01158 ..... **$222.95**

KETT KB-301 CORDLESS 18GA SHEAR



High torque 2300 SPM motor lets you easily cut 18 gauge mild steel or up to 20 gauge stainless at over 150"/minute. The swivel head gives you precise control as you make straight or contour cuts. The double-cut shearing action leaves a clean burr free edge and won't warp or bend the piece. Extended run time NiCad battery recharges quickly and there's room for a spare, and the charger unit, in the handy carrying case. Length: 12-3/4", Weight: 7 lbs. The kit includes the KB-301 power shear, KB-302 14.4 volt NiCad High Performance battery. KB-303 battery charger and KB-304 carrying case.

Model No.	Description	Part No.	Price
KB-301-K	Cordless Shear Kit #300	12-00117	**$314.95**
KB-302	14.4 volt NiCad Battery	12-00118	**$61.25**
KB-303	One Hour Battery Charger	12-00119	**$62.00**
KB-304	Carrying Case	12-00121	**$26.30**

KETT KD440 14GA POWER SHEARS



Cuts 14 gauge mild steel and most grades of stainless to 16 gauge. Cuts over 150 inches/minute, leaving a clean, flat sheet, ready to fabricate. Distortions are absorbed in an easily disposed of waste curl, leaving the sheet cool and free of burn, chips, and burrs. The cutting blades are finest high speed steel. (Also cuts sheet metal, Stainless and Plastics) P/N 12-00676..... **$234.95**

KETT KD-446R PROFILE SHEARS



Cuts profile and flat materials up to 18 gauge, spiral duct, wire mesh and many other materials. Can cut tight curves at a radius of three inches. The blades are made of high quality steel, heat treated and precision ground. The motor is variable speed up to 2500 RPM and cuts up to 28 feet per minute.

Features: • 5.0 amp pistol grip • Replaceable A-2 tool steel shear blades.• These snips cuts C.R. mild steel 18 gauge and lighter, wire mesh to 18 gauge, spiral pipe, metal studs and corrugated metal
Right Hand ..... P/N 12-02507..... **$259.85**
Left Hand..... P/N 12-02509..... **$259.85**

CORDLESS ELECTRIC KEVLAR SCISSOR KIT



The USATCO cordless electric kevlar scissor kit cuts aramid fibers, kevlar and other tough materials! Lightweight and maneuverable with superior ergonomic design. Requires much less effort than cutting manually. Short rapid strokes for intricate work. This can be operated with cord and adapter for unlimited cutting time. P/N 12-02630 ..... **$190.75**

TO

VAMPLIERS

VAMPLIERS MINI SCREW REMOVAL PLIERS



- Remove stripped/rusted/corroded/stuck/one-side/Torx screws, nuts and bolts.
- Designed with VamPLIERS™ Technology.
- Target screws can be extracted using top jaw or side jaw.
- Perfect slim nose for access confined spaces.
- ESD safe handle (1x106 ~ 107 O • sq)
- Ergonomic elastomer handles for unmatched comfort.
- RoHS Compliant for use in various industries.
- Made in Japan from high carbon stainless steel.

P/N 12-04717 ..... **$26.95**

VAMPLIERS PRO SCREW REMOVAL PLIERS



- Remove stripped/rusted/corroded/stuck/one-side/Torx screws, nuts and bolts.
- Designed with VamPLIERS™ Technology.
- Target screws can be extracted using top jaw or side jaw.
- Ergonomic elastomer handles for unmatched comfort.
- Wire cutters hardened to HRC58±2 (Rockwell standard).
- RoHS Compliant for use in various industries.
- Made in Japan from high carbon stainless steel.

P/N 12-04718 ..... **$39.95**

VAMPLIERS SCREW REMOVING PLIERS



The amazing Vampliers doubles as a regular pair of pliers, as well as a handy and effective screw remover. It uses a patented vertical and horizontal serration pattern to clamp onto screws (even if they are completely stripped) and remove them. Of course, it can also be used as a regular pair of pliers which features built-in wire cutters and wire strippers.

P/N 12-04716 ..... **$29.95**

VAMPLIERS SLIP JOINT STRIPPED SCREW REMOVAL PLIERS



These Slip Joint VamPLIERS have the signature concave shaped jaws with vertical and horizontal serrations designed inside of the jaws. This which gives the perfect bite around a stripped/rusted/corroded screw, nut or bolt for extraction. Compared to its predecessor, these jaws are wider to tackle bigger problem screws. Adding to its big bite is the "slip-joint" feature made with reversed body structures that allows the jaws to adjust and firmly take on bigger screws, nuts, and bolts!

P/N 12-04719 ..... **$34.95**

VAMPLIERS KIT



VamPLIERS have a signature concave shaped jaws with vertical and horizontal serrations designed inside of the jaws. This which gives the perfect bite around a stripped/rusted/corroded screw, nut or bolt for extraction.

This kit features a pair of the VT001-8 VamPLIER Pro Pliers, VT001-5 Mini Pliers, and the VT001-7SJ VamPLIER Slipjoint to cover all your rusted screw problems.

P/N 12-04720 ..... **$133.75**

VAMPLIER TOOL POUCH



Keep your VamPLIERS all in one place. This handy case has five individual pouches to hold your tools, and rolls up to save space in your toolbox.

Note: Does not include VamPLIERS.

P/N 12-04721 ..... **$9.95**

VAMPLIERS® SCREW REMOVAL PLIERS

Remove stripped/rusted/corroded/stuck/one-side/Torx screws, nuts and bolts. Designed with patented VamPLIERS® Technology. Long Nose ideal for hard-to-reach screws up to 5.5mm in diameter and 2.2mm in height. Wire cutters hardened to HRC60±2 (Rockwell standard) to handle tough screws. Serrations in between grips used as wire pullers. Top teeth are inter-meshed for non-slip grip. Ergonomic elastomer handles for unmatched comfort. T-Shaped forged handles prevent the grip covers from twisting or slipping off. RoHS compliant for use in various industries. Made in Japan from high carbon stainless steel.

Description	Part No	Price
Long-Nose 7.5 Inch Screw Extraction Pliers	12-05052	**$39.95**
2 Piece Set S2A 5 Inch Mini and 6.25 Inch	12-05053	**$53.95**
2 Piece Set S2B 6.25 Inch and 7 Inch	12-05054	**$69.65**
2 Piece Set S2C 7 Inch and 8 Inch	12-05055	**$71.85**
2 Piece Set S2D 6.25 Inch and 8 Inch	12-05056	**$66.85**
3 Piece Set S3A 5 Inch Mini, 6.25 Inch, and 7 Inch	12-05057	**$87.75**
3 Piece Set S3B 6.25 Inch, 7 Inch, and 8 Inch	12-05058	**$99.60**
3 Piece Set S3C 5 Inch, 6.25 Inch, and 8 Inch	12-05059	**$91.95**
4 Piece Set S4AP 5 Inch Mini, 6.25 Inch, 7 Inch, and 8"	12-05061	**$134.70**

VAMPLIERS® RECESSED SCREW EXTRACTOR WITH 2-IN-1 BIT SET



High Quality Screw Extractor for recessed stripped screws. Easily removes stripped or damaged flathead, countersunk, and recessed screws. Saves time – No preparation required. No messy drilling required. High-Torque handle grip. 2-in-1 bit set for slightly-damaged and heavily-damaged screws.

P/N 12-05062 ..... **$39.95**

VAMPLIER SHEARS



The VT-3949 Eshears are made of high carbon stainless steel with Molybdenum and Vanadium blades, vacuum hardened and precision-ground for a long lasting edge. These sport modern ergonomic handles that are made of Nylon with 30% fiberglass and work for both the right and left handed user. P/N 12-04997 ..... **$24.95**

VAMPLIER ALL-IN-ONE ELECTRICAL SHEARS / CRIMPER



An electrician's choice shear, the All-In-One Eshears are made of high carbon steel with molybdenum and Vanadium micro-serrated blades, which are vacuum hardened for everlasting durability. They are also outfitted with sporty ergonomic handles made of Nylon and 30% fiberglass for comfort and designed for ambidextrous use. P/N 12-04996 ..... **$29.95**

VAMPLIER 6.25" KEVLAR CUTTING SHEARS



High quality scissors for cutting Kevlar thread. These scissors are specially designed for cutting Kevlar material; Kevlar thread in particular. One blade is micro-serrated along the whole edge. The blades are made of high carbon alloy steel with Molydenum and Vanadium edge 60~62, cutting edge hardness HV1200. The handles are especially designed for firm grip and to ease repetitive cutting action.

P/N 12-04994 ..... **$19.95**

VAMPLIER SUPER COMBO SCISSORS



A high quality multi-use 4-in 1 innovative scissors for industrial and home use. The cutting edges are sharp and micro-serrations provide a firm grip during cutting.

P/N 12-04995 ..... **$29.95**

VAMPLIER 8" KEVLAR CUTTING SHEARS



These shears are ideal to cut materials made from aramid and para-aramid Fibers such as Kevlar, Dyneema, Vectran, and Technora in rope, ribbon, tape or fabric form. Its blades are made of high carbon alloy steel from Japan and are infused with Molybdenum and Vanadium (HRC 60~62) through a proprietary process to achieve a level of hardness (HV1200) to cut strong materials. P/N 12-04993 ..... **$39.95**

COMPARTMENT BOXES – TOOLS

16 COMPARTMENT STORAGE BOX



Easy glide large and small racks are designed to accommodate large and small compartment boxes and create convienent, compact storage systems. Boxes can be removed and tranported to the job site. Rugged plastic inserts and scoop bottoms fit neatly into steel outer shell boxes. Optional bases raise racks off the floor.

•Compartment: 16 •Weight: 8 lbs • Material: Prime cold rolled steel • Interlocking and Welded Construction • Colors: Durable gray powder coat finish • Depth: 12" • Height: 3" • Width: 18"

P/N 12-02623.....**$32.85**

21 COMPARTMENT STORAGE BOX



Easy glide large and small racks are designed to accommodate large and small compartment boxes and create convienent, compact storage systems. Boxes can be removed and tranported to the job site. Rugged plastic inserts and scoop bottoms fit neatly into steel outer shell boxes. Optional bases raise racks off the floor.

• Compartment: 21 • Weight: 8 lbs • Material: Prime cold rolled steel • Interlocking and Welded Construction • Colors: Durable gray powder coat finish • Depth: 12" • Height: 3" • Width: 18"

P/N 12-02622.....**$32.85**

32 COMPARTMENT STORAGE BOX



Easy glide large and small racks are designed to accommodate large and small compartment boxes and create convienent, compact storage systems. Boxes can be removed and tranported to the job site. Rugged plastic inserts and scoop bottoms fit neatly into steel outer shell boxes. Optional bases raise racks off the floor.

• Compartment: 32 •Weight: 8 lbs • Material: Prime cold rolled steel • Interlocking and Welded Construction • Colors: Durable gray powder coat finish • Depth: 12" • Height: 3" • Width: 18"

P/N 12-02621.....**$32.85**

EZ GUIDE DRAWER RACKS



Easy glide large and small racks are designed to accommodate large and small compartment boxes and create convienent, compact storage systems. Boxes can be removed and tranported to the job site. Rugged plastic inserts and scoop bottoms fit neatly into steel outer shell boxes. Optional bases raise racks off the floor.

• Weight: 20 lbs • Material: Prime cold rolled steel • Interlocking and Welded Construction • Colors: Durable gray powder coat finish • Depth: 15" • Height: 8-1/8" • Width: 20"

P/N 12-02624.....**$128.75**

EASY GLIDE RACK BASE



Rack base (20 5/8" W X 15 5/8" H X 12 5/8" D; weight 13 lbs.) is available for use with PN# 12-02626.

• Weight: 13 lbs. • Material: Prime cold rolled steel • Colors: Durable gray powder coat finish • Depth: 12-1/8" • Height: 15-1/8" • Width: 20-3/8"

P/N 12-02627.....**$49.80**

AEROSPACE VALVE CORE REMOVAL TOOL



Used for rapid and safe tire deflation, Tool threads on valve stem, Releases and traps the valve core within the tool but exhausts the air through ports, Prevents Injury to Technician and FOD (stops the valve core from becoming a missile!), and Air exhausts away from technician. Made In the USA **Small**: Examples of applicable aircraft: Boeing 757, 737 Classic/NG, 727, 717, MD88, Airbus A320 Series, Bombardier and Embraer Regional Jets, General Avaition piston and jet aircraft: Cessna piston, Beechcraft piston and turbine (Bonanza and King/Queen Air), Pilatus PC-12 etc. **Large**: Examples of applicable aircraft: Boeing 747,767, 777, 787, DC10, MD11, Airbus A300, A330, and A380.

Small.....P/N 12-03428.....**$45.85**

Large.....P/N 12-04868.....**$74.75**

GRYPMAT NON-SLIP ANTI-STATIC TOOL MAT



The GrypMat by Grypshon Industries is made from a rubberized, flexible, non-marring, non-slip, anti-static material.

GrypMat is designed to give mechanics a safe and secure surface to Place tools without worrying about damaging the equipment they are working on. GrypMat works where other tool trays won't, such as the curved surfaces found on aircraft wings and bodies. Using GrypMat reduces Foreign Object Damage (FOD), lowers maintenance times, prevents scratches and damage, and helps mechanics do their jobs.

Product Specs: Non-flammable. To clean product use damp cloth or alcohol prep pad. Periodic cleaning will provide better grip on Surfaces.

Small 6" x 12".....P/N 12-04880.....**$29.99**

Medium 8" x 12".....P/N 12-04879.....**$44.99**

Large 12" x 22".....P/N 12-04878.....**$64.99**

Trio (All 3 Sizes).....P/N 12-04982.....**$129.99**

CLAMPTITE TOOLS



With stainless steel components and an aluminum body, this tool was designed for the outdoors man, fisherman and farmer who would have it around a corrosive environment. The stainless steel components are stronger and you can just toss it in the tool box that is in the truck, boat or tractor. The tool is great for emergencies and tough wire jobs. This is the original marine grade tool.

4 3/4" Long - 7" Fully Extended

P/N 12-02633 ..... **$39.95**



Plated steel components with aluminum body. This tool was designed with the mechanic in mind who would have it around grease, oil and a controlled environment (non corrosive). Great for the CV boots, fuel line, thermostat housing, radiator hose and air hose type repairs.

4 3/4" Long - 7" Fully Extended

P/N 12-02634 ..... **$29.95**

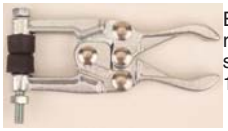


This tool is machined stainless steel with a one piece body and nose and bronze nut. The tool was designed with the detailed craftsman who need a long lasting tool able to hold up to extremely tough wire while clamping, binding and pulling the wire until the job is complete.

4 3/4" Long - 7" Fully Extended

P/N 12-02632 ..... **$69.95**

TOGGLE CLAMPS



Easy to use than regular C-clamps. Quick-release style. Removable rubber pads on each screw. Gap: 1"

1-1/2" Reach.....P/N 12-02863.....**$14.65**

SCREW & BOLT SHEAR



The Screw & Bolt Shear is a bolt cutting device manufactured from very high quality tool steel which is hardened, tempered & machined to very close precision tolerances. The action of this tool is similar in nature to a "guillotine" design and is quite effective in cutting screws/bolts to specific lengths. The cutting body of the SBS-1 will accommodate screws or bolts in sizes of 4-40, 6-32, 8-32, 10-32, 10-24, 1/4-20 & 1/4-28.

P/N 12-14250.....**$98.90**

QUICK ANGLE - MEASURING ANGLES & PITCHES



A multi-functional revolutionary new tool for measuring angles and pitches. It's rare to find one tool that will accomplish so much (miter cuts for one and duplications for another). Use this one-in-all tool to compliment and enhance your tool box.

P/N 12-02458.....**$35.80**

TO

AMP PRO CRIMPER II HAND TOOL



The PRO-CRIMPER II Hand Tool provides the versatility of general-purpose service of general-purpose service tools along with the reliability and ease of use of many premium-grade tools For versatility, 75 die sets (available separately) are interchangeable, including those for open-barrel contacts and terminals. Additionally, many of these die sets have multiple cavities for crimping a variety of contact or terminal sizes. For reliability, the tool is constructed of durable high carbon steel with extra-strength pivot pins. And, for user convenience, the PRO-CRIMPER II Hand Tool particularly excels. Ratchet control is provided for complete crimp cycling; this helps eliminate partial crimps. Also, an emergency ratchet release allows the user to open the tool jaws at any time during the crimp cycle.To reduce handle force, the linkage was designed to match the forces required to crimp our largest insulated terminal. The result is dramatically less hand force than comparable tools. Also, the angled had and specially designed handles provided comfortable operation. Locator are mounted on pin-and-socket style tools They help properly locate the contact in the die set, provide a wire stop, and help minimize contact rotation and bending during crimping.

PROCRIMPER II 58433-3.....P/N 12-01379 ..... **$179.00**
O-CRIMP DIE 58435-1.....P/N 12-01380 ..... **$320.00**
HEX CRIMP DIE 58436-1 .....P/N 12-01381 ..... **$139.95**
PIN & SOCKET 58495-2.....P/N 12-01382 ..... **$174.75**

KOUL SINGLES STAINLESS BRAIDED HOSE ASSEMBLY TOOLS

Since the invention of stainless braided hose, racers and mechanics have been fighting the problem of installing it into the socket part of the assembly. If your lucky and get a clean cut on the end of that hose, you might get it in. Most of the time a little fuzz appears on the hose end and the battle begins. It is not only time consuming, it can get bloody. This tool is the solution that makes the assembly a snap. Manufactured of a high tech composite, it is virtually indestructible. No need to worry about vise marks or wearing out. Just insert the socket into the tool, twist the hose in, and in less than 10 seconds you have it assembled. You can repeat this several times without recutting the hose end. The tool can pay for itself the first time you don't have to scrap some hose because it got too short trying to clean up the end. You'll be amazed at the amount of time you'll save.



SMALL KIT - The Small kit contains the capsules to install -4, -6, -8 hose into their respective sockets. To accommodate all the different manufacturer's fittings, spacers and sleeves are required to tighten up the some of the sockets within the capsule. For the tool to perform at its best, the socket needs to be a snug fit in the funnel. The two spacers are used in some -6's and 8's. If the socket seems loose in the tool, use a spacer to tighten it up. In the small kit, only the Russell -4 needs a sleeve. Not for use with Teflon-style hose. PN 12-01061 ..... **$73.95**



LARGE KIT - The Large kit contains the capsules to install -10, -12, -16 hose into their respective sockets. To accommodate all the different manufacturer's fittings, spacers and sleeves are required to tighten up some of the sockets within the capsule. For the tool to perform at its best, the socket needs to be a snug fit into the funnel. In the 1016 kit, all the -16's except Russell's require the sleeve and a rear spacer. See the instructions in the case for the proper spacer number. Most of the -10's and 12's* will use a spacer. Not for use with Teflon-style hose. * -12 is a stainless washer.
PN 12-01062 ..... **$88.85**



HOT ROD KIT - The Hot Rod kit contains the capsules to install -6, -8, -10 hose into their respective sockets. To accommodate all the different manufacturer's fittings, spacers and sleeves are required to tighten up some of the sockets within the capsule. For the tool to perform at its best, the socket needs to be a snug fit into the funnel. Spacers are used in some -6's, -8's, and most -10's. If the socket seems loose in the tool, use a spacer to tighten it up. See the instructions in the case for the proper spacer number. Not for use with Teflon-style hose.
PN 12-01898 ..... **$110.95**



THE PRO COMBO - The Pro Combo is a special offer of BOTH the #468 and #1016 kits listed above. Pros need both kits to handle all the hose sizes in a race car. Ordering this combination will save $15.00. Not for use with Teflon-style hose.
PN 12-01897 ..... **$147.50**



KOUL SINGLES

6 Koul Single..... PN 12-01928 ..... **$29.50**
8 Koul Single..... PN 12-01929 ..... **$29.50**
10 Koul Single ..... PN 12-01930 ..... **$29.50**

AMP RIGHT ANGLE DUAL CRIMP TOOL



Amp right angle dual crimp tool. Features: • RF Connector, Gender Plug. Dual Crimp, Right angle body, Waterproof, Without Solder Terminal, without Military Grade, Teflon material, Without Mechanical Attachment Panel Mount. Connector Impedance (Ohm) is 50. Coaxial Cable Termination Type is Crimp. Body Plating is Silver. Center Contact Plating is Gold. Coaxial Cable Type (RG/U or Mfg.) is 214, 9, 9A. Government/Industry Qualification - No. RoHS/ ELV Compliance is Not ELV/RoHS compliant. Lead Free Solder Processes is not relevant for lead free process.
P/N 11-10006.....**$129.95**

PRO CRIMPER III HAND CRIMPING TOOL



Ratchet tool for panel mount free hanging connectors, open barrel pins and sockets with dies 16-28 AWG. The PRO-CRIMPER III Hand Tool provides the versatility of general-purpose service of general-purpose service tools along with the reliability and ease of use of many premium-grade tools. To reduce handle force, the linkage was designed to match the forces required to crimp large insulated terminals. The result is dramatically less hand force than comparable tools. Model: #584951. P/N 11-14450.....**$212.95**

EXPRESS PORTABLE AIRCRAFT VACUUM



Express Vacuum Features Weighs only 4 pounds Powerful 79 CFM/110V Motor& made in the USA.
ortable - Weighing just 4 pounds, the Atrix Express Plus is one of the lightest portable vacuums available.
Convenient - The Express Vacuum is easy to operate. The replacement cartridge filters install with a snap and without mess. And, an inexpensive two-stage bag/shell filter option is available.
Powerful - Atrix has built in a powerful motor making the Express Plus as powerful as most of the larger service vacuums.
Safe - The Express Vacuum comes with an ESD safe hose, ESD safe round dust brush, ESD safe gooseneck, ESD safe crevice tool and power cord. The complete system is grounded from the tip of the hose through the end of the power cord.
Filtration - Standar filter with a 0.3 micron retention - Ideal for soot, dust, laser toner and other fine particulate.

Toner/ESD Vacuum 110V.....P/N 12-01058.....**$128.00**
Toner Toner Filters 2 Pk. .....P/N 12-01059.....**$24.55**
Vacuum Carrying Bag .....P/N 12-01454.....**$24.90**

XCELITE ROUND BLADE SLOT SCREWDRIVER



Xcelite 1/8 inch x 10 inch length,Regular Round Blade Screwdriver, Amber Handle. 1/8" x 10" Regular Round Blade Screwdriver, Amber Handle.
P/N 12-04776.....**$7.80**

AIRLOC CROSSPIN INSTALLATION TOOL



This tool accommodates the two series (diameters) of Airloc (A-Spec) studs commonly found in Beechcraft and Raytheon aircraft: #2 and #5. It has a seat for each series so the cross pin can be installed and centered and operates by placing the pin into the appropriate hole where it should remain seated. Then compress the pliers to force the cross pin into the stud. Once completely clamped, the pin will be perfectly centered in the stud. Comes with complete instructions..
P/N 12-04808.....**$212.95**

SPEEDKIT AERO TOOL KIT



It provides the most essential tools in an affordable and compact package. Included are three combination wrenches, three hex wrenches, a 5-in-1 screwdriver, 11/32" nut driver, tire pressure gauge, and our highly competent diagonal cutters. Everything is housed in a durable textile pouch with extra room for additional items as needed. Weighing in less than a pound (2 kg.) and measuring only 7" x 2" x 2", even Cub owners can find a place for the SPEEDKIT. P/N 12-04750.....**$32.95**

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

TORQUE WRENCHES

FULLY RELEASING TORQUE DRIVER



The MD1F35H is an adjustable driver with a range of 5 to 35 lb. in. Body is constructed of steel and anodize aluminum, has a CNC machined knurled grip and 1/4" male drive and comes packaged in a plastic box. The MDP1F35 is is a preset model ideal for repetitive assembly operations. P/N 12-00530 ..... **$218.95**

DIAL TYPE TORQUE WRENCH



Dial Type Wrenches provide unmatched reliability, accuracy and durability for applications where torque measurement is extrememly critical. Models feature a memory pointer that indicates the highest torque achieved during application of torque. 2% accuracy clockwise and counterclockwise. All wrenches are made in the USA of all steel construction for the highest quality. Both models come with a plastic storage box and a calibration compliance certificate.

3/8" sq.dr. / 300 lb.in..... P/N 12-00531 ..... **$204.95**
3/8" sq.dr. / 600 lb.in.-50 lb. ft. .... P/N 12-00532 ..... **$204.95**

MICROMETER ADJUSTABLE CLICK WRENCH



Engineered, precision bearing surfaces extend the calibrated life of these micrometer torque wrenches to as many as 60,000 cycles or more and ensure the most reliable performance possible. In addition to flawless operation at release, calibration is completely external, unlike traditional mechanism that require disassembly and the replacement of blocks and shims. Both models come with a plastic storage box and a calibration compliance certificate.

3/8" sq.dr. / 40-200 lbs. In.....P/N 12-00533 ..... **$206.95**
3/8" sq.dr. / 20-100 lbs. In.....P/N 12-00534 ..... **$206.95**

QUICK-GRAB RATCHET-ACTION WRENCHES



You'll have the advantages of an open-end wrench, plus the convenience of ratchet action. The jaws snap open to slip onto fittings and fasteners; then, they close tightly for ratcheting. Wrenches require a 30 degree handle swing to turn a fastener. All are made of hardened steel with a black finish.

Size	Part No.	Price
5/8 Inch	12-00913	**$33.50**
3/8 Inch	12-03238	**$35.50**
1/2 Inch	12-03239	**$28.90**
9/16 Inch	12-03240	**$35.50**

ADJUSTABLE TORQUE SCREWDRIVER



Bi-directional Accuracy of +/- 6% Indicated Value from 20% to 100% of capacity meets or exceeds ASME B107.300-2010 and ISO 6789. Incredibly durable; many owners have experienced a service life of 10+ years! Operator cannot overtorque. Clutch releases automatically when desired torque has been achieved. Scale on shaft is marked in dual incrementation (in. lbs. and NM) on Cal 36/4, kgf•cm on CAL 40. Magnifying lens improves view of clearly engraved scale. To operatie, simply dial torque setting and insert bit. Uses standard bits, adapters and sockets. Anti-backlash design enhances repeatability. Comes with FREE certificate of calibration from our ISO/IEC 17025 Accredited Calibration Laboratory. CAL 36/4 can be ordered with certification for English or SI units of measure.

P/N 12-03398 ..... **$255.95**

MICROMETER TYPE TORQUE WRENCH



The wrench is equipped with a reversible ratchet head or plain (non-ratcheting) head may be used in both right or left hand directions. The drive head accommodates sockets, extensions, crowfoot adapters, and other attachments to fit a multitude of fasteners both in English and Metric.

P/N 15-05531 ..... **$152.75**



DIAL TORQUE WRENCH

Capacity	Graduation	Sq. Dr.	Length	Weight	Part No.	Price
300 in. lbs.	5 in. lbs.	3/8"	10.3"	1.2 lbs.	12-03399	**$277.95**



MICROMETER ADJUSTABLE TORQUE WRENCHES

Range	Graduation	Sq. Dr.	Part No.	Price
30-150 in.lbs.	2 lbs./in.	3/8"	12-03402	**$238.95**
40-200 in.lbs.	2 lbs./in.	3/8"	12-03403	**$243.95**



MICROMETER ADJUSTABLE INTERCHANGEABLE TORQUE WRENCHES

Range	Graduation	Part No.	Price
30-150 in. lbs.	2 in. lbs.	12-03404	**$184.00**



3/8 INCH SQUARE DRIVE RATCHET INTERCHANGEABLE HEAD

Note: Must be used with part numbers 12-03404 or 12-03405 and 12-03407. See Accessories. This series is designated "SDRT". Ideal for use when a socket is to be used and there is significant rotation of the fastener required to complete the tightening: A socket can be used to engage the fastener. A higher amount of rotation will be needed to attain the desired torque. P/N 12-03406 ..... **$87.50**



3/8 INCH SQUARE DRIVE INTERCHANGEABLE HEAD

Note: Must be used with part numbers 12-03404 or 12-03405 and 12-03406. See Accessories. This series is designated "SD". Ideal for use when a socket is to be used and there is significant rotation of the fastener required to complete the tightening: Calibrating the wrench on a torque tester, A socket can be used to engage the fastener, A small amount of rotation will be needed to attain the desired torque.

P/N 12-03407 ..... **$45.75**

TO

LIGHTED SCREWDRIVER - 8-IN-1



Perfect for Computers, Electronics, Industial and Residential Applications, Hobbies and Crafts. Two Super Bright LED Lights Provide 360° Tip Illumination. Transparent Collar Maximizes Illumination. Unique Design Features Two Drivers in One Handle. This is an 8 in 1 tool perfect for just about any need (Bit Sizes: #0, #000, 1/8", 5/64"; T5, T8; T6, T10). Convenient Bit Storage in Handle. Removable mini screwdriver. Cordless (3 "LR41" Batteries Included). P/N 12-03354..... **$12.50**

LIGHTED TWEEZER



Working inside those dark, confined spaces on the job just got a lot easier! General's Illuminated Tweezers offer a built-in, bright white light-emitting diode (LED) to directly illuminate your working area. Made from heat-treated steel with a corrosion-resistant black finish, these cutting-edge tweezers are built to withstand tough jobs and working environments. we've also included a non-slip cushion grip for added comfort. Available in Serrated Blunt, Serrated Bent and Smooth Pointed Tips.
P/N 12-03349..... **$8.50**

REVERSIBLE RATCHETING TAP WRENCH



No. 0 to 1/4" Reversible Tap Wrench - General's Reversible Tap Wrenches feature a fine-tooth ratcheting mechanism which adjusts on the fly for right- and left-hand use. In addition, the ratchet can be locked to transform the tool into a standard tap wrench. The self-centering, hardened-steel jaws assure the formation of straight threads in your work piece. Although designed mainly for holding taps, the Reversible Tap Wrench also works great with reamers, drill bits, screw extractors and other hand-turned tools.
P/N 12-03352..... **$29.90**

60 PIECE DRILL BIT SET



60 pc. Bright - Jobber Length - 118° Point - Wire Sizes - 95090850. Excellent general purpose drill bit. Precision CNC machined for faster, more efficient chip removal. Industrial-Grade NAS High Speed Steel (HSS). Heavy duty metal storage case. Numbered metal tip-out indexes keep bits organized. Made in the USA. Material applications: aluminum, copper, wood, plastic Size range: Wire #1-#60. P/N 12-04760..... **$96.95**

AIR CHISEL TOOLS



Aircraft structures are sensitive to tool damage during manufacture, servicing and repair but the numerous plastic and composite materials available in our products are able to deliver the levels of strength and durability required of tools systems whilst conforming to aircraft manufacturer specifications.
Strong ribbed backing air chisels that are easily reshaped. Designed to fit standard air chisel tools with a 0.401" diameter shank, this scraper system maintains the damage reduction and non-marring properties of our hand tools but is suited to heavy-duty and higher volume material removal while reducing operator fatigue.



GENERAL SCRAPPER CHISEL TOOLS

Standard width air chisel scraper.
General Scrapper Chisel Tool - Soft
P/N 12-02282..... **$7.50**



FLAT SCRAPPER CHISEL TOOLS

Steep angle for air chisel scraping delicate, narrow jobs that require less of a wedging angle.
Flat Scrapper Chisel Tool - Soft
P/N 12-02284..... **$7.50**



BOX CORNER SCRAPPER CHISEL TOOLS

Ideal shape for air chisel scraping tight into corners, removing material on both sides surface at once.
Box Corner Scrapper Chisel Tool - Soft
P/N 12-02286..... **$7.45**



LARGE HEAVY DUTY FLAT AIR CHISEL TOOL

Wide air chisel scraper for larger areas of removal.

Large Heavy Duty Flat Air Chisel Tool- Hard
P/N 12-02288..... **$9.95**



NARROW HEAVY DUTY FLAT AIR CHISEL TOOLS

Narrow air chisel scraper for tight, confined areas of removal.
Narrow Heavy Duty Flat Air Chisel Tool- Hard
P/N 12-02289..... **$8.75**

FEIN MULTIMASTER START PLUS



The universal system for interior construction and renovation with the basic accessories for the most common applications.
Kit Includes: 1 FEIN Multimaster FMM 250, 1 backing pad, 20 sanding sheets (5 each of grits 60, 80, 120, 180), 1 Universal E-CUT saw blade (1 3/4 in), 1 HSS segment saw blade, 1 rigid scraper blade, 1 wrench and mounting bolts, and 1 tool case. Weight: 2.6 lbs.
P/N 12-02962..... **$248.00**

SKYBOLT 4P3-SP5 COMBO TOOL



SK-4P3 CLoc® Pliers (PN# SK-4P3)
A must to install CLoc® or Camloc® 4000 Series studs into grommets. Also handy to install 2000 Series Studs, including winged studs. Cushioned grip handles. Grip jaws are milled precisely to fit 4000 Series cups perfectly! .....P/N 08-07224 ..... **$72.75**

HOSE PINCH-OFF PLIERS



Great for radiator and heater hose, vacuum and fuel lines. Tested to 50,000 cycles without failure for reliable performance. Patented clamping mechanism - No adjustment needed -- Simply squeeze to lock Cushion handgrips for comfort and control. Available in three sizes. Made in U.S.A.
Hose Pinch-off Pliers 1-1⁄4" OD Cap. .....P/N 12-00524 ..... **$19.50**
Hose Pinch-off Pliers 2-1⁄2" OD Cap. .....P/N 12-00525 ..... **$25.75**
Hose Pinch-off Pliers 3/4" OD Cap. .....P/N 12-00526 ..... **$20.50**

HOSE CLAMP PLIERS



Specially designed for applying and removing spring hose clamps.The recesses in the jaws grip the ends of the spring so it cannot slip or twist. Grips with either end or side of jaws for reaching into tight places.
P/N 12-01154 ..... **$18.95**

TO

SAFETY WIRE TWISTERS - SAF-T-BLOKS



MILBAR SAFETY WIRE TWISTERS

Three-In-One Tool: Pliers, twisters and cutters. Used on wire sizes .060" or less. Grips wire into 30° slip proof angle. One-hand operation. Squeeze, press button and it locks. Squeeze again and it unlocks. Made in USA.

With Manual Return		
Description	**Part No.**	**Price**
Standard Nose - 9" Long	12-00915	**$71.75**
Diagonal Nose - 6"Long	12-00914	**$73.75**
With Automatic Return - Non Reversible		
9" Long	12-00916	**$74.85**

MILBAR WIRE TWISTERS CUSHION THROAT MODEL 25W & 26W



Milbar is the world's leading brand of Wire Twister Tools and Kits. Designed for the professional mechanic, Milbar forgings are made from high carbon alloy steel and are controlled throughout the manufacturing process to exacting engineering specifications. Each tool passes a series of rigorous quality assurance tests which ensure function and reliability under the most demanding environments. (Black oxide finish) TYPES AND STYLES - Wire Twisters come in 6" Diagonal Configuration. The 25W model incorporate a Cushion Throat to catch clipped wire ends, preventing FOD (foreign object damage). The Spring Return feature automatically retracts the twist rod to ease and speed the work.

25W-NOM Size 6" ..... P/N12-01631 ..... **$88.75**
6W-NOM Size 9" ..... P/N 12-02018 ..... **$97.75**

ECONOMY REVERSIBLE MILBAR WIRE TWISTERS MODEL 42W & 45W



Milbar Safety Wire Pliers 45W 6" & 42W 12" Reversible-Automatic Return Milbar Safetytwist Reversible Wire Twister with Automatic Return.

Milbar 45W Reversible 6" Safety Wire Pliers have an overall length of 8-3/4" and wire capacity of .041".

P/N 45W **$86.50**

Milbar 42W Reversible 12" Safety Wire Pliers have an overall length of 12-1/4" and wire capacity of .060".

P/N 15-06301 ..... **$129.95**

SAFETY WIRE TWISTERS



These top quality twisting lock pliers with automatic return are reversible, economically priced, and extremely durable. Features a sharp cutting edge and will twist up to .060" dia. safety wire.

6-INCH ..... P/N 12-02828 ..... **$48.75**
9-INCH ..... P/N 12-02829 ..... **$49.85**

SAFETY WIRE TWISTER KIT M300



Contains 6" Safety Wire Twister and 19" Chrome Adjustable Safety Twister Tool.

P/N 12-01680 ..... **$115.95**

MILBAR 105W PROFESSIONAL WIRING KIT



The most versatile kit available. Contains three different SafetyTwist® Pliers to cover almost any application: 9" Automatic (1W393), 6" Mini (9W) and a 19" Deep Reach Twister (13W). Includes three 1/4 lb. spools of stainless steel safety wire (.020, .032, .041). Durable plastic storage case. Kit weight 4 lbs.

P/N 12-02020 ..... **$198.00**

SAFETY WIRE TWISTER KIT



• 04-134SR - Safety Wire Twister • 04-134SR6 - Safety Wire Twister - Mini • 43-025 - Stainless Steel Aircraft Safety Wire • 43-032 - Stainless Steel Aircraft Safety Wire • 43-041 - Stainless Steel Aircraft Safety Wire• Kit Box 13" P/N 12-02350 ..... **$64.75**

ECONOMY SAFETY WIRE TWISTERS



These top quality twisting lock pliers with automatic return are economically priced and extremely durable. Features a sharp cutting edge and will twist up to .060" dia. safety wire. Length 6"& 9". Foreign made.

6"..... P/N 12-01472 ..... **$21.50**
9"..... P/N 12-01473 ..... **$19.95**

SAFETY WIRE STARTER KIT



This handy kit enables you to safety wire any nuts or bolts on an airframe or engine. Just place the special washers under the bolt or nut, bend up the small flanges to hold the bolt or nut in place, and then use the tab of the washer to attach the wire to a solid point so the bolt cannot move. This kit works on the same principle as drilled bolts do and is very handy for those flying with an engine that does not have safety wired nuts and bolts. Excellent for use on 2 stroke engines. Package of spare washers includes 6 ea. of: 6, 8, & 10 mm sizes.

Safety Wire Starter Kit ..... P/N 12-16625 ..... **$26.95**
Package of 18 Spare Washers ..... P/N 12-16626 ..... **$6.75**

AERO SAF-T-BLOKS



Since the introduction of Saf-T-Bloks in 1981, they've helped thousands of mechanics by taking the headaches and hassle out of drilling safety wire holes in bolts and nuts. This easy to use Saf-T-Blok holds the bolt steady after you thread it in to the required depth. You then drill the hole through the center with no risk of misalignment. Saf-T-Blok is available in 4 sizes:

Description	**Part No.**	**Price**
Metric: (5 Thread Size) 6x1, 8x10, 8x1.25, 10x1.25, 10x1.5	12-15346	**$41.55**
Aero: (5 Thread Size) 8-32,10-32, .25x20, .25x28, 5/16 x 24	12-15347	**$35.50**

NUT SAF-T-BLOK



Designed to enable safety wire holes to be drilled through the head of bolts or through nuts, across the diagonal. Designed to accept up to 3/4 inch diameter nut. Easy to use. Nut Saf-T-Blok requires that the nut or bolt be placed into the "V" groove, tighten down the holding screw, drill and deburr. P/N 12-15349 ..... **$38.50**

ALLEN II SAF-T-BLOK STANDARD



From MTE industries the Allen Saf-T-Blok2. Design for all socket head cap screws Metric and SAE. With an added plus can be used as a tubing drill guide. As with all the Saf-T-bloks, this takes the headache and hassle out of drilling safety wire holes.

P/N 12-02407 ..... **$36.50**

SWP8 SAFETY WIRE INSTALLATION PLIERS



The SWP8 features a diagonal nose jaw and heat-treated cutting blades, using pro-spec chrome vanadium material. The locking mechanism operates with ease, as does the self-retracting twist lever, according to company officials. P/N 12-05033..... **$39.95**

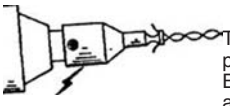
SAFETY WIRE KITS



These kits include professional safety wiring kit for all applications. Contains 9" automatic standard twister, 6" safety wire twister, made of hardened alloy steel-black oxide finish plus (3) 1/4 lb. spools of annealed stainless steel safety wire. (Sizes: 020, 032, 041). Model 100 also includes 19" chrome adjustable safety wire twister (for cavity and deep access applications.

Model 200 ..... P/N 12-16650 ..... **$118.75**

POWER TWIST ADAPTER



This new tool attachment provides quick and precise twisting of safety wire using Skill or Black & Decker type cordless screwdrivers. Just attach the adapter to the screwdriver, insert wire and you will have a neat, tight, easy wire twist. Works perfectly in a wide variety of applications (particularly twists in tight spaces). Available exclusively from Aircraft Spruce & Specialty Co. P/N 12-20800 ..... **$25.50**

SAFETY WIRE DRILLING JIG



This tool provides a fast, simple way to drill bolt heads with virtually no broken drill bits. The tool is made of 6061T6 hard anodized aluminum for durability. Fits 3/16" to 5/8" dia. bolts and works on hex head bolts, header bolts, 12 point countersink and Allen head cap screws. Includes drill bushings and two cobalt drills. Made in U.S.A.

P/N 12-16600 ..... **$64.85**

SPECIALTY TWISTER

An excellent tool for different access situations, this twister provides a deep reach and access to close quarters. Made in U.S.A.

P/N 13W **$42.85**

SAFETY WIRE TOOL



Easy one-hand operation. Reaches into tight places, makes a fast, neat twist. Shatterproof plastic handle. P/N 12-01072 ..... **$19.75**

TO

STRIPPER/CUTTERS

Klein wire strippers and cutters cut, strip, gauge and loop a wide range of wire types and sizes. Made of strong, hardened steel with comfortable handles, these tools are durable and long lasting.



11055 KLEIN-KURVE™ WIRE STRIPPER/CUTTER

Solid and Stranded. Double-dipped comfort grips with curved handles, cuts, strips, loops and gauges 10-18 AWG solid wire and 12-20 AWG stranded wire, cleanly shears 6-32 & 8-32 screws, coil spring provides fast, self-opening action. P/N 12-00235 ..... **$21.50**



11057 KLEIN-KURVE™ WIRE STRIPPER/CUTTER

Solid and Stranded. Double-dipped comfort grips with curved handles, cuts, strips, loops and gauges 20-30 AWG solid wire and 22-32 AWG stranded wire, cleanly shears 6-32 & 8-32 screws, coil spring provides fast, self-opening action. ..... P/N 12-00236 ..... **$20.80**



11045 KLEIN 10-18 WIRE STRIPPER/CUTTER

Strips 10 to 18 AWG solid wire, easy-to-read wire gauge markings, comfortable handles with cushion ridges. ..... P/N 12-00233 ..... **$13.85**



11046 KLEIN 16-26 WIRE STRIPPER/CUTTER

Strips 16 to 26 AWG stranded wire, easy-to-read wire gauge markings, comfortable handles w/cushion ridges ..... P/N 12-00234 ..... **$16.50**



11054 KLEIN KURVE WIRE STRIPPER / CUTTER

Cuts, strips and loops 8-16 AWG Solid and 10-18 AWG Stranded wire. Precision shear-type blades for clean cuts on solid and stranded copper wire. Easy-to-read markings on both sides. Curved handles help reach into confined areas.

P/N 12-03218 ..... **$22.99**

KLEIN WIRE STRIPPERS 6-12



This lightweight Klein-Kurve wire stripper-cutter strips large gauge 6-12 AWG stranded wire and eliminates the need for a skinning knife. The tool clearly shears 6-32 and 8-32 screws and has a serrated pliers nose, which allows the user to pull, grip, and twist wire design adn double-dipped textured grips provide control and comfort.

P/N 12-01456 ..... **$21.50**

63020 KLEIN-KURVE MULTI CABLE CUTTER



Designed with 3 different cutting blades; anvil cutter, a copper curved cutter & a steel cutter. Cleanly shears 6-32 & 8-32 screws, double-dipped comfort grips with curved handles, coil spring provides fast self-opening action. P/N 12-00496 ..... **$25.90**

KLEIN TOOLS CABLE STRIPPER / CUTTER



Klein Tools added its new QTR-Turn NM cable stripper/cutter with Klein-Kurve handles to its existing line of strippers and cutters. The QTR-Turn technology allows users to place cable in the upper jacket strippers, squeeze the handle, and turn one-quarter to completely sever the outer jacket. It utilizes spring-loaded action for self-opening. ..... P/N 12-01770 ..... **$29.95**

63030 KLEIN 8-1/4" CABLE CUTTER



Cuts up to 1" diameter aluminum and copper coaxial cable, curved jaws firmly grasp cable, shear-type cutting blades, precision, one-hand shearing action. ..... P/N 12-00497 ..... **$47.50**

CRIMPING/CUTTING TOOL



This tool is designed to crimp insulated and non-insulated 10 to 20 AWG solderless terminals & connectors. It has easy-to-read tool markings to identify the insulated or noninsulated crimping dies. Its tapered nose design works well in tight places and has specially hardened cutter in th nose for quick, clean cuts. Size: 9.75". Lifetime warranty..... P/N 12-00698 ..... **$39.60**

KLEIN SCREW-HOLDING SCREWDRIVERS



Unique screw-holding design in which screws are held at the tip of drivers for precise placement in tight, hard-to-reach places and allows both torquing and tightening of screws. Starts and drives screws with one hand when working in hard-to-reach spaces.

1/4" Slotted ..... P/N 12-02702 ..... **$9.50**
1/4" Phillips ..... P/N 12-02701 ..... **$9.75**

PLIERS

Designed and built with exceptional quality standards in a tradition that dates back to 1857. Klein specializes in the making of the world's finest pliers, for the professional. What makes Klein pliers different is induction hardening of cutting edges, pliers head hardness, hot riveting and special handle hardness.



D228-8 KLEIN 8" DIAGONAL-CUTTING PLIERS - High-leverage, standard-bevel cutting knives, with hand-form style plastic-dipped handles. P/N 12-00228 ..... **$28.60**



D203-6 KLEIN 65/8" LONG-NOSE SIDE-CUTTING PLIERS - Standard cutting knives at hinge, wraps, loops, and cuts, plastic-dipped handles.

P/N 12-00229 ..... **$25.90**



D203-6 KLEIN 85/16" HEAVY-DUTY LONG-NOSE SIDE-CUTTING PLIERS - Induction hardened cutting knives, greater cutting power, hot-riveted joint, plastic-dipped handles.

P/N 12-00230 ..... **$32.75**



D252-6 KLEIN 6" DIAGONAL-CUTTING PLIERS - All-purpose, heavy duty, tapered nose, induction hardened cutting knives, hot riveted joints, plastic-dipped handles.

P/N 12-00231 ..... **$30.70**



5139 KLEIN CANVAS ZIPPER BAG

White canvas bag with strong zipper, convenient storage for tools, 7.5" x 12" overall size.

P/N 12-00239 ..... **$12.50**



NUT DRIVERS

The professional requires a number of nut drivers in a variety of sizes and types. Klein drivers feature convenience, comfort and efficiency in use, plus exceptional strength and durability. All Klein nut drivers are made of the highest quality tempered steel, carefully heat-treated for maximum strength.

631 KLEIN 7-PC. CUSHION-GRIP NUT DRIVER SET - Contains 3/16", 1/4", 5/16", 11/32", 3/8", 7/16", & 1/2" hollow-shaft nut drivers, roll-up plastic storage pouch. P/N 12-00238 ..... **$58.75**



610 STUBBY NUT DRIVERS - The #610-1/4 & #610-5/16 stubby nut drivers are designed for use in tight spaces and on hard-to-reach fasteners. The tools have cushion grip handles for greater torque and user comfort. Drivers are made for 1/4" & 5/16" hex nut and hex screw sizes. The tool shafts measure 1.5" long and overall 3.5" long.

#610-1/4 ..... P/N 12-00694 ..... **$8.99**
#610-5/16 ..... P/N 12-00695 ..... **$8.75**



KLEIN TIP NUT DRIVER SET 7 -PC SET - Full Hollow Shaft design with Rare Earth magnetic tip. (Only with P/N 12-01594). Full hollow shafts facilitate work on long bolt applications. Cushion Grip handles allow for greater torque and comfort. Handle domes are color coded for easy identification. Internal flanges provide solid, twist-resistant shaft anchor. Chrome plated shaft helps prevent corrosion. Set contains Cat. No. 646-3/16M, 646-1/4M, 646-5/16M, 646-11/32M, 646-3/8M, 646-7/16M, 646-1/2M.

Klein nut driver 7pc. set ..... P/N 12-00306 ..... **$57.99**
Klein driver 7pc Magnetic Set ..... P/N 12-01594 ..... **$82.75**

KLEIN HIGH-TENSION HACKSAW



Adjustable blade tension of up to 30,000 PSI for fast, precise cuts, along with soft touch grips for comfort. The alternative 45-degree mounting is perfect for flush cutting, and there's a front mount for reciprocating saw blade. There's a space to store your blade in the handle, and it comes with a 12" x 24 TPI bi-metal hacksaw blade and 6" x 24TPI bi-metal reciprocating saw blade..... P/N 12-02641 ..... **$25.50**
6" Replacement Blade..... P/N 12-03247 ..... **$12.50**
24" Replacement Blade..... P/N 12-02706 ..... **$27.50**

TO

Prices Subject to Change Without Notice

KLEIN HOLE SAW KITS



Klein Hole Saws feature bimetal cobalt construction which allows for heavy-duty cutting; they can cut through studs in one pass. They also have multiple knock-out slots and holes for easy core removal. Carbide grit hole saws work well for cutting abrasive materials and offer a smooth cut with minimal tear-out. Electrician's Hole Saw Kit - Contains the most popular sizes for basic electrical work. Hole Saws: 7/8", 1-1/8", 1-3/8", 1-3/4", 2", 2-1/2" Arbors: 7/16" (qty.2) P/N 12-00969 ..... **$58.75**

KLEIN ELECTRICIAN TOOL SETS



Designed for beginner and experienced wirers, these tool sets range in size from a basic 14-piece assortment to the 41-piece comprehensive collection. Each set contains Klein premium products, such as wire stripper/cutters, screwdrivers, and pliers, plus protective eye wear and a pouch or tool bag for toting and storage. Each set offers a cost savings when compared to buying the tools separately. Tools in Electricians sets have standard handles. Tools in Journeyman sets have state of the art dual-material handles which provide a superior grip without sacrificing tool strength or durability.

14-Piece Electrician Tool Set .....P/N 12-00819 ..... **$264.95**
18-Piece Journeyman Tool Set.....P/N 12-00821 ..... **$361.00**
28-Piece Electrician Tool Set .....P/N 12-00820 ..... **$431.00**
41-Piece Journeyman Tool Set.....P/N 12-00822 ..... **$800.00**

KLEIN DIAGONAL CUTTING PLIERS WITH TAPERED NOSE



Easy working in confined areas. Short jaws and beveled cutting edges permit close cutting of wire. Induction-hardened cutting knives for long life. Hot-riveted joint ensures smooth action and no handle wobble. Plastic-dipped handles for comfort and ease of identification. Custom, US-made tool steel. P/N 12-03373 ..... **$31.50**

KLEIN LIGHTWEIGHT FLUSH CUTTERS



These shears wire up to 18 AWG producing a flat, flush cut. Shear cutting greatly reduces cutting effort and minimizes fly-off. Cushioned grips and steel return spring for increased comfort during repetitive cutting. Ultra slim profile increases access in confined areas. Heat treated for increased durability. With 1/2" drive.
P/N 12-03360 ..... **$11.55**

FLYING WIRE TENSIOMETER



This tool is used for setting the tension on flying wires from 1/4" - 1/2". Tension ranges from 200 lbs. to 2400 lbs. Can also be used for setting drag, anti-drag wire tension. Ideal for use on Stearmans, Wacos, and Pitts, etc. To use this tool you will need a torque wrench. With a 1/2" drive. P/N 12-12500 ..... **$259.00**

ATTENTION: TENSIOMETER PRODUCTS MAY NOT BE CANCELLED OR RETURNED.

ROCKER SHAFT REMOVAL TOOL



Clever tool makes it easy to compress the valve springs to ease the removal of the rocker shaft. Just mount it into one of the valve cover screw holes and then give the knob a couple of turns to compress the valve spring. That will take the pressure off the rocker arm and allow you to easily remove the rocker shaft. Combine this with the Piston Pin Removal Tool and really save time on your next cylinder swap.
P/N 12-04807 ..... **$54.85**

PISTON PIN REMOVAL TOOL



This tool takes all the work and risk out of removing the piston pin. It works on Lycoming and Continental engines. Just slip it over the piston, turn the shaft and it pushes the pin out smoothly and cleanly. Vinyl coated tip prevents scratching and marring the pin or piston during removal. Will handle up to 5.5" pistons. P/N 12-04810 ..... **$79.85**

GREASE JOINT REJUVENATOR



Have you ever tried to push grease in through a grease fitting and couldn't? The Grease Joint Rejuvenator opens clogged grease joints and fittings effortlessly in less than a minute! • Opens clogged grease fittings & joints • Cleans and replenishes old and dirty grease fittings • Loosens dried grease in joints • Cleans ways and stays in milling machines and lathes • Lubricates bearings on farm, lawn & construction equipment.
P/N 12-01038 ..... **$41.50**

COMPRESSION WHISTLE ALERT



No more burning your fingers and hands! Just Listen! Insert Whistle Alert™ into any 14mm spark plug hole and bump the engine until you hear the whistle. You are now on the compression stroke! • Easily find Top Dead Center compression stoke • Turn engine over from inside the car and listen for the whistle. • Made of steel and aluminum • Made and assembled in the USA.
Whistle Alert (Rigid).....P/N 12-01039 ..... **$22.50**
Whistle Alert (Flex).....P/N 12-01041 ..... **$15.90**

KEARNEY SWAGER



This portable, hand-operated roll type swaging machine will swage MS type terminals onto galvanized and stainless steel cables from 1/16" diameter up to and including 3/16" diameter. Includes machine, a full set of roll dies, terminal gauges and feed guide adapters & instructions in a steel carrying case. Wt. 95 lbs. New manufacture. All replacement parts available. Special order
P/N 12-01188 ..... **$6,995.00**

ENGINE CALIBRATION & SET-UP KIT



The Engine Calibration & Set-up Kit gives you innovative tools that help eliminate mistakes when setting up mechanical engine timing sequences, timing chains, timing belts, balance shafts and belts, distributor installations and general engine set-up.
Kit includes: •Standard 6" (14mm) and Extended 10.75" (14mm) •TDC Indicators •Compression Gauge Extension •Compression Whistle Alert™ •Crank Stopper •18mm & 12mm Spark Plug Hole Adapters, extra nipple for compression tube to whistle conversion. P/N 12-01040 ..... **$127.75**

HAWKEYE PRECISION FLEXIBLE BORESCOPES



Hawkeye Rigid Borescopes feature the patented endoGRINS(r) lens technology that provides a sharp view inside engine cylinders, wings, under seats, and other remote areas. Includes a mirror tube which allows you to look sideways in a 360 degree arc as well as straight ahead. Packed in a lockable metal case with die-cut foam to protect the borescope. The heavy duty Mini-NOVA light source is highly recommended in aircraft applications. All Hawkeye Slim borescopes have a 0° direction-of view and 42° field-of-view. A rotating 90° direction-of view is achieved by sliding a Slim Mirror Tube onto the scope. Hawkeye
7" Hawkeye Hardy Kit .....P/N 12-00337 ..... **$841.00**
12" Hawkeye Hardy Kit .....P/N 12-00338 ..... **$895.00**

NOTE: ALL BORESCOPES ARE NON-RETURNABLE

ATS PUSH ROD SPRING COMPRESSOR



You know how hard it is to get at the springs on the push rod tubes... Now, you can compress them and remove the tube in under a minute. Just slip this tool onto the spring and crank the shaft counterclockwise (an air ratchet works great for this) to compress the spring, and then give everything a wiggle and out it comes. It's a must-have tool when working on big bore Continentals. This tool will fit all production engines Lycoming, Continental, Franklin, and even most old radials. P/N 12-04809 ..... **$59.95**

TACH DRIVE SEAL REMOVER



This straight forward tool will let you remove the tach seal in minutes time and time again.
P/N 12-04820 ..... **$319.00**

TO

STEELMAX POWER TOOLS - TENSIOMETERS

STEELMAX METAL CUTTING SAW 9 INCH



More efficient than any portable metal cutting process you are using now! • Increase Productivity - No Milling or de-burring with near surgical dry-cut technology. • Cuts a Variety of Metals, Plastic and Wood - Bring your saw to the work-piece while cutting mild steel, stainless steel and aluminum as easy as it cuts plywood. • Cool-to-the-Touch - No waiting for your workpiece to cool down. Just cut it and handle it. • Precise Cutting - With integrated laser sighting system. P/N 12-01716 .....**$412.95**

Accessories	Teeth	Arbor	Part No.	Price
9.25" Mild Steel Blade	48T	1.0"	12-01804	**$59.95**
9" Stainless Steel Blade	80T	1.0"	12-01805	**$76.95**
9" Alluminum Blade	80T	1.0"	12-01807	**$61.95**

STEELMAX DRYCUT SAW S14



Utilizing a 14" carbide tipped blade, the Steelmax S14 cuts through metal faster, safer and cleaner than abrasive chop saws in a fraction of the time and cost. Powered with a 15 amp motor and geared to turn slower than a chop saw, the S14 dry cutter cuts like a cold saw, but at a fraction of the cost. Sold standard with a 14" carbide tipped mild steel blade attached, heavy duty, industrial strength cast iron base and two position locking vise, this saw is ready for immediate action! Cuts solid mild steel up to 1"thickness; cut profiles: pipe, angles, channel with a depth of cut up to 4-3/4". Bevels to 45 degrees. Saves time and money giving cool cuts that need little to no finishing, eliminating any need for grinding or cool down time. P/N 12-01717 .....**$482.00**

Accessories	Teeth	Arbor	Part No.	Price
14" Stainless Steel (Less Than 1/4")	90T	1.0"	12-01809	**$172.75**
14" Thin Mild Steel (Less Than 1/4")	90T	1.0"	12-01810	**$142.95**

MAGNETIC BASE DRILL



SteelMax® brand drills maintain rigidity and accuracy throughout the life of the drill. The rail system eliminates the need to adjust or maintain traditional gibs. In addition to saving on maintenance, cutter life is increased by reducing movement at the cutter tips. When cutters last longer, you save money every day you use SteelMax!

Magnetic Base Drill.....P/N 12-01718 ....**$1,398.85**
Portable Magnetic Drill.....P/N 12-01811 .....**$999.95**

CUTTERS FOR MAGNETIC BASE BRILL

Dia.	D.O.C.	Part No.	Price
7/16"	1"	12-01813	**$25.66**
1/2"	1"	12-01814	**$25.97**
9/16"	1"	12-01815	**$26.26**
5/8"	1"	12-01816	**$26.66**
11/16"	1"	12-01817	**$27.17**
3/4"	1"	12-01818	**$28.68**
13/16"	1"	12-01819	**$29.94**
7/9"	1"	12-01829	**$32.70**
1"	1"	12-01831	**$38.49**
1-1/16"	1"	12-01832	**$41.27**
7/16"	1"	12-01833	**$35.29**

Dia.	D.O.C.	Part No.	Price
1/2"	2"	12-01834	**$35.29**
9/16"	2"	12-01835	**$39.75**
5/8"	2"	12-01836	**$39.75**
11/16"	2"	12-01837	**$36.79**
3/4"	2"	12-01838	**$40.29**
13/16"	2"	12-01839	**$44.29**
7/8"	2"	12-01840	**$48.95**
15/16"	2"	12-01841	**$51.95**
1"	2"	12-01842	**$58.75**
1-1/16"	2"	12-01843	**$59.90**

Accessories for Base Drill	Part No.	Price
1" Center Pin For SM4374	12-01845	**$11.75**
1" Center For1" DOC Cutters	12-01844	**$11.75**
2" Center Pin For SM437L Only	12-01847	**$7.95**
2" Center For 2" DOC Cutters	12-01846	**$7.95**

1/2 INCH CHUCK & ADAPTER



With this optional industrial arbors and 2MT-1/2"Drill Chuck now you can! SteelMax industrial arbors let you easily adapt our premium m2AL cutters to a variety of machinery, including CNC, lathe's, stationary drill presses and similar equipment. With our integrated coolant collar, cutter performance and cutter life is assured!

P/N 12-01812.....**$98.85**

6 AND 13 PIECE CUTTER SETS

Description	Includes	Part No.	Price
6 Piece Set 1" DOC	9/16", 11/16", 13/16", 15/16", 1-1/16", Cutter Case, and 1" Pilot 9/16"-1-1/16"	12-01848	**$149.95**
6 Piece Set 2" DOC	9/16", 11/16", 13/16", 15/16", 1-1/16", Cutter Case, and 2" Pilot 9/16"-1-1/16"	12-01849	**$199.95**
13 Piece Set 1" DOC	7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8" 15/16", 1", 1-1/16", Cutter Case, and1" Pilot 7/16", 1" Pilot9/16"-1-1/16"	12-01850	**$299.95**
13 Piece Set 2" DOC	7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8" 15/16", 1", 1-1/16", Cutter Case, and1" Pilot 7/16"-1/2", 1" Pilot9/16"-1-1/16"	12-01851	**$399.95**

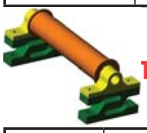
TENSITRON TRANSDUCERS

Tensitron's transducers convert a material's tension into a reliable signal that can be used for remote indication, high-speed recording, computer hook-ups, or as input for automatic tension control systems.
Note: A Signal Conditioner is needed to provide the necessary excitation, amplification, signal conditioning, calibration functions, display/readout and other options necessary to operate strain gaged transducers.
Attention: Tensitron products may not be cancelled or returned.



TENSITRON FIBER AND WIRE TRANSDUCERS

Model No.	Description	Tension Range	Part No.	Price
E-090-00	Single Roller Low Force Load Cell	1 - 100 lb.	12-05002	**$1,030.00**
E-091-00	3 Roller Low Force Load Cell	1 - 100 lb.	12-05003	**$1,030.00**
E-095-01	Notched Beam Transducer	10 - 1,000 lb.	12-05005	**$1,130.00**
E-095-03	3 Roller Notched Beam Transducer	10 - 1000 lb.	12-05006	**$1,630.00**
E-415-002	Small Space Transducer with Single Roller	5 - 5,000 g	12-05011	**$1,030.00**
F-1806	Platform Mounted Fiber Transducer	5 - 5,000 g	12-05013	**$1,180.00**
FT-107	Small Space Fiber Transducer	5 - 5,000 g	12-05014	**$1,030.00**
FT-107-TIS	Small Space Fiber Transducer - Titanium	5 - 5,000 g	12-05015	**$1,630.00**
FT-116	Low Profile 3 Roller Sensor	5 - 5,000 g	12-05016	**$980.00**
FT-117	Single Roller Sensing Beam	5 - 5,000 g	12-05017	**$980.00**



TENSITRON WEB AND BELT TRANSDUCERS

Model No.	Description	Tension Range	Part No.	Price
4260	Single Roller Web Transducer.	2-200 lb.	12-05001	**$980.00**
E-091-02	Low Force Load Cell with Cyindrical Rollers	1-100 lb.	12-05004	**$1,180.00**
E-095-04	Notched Beam Transducer with Cylindrical Roller.	25-250 lb.	12-05007	**$1,130.00**
E-200-00	Cantilever Transducer	1-25 lb.	12-05008	**$980.00**
E-202-00	Pillow Block Load Cell Transducer	25-1,000 lb.	12-05009	**$1,630.00**
E-210-00	S Column Transducer	5-250 lb.	12-05010	**$1,630.00**
E-415-003	Small Space Transducer with 3 Rollers	5-5000 g.	12-05012	**$1,030.00**



OMEGA-NEWPORT INFCS TRANSDUCER SIGNAL CONDITIONERS

Model No.	Description	Part No.	Price
INFCS-000 B	Infinity Basic Signal Conditioner, 115 VAC	12-05023	**$580.00**
INFCS-001 B	Infinity Basic Signal Conditioner, 115 VAC Analog Out	12-05024	**$748.00**
INFCS-010 B	Infinity Basic Signal Conditioner, 115 VAC Dual 5A Relays	12-05025	**$738.00**
INFCS-011 B	Infinity Basic Signal Conditioner, 115 VAC Analog Out & Dual 5A Relays	12-05027	**$817.00**
INFCS-100 B	Infinity Basic Signal Conditioner, 230 VAC	12-05028	**$580.00**
INFCS-101 B	Infinity Basic Signal Conditioner, 230 VAC Analog Out	12-05029	**$748.00**
INFCS-110 B	Infinity Basic Signal Conditioner, 230 VAC Dual 5A Relays	12-05030	**$738.00**
INFCS-111 B	Infinity Basic Signal Conditioner, 230 VAC Analog Out & Dual 5A Relays	12-05031	**$817.00**
INFCS-411 B	Infinity Basic Signal Conditioner, 10 to 30 VDC Analog Out & Dual 5A Relays	12-05032	**$1,122.00**

TO

WWW.AIRCRAFTSPRUCE.COM

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CABLE TENSIOMETERS - SWAGERS

T5 2000 SERIES CABLE TENSIOMETERS



T5 – 2000 Series Cable Tensiometers
The familiar T5 Tensiometer is a low cost, highly accurate, precision instrument giving cable tension readings covering a wide range. In use, each T5 instrument is calibrated at the factory and is provided with its own calibration chart for the simple conversion of readings into pounds-tension. The charts shown, indicate the riser which must be used to accommodate the various cable sizes and tensions. The T5 is a small, lightweight, precision instrument, durably constructed for long accurate service.

Part Number	Cable Size	Range
T5200210100	1/16", 3/32", 1/8"	10-100
	5/32", 3/16"	15-150
	7/32", 1/4"	25-150
	P/N 12-01144	
T5200210400	1/16", 3/32", 1/8"	30-200
	5/32", 3/16"	30-300
	7/32", 1/4"	30-300
	P/N 12-04805	

T5-2002-101-00.....P/N 12-01144.....**$745.00**
T5-2002-104-00.....P/N 12-04805.....**$745.00**

BURROUGHS CABLE GAUGE



Easy to use - just squeeze ball handle, put gauge on cable, release handle and read tension on rotation dial. No conversion charts necessary. Tension range: 10–70lbs. for 1/16" cable, 15 - 70 lbs. for 3/32 & 1/8" cable. 50-350 lbs. on 5/32" & 3/16" cable. Only 3-1/4" wide. Fits through inspection hole.
Attention: Tensiometer Products may not be cancelled or returned.
For 1/16", 3/32", 1/8" .....P/N 12-19200 .....**$186.85**
For 5/32", & 3/16".....P/N 12-19210 .....**$185.75**

TENSITRON ACM CABLE TENSION METERS



Standard Features of all models: • Easy one-hand operation • No interchangeable parts are needed to adapt to different cable sizes • Memory Lock Pointer holds readings until cleared • Calibration chart affixed to back of meter • Durable and made of non-corrosive materials • Weigh approximately 21 oz. Compact design allows engagement of meter onto cables closely routed along floors, flat surfaces and other minimum clearance areas. Models ACM-100, ACM-200, ACM-300, ACM-400 are compact enough to allow use in limited access panels as small as 4" dia. ***Attention: Tensiometer Products may not be cancelled or returned.***

Model	Part No.	Price
ACM-100 - Designed to measure from 5-100 lbs tension in 1/16", 3/32", 1/8", 5/32" diameter cables.	12-01050	**$596.00**
ACM-200 - Designed to measure 20-200 lbs tension in 1/16", 3/32", 1/8", 5/32", 3/16", and 1/4" diameter aircraft cables.	12-01051	**$759.00**
ACM-400 - Designed to measure from 40-400 lbs tension in 3/32", 1/8", 5/32" and 3/16" diameter standard cables.	12-01053	**$596.00**
ACM-600 - Measures tension from 40-600 lbs in 1/8", 5/32", 3/16" and 1/4" diameter aircraft cables.	12-01362	**$658.00**

TENSITRON ACX-SERIES DIGITAL AIRCRAFT CABLE TENSION METERS



In its 5th generation of digital aircraft cable tension meters, Tensitron is using the latest technology, software, and design improvements providing unsurpassed accuracy and resolution for numerous material sizes and tension ranges. Select the cable size from the menu, press "Enter", engage the meter, and instantly see the actual numeric tension value on the display while simultaneously a dynamic colored bar graph indicates whether the tension is in the user's acceptable range. Data logging is no longer required to be purchased as a separate option, but is a standard feature; the memory function can store multiple sets of data, and 10-point calibrations can be utilized for extremely precise tension readings on difficult materials. ***Attention: Tensiometer Products may not be cancelled or returned.***

Model	Range	Resolution	Standard Cable Selections	Part No.	Price
ACX-100-1	5-100 lbs	0.5 lb	1/16", 3/32", 1/8", 5/32"	12-03758	**$879.00**
ACX-250-1	20-250 lbs	0.5 lb	1/16", 3/32", 1/8", 5/32", 3/16"	12-03759	**$879.00**
ACX-250-M-1	20-250 lbs	0.5 lb	2.0 mm, 2.5 mm, 3.5 mm, 4.0 mm	12-03761	**$879.00**
ACX-500-1	40-500 lbs	1 lb	3/32", 1/8", 5/32", 3/16"	12-03762	**$879.00**
ACX-CWT-1	20-250 lbs	0.5 lb	CWT-5,CWT-10,CWT-15,CWT-20,CWT-25	12-03763	**$879.00**
ACX-CMB-1	20-250 lbs	0.5 lb	1/16",3/32",1/8",5/32", 3/16", CWT-5 thru CWT-25	12-03764	**$999.00**
ACX-CMB-M-1	20-250 lbs	0.5 lb	1/16",3/32",1/8",5/32", 3/16",& 2.0 mm, 2.5 mm, 3.5 mm, 4.0 mm	12-03766	**$959.00**

ECONOMY SWAGING TOOLS



NO. 2 SWAGE-IT - For use with sleeves for 1/16", 3/32" and 1/8" cable. Swaging pressure applied by using a wrench to tighten bolts. Size: 1/2" x 1" x 7". Wt. 1 lb. Cadmium plated. P/N 12-12000 .....**$19.50**



NO . 3 SWAGE- IT - For use with sleeves for 1/8", 5/32", 3/16" and 1/4" cable . Same design as No. 2 tool but larger. Size: 3/4" x 1-1/2" x 14". Wt. 3-1/2 lb. P/N 12-12100 .....**$43.85**



SWAGE-IT RIGGING KIT

This Swage-It rigging kit contains everything you will need for rigging and emergency repairs of Nicopress sleeves on cables. Includes the #2 Swage-It tool for 1/16", 3/32" and 1/8" sleeves, 1/2" extension wrench for use on the #2 tool and a #316 cable cutter. Size: 4-1/2" x 9". Packaged in a clear plastic tube with vinyl caps to better protect tools.
P/N 12-12200 .....**$49.50**

LOCOLOC® HAND SWAGER NO. 1-SC



Designed for swaging copper and aluminum 1/16, 3/32, 1/8, 5/32 and 3/16 oval and stop sleeves, plus 7/32 stop sleeves, total of 11 sizes plus the ability to cut up to 7/32 diameter aircraft quality steel cable. A multi cavity hand cable swaging tool with a dozen functions. 26 inches long, weighs 6.5 pounds. Parts list included with each cable swaging tool. To assure proper swaging of Locoloc® aluminum, copper and stainless steel sleeves there is a Locoloc "Go" "No Go" gauge with each cable swaging tool. P/N 12-12400 .....**$272.95**

LOCOLOC® TRIPLE CAVITY HANDSWAGER



Locoloc® Triple Cavity Handswager is made of 4140 Carbon Steel Hardware for superior longer life. This has 3 cavities for the most commonly used sleeve sizes: 3/32", 1/8", 3/16". Eliminates confusion on the job site. It has an Adjustment Bolt for calibration. Made in America. P/N 12-04960.....**$178.00**

LOCOLOC HANDSWAGING TOOL



LocoLoc #1-3-SBHS Hand Swager – This tool is an outstanding small hand tool, and it does a great job of swaging small sleeves. This is a (4) cavity tool, swaging sleeve sizes 1/32", 3/64", 1/16", 3/32" and #12 SEISMIC. Ratchet mechanism will not release until swage is complete. Swages copper and aluminum sleeves only. Usage instructions and swage gauge included in each tool. Each LOCOLOC Swager is supplied with a gauge. Application: Copper Oval Sleeves, Copper Oval Plated Sleeves and Aluminum Oval Sleeves P/N 12-00222.....**$126.75**

THE GRIPPER - ALL DIGITAL CABLE TENSIOMETER



There are no extra parts to worry about. The Gripper can adapt to 5 Cable sizes 1/16, 3/32, 1/8, 5/32, and 3/16. From 5 to 150lb's. 1%-2% Accuracy. An instrument that will pay for it self quickly. The time savings compared to your current tool will amaze you. Electronically measured readings, assures accurate, reliable and repeatable measurements every time you use the "Gripper". The Gripper heads small size (1 1/8" square by 4 1/8" long) lets you access tight areas as it will go where other just will not go. It comes to you calibrated and ready for use. ***Features***: • Unique Remote Head Fits in to tight areas • Backlit Controller for easy reading . ***Specifications***; • Cable sizes: 1/16, 3/32, 1/8, 5/32, and 3/16. • From 5 to 150lb's • 1%-2% Accuracy ***Attention: Tensiometer Products may not be cancelled or returned.*** P/N 12-01722.....**$1,395.00**

NICOPRESS SWAGING TOOLS - 64-CGMP



The 64-CGMP has four grooves and is used for Oval Sleeve in the range of cable sizes from 1/16" through 5/32". The "C" groove is also used for the No. 871-1-C Stop Sleeve. The No. 63V-XPM has three grooves and is used only with Oval Sleeves.
For cable sizes 1/8", 5/32" and 3/16".

	Sleeves				Swaging Tools	
Cable Dia	Plain Copper		Zinc Coated Copper		64-CGMP	63V-XMP
1/16	MS51844-42	18-1-C	MS51844-22	28-1-C	X	
3/32	MS51844-43	18-2-G	MS51844-23	28-2-G	X	
1/8	MS51844-44	18-3-M	MS51844-24	28-3-M	X	X
5/32	MS51844-45	18-4-P	MS51844-25	28-4-P	X	X
3/16	MS51844-46	18-6-X	MS51844-26	28-6-X		X

64-CGMP .....P/N 12-02560.....**$284.50**
63V-XMP.....P/N 12-02561.....**$299.00**

TO

SPECIALTY TOOLS

GO-NO GO SLEEVE GAUGE



When the proper slot in the gauge slips over the compressed area of the sleeve after swaging then your swage is satisfactory. GA-1P: Gauges all swages performed on 1/32", 3/64", 1/16" 3/32", 1/8", 5/32", and 3/16" oval and stop sleeves.

P/N GA-1P **$11.95**

NO-GO GAGE



There are five measurements required for each pilot and co-pilot seat, these two tools will shorten the time to make these five measurements to minutes.

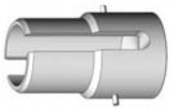
P/N 12-02861.....**$39.95**

COMPASS FILLING AID



The compass filling aid is designed to be used for filling most standard aircraft compasses. The standpipe is simply attached to the compass with a supplied special rubber band. The compass is then filled and purged through the standpipe. When all air is removed, and the level in the standpipe is constant, the plug is then installed through the filled standpipe. Thus the need for submerging for proper filling is eliminated.....P/N 12-17604 .....**$23.50**

VENTURI REMOVING TOOL



Venturi extractor tool used on Marvel-Schebler®, MA-3® and MA-4® series carburetors.

P/N 12-01908 ..... **$245.95**

THE PEN GRIP - PEN AND TOOL HOLDER



The Pen Grip attaches to almost any surface with double stick tape. Just peel off the backing on the attached double stick adhesive, press firmly onto the surface to which you want it attached and insert your tools. The unique gripping fingers hold all sorts of pens, pencils, & tools in many different positions, even upside down. Like the Tool Grip, The Pen Grip is available in White and Black.

Get a Grip Pen Grip (Black)
PN 12-00961..... **$5.95**

Get a Grip Pen Grip (White)..... PN 12-00962..... **$5.95**

WIRE SPOON



Features: • Wire threader designed for threading wires into an already tied harness • 300 Series stainless steel construction • Made in America for superior quality P/N 12-01801 .....**$10.95**

FELCO CABLE CUTTERS



A cable when crushed or deformed is difficult to use with fittings. These fine quality Swiss made cutters, with unique triangular jaws, never leave a frayed end.

Felco No.	Max Cutting Dia.	Length	Weight	PN	Price
C2A	2mm	8"	.625 lbs	12-00223	**$66.75**
C7F	3/16"	8"	.625 lbs	12-01135	**$56.90**
C9	1/4"	13"	1.6 lbs	12-00179	**$199.75**
C12	3/8"	19"	3 lbs	12-01174	**$244.95**
C16	5/8"	22"	5 lbs	12-05133	**$347.00**

TO

S & F CABLE CUTTERS



A fine tool made from high quality alloy steel and heat treated for best cutting action and long life of cutting edges. Handles shaped for comfortable grip and minimum cutting effort. Max. capacity 3/16" dia. 1 x 19 cable.

No. 316 Cable Cutter.....P/N 12-18600 ..... **$19.50**

BENCH MOUNT FOR #316 CABLE CUTTER

This bench mount adds to the versatitlity of the #316 cable cutter. Mounts with 2 screws to a bench or plate. Fingers can still grip the tool. Easily removed. P/N 12-00674.....**$3.50**

S & F HARD WIRE CUTTER



These quality cutters feature a unique handle design with thick "T" shaped vinyl handle grips for maximum comfort while cutting. Cuts 3/32" maximum diameter music wire, heat treated steel spring wire, stainless or galvanized cable. Produces clean square cuts. Gold iridite finish for maximum rust protection. Length: 6". Wt. 7 oz.

Model No. 093. ..... P/N 12-18605 ..... **$17.95**

VAN SANT MULTITOOL ATTACHMENTS

The Multitool belt and disc grinding attachments for your bench grinder are must-have tools for any fabricator! These versatile tools remove material up to 5 times faster than with the equivalent grit grinding wheel. Belts change in seconds from grinding, to sand deburr or polish. Quality construction is backed by a 1-year warranty. The attachments are all available with motor options to suit the hobbyist or the professional. Includes 1 belt and 1 disc. Fits 1/2HP or more grinders with 1/2" or 5/8" shaft. Visit our website for a Compatability Template in PDF



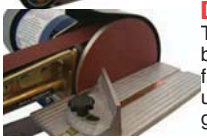
M362 MULTITOOL GRINDER ATTACHMENT -
(2"X36" Belt and one disc)
P/N 12-02064.....**$199.95**



M482 MULTITOOL GRINDER ATTACHMENT -
(2"X48" Belt and one disc)
P/N 12-02068.....**$289.95**



M462 MULTITOOL GRINDER ATTACHMENT -
(4"X48" Belt and one disc)
P/N 12-02070.....**$329.95**



DISC GRINDER MITER ATTACHMENT -
The Multitool disc grinding attachment for your bench grinder are must-have tools for any fabricator! These versatile tools remove material up to 5 times faster than with the equivalent grit grinding wheel. P/N 12-02071.....**$74.95**

DILLON MECHANICAL FORCE GAUGE



Model X-C comes in nine capacities ranging from 50 lb to 25,000 lb or 50 to 10000 kg. Allfeature accuracy of ±1% of full capacity, except the 25,000 (10000kg) capacity instruments which are accurate to ±2% of full capacity.

Load is applied against a hardened ball which rotates to maintain vertical alignment as pressure increases. The ball is held in place with a spring clip or retainer. A threaded mounting hole is located opposite the loading ball in the bottom of the beam. Model X-C is available in pound and kilogram capacities.....P/N 12-03326 ..... **$820.00**

DZUS SNOOPY TOOL



Classic tool designed for Dzus fasteners found on warbird and antique airplanes. Tool matches the most common size slots in 1/4 turn fasteners, giving the tool the distinctive "snoopy" shape. This tool is made from heat treated 4130 aircraft steel, with a riveted wooden handle – exact copy of the original tools. Made in the USA. .....P/N 12-04763 ..... **$23.60**

AN VISE JAWS



Generally AN Vise Grips are cheap castings that lack the precision mating surfaces necessary to avoid unsightly tool marks on your fresh hose assemblies. This is especially true with black anodized fittings so prevalent today. Get rid of your old vise jaws and stop using the sharpie to cover mistakes. .....P/N 04-03665 ..... **$25.50**

QUICK-CHECK TENSION METERS



The Dillon Quick-Check can be placed on a cable, measure its tension, and removed in under five seconds! There are no complex lookup tables, no conversion charts. The operator can quickly select from 15 different wire sizes and types stored in Quick-Check's memory. The Check-Tensioning mode graphically displays the current and target tensions for extremely quick setting of line tension. Even the infrequent battery changes are quick. The Quick-Check can be employed in many industries to ensure proper tensioning. Typical applications include tower and stack guy wires, pretensioned cable barriers, bridges, elevators, winch rope, overhead electric transit wires, fall arrest systems, aircraft cables and utilities. Features: • Sheaves with bearings eliminate friction and provide the best accuracy • Accommodates a wide range of wire sizes and styles • Telescoping handle engages meter quickly with minimal effort • Highly visible yellow finish • Easy-to-read display with full-text prompts • Easy to use soft-key interface • Uses popular AA batteries and has long life between changes.

2000 Lb. .....PN 12-03324 ..... **$2,632.00**
10000 Lb. .....PN 12-03325 ..... **$3,598.00**

Prices Subject to Change Without Notice

DEBURRING TOOL



Utilizes a twist-of-the-wrist action for deburring holes and radii. Curved blade automatically follows all contours. Telescoping blade holder extends to reach deep internal holes. Supplied with one #10 and one #20 deburring blade. P/N 12-00700 ..... **$19.50**

Item	Description and Application	Part No.	Price
#10 Deburring Blade	High-speed steel. For steel, aluminum & smaller holes	12-00800	**$3.45**
#20 Deburring Blade	High-speed steel. For brass, Bronze, cast iron, larger holes.	12-00900	**$3.45**
#40 Scraper Blade	High-speed steel. Small triangular blade.	12-01000	**$14.65**
#42 Scraper Blade	High-speed steel. Large triangular blade.	12-01100	**$11.60**
#48 Scraper Blade Holder	Holder has 10-32 threads. Accepts #40 & #42 blades. Extends to 3-1/2".	12-01200	**$7.85**
#50 Scriber	Carbide-tipped scriber.	12-01300	**$7.90**
#60 Deburring Blade	For backside deburring & for restricted positions	12-01400	**$6.50**
#70 Deburring Blade	Carbide-tipped blade for deburring edges of sheet metal.	12-01500	**$10.65**

SPEEDY BURR II



Speedy Burr II is designed for deburring outside corners, sheet metal, machined parts, extrusions, castings, and plastic parts. This lightweight easy grip tool has a durable plastic coating on the handle for comfort and a sure grip. The burring tip is made from hardened steel and is replaceable.

Speedy Burr II ..... P/N 12-00651 ..... **$23.65**
Replacement Burr Tip ..... P/N 12-00652 ..... **$12.65**

DEBURRING & SCRAPING KIT



Standard duty kit includes MANGO II Handle, "B" Blade Holder, "C" Blade Holder, B10, B20, B30, B60, B11, B70, C40 blades and the "C" Key.

P/N 12-03194 ..... **$38.50**

PRO SERIES STRUT SERVICE TOOL



The Pro Series Strut Service Tool has all the great attributes of the original Strut Service Tool, with the addition of a dual tank and dual check valve design. The longer service hose makes it easy to attach. Strut pressure, fluid and foam is captured in one tank. Clean, foam-free fluid is drawn back into the strut from the second tank. Simplicity, cleanliness and less waste make this tool a must-have. The strut valve core is not removed. P/N 12-00677 ..... **$194.50**

TIRE BALANCER AND BEARING PACKER





For 500-5 & 600-6 Bearings and Tires. Package Includes: Set of 500-5 & 600-6, Bearing Cones, Aluminum Balance Shaft, Set of Balance Shaft Bearings, 1/4 oz. Lead Balancing Weights, Aluminum Bearing Packing Tool that, removes old grease and abrasives, A great Stainless Tool Box using the shaft as a handle P/N 12-02309 ..... **$334.00**

TWO STEP STUD EXTRACTORS



These Two Step Stud Extractors are the simplest way to remove broken studs and require only 1/8" of the broken stud for removal. Simply tap stud remover on stud or frozen bolt with a hammer or mallet, and then remove stud by attaching a wrench to the hex portion of the remover. Just hammer on and screw out. Built to last from case hardened steel. Stud Extractors available in sizes listed below.

Part No.	Size	Price Ea.	Part No.	Size	Price Ea.
76001-76	3/16"	**$42.85**	76008-76	5/8"	**$67.25**
76002-76	1/4"	**$42.95**	76009-76	3/4"	**$67.25**
76003-76	5/16"	**$42.85**	76010-76	7/8"	**$74.50**
76004-76	3/8"	**$46.50**	76011-76	1"	**$78.75**
76005-76	7/16	**$45.55**	76012-76	Set 3/16-1/2"	**$212.95**
76006-76	1/2"	**$49.75**	76013-76	Set 9/16-1"	**$351.95**
76007-76	9/16"	**$64.25**			

SPOTFACE KIT



The Spotface Kit tool makes a flat spot for screws. This tool is specifically modified to provide rail cap clearance for use on seat rails. Cutter comes with 1/8", 5/32", 3/16" pilots.

P/N 05-04429 ..... **$86.80**

HX STRUT PUMP



Boost air to 1000psi without an air compressor.

- Very portable. No air compressor needed!
- Use air bottle, spare tire, tire pump for source air.
- Can also use with air compressor for air source.
- Detailed instructions.
- Equipped with 7 foot hose

P/N 12-16710 ..... **$436.00**

10X STRUT PUMP



Aircraft Strut Pump 10X delivers up to 1,500 PSI of pressure to raises struts without the need to place the airplane on jacks. Safety one-shot air delivery system gives you maximum control over the entire process -- each stroke of the delivery valve injects a small shot of high pressure air into the strut so that you can raise it in controlled increments. There is virtually no chance of you accidentally overpressurizing and possibly damaging your struts..... P/N 12-03731 ..... **$289.95**

15X STRUT PUMP





Boost air or nitrogen to 2250psi.

- More than enough pump for most aircraft.
- Built for shop use or for a discriminating do-it-yourselfer.
- Weighs less than 7 pounds.
- Equipped with a 36" hose.
- Comparable to pumps priced in the thousands.
- Nitrogen adapter makes it easy to use bottled nitrogen.

15X Strut Pump ..... P/N 12-16700 ..... **$575.00**
Nitrogen Adapter Kit ..... P/N 12-02016 ..... **$44.75**

STRUT SERVICE TOOL



Service Strut in your Sunday Suit.

- Clean way to service struts.
- Strut valve core is NOT removed.
- Hose fitting releases pressure & fluid into the bottle.
- Raise & lower strut a few times, then apply the charge.

P/N 12-16792 ..... **$31.50**

BOGERT PRESSURIZED STRUT FILLER 16M-PSF



Finally a real time and money saver! This tool changes the way landing gear struts are serviced. No longer do you have to put an aircraft up on jacks to add fluid to and fill Oleo type landing gear. This is a totally clean and safe process. No oil is spilled. The strut valve is not disturbed and the plane is sitting on the ground the whole time. This is safe for the technician and the aircraft. Features: • It is a convenient, small, compact system, easy to use, and neat to store • Two tank system. One tank contains clean Strut fluid and the other collects the excess • Built in pump forces fluid into the strut to top it off and the excess is drained off controlled right from the unit • Large capacity 5 qt storage tanks are big enough for just about any strut • Can be used on struts requiring up to 3000 psi strut pressure • Made in the USA.

Strut Filler ..... P/N 12-03166 ..... **$798.00**

SCREWSTICK POCKET SCREWDRIVER



The Screwstick is a pocket screwdriver which accepts any common 1/4" tip. An extra tip is stored in the stainless steel shaft, and a heavy duty magnet holds tips firmly in place. A steel torque driver for stubAborn applications is stored in the shaft. A rubber finger grip for holding plus a heavy duty pocket clip are included. Ideal for aviation, automotive, & many other applications. Great for mechanics. P/N 12-20105 ..... **$4.50**

BALLPOINT HEX SOCKET DRIVER



3/32" Ballpoint Hex Socket Driver for use on hex head screws and nuts.

****This tool is commonly used with most avionics units like Honeywell Bendix/King and Garmin.*** P/N 12-02063 ..... **$5.35**

TO

WORK LIGHTS - INSPECTION MIRRORS

CONDUCT-A LITE INSPECTION KIT



Kit consists of aluminum 2-cell holder, 1-cell holder for use in small areas, 6" straight Lucite conductor, 4" curved Lucite conductor for lighting around corners, 2-1/2" straight conductor for pin-point lighting, and clip on mirror which attaches to any of the Lucite conductors. When used with curved conductor it can virtually make light available around a corner in a full 360° arc. Operates on penlight batteries (not included). P/N 12-14900 ..... **$19.95**

CORDLESS LED WORKLIGHT



When the unexpected happens, be prepared on-the-fly with LED battery power trouble lights. This portable energy-saving lighting can provide you with efficient, effective illumination for task lighting, be it in your plane, hangar, garage, car, or workshop--where you need it, when you need it!

These trouble lights operate on four AA batteries (included) with a low 290 lumen setting and a high 450 lumen setting to give you the perfect amount of lighting needed. They produce much less heat than a halogen work light, making them a safer option of lighting--no heat to burn, and no glass bulbs to break. They feature sturdy construction with a clamshell bulb shield, a built-in on/off switch, and a hook at the top for convenient hanging, for hands-free lighting anywhere!

P/N 12-04872 ..... **$63.75**

HEADLIGHTS



The Brighteyes Pro Headlights is a hands-free flashlight worn like eyeglasses to provide light for reading maps, instruments, repair work, and more. Excellent for work on aircraft, automotive applications, around the house, camping, & fishing. Headlights can be used with or without eyeglasses, and the lights will swivel to direct the light where you need it. (4) AAA batteries included. P/N 12-00242 ..... **$13.95**

BEND-A-LIGHT



Bend-A-Light flexible brass–alloy high intensity light tools bend to any configuration and illuminate hard-to-reach areas where conventional lighting cannot go. The incredibly brilliant light beam penetrates anywhere! Bend-A-Light is a must for electronics, automotive, maintenance, repairs, locksmiths, industrial, hobbies, around the house and more. You bend it… and it holds! Bend-A-Light is the only complete line of professional quality high intensity flexible light tools. Available in 3 lengths and 3 different lamps to choose from. All Bend-A-Light models are made in USA and come with batteries installed.

Part No.	Description	Length Flex Shaft	Length Overall	Batt.	Bulb	Price
12-15005	Mini Pro	6"	11.5"	2-AAA	12100	**$19.95**
12-15150	Pro	15.75"	24"	3-AA	12110	**$39.95**
12-10250	Removable Shaft	9.5"	15.75"	2-AA	12100	**$22.65**

Part No.	Description	Dia	Bulb Life	Price
12-15020	12100 - Replacement Lamp	5/32"	4 Hours	**$7.50**
12-12110	12110- Krypton Lamp	5/32"	20 hours	**$9.50**

BIG LARRY POWER WORK LIGHT



The BIG Larry™ knows how to light up a room! Equipped with C•O•B LED technology, the BIG Larry™ outputs 400 lumens of intense light. Secondary light modes include Low (160 lumens) and the Emergency Red Flash mode. This intense red light is perfect for distress signaling or roadside emergencies. The anodized aluminum body and recessed LED housing ensures that the BIG Larry™ can handle any situation.

Black ..... P/N 13-18745 ..... **$21.85**
Silver ..... P/N 13-18746 ..... **$21.55**

INSPECTION MIRRORS AND MAGNIFYING MIRRORS FOR ALL-ANGLE VIEWING



Double ball-joints of tempered spring steel move freely, hold desired position for viewing to 360°. Mirrors have brushed stainless steel backs and insulating vinyl grips. Refill mirrors available.

Description	Size	Length	Part No.	Price
A-2 Circular Pocket mirror	7/8" Dia.	7.5"	12-01080	**$5.40**
A-2M Circular Magnifying Pocket mirror	7/8" Dia.	7.5"	12-01081	**$7.95**
B-2 Oval Pocket mirror	1" x 2"	8.5"	12-01169	**$5.75**
C-2 Circular Telescoping Mirror	2-1/4" Dia.	10" to 14"	12-01175	**$8.50**
C-2M Circular Magnifying Telescoping Mirror	2-1/4" Dia.	10" to 14"	12-01176	**$12.55**
K-2M Rectangular Magnifying Telescoping Mirror	2-1/8" x 3-1/2"	11.25" to 14.25"	12-01152	**$13.50**

Description	Part No.	Price
HTE-2 with 1.25" mirror for viewing in tight areas telescopes from 6.5" to 35"	12-01090	**$10.95**
HTC-2 with 2.25" mirror for viewing in less restricted areas telescopes from 6-1/2" to 36-3/8".	12-01089	**$10.95**
HTS-2 with 3.25" mirror for brightest clearest viewing with room tomaneuver telescopes from 6.5" to 36-3/8".	12-01091	**$12.95**
HTC-2LTwith 2.25 LED case illuminates darkened areas - two lithium batteries included. All-angle ball joint holds lighted mirror head firmly for perfect viewing textured cushion grip will not slip in wet or oil hands. Stainless steel handle telescopes from 6-3/4" to 37"	12-01979	**$16.55**

Accessories	Part No.	Price
Mirror Size: Dual 1"x2" Weight: 2oz	12-01084	**$1.22**

TELESCOPING INSPECTION MIRROR



PLM2 Telescoping Inspection Mirror / Flashlight - Batteries included. Best design on the market-LED is on the end of the handle directing light exactly where you need it, not on the end of the mirror which can be blocked. Professional grade construction. Sleek mirror design and size allows you to get into tighter spaces. Fieldpiece brand. Doubles as a telescoping flashlight without mirror. Telescopes to 30½". Bright white LED to light the darkest of places. Mirror slides off when all you need is a flashlight. Clips to your pocket just like a pen. Pivot control with adjustable tension screw. Omnidirectional ball joints for precise mirror positioning. 2" x 1" mirror size. Beautiful chrome finish. Handle screws down tight to ensure LED stays off when not in use. .....P/N 13-16353 ..... **$22.50**

THE INSPECTOR ADJUSTABLE LIGHTED INSPECTION MIRROR



No more trying to aim a flashlight at the old style mirror. Inspector is a one–hand tool that comes with a very bright light that illuminates the total inspection area. Easy to adjust the mirror angle. Once inserted into the inspection area, simply push or pull the thumb knob for a 90° mirror angle adjustment. The product is constructed of non-conductive materials for safety. The mirror, lamp, and 2–AA batteries (included) are easily replaceable.

Inspector ..... P/N 12-15105 ..... **$26.50**
Inspector Replacement Lamp ..... P/N 12-15110 ..... **$3.99**
Inspector Replacement Mirror..... P/N 12-15115 ..... **$5.95**

BINOCULAR MAGNIFIERS



The Binocular Magnifiers offer powerful, crisp magnification of your detailed projects while simultaneously leaving both of your hands free to work. The ground and polished optical lens is mounted to a tilt-up frame, allowing you to disengage the magnifier without removing the entire assembly from your head. This item is equipped with a cushioned headband which rests as comfortably as a baseball cap and is likewise adjustable for a snug fit. Features: • 1.75x magnifying lens. • Great for assembly and inspection applications. • Used commonly by toolmakers, machinists, engravers, jewelers and hobbyists. •Leaves hands free to work. • Tilt-up lens frame instantly removes magnifying lens from sightline. • Ground and polished optical lens eliminates eyestrain. • Fits over prescription glasses. • Adjustable, cushioned headband for comfort fit. 14" focal length.

Description	Power	Focal Length	Part No.	Price
Binocular Magnifiers	2.25X	10"	950-5	**$29.50**

TO

Prices Subject to Change Without Notice

DRILL DOCTOR – SPRAY SYSTEMS

DRILL DOCTOR 350X



The DD350X is ideal for the home workshop. It provides the homeowner, weekend craftsman, or hobbyist with the sharpening power needed to restore dull bits and keep on working. The DD350X adds simplicity, stability and accuracy.
Specifications: • On Chuck Alignment, eliminates alignment port for simplified sharpening process • V-Block jaws eliminate jaw twisting on small bits • New ergonomic low profile design for increased stability and less tool walking • New permanent magnet motor produces consistent power,regardless of speed or load • Sharpens 3/32" to 1/2" drill bits • Sharpens to a 118 degree point angle • Sharpens High-speed Steel, Carbide, TiN-coated and Masonry bits • User-Replaceable diamond sharpening wheel accessory available. P/N 12-03774 ..... **$59.65**

DRILL DOCTOR TRADESMAN BIT SHARPENER



The DD500X Pro Kit combines the Drill Doctor Tradesman sharpener with heavy duty carrying case. Sharpen bits either 118°. or the high performance 135° setting and it can turn standard drill bits into self-centering, split point bits. Sharpens bits from 3/32" to 1/2" diameter in about 60 seconds and includes the patented E-Z align system and diamond grinding wheel for sharp precise results. Includes: Sharpener, 1/2" chuck, 110V power cord, carrying case, free video and easy to follow instructions.
P/N 12-00673 ..... **$127.50**

NUTPLATE INSTALLATION BLOCK



With this Nut Plate Block, you can install nut plates faster, easier, and with less damage to the surface and paint of the object you are fastening the nut plate to. The top side has 1/8" radius so no gouging will occur. The Nut Plate Block will produce a flush nut plate on the back side and the rivet will be flush to the skin surface every time. It takes less then 1 minute to install a nut plate. It is zinc plated for corrosion protection.
1/8" Nutplate Block 8-32..... P/N 12-04814 ..... **$67.50**
1/8" Nutplate Block 10-32..... P/N 12-04813 ..... **$67.50**

THICKNESS GAUGE



Sheet Thickness Gauge - Part Number 880-G. Stainless Steel Go/No Go Gauge for all Spring-Fast sizes. For sheet thicknesses from 0.020 to 0.260.
P/N 05-13297 ..... **$49.00**

HAND VACUUM/PRESSURE PUMPS



Mityvac vacuum gauges are scaled 0 - 30 inches of Mercury (0 - 100 kPa). Compound gauges included on dual vacuum/pressure converter pumps are scaled 0 - 30 psi (0 - 200 kPa) pressure, and 0 - 30 inches of Mercury (0 - 100 kPa) vacuum. All Mityvac pumps produce vacuum at the front port. Dual converter pumps are capable of producing vacuum or pressure at the front port. A rotating knob on the side of the pump allows the operator to switch between vacuum and pressure. Dual converter pumps include a compound gauge for indicating levels of both. All Mityvac pump vacuum/pressure ports fit standard 1/4" (6.4 mm) ID tubing
Features: • Produces vacuum or pressure at the turn of a switch • Comfortable ergonomic design • One-finger trigger vacuum/pressure release • Pressure and vacuum are created on the squeeze stroke for superior accuracy and control • Includes durable, accurate gearless diaphragm style compound vacuum/pressure gauge with pinned connection for 360° rotation.
Specifications: • Pump Displacement: 1 in3 (16cc) per stroke • Max. Pressure 30 psi, 207 kPa • Material: PVC • Vol. per Stroke: 1 cu. in. / 16cc • Gauge1: Yes • Dual Converter2: Yes • CE Certified: Yes • Weight: 11.5 oz 326 g • Country of Origin: China, Designed and quality controlled in the USA.
Standard ..... P/N 15-08423..... **$65.95**
Deluxe..... P/N 15-08422..... **$74.75**

AXIS HVLP PAINT SPRAYERS



The Axis series of paint sprayers is designed to take the guesswork out of choosing a spraying system which can be confusing for the homebuilder who is going to paint for the first time. Rather than offer a wide variety of sprayers, Axis has selected the best turbine for each type of product normally used to finish an airplane. This is the SP 2003 (three stage turbine) which is furnished with 30 feet of air delivery hose and the Lexair spray gun. Select one of the three systems shown below based on type of material you will be spraying. If waterborne materials are going to be used, we can furnish systems for this process on a special order basis.
Sys. 1 to paint aircraft covered in fabric.....P/N 12-15920 ..... **$869.00**
Sys. 2, to paint composite structure.....P/N 12-15930 ..... **$844.00**
Sys. 3, to paint over metal or wood .....P/N 12-15940 ..... **$820.00**

ACCESSORIES

Lexair Gun.....12-01385 ..... **$399.95**
Hose 40 .....12-01386 ..... **$71.99**

AXIS HALF FACEMASK ASSEMBLY



Comfortable neoprene half facemask with durable strap assembly provides maximum seal with a wide sealing edge that fits securely against the face. You'll find it's a pleasure to wear. Add a Pullover Painting Hood (PN 12-03317) and Lens Protectors (PN 12-03318) for complete head and eye protection. Weight: 2 lbs.
P/N 12-03316 ..... **$89.75**

PULL OVER PAINTING HOOD



Durable full protection hood designed to be worn over any Axis Products, Inc. half facemask air supplied respirator system. Large 16" x 6 1/4" viewing area. Air pump supplies seven cfm of cool fresh air which circulates around the hood and exits around the neck. Don't forget to protect your lens with Hood Lens Covers (PN 12-03318) Caution: This hood is designed to be worn over air supplied half facemask system only! P/N 12-03317 ..... **$44.95**

AXIS AIR SUPPLIED TYVEK PAINTING HOOD



The Air Supplied Tyvek Painting Hood is durable and provides full protection. Large 16" x 6 1/4" viewing area and ratcheting headband for a secure fit are included. When used with any Hobbyair System it will supply cool fresh air to the hood, which circulates and exits around neck. Air flow prevents lens fogging. Don't forget to protect your lens with Hood Lens Protectors (PN 12-03318).
Painting Hood.....P/N 12-03319 ..... **$99.95**
Hood Lens Protectors.....P/N 12-03318 ..... **$24.95**

AXIS GUN WITH BOTTOM FEED - QT CUP



Features a heavy duty chrome plated die cast aluminum gun body. The stainless steel needle and nozzle, chrome plated brass air cap, and 6061-T6 anodized aluminum nozzle holder are all CNC machined to tight tolerances. The three position floating air cap offers the ultimate in pattern control. The Pro Series spray gun features and exclusive Teflon packing design for long life and easy adjust-ability. The Pro Series spray gun has no O-rings and is gun washer safe and impervious to all solvents. * Pressurized Cup helps atomize paint better * All Metal Construction * One Quart Bottom Feed Cup * Includes 1.0 Needle/Nozzle.
P/N 12-03321 ..... **$397.00**

QUICK DISCONNECT FITTING



Weight: 0.5 lbs P/N 12-03320 ..... **$10.85**

CITATION 240

PAINT SPRAYER/RESPIRATOR SYSTEM



The Citation HVLP 'twin turbine' system provides both a 'professional quality' paint spray system and the HobbyAir supplied-air respirator in one portable package. This system comes complete with everything you will need to spray exceptionally fine finishes with practcally any material and to breathe in safety and comfort while you work. The basic system includes two 40' airlines (one for breathing and one for painting) and a half face mask. Available options include: A larger two-person Citation system with 3 airlines (two for breathing and one for spraying), Full face masks, and air-supplied hoods. This system comes with an unconditional 1-year warranty..... P/N 12-15900 ..... **$997.00**
Optional 4 ft. whip hose..... P/N 12-15910 ..... **$24.70**

TO

APOLLO SPRAY SYSTEMS

APOLLO POWER-3 PAINT SPRAY SYSTEM



Apollo's TrueHVLP™ Power Series gives more power, more performance and more value than ever before - Provides 15% more power from a 3-Stage Turbine. Spray all solvent-based materials such as: enamels, lacquers, stains, polyurethanes, most HVLP compatible waterborne coatings and more. Yields a high quality finish and suits smaller-scale professional and home-based operations. Comes equipped with the Handi-Hold® Spray Gun Docking Station, an Apollo innovation. **Specifications:** • Type: 3 Stage • Pressure: 7.0 PSI (0.48 Bar) • Volume: 115 CFM (3.25 cmm) • Filtration: Dual Air Filtration • Gun Type: HVLP Only, Single gun • HP: 1.65 HP • Current: 110VAC - 60HZ or 240VAC - 50Hz • Amps: 11 or 5.5 P/N 09-04548 .....**2.95**

APOLLO POWER-4 PAINT SPRAY SYSTEM



Apollo's Power Series POWER-4 brings you 12% more power from a 4-stage Turbine. Sprays higher viscosity materials with excellent results, like, solvent-based materials including: enamels, stains, lacquers, polyurethanes, catalyzed finishes, conversion varnishes, and linear polyurethanes, as well as any waterborne coatings, latex (emulsion) paint (use with Floetrol® or similar flow additive) and other specialized materials like faux paints and gel coat. Extremely versatile unit that provides the perfect finish to woodworkers, boat builders and restorers, automotive and airplane restorers and finishers, and any industry desiring super fine atomization with the widest range of materials. Optional Y-connector. Equipped with the Handi-Hold® Spray Gun Docking Station, an Apollo exclusive innovation. **Specifications**: • Type: 4 Stage • Pressure: 9.0 PSI (.062 bar) • Volume: 130 CFM (3.68 cmm) • Filtration: Dual Air Filtration • Gun Type: HVLP Only, Single gun • HP: 1.85 HP • Current: 110VAC - 60HZ or 240VAC - 50Hz • Amps: 13 or 6 • Dimensions: 15" X 8.5" X 12" (38.1cm X 21.6cm X 30.48cm) P/N 09-04551 .....**2.95**

APOLLO POWER-5 PAINT SPRAY SYSTEM



The Apollo POWER-5 combines exceptional Power Series features in a 5-Stage Turbine - with 22% more power! Spray solvent-based materials: enamels, stains, lacquers, polyurethanes, catalyzed finishes, conversion varnishes and linear polyurethanes. The POWER-5 also delivers superb results with waterborne coatings, latex (emulsion) paint (using Floetrol® or similar flow additive) and specialized materials like faux paints and gelcoat. The POWER-5 comes with the Handi-Hold® Spray Gun Docking Station to store, hold or transport your spray gun safely. The enhanced power and exclusive precision features of the new Precision Series POWER-5 put you in control of the most advanced TrueHVLP system for industries and applications demanding precision technology for the perfect finish. The POWER-5 will support multiple spray gun operations with a Y-connector. The POWER-5 turbine comes equipped with the Handi-Hold® Spray Gun Docking Station, an Apollo exclusive innovation. Store, hold or transport your spray gun in a vertical position with no risk of tipping. Ready to spray when you are. **Specifications**: • Type: 5 Stage • Pressure: 9.5 PSI (.070 bar) • Volume: 130 CFM (3.68 cmm) • Filtration: Dual Air Filtration • Gun Type: HVLP Only - Single Spray Gun • H.P.: 1.85 HP • Voltage: 110VAC - 60HZ or 240VAC - 50Hz • Amps: 13 or 6
P/N 09-04552 **2.95**

TURBOPRO SPRAY GUNS



Experience flawless performance paired with any TURBOPRO TrueHVLP Turbospray system. Additional spray gun models are available that will easily adapt to any pressure pot for larger applications. A full range of nozzles, needles and and air caps are available for every automotive, marine or aviation spraying application.

Primer.....P/N 09-04553.....**$476.10**
Basecoat.....P/N 09-04557.....**$476.10**
Clearcoat.....P/N 09-04558.....**$476.10**

TURBOPRO 1000 PAINT SPRAY SYSTEM



APOLLO SPRAYERS are the TrueHVLP Turbospray equipment is finding broad application across the world. The benefit of less overspray and recorded savings of 38% on coatings with no finish compromise is just one.
Imagine having portability if necessary and no need for dryers or filters since the air supply is clean, dry and continuous always. Spraying waterborne coatings is a dream with Apollo TrueHVLP Turbospray Technology. Add to the list less energy consumption and even less booth filter maintenance if used in a spray booth.
P/N 09-04546.....**$2,155.50**

TURBOPRO 2000 PAINT SPRAY SYSTEM



APOLLO SPRAYERS the TrueHVLP Turbospray equipment is finding broad application across the world. The benefit of less overspray and recorded savings of 38% on coatings with no finish compromise is just one.
Imagine having portability if necessary and no need for dryers or filters since the air supply is clean, dry and continuous always. Spraying waterborne coatings is a dream with Apollo TrueHVLP Turbospray Technology. Add to the list less energy consumption and even less booth filter maintenance if used in a spray booth.
Precision - Pressure Control System (PCSTM) controls motor speed, voltage and amperage adjusting automatically for altitude and barometric pressure assuring precise atomizing pressure worldwide.
Power - Documented 80% transfer efficiency and 38% savings on coating when compared with compressed air systems.
Throttle Back Control (TCB™) – Permits highest available flow pressure and increased motor longevity.
LCD Message Center – Accurate Pressure Display – Motor Idle – Temperature – Hour Use Meter
Systems are supplied with our Award Winning PBC-GTO Series spray guns and our Handi-Hold Spray Gun Docking Station, an Apollo innovation. Store, hold or transport your spray gun in a vertical position with no risk of knocking or falling over. It's ready to spray when you are.
P/N 09-04547.....**$3,145.50**

ATOMIZER GRAVITY FEED SPRAY GUN



A7500GT AtomiZerTM Gravity Feed Spray Gun. The Apollo 7500GT gravity feed spray gun is supplied with an 8fl. oz (250cc) or 20fl. oz (600cc) non-stick coated gravity cup or a 1 quart (1000cc) gravity cup, duckbill valve, deluxe carrying case, spare parts kit, sample bottle of genuine Apollo Spray Gun Lube and a wrench (spanner). **Gravity feed** – three cup sizes **Pressure feed** – two cup sizes, and **Production** – 2 quart (2 litre) pot or larger
P/N 09-04556.....**$315.00**

ATOMIZER TOUCH UP SPRAY GUN



A7500MT AtomiZerTM Touch-Up Spray Gun. The Apollo 7500MT touch-up cup gun is supplied with an 8fl. oz (250cc) mini touch-up cup assembly, duckbill valve, carrying case, spare parts kit, stainless steel material filter, sample bottle of genuine Apollo Spray Gun Lube and a wrench (spanner). **Gravity feed** – three cup sizes. **Pressure feed** – two cup sizes, and. **Production** – 2 quart (2 litre) pot or larger. P/N 09-04555.....**$315.00**

ATOMIZER QUICK RELEASE CUP GUN



A7500QT AtomiZerTM Quick-Release Cup Gun. The Apollo 7500QT turbine cup gun is supplied with a 1 quart (1 litre) non-stick coated cup assembly, duckbill valve, deluxe carrying case, spare parts kit, stainless steel material filter, sample bottle of genuine Apollo Spray Gun Lube and a wrench (spanner). **Gravity feed** – three cup sizes **Pressure feed** – two cup sizes, and **Production** – 2 quart (2 litre) pot or larger
P/N 09-04545.....**$315.00**

TO

Prices Subject to Change Without Notice

SPRAY EQUIPMENT

BINKS SPRAY EQUIPMENT



MODEL 2001 AIR SPRAY GUN - The 2100 is a conventional, full-size spray gun which can be used to spray a wide range of materials. The 2100 spray gun is a durable, full-sized gun that is comfortable, well balanced, and easy to use. A specially designed grip measurably improves operator control, balance, and spray quality. Supported by the largest selection of air nozzles in the industry, the model 2100 will spray all conventional coatings, including those with high solids. The 2100 spray gun features a forged aluminum body that has been precision machined, and brass air nozzles and knobs that are nickel plated. These features ensure that the 2100 gun will withstand many years of use under the toughest working conditions. Air Flow: 7.9 CFM at 30 PSI, 12.1 CFM at 50 PSI. Max Pattern @ 8": 10.5 Wt. 3.25 lbs.

Model 2001 Gun and Cup..... P/N 12-04000.....**$399.00**
Gun Only..... P/N 12-04100.....**$328.00**
Cup Only..... P/N 81-350.....**$78.75**

BINKS AIR HOSE



5/16" Dia. hose with standard 1/4" NPS connection at both ends.
5/16" Dia. x 25' Long..... P/N 71-1205.....**$49.50**
5/16" Dia. x 50' Long..... P/N 71-1206.....**$105.95**
A 5/16" diameter hose is recommended for efficient operation.

STAINLESS STEEL PRESSURE ASSISTED 1 QUART CUP



Bink stainless steel pressure assisted 1 quart cup & attachment.
80-500 cup/lid assembly..... P/N 12-01332.....**$219.95**
82-367 cup gasket (poly)..... P/N 82-367.....**$12.50**

BINKS MACH 1 HVLP



The Binks Mach 1 HVLP is a siphon-fed refinishing system that performs like your favorite conventional outfit but produces far superior transfer efficiency. A unique arrangement of air nozzle, fluid nozzle, and needle enable the Mach 1 to draw material from a standard siphon feed cup and avoid the need for a pressure cup. Eliminates the need for the operator to set fluid pressures. Delivers lower emissions for compliance with environmental regulations.

P/N	Description	Price
12-04410	MACH 1 Siphon Gun Only	$466.00
98-1176	MACH 1 HVLP Siphon outfit -Spray Gun, 81-375 'No-Drip' Siphon Cup, &83-469 gun brush.	$651.00

1 QUART CUP ASSEMBLE MODEL 81-810



One Quart drip proof cup - clamp type - with a extra vent tube. Shipping weight 16 oz. Fulid inlet: 3/8" nps (f)
P/N 12-02457..... **$87.75**

ZIPGUN REPLACEMENT CUP ONLY - PACKAGE OF 25



Utilizes disposable paper cups as paint reservoirs making color changes possible in seconds. Package of 25 cups. P/N 01-00325 .....**$6.75**

PREVAL SPRAY GUN



Sprays paints, primers, gel coats, lubricating oils, cleaners, zinc chromate, etc. Perfect color matches in minutes. No wires, no hoses-portable and disposable. Sprays up to 16 ounces of any liquid thinned to the same consistency as for heavy spray equipment.
#267 Complete Set .....P/N 09-00339 .....**$4.99**
#268 Power Unit .....P/N 09-00340 .....**$4.35**
#269 Product Container .....P/N 09-00341 .....**$1.88**

PREVAL PROPACK SPRAY SYSTEM



Deliver twice the spray with the Preval Pro-Pak : two complete Preval Spray Systems in one money-saving package. Each versatile Preval sprayer is made in the USA and delivers 16oz. of almost any paint or liquid, offering unparalleled versatility for small projects and touch ups.
P/N 09-04560 .....**$16.50**

BINKS MODEL 95 SIGNATURE SERIES SPRAY GUN



Model 95 spray gun employs the best features of Binks' most popular conventional air spray guns. This gun delivers higher quality finish, faster production, less operator fatigue, greater fluid compatibility, and more application versatility than any spray gun currently available. Model 95 is a high production gun with stainless steel fluid passages which may be used with most coatings. This new gun replaces Models 18, 62, and BBR spray guns, incorporating the best features of all 3: drop-forged anodized aluminum body, stainless steel fluid passages, adjustable floating needle valve, hardened steel or stainless steel fluid nozzle, plated drop-forged bronze self-centering air nozzle, brass air valve cartridge, adjustable spray pattern, 3/8" NPS (m) fluid inlet, 1/4" NPS (m) air inlet. Weight 1 lb., 11 oz.
Model 95 Hand Gun.....P/N 12-14150 ..... **$504.00**

THE BEUGLER STRIPER PROFESSIONAL PINSTRIPING TOOL



The Beugler tool makes accurate lines consistently, without gravity or pressure, eliminating the need for tape. The unique serrated wheel and wheel head design are the secret to the striper's success. Ideal for any art project, the Beugler Striper is a professional tool used by auto, truck and motorcycle painters around the world. Beugler's magnetic guide securely holds to any steel surface, allowing the striper's guide arm to slide smoothly along its recessed groove for long, accurate, straight, or arced lines. To ensure customer satisfaction, Beugler also offers a 40 minute video tape or DVD with instructions, tips and demonstrations. The Beugler Striper works well with any "creamy" consistency paint. You can stripe at any angle, as the tool is not gravity fed. Both Professional and Deluxe Kits are of the same quality and include guides, clean up brush, 2/3 oz. paint barrel (which stripes 250 to 1750 feet, depending on stripe size) and complete instructions. Length 4-1/4", O.D. 3/4".

Description	PN	Price
Deluxe Kit (Includes 3 Srtiping Heads)	12-01696	$134.75
Professional Kit (Includes 7 Srtiping Heads)	12-01695	$208.95

MINI-AIR POWERED VACUUM



Runs off of an air compressor and is simple to use. Just plug it into the air hose using the adapter (included) & start cleaning. The body of the unit is plastic or cast aluminum construction with an 18" clear plastic flex tube that can easily get into tiny spaces to clean. The canvas bag is easily removed. Wt. 8.5 oz.
Mini-Air Vacuum - plastic .....P/N 12-16820 .....**$31.50**
Mini-Air Vacuum - aluminum.....P/N 12-16821 .....**$60.75**
Spare Bag and Clip.....P/N 12-16825 .....**$8.95**
36" Clear Flex Hose.....P/N 12-16830 .....**$12.50**

PREVAL VALPACK SPRAY SYSTEM



Preval Sprayers' Best Value for your workshop, garage, job site and around the house. The Preval Val-Pak is a complete assortment of Preval Sprayers and sprayer accessories. This cost-effective kit provides everything you need to apply multiple types of paints, chemicals, finishes, coatings and most other liquids in a multitude of prep, touch up and maintenance applications. Ideal for commercial use and DIY projects, every Preval Power Unit atomizes up to 16oz. of virtually any liquid. Included with the Val-Pak kit are accessories and extra bottles that enable you to switch easily between different liquids for different projects, then store the remaining material in the reservoirs for later use. Easy to clean. Each Power Unit can be reused for multiple applications. Made in the USA. P/N 09-04531 .....**$66.75**

PREVAL UNIVERSAL VGRIP HANDLE



vGrip Universal Handle is a 2-in-1 gun handle and ergonomic trigger that snaps onto the Preval Sprayer with ease. Also attaches to any other standard aerosol can. (handle only). This is a replacement part for the Preval Valpack (09-04531). P/N 09-04563 .....**$4.90**

TO



HAND PADS

Faster, cleaner, and more durable than wire brushes, scrapers and sandpaper. Non-woven nylon pads are pre-cut. They provide conformable, consistent finishes. General Purpose and Ultra Fine Pads may be used with lubricants and solvents. General Purpose - Clean up dirty parts in solvent tank • Light corrosion removal on steel and aluminum parts. Commercial - An aggressive hand pad for waterbased products only. •Not to be used with solvents. •Heavy duty rust removal and general cleanup Ultra Fine - For scuffing in new rod and main bearings. • Light corrosion removal on steel and aluminum parts.

Description	Size	Grain	Color	Qty.	Part No.	Price
General Purpose	6" x 9"	A/O	Maroon	1 each	12-00861-1	**$1.02**
Ultra Fine	6" x 9"	S/C	Gray	1 each	12-00862	**$1.15**
Heavy Duty	6" x 9"	A/O	Tan	40 pack	12-00864	**$87.75**
Hand Pad Holder	-	-	Orange	1 Hand Pad Holder, 4 Sanding Pads	12-00865	**$19.70**

BENCH GRINDER DISCS



Quickly remove carbon from pistons and valve stems. Great for light deburring head bolts and studs. One disc is flexible when run alone. Stack as many discs on at a time for the desired finish and removal rate. Safer than a wire wheel, with a much better finish. The very fine grade Bench Grinder Discs are packaged 10 to a pack, and the medium grade Bench Grinder Discs are packaged 5 to a pack.

Size	Grain	Grade	Max RPM	Part No.	Price
8" x 1/2"	A/O	Very Fine	3,000	12-00849	**$44.80**



BLASTER KIT (F-50)

Use dry abrasives only. Hose length - 7ft. Tank capacity - 50lbs.. Free standing open top tank. Maximum 125 psi. 7 CFM@80 psi minimum. Lightweight and portable. Easy setup. Steel nozzles - 13/64", 1/4", 5/16"

P/N 12-02548.....**$128.75**



BLASTER KIT (F-90)

Use dry abrasives only. Hose length - 10 ft.. Tank capacity - 90 lbs.. Strong tubular steel cart. Wheels - 6". Maximum 125 psi. 7 CFM@80 psi minimum. Lightweight and portable. Easy setup. Steel nozzles -13/64", 1/4", 5/16".

P/N 12-02549.....**$182.75**



7"CUTTING WHEEL 1/2" X BRE 1/16"

Oxide abrasive wheel - fine abrasive for burr-free cutting of thin wall tubing and applications which require a fine finish.

•Wheel Size: 7" x 1/16" x 1/2" • Max RPM: 8,700 • Weight: 6lbs • Standard Grades: A60TBE 3C14

P/N 09-02564.....**$5.35**

3M™ ORBITAL SANDERS



The all new line of 3M™ air-powered finishing tools includes innovations designed to optimize performance and productivity. 3M™ Tools are designed for smooth operation, and are packed with horsepower. Multiple grip sizes are designed to provide advanced operator comfort, and color-coded levers allow for easy orbit identification.

RANDOM ORBITAL SANDERS



Non-Vacuum Model *Self-Generated Vacuum Model*

The 3M's NEW dust management system featuring Clean Sanding Abrasives and Accessories is revolutionizing the dust evacuation process. Discs are designed to cut more and last longer. The patented multi-hole pattern captures and remove more dust compared to 5- or 6-hole products.

Model	Tool Dia. Inch (mm)	Vacuum	Orbit Dia Inch	Max RPM	Motor HP (W)	Airflow Rate SCFM (LPM	PN	Price
20319	5"(127)	Yes	3/16"	12,000	.28(209)	17(481)	05-03483	**$248.95**
20314	3"(77)	No	3/32"	12,000	.28(209)	17(481)	05-03485	**$229.00**
20317	5"(127)	No	3/16"	12,000	.28(209)	17(481)	05-03484	**$234.95**

Accessories		PN	Price
	Clean Sanding Filter Bag	05-03486	**$6.50**

BLASTING SYSTEMS



VAC BLAST PORTABLE VACUUM BLASTER

This portable 28-gallon vacuum unit blasts, removes and recycles abrasives in one operation. It works with glass beads, aluminum oxide, steel grit, garnet, plastic grit, walnut shells, corn cobs and more. Rolls easily on 6-inch wheels. What's included: (1) 28-gallon vacuum blaster (1) 8-ft. air and vacuum hose (1) Gun and brush assembly (1) 6-ft. power cord (2) Wheels (1) Replacement nozzle Specifications: Operating PSI: 115 - 140 (Max), Capacity: 28 gallons, Vacuum moter: 1100 watt, 120V, 1.5 HP, Air Consumption at Load (CFM): 15 at 80 PSI, Body Material: Steel, Body Finish: Powder-coated, Recommended Media: Glass beads, aluminum oxide, steel grit, garnet, plastic grit, walnut shells, corn cob, Hose length (ft.): 8, Nozzle Size (in.): 1/4, Tire Size (in.): 6 Dimensions L x W x H (in.): 15 x 15 x 41, Manufacturer Warranty: 1 year limited warranty, Ship Weight: 88.0 lbs

P/N 12-02647 ..... **$636.95**



MONSTER BLAST CABINET

The Monster Blast Cabinet is constructed of 14-gauge steel for strength and durability. It features a built-in dust collector and large work area to handle bigger pieces. Foot pedal control and side-mounted light switches for easy control.
What's included: (1) Blast cabinet (1) Blast Gun (4) Nozzles (two 7/32in., two 9/32in.) (1) Air regulator (2) Blast gloves (1) Foot pedal (4) Fluorescent lights (5) Extra window and (5) extra light underlayment sheets
Features: Large front door for easy loading. Heavy-duty 90 CFM dust collector improves visibility during blasting. Rear-mounted dust collector saves floor space. Convenient foot pedal operation. Large work area. Large viewing window: 30 inches x 15 inches. Heavy-duty steel grate holds up to 400 pounds! 4 fluorescent bulbs provide a very bright work area. Monster-sized 443 pounds! Heavy-duty 14 gauge steel has a resilient powder-coated finish. Gas-charged hydraulic hinges provide smooth and easy opening / closing Power controls are lighted and within easy reach on side of cabinet Blast-gun hook inside cabinet.

P/N 12-02648 ..... **$2,285.00**



CABINET BLASTERS

100 CFM dust collector included with all steel cabinets. HD 14 gauge steel - welded seams. Full width top door. Optional additional side door. Optional foot pedals or ALC pistol grip trigger gun. High quality lined 24" gloves. Cushioned foam armholes.
Specifications: Work Area: 36" or 48" or 60" W x 24"H x 24"D, Height: 60", Door Options: Double Doors, Top Door Opening: 13" x 35", Side Door Opening: 11" x 17", Gun Options: Foot Pedl, Weight: 36" - 272, 48" - 303, 60" - 333.

Cabinet 36" ..... P/N 12-02563..... **$1,747.27**
Cabinet 48" ..... P/N 12-02564..... **$1,795.00**
Cabinet 60" ..... P/N 12-02565..... **$1,879.00**



BLASTING ABRASIVES

Removes paint/corrosion/rust from military, commercial and private aircraft while preserving anodized and alclad surfaces. Customers and usages include: Bell Helicopter Textron, U.S. Air Force, U.S. Navy, U.S. Marine Corps, U.S. Army, Pratt & Whitney, Commercial Airlines(MRO), FAA Repair Stations, turbine blades. **Note: Priced and sold in 25 lb bags.**

Model No.	Description	Part No.	Price
T-2 Urea	T-2 Urea, with a Barcol Hardness of 54-62, is our most versatile plastic blast media. It is highly suitable for a broad range of cleaning and stripping applications, including aircraft, automobiles, marine vessels, trucks, and trailers. Superb results can be expected in the removal of paints, anti-corrosion coatings, hydrocarbon deposits, waxes, oils, adhesives, and sealants, to name a few. T-2 for optimum results on a variety of applications!	12-03810	**$39.75**
T-3 Melamine	T-3 Melamine, with a Barcol Hardness of 64-72, is our most aggressive, fast blast media. It is highly suitable for a broad range of cleaning and stripping applications, and is highly desirable for replacing glass beads and other harsh abrasives. Best results can be expected in the removal of stubborn paints, printers, hydrocarbon deposits and other hard materials such as molds, engines, iron, and steel. T-3 for maximum aggression and performance on harder substrates!	12-03811	**$39.75**
T-5 Acrylic	T-5 Acrylic, with a Barcol Hardness of 46-54, is especially suited for a broad range of applications that require high stripping rates coupled with the need to insure surface integrity. T-5 Mil Spec media meets or exceeds the requirements set forth in Mil-P-85891A. Ideal for aircraft components, it is also excellent for powder coating removal from pultruded aluminum parts, thin fiberglass components, thin gauge metals, and of course, aircraft components. T-5 Mil Spec for optimum results where surface integrity is a must!	12-03812	**$66.50**



ECONOMY PORTABLE SAND BLASTING SYSTEM

A new portable blasting system for cleaning and surface preparation of metal, plastic, fiberglass or wood. Ideal for graffiti removal from brick or stone surfaces. Dee-Blast system consists of an abrasive hopper 20-1/2" high and 9-1/2" diameter molded PVC drum with tight fitting top to keep abrasive media clean. Hopper holds up to 65 lbs. of media. It has a 10 ft. long rubber hose, a full-length face shield and a trigger-operated blasting gun that completely mixes air and media to produce a uniform spray pattern.

P/N 130 ..... **$284.95**

PORT-A-BLAST SANDBLASTER



The Port-A-Blast sand blast gun is a complete sand blast unit. Fill the container with the abrasive material, connect the gun to your air line and it is ready to go to work. Will operate on air pressure as low as 60 PSI. However, for best results, pressures of 100-500 PSI are recommended. The greater the pressure the faster the cutting. The gun can be used to siphon abrasives or liquids directly from a hopper or bucket, using a flexible siphon tube, and eliminating the 1Qt. container.
Compatible Abrasives: • Silica Sand - the cheapest and most widely used for average work. • Glass Beads • Black Beauty Abrasive • Aluminum Oxide Abrasives - for fast cutting and fine texturing and etching. • Nut Shell Abrasives - for cleaning and polishing hard under surfaces without scratching. • Metal Shot - for removal of hard surfaces such as porcelain.

Port-A-Blast gun ..... P/N 12-00172 ..... **$64.95**
Flexible siphon tube ..... P/N 12-00173 ..... **$11.75**
Replacement Ceramic nozzle ..... P/N 12-00493 ..... **$20.50**



Model 1000

DELUXE PORTABLE PRESSURE BLAST SYSTEMS

These Portable Pressure Blasters are designed to make the most efficient use of your air and abrasive supply. These are not inexpensive siphon units. The entire tank is filled with air and sand under pressure. When the nozzle and valve is opened the sand/air mixture is released under tremendous pressure to quickly remove paint, rust, scale and other coatings. These units are 3-5 times faster to use than siphon units. All units arrive complete with air gauge, pressure vessel, sandblast hood, and sandblast hose. Simply fill with abrasive and attach to your air supply and you are ready to begin blasting. Order by Part no.

ABRASIVES – Black Beauty: Economical, fast cutting abrasive. For quick removal of paint and rust. 80# bag.

P/N 12-20740..... **$47.50**



Model 400

Spec. Chart	Model 400	Model 1000
Operating Pressure	60-125 psi	60-125 psi
ASME Tank	No	Yes
Sandblast Hose	7 feet	10 feet
Abrasive Capacity	40-50 lb.	100-120 lb.
Nozzle Size	3/32"	1/8"
Part Number:	12-20725	12-20735
Price:	$994.00	$860.00

TO

BLASTING SYSTEMS- TIG WELDERS



DUAL STATION BLASTING CABINET

2 operators can blast simultaneously. No long delays for moving blast items, operator can simply change stations. 2 siphon blast guns. 2 90 CFM dust collectors. 4 Bright florescent tube lights. 2 pairs of 7"x33" blast gloves. 2 Air pressure regulators. 2 Foot pedal controls. 10 Extra protective window underlays. 5 Extra protective light underlays. 8 Extra nozzles - 4 Ea. 6mm and 7mm. Lighted power controls. 1 Year warranty.

P/N 12-04818 ..... **$2,274.00**



AMI TURBINE ENGINE WASH SYSTEMS

The AMI-TW60 turbine engine wash system and the AMI-TW60AT Turbine Engine Wash System (TEWS) for performing compressor and turbine washes to aircraft engines.

Designed to perform compressor and turbine wheel washes to the manufacturers' specifications, the AMI-TW60 line is robust and well built, allowing the operator to save money.

The lightweight and portable design allow you to move the cart easily and provides you the versatility of selectable outlet pressure and source selection to utilize water only when required and chemical solution when necessary, without changing bottles or fluids.

Note: AMI-TW60AT can be used with shop air as the air source or the on board air tank can be serviced with shop and it can be utilized as a self contained unit away from shop air.

AMI-TW60 .....P/N 11-14757 ..... **$2,750.00**
AMI-TW60AT .....P/N 11-14758 ..... **$2,995.00**



TRIPLE DOOR BLAST CABINET

48x24" Triple Door Blast Cabinet
Features: • Full width top door • Two side doors • Foot pedal • Flourescent light • 90 CFM dust collector attached • Pressure regulator • Replaceable window underlays • Includes 4 nozzles • Some assembly required.

P/N 12-02858 ..... **$1,495.00**



BENCHTOP CABINET BLASTER

30x20" Bench Top Blast Cabinet
Features: • Made of tough LDPE polymer • One-piece construction (no leaks) • Self-adhesive underlay • Pistol grip trigger gun • Overside top window/door
Specifications: • Work area: 30"W x 27"H x 20"D • Height: 28" • Weight: 34 lbs.

P/N 12-02857 ..... **$465.00**



ASK MISTER TIG DVD

Learn how to tig weld with the best!! Mister Tig (Wyatt Swaim-30 years of aerospace welding experience) will teach you the fundamentals and launch your tig welding training. This 34 minute DVD will teach you the proper torch angle, tungsten preparation, tungsten stick-out, and th eproper "dabbing" of the filler rod technique. This instructional DVD will help you set up your machine for the correct procedures including aluminum (alternating current), and 4130-cro-mo (DC-).
The DVD is also packed with tig information and is designed for the beginner tig operator and will even help the intermediate operator.

P/N 13-05751 ..... **$26.75**



TIG CALCULATOR

Just tell it what material you're welding, the thickness, and type of weld (butt, lap, etc.), and it will give you information concerning your weld such as travel speed, number of passes needed, tungsten type and size, what amperage to run, and speed of welding. Slide rule style. P/N 12-00444 ..... **$8.90**

TIG TORCHES & REPLACEMENT CABLES



PTA-9F - Air-cooled TIG torch, rated 125 amps at 60% duty cycle. Includes a 12-1/2 foot Superflex Cable. Equipped with a flexible head for easy maneuverability into tight places.
P/N 12-00391 .... **$196.90**

REPLACEMENT CABLE - 12-1/2 foot Superflex replacement cable for the PTA-9F P/N 12-00399 ..... **$59.75**



PTA-17H -Air-cooled TIG torch, rated 250 amps at 60% duty cycle, heavy duty. Equipped with a 12-1/2 foot Superflex Cable P/N 12-00392 ..... **$296.95**

REPLACEMENT CABLE - 12-1/2 foot Superflex replacement cable for the PTA-17H P/N 12-00401 ..... **$84.75**

TIG TORCH ACCESSORY KITS



9GL KIT - TigDepot Parts Kits provide all the torch accessories you need to start welding. Parts Kits provide collets, collet bodies, a back cap, alumina nozzles and tungstens in a variety of sizes, all packaged in an easy to carry reclosable box.
The 9GL-Kit comes with .040, 1/16, 3/32 Collets, Gas Lens Collet Bodies, Gas Lens Nozzles, (#5, #6, #7), a long Back Cap, and an assortment of 2% Thoriated and Ceriated Tungsten in a convenient plastic box. For the 9 Series torches P/N 12-00393 ..... **$69.95**



17H-GL KIT - The TigDepot 17H Gas Lens Kit is made specifically for the 210 Amp 17H Torch. ***The Kit includes One of each:*** • 2% Thoriated Tungsten .040, 1/16, 3/32 DIA. • Alumina cups #5,6,7 • Gas lens .040, 1/16, 3/32 • Collets .040, 1/16, 3/32 • Backcaps-short,medium, long • Insulator • Tool box PN 12-00394 ..... **$79.95**



TIG BUZZ BOX KIT

TIG weld Aluminum, Stainless Steel,Chrome Moly, and many other metals. Plug it directly into your standard household outlet (110 volts, 15amps). ***Kit includes:*** • CK9 Rigid Torch w/Valve and 12.5' one piece cable with male dinse connector. • Flowmeter Regulator • Adapter Plug with 1' extension cord • Female Dinse to allow you to go back and forth to stick welding. • AK-4 Accessories Kit • AMP Conversion Decal • Instruction Manual P/N 12-00389..... **$271.95**

TIG WELDERS / WELDING EQUIPMENT



INVERTEC V155-S TIG READY-PAK - Weighing in at just under 15 lbs. (6.8 kg) it is no lightweight contender. It packs the full punch of a heavyweight professional that you can take to the most demanding jobs. With 120/230V auto reconnect operation, it can operate from a portable generator. It can also plug into a 200 foot (61 m) 230V extension cord (not included) so you can weld just about anywhere. The Dent resistant case is IP23 rated for outdoor use.

P/N 12-01978..... **$1,195.00**

TO

TIG WELDING EQUIPMENT & ACCESSORIES

FULL ARM WELDING GLOVES



Full Arm Welding Gloves. Industry First! - 21" glove with heavy duty padding on the forearm and elbow for comfort. Super supple Genuine American Deerskin tanned in U.S.A.. Boarhide™ leather heat shield patch, reinforced palm, cuff and lean-on patch. Sock-lined FR (flame resistant) cotton fleece insulated. Boarhide™ leather pull-strap. Sewn with Kevlar® thread. Complimentary 3" carabineer to keep gloves together with exclusive Caiman® loops on each pair. Kontour™ - Exclusive 3-Dimensional, pre-curved fingers, and form-fitting design for ultimate fit, comfort & dexterity. Patches, padding and reinforcements for comfort & protection.

P/N 13-20151 ..... **$41.50**

MAGNETIC UNI-JIGS



Magnetic holders for hands-free support in a variety of applications. Designed to last a life time. Each angle is screwed (not riveted) completely through the magnet to insure proper angles.

Small (supports up to 45 lbs.)
P/N 12-05185 ..... **$7.95**

Large(supports up to 80 lbs.)
P/N 12-05186 ..... **$17.95**

TIG TUNGSTEN



Sold in packages of 10

2% Thoriated
1/16.....P/N 12-00438 ..... **$14.85**
3/32.....P/N 12-00439 ..... **$32.85**

2% Ceriated
1/16.....P/N 12-00440 ..... **$14.95**
3/32.....P/N 12-00441 ..... **$32.70**

Pure
1/16.....P/N 12-00442 ..... **$14.60**
3/32.....P/N 12-00443 ..... **$39.90**

TIG FILLER MATERIALS



36" Cut Lengths are packaged in 1 lb. tubes to provide you the flexibility of buying only what you need for your job.

Base Material	Use Filler	Size	Part No.	Price/Lb.
4130	ER80S-D2	.035	12-00473	**$13.60**
4130	ER80S-D2	.045	12-00474	**$11.80**
4130	ER80S-D2	.062	12-00475	**$9.90**
4130	ER70S-2	.035	12-00477	**$13.60**
4130	ER70S-2	.045	12-00478	**$12.85**
4130	ER70S-2	.062	12-00479	**$9.90**
Aluminum	ER4043	.045	12-00480	**$25.50**
Aluminum	ER4043	.062	12-00481	**$14.70**
Aluminum	ER5356	.045	12-00482	**$25.65**
Aluminum	ER5356	.062	12-00483	**$13.50**
Stainless Steel	ER312	.035	12-00484	**$32.85**
Stainless Steel	ER312	.045	12-00485	**$29.90**
Stainless Steel	ER312	.062	12-00486	**$22.75**
Stainless Steel	ER308L	.035	12-00487	**$28.65**
Stainless Steel	ER308L	.045	12-00488	**$25.50**
Inconel	NICKEL 625	.035	12-00490	**$122.95**
Inconel	NICKEL 625	.045	12-00491	**$138.95**
Super Alloys	ALLOY W	MKT	Special Order	**Call**
Titanium	TITANIUM	MKT	Special Order	**Call**
Magnesium	TITANIUM	MKT	Special Order	**Call**

BRAZING AND SILICON BRONZE



.062..... P/N 12-00470..... **$19.90**

CUTTING TORCH ATTACHMENT



Cuts up to 3". Spiral tube mixer design optimizes the mixture of fuel and oxygen. Stainless steel tubes and lever. "A" hose fitting, 3/8"-24 thread.

P/N 12-00448 ..... **$102.50**

BOTTLES AND TOTE



Plastic Stand, Oxygen and Acetylene Cylinders - Plastic Cylinder Stand holds "MC" Acetylene Cylinder and "R" Oxygen Cylinder.

Plastic Cylinder Stand
P/N 12-00449 ..... **$31.50**

"MC" Acetylene Cylinder (Empty)
P/N 12-00451 ..... **$78.75**

"R" Oxygen Cylinder (Empty)
P/N 12-00452 ..... **$95.75**

COW HIDE GLOVES



These are a good import, not too stiff.

P/N 12-05155 ..... **$4.75**

38" LEATHER WELDING APRON



Quick release buckle and cross straps make it very comfortable; it also has pockets. P/N 12-05160 ..... **$22.50**

3M SPEEDGLAS BLAZED WELDING HELMET 100



3M™ Speedglas™ 100 Welding Helmets deliver outstanding protection, comfort and performance with distinctive graphic designs. Welders can benefit from its excellent optical quality and reliable light-to-dark switching at a highly affordable price. The Speedglas 100 welding helmet can be used with most arc welding processes, such as stick (MMA), MIG/MAG and TIG applications greater than 10 amps. It's also the ideal "entry-level" auto-darkening helmet for occasional users, such as hobbyists, farmers and maintenance or construction workers. P/N 12-02695... **$278.95**

FULL FACE SHIELD



Lightweight headgear, shield flips down over prescription glasses. Good over bifocals. P/N 12-05175.....**$19.75**

WA-GOGGLE



Gas welding goggle with adjustable headrest that pulls out and down. Permits easy use of eyeglasses. 2 x 4 lens.

P/N 12-05165.....**$56.50**

OXY-ACETYLENE HOSE



3/16" hose that may be used with all welding outfits.

B-B FITTING -
12'.....P/N 12-05916 ..... **$19.95**
25'.....P/N 12-05917 ..... **$17.95**

A-B FITTING -
12'.....P/N 12-05918 ..... **$18.70**
25'.....P/N 12-05919 ..... **$25.75**

TWO-IN-ONE 'R' GRADE HOSE FOR ACETYLENE



Green Hose: Oxygen. Red Hose: Acetylene. Length: 12-1/2" (3.8m). Diameter: 3/16" (5mm). Weight: 2-1/2 lbs (1.1kg). Use with AW Torch Series. "A" 3/8-24 & "B" 9/16-18 Hose Fittings.

P/N 12-01198 ..... **$28.50**

PORTASOL CORDLESS BUTANE SOLDERING TOOL KIT



Contains four different tools. Simple tip/accessory installation allows you to convert into a soldering iron, blow torch, hot blower or hot knife within seconds. Quickly cut and seal repairs on dacron, mylar and nylon. Cordless, go-anywhere versatility, 90 minute continuous use capacity, refills in 20 seconds with standard butane lighter fuel, and full 2 year warranty.

P/N 12-20600 ..... **$87.75**

TO

WELDING EQUIPMENT – PARTS CARTS



COBRA STANDARD TORCH KIT

Standard Welding System contains the DHC2000 Welding Torch, #0, #0.5, #1, #2, #3 and Copper Cutting Tip, undercutter, overcutter with guide rail attachment, one set of check valves, a tip cleaner set, wrench, DVD, and instructional manual. P/N 12-16000 ..... **$407.00**

SMITH WELDING OPTIONAL EQUIPMENT

SERIES 30™ TWO STAGE REGULATORS



H1421A-510 for Acetylene, 0-15 PSI
P/N 12-01186 .....**$279.95**
H1410A-540 for Oxygen, 0-150 PSI
P/N 12-01185 .....**$286.95**
For the professional. Heavy duty, w/check valves.



AC309 AIRLINE™ - STANDARD DUTY CUTTING ATTACHMENTS - Cutting capacity up to 3" thick (76mm) steel. Head Angle 90° USE IN: Torch Handles - AW1A, AW10A. P/N 12-01082 .....**$199.95**



CUTTING TIP - Slip-in cutting tips for general medium duty hand cutting. Use with medium pressure acetylene and oxygen. USE IN: Cutting Attachments - DG109A, MC505, MC509, CC509P (all sizes); AC309 (Maximum tip size MC12-4).
P/N 12-01192 .....**$17.85**



HUNTSMAN FACE SHIELD - Dark green plastic window 8" x 11-1/2" snaps onto lightweight plastic adjustable headband. Permits full peripheral vision during work. Protects against radiation - flip up visor when not in service.
Headband - Model K .....P/N 12-05000 .....**$29.95**
Visor .....P/N 8124D.....**$5.50**
Complete Shield .....P/N 12-05100 .....**$35.00**

HUNTSMAN ELECTRONIC WELDING HELMET
Call for prices and information on the new Huntsman Autoview Welding Filters which provide uncompromising eye protection.



TIP CLEANER SET - 13 cleaners for #49 - #75 drill size orifices. P/N 12-01195 .....**$19.95**

SINGLE STAGE REGULATORS



Gas Used: Oxygen Delivery Pressure: 0-100 PSIG, 0-7 Bar.....P/N 12-19300 .....**$139.85**
Gas Used: Acetylene Delivery Pressure: 0-15 PSIG, 0-1 Bar.....P/N 12-19400 .....**$139.85**



STANDARD DUTY TORCH HANDLE - Inlet connections 3/8"- 24 right and left hand, fit "A" size hose nuts. Cuts up to 3" (76mm), welds up to 1/2" (13mm). Covered by the LIFETIME Warranty & Service Agreement. USED WITH: Cutting Attachment - AC309. Welding Tips - AW200 Series, AW400 Series. P/N AW1.....**$168.75**



AW200 AIRLINE™ SERIES OXY-ACETYLENE - USE IN: Torch Handles - AW1A & AW10A.

For Metal Thickness Up To	Part No.	Price
1/32"	AW201	**$51.75**
1/2"	AW203	**$63.80**
1/8"	AW205	**$50.50**



ONE SINGLE FLINT LIGHTER -
P/N 12-01194 .....**$1.75**
Box of five Extra Flints for Lighter
P/N 12-01193 .....**$7.60**

TWIN HOSE - 12-1/2 Ft. (3/16" I.D.)P/N RA921.....**$28.50**



TIP CLEANERS

Quality aluminum case with rustproof stainless steel wire. The long spiral cleans a large number of tip styles. A hardened steel file included in each case. P/N 12-05180 ..... **$2.95**

BULLDOG RED WELDING DAMAGE CONTROL CLOTH



This heavy duty red cloth is made from .015" thick fiberglass with a Hypercote finish. It resists abrasion and liquids, cuts without fraying, is electrically non-conductive and chemical resistant, and drapes easily.
P/N 12-19500 .....**$14.90/lineal yd.**

SILVER PENCILS



The best way to mark tubing. Will not corrode tubing and shows up well on greasy tubing. May be used to mark exhaust system without lead cracking
P/N 12-05190 ..... **$4.35**

INNOVATIVE PARTS CARTS

Keep parts and pieces from taking off. Cut clutter and down time. ..... Everyone needs one or more - at work or at home, innovative parts carts people become very attached to their parts carts. They 're virtually indestructible. Make users more efficient, productive and better organized - plus they're good looking and customizable.



INNOVATIVE PARTS CART A™

* Industry's easiest-nesting /catalog. * Perfect size for "lighter-hit" jobs. * Makes a great portable workstation. * High-carbon, heat-treated steel shelf brackets for years of trouble-free use. * All shelves have upper side rails to prevent parts slide-off. * Four industrial grade total-lock caster wheels for mobility; zero movement when locked. * Durable powder coat finish stays new-looking longer. * Shown with optional Shelf Mat. * U.S. Patent #7,314,413 * Other Patent Pending. * 42"W x 31"D x 44"H * Shelves measure 40"W x 24"D * Shelves adjust every 3" * Weight rated to 125 lbs. per shelf * Includes: * 2 adjustable shelves * 2 adjustable support arms * 2 bungee cords * 6 metal hooks * 73 lbs.
PN 12-02023.....**$294.95**



INNOVATIVE PARTS CART B™

* Industry's easiest-nesting /catalog * 30% more shelf positions that any other parts /catalog. * High-carbon, heat-treated steel shelf brackets for yeas of trouble-free use. * All shelves have upper side rails to prevent parts slide-off * Four industrial grade total-lock caster wheels for mobility; zero movement when locked. * Durable powder coat finish stays new-looking longer. * Assembles in less then 20 minutes. * U.S. Patent #7,314,413 * Other Patent Pending. * 42"W x 31"D x 75"H * Shelves measure 40"W x 24"D * Shelves adjust every 3" * Weight rated to 125 lbs. per shelf * Includes: o 3 adjustable shelves o 2 adjustable support arms o 2 bungee cords o 6 metal hooks * 92 lbs.
PN 12-02024.....**$364.00**



INNOVATIVE PARTS CART C™

* Easiest shelves in the industry to adjust. * Provides 32 sq. ft. of shelf space! * High-carbon, heat-treated shelf brackets for years of trouble-free use. * All shelves have upper side rails to prevent parts slide-off. * Durable powder coat finish stays new-looking longer. * Shown with optional RO Holder. * U.S. Patent #7,314,413 * Other Patent Pending. * 42"W x 50"D x 75"H * Shelves measure 40"W x 24"D * Shelves adjust every 3" * Weight rated to 125 lbs. per shelf * Includes: o 6 adjustable shelves o 4 adjustable support arms o 2 bungee cords o 6 metal hooks * 152 lbs.
PN 12-02025.....**$518.95**

TO

Prices Subject to Change Without Notice

AIRCRAFT SCALES – TEST EQUIPMENT

PRECISION AIRCRAFT SCALES FOR ACCURATE WEIGHT & BALANCE



Checks aircraft weight and balance after modifications or fitting of new accessories. Flight safety is improved by periodic weighing to verify weight and balance is within limits. Simply roll the aircraft up the ramps onto the scales or jack the wheels and slide the pads under tires. A single high performance strain gauge load cell is in each pad. Temperature compensation prevents zero shift or sensitivity changes. Weighing pads, indicator and cables are color coded for easy match up. Include one 3 channel indicator, three colored cables, one 110V battery charger cable, three ramps, and six tire stops. Also includes a case.

Part No.	Capacity	Price
12-16711	2,500 lbs. per pad	**$6,560.00**
12-16715	6,000 lbs. per pad	**$7,820.00**
12-16721	10,000 lbs. per pad	**$8,826.00**
12-16725	15,000 lbs. per pad	**$9,395.00**
OPTIONS		
Part No.	**Description**	**Price**
12-16730	Extra cable, colored	**$365.95**
12-16735	Extra ramps, small, set of 3	**$298.95**
12-16740	Extra ramps, large, set of 3	**$656.00**
12-16745	Extra tire stops (chocks)	**$54.85**
12-16750	220V Battery Charger Cable for overseas	**$541.00**

AIRCRAFT WIRELESS WEIGHING KIT



The Aircraft Wireless Weighing Kit is the highly portable weighing device for small to medium sized aircraft. Ideal for obtaining weight from 3 points under the aircraft to properly determine CG ratios.
Featuring standard capacities to 22,000 lbs (greater capacities available), this device will be a welcomed addition to your aircraft repair facility or regional airport.
Specifications: • Load Cell Model: WJSD-5000 • Wireless Range: 50 ft. • Capacities: 5 ton/sensor • Minimum Division: 1 kg • Maximum Tare: 4,000 kg • Built-In Rechargeable Battery • AC Adapter
P/N 12-02608 ..... **$3,805.00**

SCALES 4 PLANES



2,000 lb scale measures 11-3/4" x 15-1/4" and is made of cast aluminum. The electronic display has been recessed into the top to keep it out of harms way. Your tire will be positioned parallel to the display to allow the readout to be clearly seen on the outboard side of the tire, or wheel pants. The scale top is powder coated gray. The coating makes cleanup quite easy because most everything will wipe right off. The units are not water proof. They should never be washed by hose or high pressure, but gentle hand cleaning should be all that is needed.

Model No.	Description	Part No.	Price
AWS-2K-STD	2K Per Wheel with built in display	12-03798	**$525.00**
AWS-3K-STD	3k Per Wheel with built in display	12-03799	**$630.00**
AWS-6K-REM	A set of 3-2k with remote diaplay	12-03801	**$1,465.00**
AWS-8K-REM	A set with remote diaplay	12-03802	**$1,475.00**
AWS-9K-REM	A set of 3-3k with remote diaplay	12-03803	**$1,595.00**
AWS-15K-REM	A set of 3-5k with remote diaplay	12-03805	**$2,895.00**
BS-002D	2K Smart Scale 11-3/4" x 15-1/4" Aluminum	12-04816	**$499.00**
BS-004D	3K Smart Scale 11-3/4" x 15-1/4" Aluminum	12-04817	**$615.00**

SMART SCALE CALIBRATOR



This calibration tool allows local scale companies to calibrate our smart bases. It also allows the scale operator to view any of the three bases, one at a time. When using this repeater, all scales receive their power from this unit. (A/C only) the Smart Bases require no additional power. This is a repeat of the reading that is displayed at each scale. When weighing large Tundra tires the display that is built-in is sometimes obscured. Includes Cables. Add LB/KG switching to your smart scales. Warranty 12 months. No calibration ever required.
P/N 12-04881 ..... **$295.00**

BARFIELD DIGITAL TURBINE TEMP TEST SET



The Barfield TT1200A is a Digital Turbine Temperature Test Set. It is microprocessor based, completely self-contained, battery powered unit housed in a high visibility ruggedized enclosure. It is designed with sufficient accuracies and range to be able to test digital and glass cockpit indicators with simple operation, direct reading, and multi-function versatility.
The TT1200A is specifically designed to accomplish all requirements for testing the aircraft Chromel/Alumel (K type) turbine temperature measuring systems. The Test Set can measure resistances down to 0.001 ohms, measure insulation up to 200M ohms, perform indicator run-outs with a resolution of 0.1ºC or 1ºC and a range of 1372ºC. It can also display the equivalent ºF or millivoltages and may be used as a master indicator.
The TT1200A exceeds all of the operational capabilities of the popular Barfield TT1200A.
P/N 11-13986 ..... **$6,595.00**

PRECISION TWEEZERS 8-95142-10454-5



12-04588

Perfectly aligned, hand-filed pointed tips plus a wide, comfortable patented non-slip grip for expert precision. Designed for Slice by famed architect Michael Graves. Measures approx. 86x20x9mm (20gm) - 3.5x0.75x0.35 in (0.7oz).

Tip Shape	Part No.	Price
Pointed Tip No Slip Grip	12-04588	**$19.99**
Pointed Tip Stainless Steel	12-04589	**$19.99**
Combo Slanted/Pointed Tip No Slip Grip	12-04590	**$19.95**
Combo Slanted/Pointed Tip Stainless Steel	12-04591	**$19.95**
Slanted Tip No Slip Grip	12-04586	**$19.99**
Slanted Tip Stainless Steel	12-04587	**$19.99**

WOOD HANDLE TOOTHBRUSH STYLE CLEANING BRUSH



Three rows of bristles by seven, your choice of materials, with bent wood handle approx 7 3/4 inches long. An especially polular welders tool, but very suitable for a variety of cleaning applications. Use stainless steel for maximum abrasive action, brass for less scratching. SW version stainless bristles are wire laced for positive retention.
P/N 04-02647 ..... **$1.39**

CLEANING TUBE BRUSH 3/16 X 6.25 INCHES



Tube brushes (also known as cylinder brushes) are filled with Dupont Tynex nylon and have excellent wear resistance. Although more susceptible to strong solvents than bristle filled brushes, nylon is stiffer, wears longer and cleans easier. This cylinder brush is perfect for manually cleaning internal surfaces such as tubes or threaded holes. Handle is made of twisted steel wire.
P/N 09-04587 ..... **$1.50**

TO

TIRE BEAD BREAKERS

BEADBUSTER XB-455™



The BeadBuster XB-455 was designed to work on even the most difficult tires, which means it can make quick work of all general aviation light aircraft tires. An innovative new design requires no adjustment for different sized rims and no floor space required to set up. Precise, powerful control will ensure professional results without damaging rims. Change your own tires whenever, and wherever you want. Weight 3 lbs. Dimensions 6 x 6 x 1.75 in.

Features: • Designed in USA, made with care in Taiwan • Durable Steel Construction (AISI 1020 Cold Rolled) • Extra-strong Ram Foot is made from Hardened & Tempered 4130 Chrome-Moly Steel, with a Proof Load of >3,000 lbs • MIG Welded • Grd-5 & Grd-8 Hardware • Polyester Powder Coat Finish • Padded Clamp Arm (Will not scratch or dent rims).

Specifications: • Weight: 2.93 lbs • Size: 6" x 6" x 1-3/4" • Rim Lip Width (clamp opening): 1.70" • Max Rim Lip Thickness: 0.63" • Rim Diameter: Any • Rim Width: Any • Rim Material: Any • Max Ram Extension (throw): 1.438"

P/N 12-04707 ..... **$99.00**

TIRE BEAD BREAKER



Once the tire & wheel have been removed from the airplane, the air is let out of the tire. The "Tire Bead Breaker" is used to break the bead or bond between tire and wheel. The "TBB" let you safely break this bead almost without effort & with- out doing damage to the expensive cast wheels. One broken wheel half can easily cost more than the "Tire Bead Breaker"! The "Tire Bead Breaker" adjusts to fit tires as small as tailwheel tires and as large as those tires found on large, corporate cabin planes. Can be used on both tube and tubeless tires.

P/N 12-16790 ..... **$189.95**

BOGERT LARGE BEAD BREAKER 13M-TBB2



Break tire beads safely, with little effort! Originally built to work on dragster tires, this Tire Bead Breaker is capable of working on very small to very large tires. It's extremely adjustable! The Tire Bead Breaker is used to break the bead or bond between the tire and wheel with little effort and without doing damage to the expensive cast wheels.

P/N 12-03577 ..... **$227.95**

TO

TIRE BEAD BREAKER



The universal design of this tire bead breaker accommodate tube type and tubeless tires. It is easily adjustable for a wide range of tire sizes up to as large as tires for Twin Beech and Aero Commanders. Features all steel construction.

P/N 13-02360 ..... **$258.00**

VALVE CORE REMOVAL TOOL



Boxell Aerospace 968RB Safe Core Valve Tool. Aircraft Tire Valve Core Removal Tool. Used for rapid and safe tire deflation. Tool threads on valve stem. Releases and traps the valve core within the tool but exhausts the air through ports. Prevents Injury to Technician and FOD (stops the valve core from becoming a missile!) Air exhausts away from technician. Fits all standard aircraft tire schrader valves (equivelant to US Automotive valve stem). 100% Lifetime Warranty. Made In the USA. P/N 12-03428 .....**$45.85**

ACCUGAGE PROFESSIONAL TIRE GAUGE



This very accurate bourdon tube tire gauge offers precision pressure control and a rugged steel case with rubber shock-absorbing cover. It comes complete with a 12" long flexible braided hose, a bleeder valve, and stop hand. It is easy to read the pressure on this 2" gauge with 1" psi markings and 60 lb. range. Excellent for use on aircraft tires as well as cars and trucks.

P/N 13-00437 ..... **$16.85**

TIRE PRESSURE MONITOR SYSTEM



With the flip of a switch, this battery operated, hand held unit, displays the actual tire pressure and tire temperature. Small removable electronic valve sensors transmit pressure/temperature to the LCD monitor within 25-50 feet of the aircraft. These sensors replace the standard valve caps and stay on the tires during flight. Pressure range 0 to 80 PSI. Temperature range - 50 Centigrade to 145 Centigrade. The monitor also has an alarm setting for high or low pressure. The product is warranted for 12 months from the date of purchase. Only rated to flight level 30. Not FAA Approved. Installation on certificated aircraft requires FAA form 337.

PSI Range 0-60 ..... P/N 05-04367 ..... **$345.00**
PSI Range 0-140 ..... P/N 05-10769 ..... **$465.00**

TIRE DOG



The Wireless Tire Pressure/Temperature Monitoring System for Trucks, Trailers, and Motor Homes. The tire pressure range is 0 to 180 psi. It will support 4 tires up to 22 tires. An adjustable swivel mounting bracket allows the monitor to be mounted on the dash or windshield. All items of the system are battery operated with a life span of 12 to 24 months depending on use. ..... P/N 05-04849 ..... **$529.00**
Tire Dog Sensor ..... P/N 05-04850 ..... **$50.00**
Tire Dog Wireless Relay ..... P/N 05-04851 ..... **$75.00**

ANALOG TIRE GAUGE



Tool Testing Lab's backlit digital gauge reads in PSI, InHg, Oz, SqIn, Inches or Feet, H2O, Kg, sqCm, Kpa, and Bar, with ½% tolerance and as fine as 0.1PSI resolution. It also holds peak readings, and features a built-in bleeder valve. Features: 300 PSI gauge, Accuracy 1% Full Scale 300 PSI Rated Hose Rubber Boot, Dual Foot Chick, Swivel Footing on Gauge

0-300 PSI..... P/N 12-02638 ..... **$109.85**
0-160 PSI..... P/N 12-03345 ..... **$109.85**

TIREPRO DIAL TIRE GAUGE



Check out the tool box of your local mechanic and you're likely to see a dial-type tire gauge because they're very accurate and easy to read. The TirePro gauge has a 12" flexible hose that makes even hard-to-access valves less of a task. Readings are held until released, and a built-in valve lets you "bleed" down to the desired pressure. Readings are in psi and kPa, and the dial is protected by a rubber boot. P/N 12-03742 ..... **$19.95**

DIGITAL TIRE GAUGE



300 PSI Gauge, Accuracy ± ½ % of Full Scale, 4 Digit Display - Shows pressure in tenths of PSI 300 PSI Rated Hose Dual Foot Chuck (Other Chucks Available), Protective Rubber Boot, Swivel Fitting on Chuck Backlight Button for Low Light Conditions, Zero Button Reads in PSI, Bar, KPa and 5 Others Peak Hold Reading Manual and Auto Shutoff, Uses two AAA Batteries (2000 Hrs Usage Typical) Pressure Bleeder Valve, Storage Case, Fresh Certification..... P/N 12-02637 ..... **$269.50**

TIREPRO DIGITAL TIRE GAUGE



The TirePro Digital Tire Gauge is ideal for aircraft tires, with a large display and accuracy over a wide range of pressure levels. Readings are shown to 0.1 psi levels, with bar, Kpa, and Kg-cm2 scales also provided. An ergonomic shape fits nicely in your hand. This may well become your favorite tire gauge!..... P/N 12-03743 ..... **$17.95**

DIGITAL TIRE GAUGE KIT



300 PSI Gauge Accuracy ± ½ % of Full Scale. 4 Digit Display - Shows pressure in tenths of PSI. 300 PSI Rated Hose. Quick Disconnect. Protective Rubber Boot. Swivel Fitting on Chuck. Backlight Button for Low Light Conditions. Zero Button Reads in PSI, Bar, KPa and 5 Others. Peak Hold Reading. Manual and Auto Shutoff. Uses two AAA Batteries (2000 Hrs Usage Typical) Pressure Bleeder Valve. Storage Case. Fresh Certification. 1 year Warranty

P/N 12-02639 ..... **$325.00**

AIRCRAFT JACKS

MEYERS HYDRAULICS AIRCRAFT JACKS



Meyers Hydraulics have been recognized as the industry standard for aircraft jacks for over 25 years. Professional mechanics rely on the AJS Jack Set for applications requiring heavy-duty lifting capacity, smooth maneuverability, and reliability. Refer to the Application Chart below for the components required for your aircraft, and then order from the price list accordingly.

Aircraft	Jacks	Tailstand	Legs	Tubes & Caps
Aero Commander	(2) A-6	(1) ATS	(2) AJL	(2) AT-4
Beech: Model 50, King Air, Queen Air	(2) A-6 (1) A-5	--- ---	--- ---	--- (1) AT-3
Beech: Bonanza, Debonair, Travelaire, Baron	(2) A-5	(1) ATS	---	---
Mooney	(2) A-5	(1) ATS	---	---
Piper: All except Navajo & Aerostar	(2) A-5	(1) ATS	---	---
Piper Navajo & Aerostar	(2) A-6	(1) ATS	---	---
Cessna: Cardinal RG	(2) A-6	(1) ATS	---	(2) AT-4 (2) ATC-8
Cessna: All high wings RGs except Cardinal	(2) A-6	(1) ATS	(2) AJL	(2) AT-4 (2) ATC-8
Cessna: All 300 & 400 Series	(2) A-5	---	---	(2) AT-28 (3) ATC-4
Navion	(2) A-5	(1) ATS	---	(2) AT-28

Part No.	Description	Price
12-21405	A622 W/ AT62222 & JPR1	**$795.00**
12-21415	ATS Tail Stand	**$224.95**
12-02281	A427 Jack w/ AT42727 (27"/46")	**$847.00**
12-21435	AJL Leg	**$110.75**
12-21440	AT-1 Tube	**$77.99**
12-21445	AT-2 Tube	**$119.95**
12-21455	AT-3 Tube	**$85.75**
12-21460	AT-4 Tube	**$119.75**
12-21465	AT-28 Tube	**$84.00**
12-21470	ATC-4 Cap	**$99.85**
12-21475	ATC-8 Cap	**$99.75**
12-04981	AJL-ZB 8 Leg	**$207.95**

AJS	Height Ranges
A-5 w/AT-1*	22"/36"
A-5 w/AT-28	28"/42"
A-5 w/AT-3	34"/58"
A-6 w/AT-2*	34"/58"
A-6 w/AT-4	54"/78"
A-6 w/AJL	Legs+10"
ATC-4 Cap	+1 to 4"
ATC-8 Cap	+1 tp 8"
ATS Tailstand	30"/51"

(*) ATC Caps will not work on these tubes.



MEYER HYDRAULICS A700 AIRCRAFT JACKS

The heavier piston, turbo-prop and jet powered aircraft weighing up to 32000 lbs. (14517kg) are too valuable to consider using anything less than the A700 Series Aircraft Jacks from Meyer Hydraulics.

Meyer Model No.	Old No.	Capacity	Low	High	Lifting Range	Part No.	Price
A722B	--	16,000 lbs	22"	36"	14"	12-05106	**$1,278.00**
A725B	A-2516	16,000 lbs	25"	42"	17"	12-02669	**$1,367.00**
A728B	A-9	16,000 lbs	28"	48"	20"	12-02670	**$1,391.00**
A734B	A-17	16,000 lbs	34"	60"	26"	12-02672	**$1,327.00**
A734C	A-1724	24,000 lbs	34"	60"	26"	12-02673	**$1,449.00**
A740C	--	24,000 lbs	40"	71"	31"	12-05066	**$1,437.00**
A755C	A-5524	24,000 lbs	55"	95"	40"	12-02677	**$1,809.00**



MEYER AIRCRAFT JACK AND EXTENSION LEG

This Series basic design from Meyer Hydraulics has served as the general aviation industry standard for over 55 years. The A600 Series and its redecessors are being used by professional service technicians around the world providing confident lifting of airplanes and helicopters weighing up to 8000 lbs. (3629kg) with the security and features one should demand in an aircraft jack. Even after the additional TriTask features have been added, the A600 Series still continues to be surprisingly affordable. **In the box:** • 1 - A634 Jack • 1 - AJL-ZA Legs • 1 - AT-JPRI P/N 12-04765 ..... **$943.00**



MEYER HYDRAULICS EXTENSION BAR SETS

Model No.	Kit Contains	Part No.	Price
AT-EBZA	(2) AT-EB015s; (2) AT-EB035s (2) AT-EB055s; (2) AT-EB075s (2) AT-EB105s; (2) AT-EB125s (not for A755C or A760A)	12-04873	**$376.00**
AT-EBZB	(2) AT-EB025s; (2) AT-EB045s (2) AT-EB065s; (2) AT-EB085s 2) AT-EB095s; 2) AT-EB115s (not for A755C or A760A)	12-04874	**$399.00**

MEYER TRITASK AIRCRAFT JACK SETS



This has been designed to provide professinal technicians with the selection of equipment that best matches their own needs. It has a unique combination of aircraft jacks and accessories to lift the maximum number of different types of airplanes and helicopters weighing up to 8000 lbs. (3629kg) for the least amount of capital investment.

BASIC SET: • 2) A622 Jacks w/AT62222's and AT-JPR1's • 2) A634 Jacks w/AT63434's and AT-JPR1's • 1) AJL-ZB Extension Leg Set (8 legs) • 1) AT-EBZA Extension Bar Set • 2) AT62234 Inner Slide Tubes • 2) AT63448 Inner Slide Tubes • 1) ATS Aircraft Tailstand
P/N 12-04777 ..... **$3,985.00**

DELUXE SET: • 1) A600JS-A TriTask Basic Aircraft Jack Set • 1) A622 Jack w/AT62222 and AT-JPR1 • 1) ALW-10 Leveling Washer Set • 1) AT-EBZB Extension Bar Set • 1) AT62234 Inner Slide Tube
P/N 12-04778 ..... **$4,995.00**

PREMIUM SET: • 1) A600JS-A TriTask Basic Aircraft Jack Set • 2) A627 Jacks w/AT62727's and AT-JPR1's • 1) ALW-10 Leveling Washer Set • 1) AT-EBZB Extension Bar Set • 1) ATS-AA72 Extended Inner Slide Tube P/N 12-04779 ..... **$5,936.00**

A300 3-LEG SERIES AIRCRAFT JACKS



The heavier piston, turbo-prop and jet powered aircraft weighing up to 32000 lbs. (14517kg) are too valuable to consider using anything less than the A700 Series Aircraft Jacks from Meyer Hydraulics. For over 55 years, Meyer Hydraulics have been manufacturing aircraft jacks that continue to set the standard for safe, dependable lifting at affordable prices. This series of professional hydraulic lifting equipment handles airplanes and helicopters with the security and features one should demand in an aircraft jack.

Meyer Model No.	Old No.	Capacity	Low	High	Lifting Range	Part No.	Price
A722B	--	16,000 lbs	22"	36"	14"	12-05106	**$1,278.00**
A725B	A-2516	16,000 lbs	25"	42"	17"	12-02669	**$1,367.00**
A728B	A-9	16,000 lbs	28"	48"	20"	12-02670	**$1,391.00**
A734B	A-17	16,000 lbs	34"	60"	26"	12-02672	**$1,327.00**
A734C	A-1724	24,000 lbs	34"	60"	26"	12-02673	**$1,449.00**
A740C	--	24,000 lbs	40"	71"	31"	12-05066	**$1,437.00**
A755C	A-5524	24,000 lbs	55"	95"	40"	12-02677	**$1,809.00**

A519 AND A521 VERY LOW AIRCRAFT JACKS

Designed primarily for the new class of aircraft called Very Light Jets (VLJs). Ultra low height and the maximum stroke range necessary for the large landing gear movements found on these jets. Features: (A) Steady Knobs (B) Convenient hole spacing (C) Positive safety lock prevents accidental lowering. (D) Anti-snag round tube (E) Three 3" spring loaded casters (F) Low-height leg design.

A519 - height range 19"-34" ..... P/N 12-02290 ..... **$774.00**
A521- height range 21"-38" ..... P/N 12-02291 ..... **$789.00**

MEYER JACK REPAIR KIT



Meyer Hydraulic Jack repair kit for: A-5 Jacks (s/n 6417 plus), A-6 Jacks (s/n 5118 plus), A-60 Jacks (s/n 86 plus), A360A, A419, A421, A422, A427, A434. 1 lbs (0.5Kg)
P/N 12-03246 ..... **$69.75**

TO

AIRCRAFT JACKS

AIRCRAFT JACKS

Constructed of welded square steel tubing. The three leg design clears close tolerance gear doors, such as Bonanzas and Barons. All models have machine jack point centering cap with casters, jack handle holder and positive locking jack point centering cap with casters, jack handle holder and positive locking collars. Oversize shipping charges apply.

Aircraft Jacks	Image	Part No.	Price
Piper and Mooney Jack and other light twins and singles Height 26"-45". Cylinder Capacity **6,000 lbs. ***Note: Mooneys require 26" clearance plus room for the cap or the Jack will not fit.***		12-99115	**$359.00**
Tail Stand 18"-35:		12-99130	**$209.95**

JACK POINTS

Aircraft Jacks	Image	Part No.	Price
Cessna Jack Points Spring Gear Type		12-01374	**$58.75**
Mooney Jack Points ***(Sold Individually)***		12-01375	**$25.55 each**



JACK LIFT PAD

This Jack Lift Pad is quality made of alloy steel and is adaptable to all bottle type hydraulic jacks. The serrated vee design provides positive holding. It is easy to install and proves a great variety of applications.

P/N 12-30270 ..... **$45.60**



REDLINE DOLLY-JACK

The Dolly-Jack is a self contained, portable system that can lift any main wheel or nose wheel with the turn of crank for routine maintenance and tire changes. It allows the plane to spin around in its own space. Made in the USA using 4130 Chromoly material. **FITS THESE PIPER**: Arrow, Lance, Saratoga (RG), Malibu, Matrix, Meridian, Seminole. **FITS THESE BEECHCRAFT** Bonanza, Baron, Travel Air, T-34

P/N 13-03380 ..... **$878.00**

ADJUSTABLE JACK PAD FOR CESSNAS



Adjustable jack pad with rubber protective strip for spring steel landing gear. (fixed-gear Cessna 150, 172, 182, etc). Just tuck the pad underneath a landing gear leg and bring a floor jack up to it, efficiently lifting the wheel for tire/hub work.

Seven place Adjustable Jack Pad Width Range: axle to fuselage

P/N 12-04890 ..... **$98.75**

Single place Adjustable Jack Pad Width Range: near foot step

P/N 12-04890-1 ..... **$89.95**

AERO JACK KIT



The Aero Jack System saves time when changing tires or working on landing gear. Use a combination of innovative tools packed in a handy toolbox. Designed by an A&P, for do-it-yourselfers and other mechanics, three kits are available depending on your needs.

Description	Part No.	Price
Complete Aero Jack System - Service both flat and round gear from a handy toolbox.	12-00254	**$345.00**
Flat Gear Aero Jack Kit - Cessna C-120, 140, 150, 170, 172, 175, 188, 182, 190, 195, 205, 206, 336, 337, flat gear 177RG, Piper Tomahawk, Beech Skipper, Champion, Bellanca, and similar landing gear.	12-00681	**$259.85**
Round Gear Aero Jack Kit - Cessna C-172RG, 177RG, 182RG, 210, T210, P210, and similar landing gear.	12-00682	**$234.95**
Expandable Aero Jack System - Included in the tool box is: Bogert Tribal Jack with all the jack pads. (C210, RG, R, FPP, Moon, Musk, C300). Weight is 30 lbs.	12-02096	**$999.00**

TRIBAL JACK



Aid aircraft maintenance, such as servicing brakes, working on bearings, or changing tires. Maximum load of 2,500 pounds and can be used on Piper aircraft, Musketeer, Mooney, and many more aircraft with near-vertical landing gear. Lower clearance lifting pad which allows jack owners to begin lifting from a 2 1/2" starting position and up to 12". It can be used on main gear, nose gear and the tail wheel. Made in USA.

Tribal Jack ..... P/N 12-00838 ... **$259.85**

Tribal Jack Pads ..... P/N 12-03536 ..... **$48.95**

LANDING GEAR SAFETY STAND



The stand slips on over the axle when ever the wheel is removed. Put the nut back on and the plane can't slip off the stand. It adjusts for height with a quick release pin. The wide, stable "H" base is made from heavy gauge square steel tubing for strength, safety and durability. The unique stand is finished in an attractive, bright red powder coat finish. LGSS-2, has a 12" x 12" base with adjustable axle height of 10"-15", and LGSS-3 has an 18" x 18" base with adjustable height of 14"-21.5".

9" Stand ..... P/N 12-02015 ..... **$94.75**

12" Stand ..... P/N 12-00255 ..... **$89.75**

18" Stand ..... P/N 12-00256 ..... **$118.75**

PROP SLING, (BOGI-LIFT)



The tool every mechanic needs!

* Lift nose wheel without jacking up whole plane. * Service nose wheel & strut effortlessly. * Support a new propeller during installation. * Use with 2 and 3 blade props. * 4-point stability with tail & wing jacks.

P/N 12-16718..... **$129.75**



AUTO JACK ADAPTER

P/N 05-08297 ..... **$32.85**

TO

BOGERT WING JACK PADS



Jack Pads attach to wing jack points. Follow aircraft service manual instructions for jacking.

Cessna 210, 177RG.....P/N 12-03533 ..... **$87.75**
Cessna 172RG, 182RG .....P/N 12-03532 ..... **$85.75**
Beech Musketeer, Sundowner .....P/N 12-03535 ..... **$123.75**
Mooney M20 Series .....P/N 12-03534 ..... **$87.75**

BOGERT JACK PADS

Jack pads provide a cradle for the main landing gear legs. The cradle design securely holds the landing gear providing a safe jack point. The adjustable jack pad fits flat spring gear. The round gear jack pad fits the models listed below. • Save time when servicing tires, wheel bearings and brakes • Lift only the wheel instead of the whole aircraft • Eliminate the unsafe practice of stacking wood blocks under a bottle jack • All parts pack away neatly into a sturdy weather resistant toolbox • Made in USA



FLAT PIVOT POINT ADJUSTABLE JACK PAD - * Adjust width, taper and angle adjustment. * Adapts to many jacks. Shown with bottle jack. * Fits: Cessna C-120, 140, 150, 170, 172, 175, 180, 185. 182, 188, 190, 195, 205, 206, 336, 337, flat gear 177RG, Piper Tomahawk, Beech Skipper, Champion, Bellanca, and similar spring steel landing gear.
P/N 12-00837 .....**$116.75**



ROUND JACK PAD ADJ-R - ack pads provide a cradle for the main landing gear legs.The ADJ-R has a half round design cradles the landing gear safely. Pivots on a machined bottle jack extension. Use with Cessna C-172RG, 177RG, 182RG, 210, T210, P210, and similar landing gear P/N 12-00679 .....**$88.75**



C300 JACK PAD ADJ-300 - * Cessna 300, 400 & 500 series * Perfect for the Conquest & Citation. * Sold in Singles.
P/N 12-00683 .....**$49.95**

BOGERT JACK EXTENSIONS



* Bottle Jack Extensions will fit any 1-1/4" O.D. ram. * Typical 6 ton jack has a 1-1/4" O.D. ram. * Extensions are machined & slide together for easy stacking. * Use on aircraft with a jack point pin. * Not the same extensions as found in the Aero Jack Kit below. * No special jack pad needed on tubular C-152, 172, 182 etc.

1.5" extension.....P/N 12-00156 .....**$31.85**
3" extension.....P/N 12-00157 .....**$35.50**
8" extension.....P/N 12-00158 .....**$38.80**

BOGERT CIRRUS SR20 JACK PAD



This jack pad is designed to thread into the wing jack points for use with wing jacks. Each pad can be used with an aviation wing jack that is made to accept a jack point.
P/N 12-05118 ..... **$85.75**

BOGERT CESSNA 337 JACK PAD



This jack pad is designed to thread into the wing jack points for use with wing jacks. Each pad can be used with an aviation wing jack that is made to accept a jack point.
P/N 12-05119 ..... **$85.75**

BOGERT BEECHCRAFT B35/58 JACK PAD COMBO



Forget dragging out a full set of wing jacks to do routine maintenance. The 30M-B35/B58 Jack Pad for all Beech Bonanza and Beech Baron aircraft makes maintenance on wheels, brakes, tires and wheel bearings simple and fast. You can do the work just about anywhere. Use the jack adapter and axle pin with any 4-6 ton hydraulic bottle jack to raise main gear and nose gear to fix a flat or do normal preventative maintenance. The system is small and light enough to carry on board so you have the tools you need. Features: •Works for Main and Nose Gear. •Saves time and money •Adds mission capability •This jack adapter and pin can be used to pick up a flat tire to tire changing height. •Frees up full service and wing jacks for other work. P/N 12-05120 ..... **$166.75**

BOGERT BEECHCRAFT B35/58 JACK PAD KIT WITH JACK



Forget dragging out a full set of wing jacks to do routine maintenance. The 30M-B35/B58 Jack Pad for all Beech Bonanza and Beech Baron aircraft makes maintenance on wheels, brakes , tires and wheel bearings simple and fast. You can do the work just about anywhere. Use the jack adapter, axle pin and included Safe Jack 6 ton hydraulic bottle jack to raise main gear and nose gear to fix a flat or do normal preventative maintenance. The system is small and light enough to carry on board so you have the tools you need. P/N 12-05121 ..... **$219.00**

BOGERT CESSNA 340 / 401/ 402 / 4011 / 414 JACK KIT



Forget dragging out a full set of wing jacks to do routine maintenance. The 30M-402-k Jack Kit for all Cessna 340, 401, 402, 411, 414 and 421 aircraft makes maintenance on tires, brakes, and wheel bearings simple and fast. You can do the work just about anywhere. Use the jack pad and hydraulic jack to raise main gear to fix a flat or do normal preventative maintenance. The system is small and light enough to carry on board so you have the tools you need. Features: •Works for Main Gear. •Saves time and money •Adds mission capability •This jack pad and hydraulic jack can be used to pick up a flat tire to tire changing height. •Frees up full service and wing jacks for other work •Frees up hanger space.
P/N 12-05129 ..... **$328.00**

BOGERT VANS RV JACK PAD



You asked for them and here they are. This jack pad is designed to thread into the wing tie down holes for use with wing jacks. Pad can be used with an aviation wing jack that is made to accept a jack point or you can use the supplied adapter on homemade wing jack that are popular with home built owners. Pad is sold individually with a jack adapter. Specs: •Fits RV aircraft that have a threaded tie down rings with 3/8-16 threads. •Fits RV aircraft that have a threaded tie down rings with 3/8-16 threads. •Sold as singles •Made in USA •Pad has 3/8-16 internal threads and grade 10 set screw threads. •Pad is 2 inches in diameter •Rubber padded •¾" Ball jack point •Jack ram adapter fits jack rams up to 1.25 inch diameter. •Jack ram adapter is machined steel.Sold as singles •Made in USA •Pad has 3/8-16 internal threads and grade 10 set screw threads. •Pad is 2 inches in diameter •Rubber padded •¾" Ball jack point •Jack ram adapter fits jack rams up to 1.25 inch diameter. •Jack ram adapter is machined steel. P/N 12-05132 ..... **$76.75**

TO

AIRCRAFT JACKS

BROWNELL AVIATION JACKS



For over forty years Brownell has been the leading name in boat storage equipment throughout North America and the world. The same commitment comes in our new line of aviation products. Brownell slightly modified our jack stands and dollies to fit the needs of aviation professionals and enthusiasts in order to help make the work place safer and more efficient. All of the products are made in America using skilled American labor and American steel.

Description	Height Mins (in/cm)	Weight (lb/kg)	Part No.	Price
AS3 Brownell Jackstands W/tops	25-38 / 64-97	97 / 15.0	12-03299	**$139.99**
AS2 Brownell Jackstands W/tops	29-46 / 74-117	37 / 16.5	12-03301	**$166.95**
AS1 Brownell Jackstands W/tops	33-50 / 84-127	38 / 17.0	12-03302	**$153.99**
AS0 Brownell Jackstands W/tops	41-58 / 104-147	46 / 21.0	12-03303	**$168.75**
AS0X Brownell Jackstands W/tops	54-72 / 137-183	46 / 22.5	12-03304	**$192.75**
AS0XX Brownell Jackstands W/tops	67-84 / 170-213	50 / 43.0	12-03305	**$207.95**

RV JACK STAND KIT



Someday you'll need to jack up your aircraft to install new tires, clean & grease wheel bearings, or fix a flat. This nifty jack stand is safer than using an engine hoist or the wing tie down location. Requires a modification to the axle nuts (about 1 hour). Kit includes the axle jack arm, axle nut modification hardware, & directions to modify the nuts. For hollow axles (Wittman style) Gear only. Uses automotive bottle jack. Jack not included. Not for RV-8s. For RV Gear Legs with Hole in Axle. P/N 12-00634 ..... **$58.75**

RV 8 TRAVEL JACK



The RV 8 Travel Jack was designed and manufactured by RV-8 builder / pilot Steve Jackson. All steel construction, weighs less than 3 pounds. Jack mast easily removes from base plate for compact storage. Uses 3/4" wrench to operate (wrench not included). Tested to 1350 pounds. Has securing arm that positions between the gear leg & brake to stabilize the jack - works on both left and right gear leg with a simple adjustment. Base measures 3-1/2" X 8"; mast stands 10" tall. Designed for RV-8 flat spring gear legs (only -- will not work on the other RVs with round gear legs).

Standard ..... P/N 12-03170 ..... **$209.95**
For Grove Gear ..... P/N 12-03243 ..... **$209.95**

SHOP TUFF ELECTRIC HOISTS



This handheld remote control electric hoist works great in your garage or shop. This item comes with Universal Mount brackets and has a 110 Volt, 3/4 HP motor. Lifting height: 36ft SL, 18ft DL. Cable length: 39ft. Handheld remote control 5ft cord. Motor: 110Volt, 1-1/4HP. Universal Mount with brackets.

Model No.	Description	Part No.	Price
STF-2244EH	220 lb Single line pull 440 lb Double line pull Motor: 110Volt, 3/4HP	12-03375	**$118.75**
STF-4488EH	440 lb Single line pull 880 lb Double line pull Motor: 110Volt, 1-1/4HP	12-03376	**$149.00**
STF-5511EH	550 lb Single line pull 1100 lb Double line pull Motor: 110Volt, 1-3/4HP	12-03377	**$160.75**

QUALITY JACK POINTS



Quality Jack Points. (Very high quality jack points for most aircraft wing installations and jacks). These very small, lightweight (less than two oz.) aircraft grade aluminum Jack Points can make jacking your aircraft a simple and safe task. These Jack Points incorporate a grade eight 3/8"X 16 plated stud that fits the wing thread that can't fail causing damage. Sold as a pair.

P/N 05-12379 ..... **$24.75**

BROWNELL AVIATION TAIL STAND



- Precision acme threads for easy, smooth adjustment
- Very stable work or storage platform
- Stays in place with no bleeding, etc.
- Small footprint of base and top pad allow for easy access
- Stands stack neatly when not in use to free up valuable space
- TPE surface resists slipping and scratching
- SWL 20,000lbs/9,100kgs
- 30-52"/76-131cm range
- Universal connection
- Base plate
- Accommodates ballast

P/N 12-03306 ..... **$211.75**

BEECHCRAFT B90 JACK PAD



Made in the USA. Saves time and money. Adds mission capability. With the appropriate jack, this pad can be used to pick up a flat tire to tire changing height. Frees up full service and wing jacks for other work. Small, Portable and light weight compared to wing jacks. Should be used with Bogert hydraulic, 12", 15 ton long stroke bottle jack. The jack pad can be used with 6 ton, 1¼" ram or larger bottle jacks. Can be used with 3 ton or larger floor jacks.

Jack Pad Only ..... P/N 12-03165 ..... **$356.00**
Jack, Pad, and Pump Kit ..... P/N 12-03184 ..... **$588.00**

AEROJAK™ AIRCRAFT JACK



The AEROJAK™ aircraft lifting device is of one-piece construction for flat gear, weighing in at just under 6 lbs. The flat gear Head clamps onto the Tubular gear insert. The AEROJAK™ device is patented, U.S. Patent No. 8,960,645, and it is made in America from 4130, 304L, and 6061AL, steel, and cast Iron. Application: The AEROJAK™ device will lift Cessna flat gear C- 120, 140, 150, 170, 172, 175, 182, 190, 195, 205, 206, 336, 337. It will lift flat gear, Mustang II, Citabria, Decathlon, and similar flat gear. It will also lift Cessna round gear C- 152, 172RG, 177RG, 182RG, 210's with the Tubular gear insert. Storage: The AEROJAK™ device can remain inside the plane when not in use. Box size to 12"- 7" - 7" black and yellow plastic.

Standard ..... P/N 12-03794 ..... **$495.00**
Nose gear insert for Cessna 337 Flat Spring Gear
P/N 12-04802 ..... **$125.00**
Round Gear Insert for Cessna 172 | 182 | 206 | 210 Round Rg Gear
P/N 12-04801 ..... **$125.00**
AEROJAK™ for Shrouded Gear ..... P/N 12-04800 ..... **$325.00**
Shroud Gear Insert ..... P/N 12-04803 ..... **$95.00**

TO

Prices Subject to Change Without Notice

AIRCRAFT JACKS

THREE TON HYDRAULIC AIRCRAFT JACKS



MODEL #324 3 TON LOW WING JACK - Eliminates the frustration of having unstable jacks that conflict with landing gear components and gear doors adjacent to your jack point. These jacks are especially appreciated by owners of Bonanza, Mooney, Comanche, & Twin Comanche Aircraft for the manner in which they may be positioned clear of the inner gear door hinge. Model #324 provides an easy slide under fit on aircraft with lower jack points. • double action 3 ton (6,000lbs) hydraulic cylinder • jack point centering cap • locking safety collar secures the load • rugged heavy gauge steel construction • stable three leg design clears gear doors • convenient handle storage.

Effective Range: 24"-40" Ram Capacity: 6000lbs
P/N 12-01724.....**$308.00**



MODEL #326 3 TON LOW WING JACK - 26" - 43" Eliminates the frustration of having unstable jacks that conflict with landing gear components and gear doors adjacent to your jack point. Owners of BeechCraft Bonanza 33/35/36 aircraft especially appreciate these jacks for the manner in which they may be positioned clear of the inner gear door hinge. If the only plane you'll be lifting is the Bonanza… please see Model #324. • jack point centering cap to assure the aircraft stays on the jack. • double action 3 ton (6,000 lb) hydraulic cylinder. • locking safety collar secures the load. • rugged heavy gauge steel construction. • three leg design clears gear doors. • convenient handle storage
Effective Range: 26"-43" Ram Capacity: 6000lbs
P/N 13-05544.....**$308.00**



MODEL #332 3 TON LOW WING JACK - 26" - 43" & 32"- 49" Especially suited for use on Cessna 310/320 Aircraft. Supplied with a removable 6" riser to accommodate the higher jack points found on some aircrafts. Similar in design to Model #326, this unique design allows the Model #332 to be easily converted for use as a Model #326 by removing the 6" riser. Owners report this versatility to be of great benefit when aircraft of various types are housed together or the jacks are loaned out to others.•double action 3 ton (6,000 lb) hydraulic cylinder • jack point centering cap to assure the aircraft stays on the jack • 6" riser provided to accommodate higher jack points. Effective range 26"- 43" & 32" - 49" • locking safety collar secures the load • rugged heavy gauge steel construction • three leg design clears gear doors • convenient handle storage
Effective Range: 26"-43" & 32" - 49" Ram Capacity: 6000lbs
P/N 12-01725.....**$329.00**

EIGHT TON HYDRAULIC AIRCRAFT JACKS



MODEL #838W 8 TON UNIVERSAL JACK - *26"-43", 32"-49", 38"-55"* Model #838W provides all the strength and versatility needed to accommodate larger aircraft. This unique design allows the Model #838W to easily convert from a 26" low wing jack to a 32" or 38" jack, avoiding the high cost of having to purchase model specific jacks. Now with "Tilt & Go" wheels and convenient handle storage for greater value • ***DOUBLE ACTION 8 TON (16,000LB) HYDRAULIC CYLINDER • HIGHLY VERSATILLE- SHIPPED WITH ADAPTERD FOR 26" 32" & 38"HEIGHTS • JACK POINT CENTERING CAP TO ASSURE THE AIRCRAFT STAYS ON THE JACK • LOCKING SAFETY COLLAR SECURES THE LOAD • STABRUGGED HEAVY GAUGE STEEL CONSTRUCTION • THREE LEG DESIGN CLEARS GEAR DOORS • "TILT & GO WHEELS FOR GREATER MOBILITY • CONVENIENT HANDLE STORAGE*** Height Range 26"-43", 32"-49" & 38"-55" Ram Capacity: 16,000 lbs. P/N 12-01726...**$399.00**
The Model 838HLW combines the strength and versatility of our Model 838W jack with the ability to provide a full 6" of additional ram travel. Ram travel that translates into additional ground clearance, working room and reduced set up time. P/N 12-03328...**$449.00**



MODEL #868W 8 TON UNIVERSAL JACK - The Model #868W combines all the strength and versatility of Model #838W with the necessary fittings to accommodate High Wing Cessna Aircraft such as 172RG, 177RG, 210 and 337. Shipped with adapters, our unique design allows the Model #868W to easily convert from a 26" low wing jack through the 32" and 38" levels to a 68" high wing jack, avoiding the high cost of having to purchase model specific jacks. ***• DOUBLE ACTION 8 TON(16,000 LBS.) HYDRAULIC CYLINDER • HIGHLY VERSATILE- SHIPPED WITH ADAPTERS FOR 26", 32", 38", & 68" HEIGHTS • DOUBLE BRACED AT THE 68" HEIGHT FOR STABILITY • JACK POINT CENTERING CAP TO ASSURE THE AIRCRAFT STAYS ON THE JACK • LOCKING SAFETY COLLAR SECURES THE LOAD • RUGGED HEAVY GAUGE STEEL CONSTRUCTION • STABLE THREE LEG DESIGN CLEARS GEAR DOORS • TILT & GO WHEELS FOR GREATER MOBILITY • CONVENIENT HANDLE STORAGE*** Height Range: 26"-43", 32"-49", 38"-55", 68-87" Ram Capacity: 16,000 lbs P/N 12-01727...**$529.00**
The Model #868HLW combines the strength and versatility of our Model 868W high wing jack with the ability to provide a full 6" of additional ram travel. Ram travel that translates into additional ground clearance, working room and reduced set up time.
******NOT RECOMMENDED FOR***** Beech Model 99, Beech 1900, Citation Series, Cheyenne I/II/III/IV, Conquest, King Air, Navajo, Pilatus, Queenaire, T28 P/N 12-03287...**$569.00**



MODEL #375 TAILWEIGHT/POST - A tailweight that doubles as a tail post and can be moved easily about the shop. This unique design allows the secure anchoring of Compression or Torsion Loads without the need of numerous sand bags and anchor chains. The #375 Tailweight/Post is a safer and much more professional approach to securing the tail of an aircraft undergoing maintenance. Shipped knocked down, the Model #375 is easily assembled and weighted using Six (6) - 60 lb bag of Quickcrete - obtained locally. ***• SINGLE UNIT PROVIDES THE TAILPOST AND TAILWEIGHT FUNCTIONS • NO MORE SANDBAGS • TELESCOPING SQUARE TUBE POST PINS IN 3" INCREMENTS • RUGGED SWIVEL CASTERS • CORROSION RESISTANT GALVANIZED WEIGHT BOX • SHIPS AT 32 lbs. ~ FINISHED WEIGHT*** 375 lbs. Range of Adjustment: 17½" - 39½" P/N 12-01728.....**$249.95**

ACCESSORIES



WHEEL KIT FOR HYDRAULIC AIRCRAFT JACKS

Add Wheels to our Model #324, #326 or #332 The base that comes standard with all of our aircraft jack models is pre-drilled to easily allow for the addition of a Wheel Kit. **This Kit Includes:** 1 Left Bracket, 1 Right Bracket, 2 Wheels, Hardware Packet, Installation Instructions
P/N 12-02032.....**$52.85**

TAILWEIGHT EXTENSION FOR TAILWEIGHT POST



Adds on an additional 12 inches to the Tailweight Post model 375. For higher wing aircraft. P/N 12-02033.....**$29.95**

TO

HOBBYAIR RESPIRATOR



The Hobbyair Pro 1 is a fresh air breathing system specifically designed for the amateur painter which allows only fresh air to reach the user's lungs. It features a comfortable, lightweight facemask with beltline hook, simple snap together fittings, and is very affordable. Includes the pump unit with two stage, single speed, air bypass type motor, mask, belt and 40 foot delivery hose, fittings, filter, cord and case. The Buddy System Hobbyair is designed for two people and includes two 40 ft. delivery hoses. 1 yr warranty. Excellent for use in homebuilt aircraft construction and painting.

Hobbyair 1 (1/2 mask) 110V .....P/N 12-15850 ..... **$397.00**
Hobbyair 1 (1/2 mask) 220V .....P/N 12-15860 ..... **$499.95**
Buddy System Hobbyair (110V).....P/N 12-15870 ..... **$532.00**
Hobbyair I (Full mask) 110V .....P/N 12-15851 ..... **$498.00**
Hpbbyair I (Full Mask) 220V .....P/N 12-03520 ..... **$545.00**
Hobbyair II.....P/N 09-00633 ..... **$448.00**
Hobbyair Buddy System (2 full face Masks 110V
P/N 12-05094 ..... **$725.00**
Hobbyair F01 Air Filters .....P/N 09-01014 ..... **$5.95**
Hobbvair Cartridge Filter.....P/N 09-01015 ..... **$7.55**

HOBBYAIRE BUDDY SYSTEM AIR RESPIRATOR



Hobbyair Buddy System comes standard with an air pump, 2-40' hoses and a half facemask (HF01)for one person. Locate the intake air pump in a fresh air location and breathe HEPA filtered clean fresh air in most contaminated breathing environments. .....P/N 12-02365 ..... **$733.00**

Full Facemask Lens Protectors **-** Sold in package containing 25 lens protectors. Apply one at a time over full facemask lens. Clear covers protect your lens from overspray and lengthen the life of your facemask. .....P/N 12-02366 ..... **$25.00**

CITATION 4 HVLP SPRAYER/ RESPIRATOR



Allows its' user to achieve 'show plane' quality results to a level never before possible with a turbine powered system. The CITATION '4' offers a much higher PSI range without sacrificing the benefits of HVLP such as lower overspray, the elimination of moisture and high transfer efficiency. This is all accomplished with a more powerful, yet quieter and cooler running turbine blower. Like the standard CITATION, this new system, of course, offers the additional benefit of a built-in supplied-air respirator to assure breathing protection for its' user. P/N 12-00973 ..... **$1,195.00**

CITATION 3 & 4 HVLP SPRAYER/ RESPIRATOR SYSTEM



CITATION 3 STAGE HVLP PAINT SPRAYER & RESPIRATOR W/ BOTTOM FEED GUN - **Standard One man System Includes:** Citation Dual HVLP Pump, Two 40' hoses, one sprayer & one respirator, Half facemask & belt, Bottom Feed HVLP Paint Spray , Gun with Quart Cup, Complete System and Spray Gun Manual, Introductory 'How to" Spray Manual, 3 **Stage Sprayer Specs:** 110-120V VAC, 50/60HZ, Amps: 11.5, PSI: 5.5 **One Man Respirator:** 110-120V VAC, 50/60 HZ, Amps: 1.6, Cfm: 7 @ Facemask **Two Man Respirator:** 110-120V VAC, 50/60HZ, Amps: 7, Cfm: 7.5 @ Facemask P/N 12-02372 .....**$993.00**



CITATION 3 SPRAYER & RESPIRATOR W/ GRAVITY GUN - Standard One man System Includes: Citation Dual HVLP Pump, Two 40' hoses, one sprayer & one respirator, Half facemask & belt, Gravity Feed HVLP Paint Spray Gun with 1000 ml Cup, Complete System and Spray Gun Manual, Introductory 'How to" Spray Manual **3 Stage Sprayer Specs:** 110-120V VAC, 50/60HZ, Amps: 11.5, PSI: 5.5 **One Man Respirator:** 110-120V VAC, 50/60 HZ, Amps: 1.6, Cfm: 7 @ Facemask **Two Man Respirator:** 110-120V VAC, 50/60HZ, Amps: 7, Cfm: 7.5 @ Facemask P/N 12-02373 .....**$949.00**



CITATION 3 STAGE HVLP PAINT SPRAYER & RESPIRATOR W/ BOTTOM FEED GUN - **Standard One man System Includes:** Citation Dual HVLP Pump, Two 40' hoses, one sprayer & one respirator, Half facemask & belt, Bottom Feed HVLP Paint Spray , Gun with Quart Cup, Complete System and Spray Gun Manual, Introductory 'How to" Spray Manual **3 Stage Sprayer Specs:** 110-120V VAC, 50/60HZ, Amps: 11.5, PSI: 5.5 **One Man Respirator:** 110-120V VAC, 50/60 HZ, Amps: 1.6, Cfm: 7 @ Facemask **Two Man Respirator:** 110-120V VAC, 50/60HZ, Amps: 7, Cfm: 7.5 @ Facemask P/N 12-00973 .....**$1,195.00**



CITATION 4 STAGE SPRAYER & RESPIRATOR W/ GRAVITY GUN - The citation 4 combined HVLP paint sprayer and respirator system includes a paint sprayer and a second separate air pump for cool fresh breathing air. Includes four stage turbine power and spray gun of your choice. Great for most finishes. P/N 12-02374.....**$1,283.00**

3M™ PARTICULATE RESPIRATORS



P/N 09-01496 *P/N 09-01497*

Helps provide worker protection against certain non-oil based particles. Comfortable, easy to use, and promotes greater worker acceptance increasing wear time. Features 3M's patented filter media, nose foam, and adjustable noseclip that helps provide a secure seal and helps reduce eyewear fogging. Workplace applications: woodworking, grinding, sanding, sweeping, bagging, other dusty operations.

Description	Part No.	Price
8210 Standard dust mask	09-01496	**$1.15**
Vented dusk mask	09-01497	**$2.54**

CENTURION TEAR-N-WEAR PROTECTIVE LENS COVERS



Each AOSAFETY Centurion® goggle TEAR-N-WEAR replacement lens protectors stack contains seven layers of high quality optically clear film. When the outer layer is soiled, scratched, or difficult to see through, simply "tear" the soiled layer off by pulling the tab horizontally from right to left. You now have clean and clear vision again and the next tab is automatically ready for your next tear away.

P/N 12-00894 .....**$7.25**

SAFETY SPECTACLES



These safety spectacles feature a contoured shape which offers unobstructed vision, excellent side protection and comfort fit bridge. Front color and temple color is black. Lens and sideshield color is clear P/N 13-01310 .....**$6.75/ea.**

OPTICOR SAFETY GLASSES



Meets ANSI Z87.1+ (High Impact) and CSA Z94.3 Standards. Sizes : One Size Fits Most Frameless. Black Nylon Temples. Polycarbonate Lens. CASC (Cordova Anti-Scratch Coating). Thermo-Plastic Temples and Nose Piece.

Clear.....P/N 14-02170 .....**$6.95**
Grey .....P/N 14-02171 .....**$6.95**

SAFETY FACE SHIELD REPLACEMENT



Provides protection for the face and neck against chemical splash and flying particles.

Replace. Window, Clear .....P/N 90030 .....**$7.25**

3M™ SECUREFIT™ PROTECTIVE CLEAR EYEWEAR



These glasses come with important safety features for overall eye protection, including impact resistant polycarbonate lenses that absorb 99.9% UVA and UVB rays up to 380 nm. The glasses also meet the requirements of CSA Z94.3-2007 and ANSI Z87.1-2010. This protective eyewear weighs less than one ounce for lightweight comfort.

Color	Part No.	Price
Clear	09-04759	**$2.45**
Gray	09-04760	**$2.60**
Amber	09-04761	**$2.75**
AntiScratch Clear	09-04762	**$2.85**
AntiScratch Gray	09-04763	**$2.25**
Anti-Fog Clear	09-04764	**$3.60**
Anti-Fog Gray	09-04765	**$3.35**

SCARAB SAND BLAST HOODS



Features durable construction and large size to cover the head, face, neck and shoulders to protect against the impact of high velocity abrasives. Made with super-heavy 10.38 oz. army duck canvas treated with high water repellant and mildew resistance. Complete with an ERB Safety built-in construction type hard hat that meets ANSI Z89.1-2003 (Type 1, Class E, G & C) and complies with OSHA regulations for industrial head protection.

Scarab Sand Blast Hood..... P/N 12-01665 .....**$85.75**
Scarab Lite Sand Blast Hood. P/N 12-01666 .....**$39.95**

ACCESSORIES

Lens for Scarab Blast Hood ..... P/N 12-01667 .....**$14.95**
Screen for Scarab Blast Hood..... P/N 12-01668 .....**$11.95**

TO

Prices Subject to Change Without Notice

3M™ SAFETY GOGGLES



SAFETY GOGGLE BX
* BX protective eyewear are fully adjustable with three lens angles and adjustable nose bridge and temple length. Silver/Black frames. Soft adjustable nose bridge Three lens angles for cozy fit Integrated sideshields. Protect your eyes from impact and block 99.9% UV rays. Polycarbonate anti-fog lens. Meets the requirements of CSA Z94.3-2007 and the High Impact Requirements of ANSI Z87.1-2003
P/N 09-02154 ..... **$4.90**



SAFETY GOGGLE VIRTUA SPORT - * Meets ANSI Z87.1 * Sleek - Styling with both men and women * Lightweight - Less than 1 oz * Contoured flexible temples for comfortable fit * Hard Coat guards against scratching, static and chemical attack
P/N 09-02155 ..... **$2.75**



SAFETY LIGHTVISION 2 GOGGLE - * Hands free direct lighting; anti-fog lens; available w/reader lens * Two ultra bright, adjustable LED lights * Long-life, replaceable CR2032 3V battery; includes bag and lanyard * Flexible nose bridge fits virtually all faces * Meets ANSI Z87.1-2003 and CSA Z94.3 standards
P/N 09-02158 ..... **$16.95**



VIRTUA PROTECTIVE EYEWEAR AP - The Virtua protective eyewear line merges outstanding unisex style, protection and affordability, all while offering wearers an open, unobstructed viewing range and impact-resistant, 3-piece polycarbonate construction. Designed for indoor or outdoor use.
Clear Anti-Fog Lens..... P/N 09-03053 ..... **$2.53**
Gray Hard Coat Lens..... P/N 09-03055 ..... **$1.95**
Light Blue Hard Coat Lens ..... P/N 09-03056 ..... **$1.95**
Clear Hard Coat Lens..... P/N 09-03059 ..... **$1.90**



3M™ PELTOR™ DIGITAL WORKTUNES

Worktunes is a self-contained AM/FM noise attenuating headset (NRR 26db) which provides hearing protection combined with an AM/FM radio to provide. Features include: • Easy finger tip controls • 5 preset stations • Volume limited to a safe 82 dB level • Gel/Foam cushions • MP3 cord included • Peltor™ stainless steel spring arm headband provides even pressure all day. • Wide, soft padded headband, flexible antenna. • Quick and easy tuning and volume adjustments
P/N 11-01589..... **$85.80**



SAVE-EARS HEARING PROTECTION FOR TODDLERS / CHILDREN

• Noise Reduction rating average 25 dB, comparable to a $250 David Clark Aviation headset! • High quality padded felt headband for extreme comfort • The compact folding design ensures easy transportation and storage. • Only 7 oz in weight! • Compact, easy to use design, makes them both functional and fun! • Intended for ages 1 year and up.
Pink..... P/N 11-13993.....**$29.95**
Blue..... P/N 11-13994.....**$29.95**

3M ™ PELTOR™ PERSONAL HEARING PROTECTORS



OPTIME 105 - Over-the-head dual cup. NRR 30. Can be used for noise levels up to 105 dB. Color: Black and Red
P/N 12-00699 ..... **$24.95**



OPTIME 105 HI-VIZ - NRR 30. Can be used for noise levels up to 105 dB. Bright Hi-Viz Yellow great for recognition of workers. P/N 12-02568 ..... **$29.65**



OPTIME 101 - Over-the-head Hp. NRR 27. Can be used for noise levels up to 101 dB. Color: Green
P/N 12-16110 ..... **$19.55**



OPTIME 98 - Over-the-head Hp. NRR 25. Can be used for noise levels up to 98 dB. Color: Yellow and Black ..... P/N 12-02569 **$16.90**



OPTIME 95 - Folding hearing protector. NRR 21. Can be used for noise levels up to 95 dB. Folding – Slim design. Color: Beige and Black. P/N 12-02570 ..... **$23.50**

3M™ E-A-R™ EARPLUGS



E-A-R CLASSIC - * Most popular earplug in the world * NRR 29dB * The E-A-R® Yellow color is your assurance of proven protection * Moisture resistant dermatologically safe foam is not irritating * Slow recovery PVC foam provides comfort with low pressure
P/N 9134..... **$0.37**
P/N 09-02148 w/ Cord **$0.31**



CLASSIC™ PLUS - * Classic Plus are longer than Classic earplugs to fit deeper into the ear canal and provide a higher level of protection. * Slow-recovery foam helps ensure comfort and minimize pressure. * Bright yellow color provides a quick visual compliance check. * Dermatologically safe foam is non-irritating, non flammable, and moisture-resistant. P/N 09-02149..... **$0.26**
P/N 09-02150 w/ Cord **$0.30**



E-A-R SOFT™ YELLOW NEONS™ - * NRR 33dB-Highest NRR available * THE WORLD'S SOFTEST EARPLUGS * Self-adjusting foam provides low pressure with excellent attenuation * Exciting designs and brilliant colors * Dermatologically safe foam is non-irritating to the skin P/N 09-02151..... **$0.25**
P/N 09-02152 w/ Cord **$0.35**



3M™ PISTONZ™ EARPLUGS - No need to roll down. Biaxially-stiff stem for easy insertion, yet designed to flex sideways if impacted. Tips look like metal, yet provides ultra-soft feel for all day wear. .....P/N 12-02571 **$1.25**
P/N 12-02572 w/ cord **$0.89**



E-A-R EARBUDS 2600 HEADPHONES - * NRR 26dB * Noise Limited to 82dB * Convenient, Easy-Access Volume Control * Mp3 Compatible * Blocks out External Noise * Hear Your music while you work * Ultra Comfortable Design * Better fit for longer wear P/N 09-02153..... **$45.95**

DAVID CLARK DELUXE HEARING PROTECTOR



The David Clark Deluxe Model Hearing Protector provides maximum noise attenuation and optimum comfort. Features urethane covered ear seals, soft foam cushioned headband, military quality materials, finish and workmanship. P/N11-09205..... **$41.50**

NOISEBUSTER ANR EARMUFFS



Designed to reduce aircraft engine noise for airport ground support crews as well as aircraft maintenance and technical personnel, the NoiseBuster Active Noise Reduction (ANR) Safety Earmuff combines an ANSI-rated 26NRR passive earmuff with active noise reduction electronics that deliver up to an additional 20 db of low-frequency noise attenua Powered by a AA battery, the earmuff is resistant to water, moisture, contaminants, mechanical shock, and vibration. Perfect for users who do not mechanical shock, and vibration. Perfect for users who do not require two-way communications capability but who can benefit from protection. Includes: * NoiseBuster ANR Safety Earmuff * One AA battery * 3.5 mm audio interface cable * Warranty - 6 months
P/N 11-07369 ..... **$159.00**

TO



DERMA-LITE POWDERED NITRILE DISPOSABLE GLOVES

Powdered nitrile. Thickness: 5 mil. Extraordinary strength and puncture resistance. Non-latex. Lightly textured.

Color	Part No.	Price
Small	01-01537	**$10.75**
Medium	01-01538	**$10.75**
Large	01-01539	**$10.80**
X-Large	01-01541	**$10.75**
XX-Large	01-01542	**$10.75**



DERMA-LITE POWDER FREE NITRILE DISPOSABLE GLOVES

Powder-free exam grade nitrile. Thickness: 5 mil. Extraordinary strength and puncture resistance. Non-latex. Lightly textured.

Color	Part No.	Price
Small	01-01543	**$9.50**
Medium	01-01544	**$9.50**
Large	01-01546	**$9.50**
XX-Large	01-01547	**$9.50**



KEVLAR™ HEAT SLEEVE

14" length of 100% Kevlar. Improved comfort and protection against cuts and abrasions. Heat resistant. May be worn with gloves. Washable and reversible. P/N 01-01548.....**$6.75**



3M™ HARD HAT

Protective White hard hat with comfortable 4-point ratchet suspension and standard brow pad. Meets requirements of ANSI/ISEA Z89.1-2014 Type 1, Class G and E. 4-point ratchet suspension allows wearer to customize height and fit. Suspension sits lower on head to reduce pressure and increase security. Short brim enhances better upward visibility. Slots allow for attachment of safety accessories. Replaceable brow pad enhances comfort and extends life. Meets requirements of ANSI/ISEA Z89.1-2014 Type 1, Class G and E. ANSI/ISEA compliant when worn in the forward and reverse donning positions. P/N 09-04766.....**$11.50**

TO

3M™ E-A-R™ PUSH-INS™ CORDED EARPLUGS



3M™ E-A-R™ Push-Ins™ Corded Earplugs feature soft and flexible E-A-Rform™ Foam that inserts quickly and easily into the ears for comfortable noise reduction. The push-to-fit design with a flexible stem helps keep the soft foam tip clean, even when hands are dirty, since there is no need to roll the foam before fitting. Cord allows earplugs to be stored conveniently when earplugs are worn intermittently. Earplugs are packaged in a poly bag to keep them clean prior to use. Recommended applications include assembly and mechanical, chipping, chiseling, cleaning, drilling, furnace operations, grinding, heavy equipment operations, machining, metal repair, painting, pouring/casting, power fastening, riveting, sanding, sawing and welding. P/N 09-04758.....**$0.66**



BREATHEMATE™ RESPIRATOR BUNDLE NON OIL RESISTANT

Half-mask respirator with filter retainers. N95 Particulate Filters (Not resistant to oil). - 12 Pairs. Organic Vapor replacement cartridges - 6 each. Bonus accessory pack. NIOSH Approved

Color	Part No.	Price
Small	01-01549	**$53.75**
Medium	01-01550	**$53.75**
Large	01-01551	**$53.75**



BREATHEMATE™ RESPIRATOR BUNDLE SEMI OIL RESISTANT

Half-mask respirator with filter retainers. R95 Particulate Filters (Somewhat resistant to oil). - 12 Pairs. Organic Vapor replacement cartridges - 6 each. Bonus accessory pack. NIOSH Approved

Color	Part No.	Price
Medium	01-01553	**$55.75**
Large	01-01554	**$55.75**



3M™ PARTICULATE RESPIRATOR

The lightweight, disposable N95 particulate dust respirator is designed to help provide quality, reliable worker respiratory protection. 3M uses a variety of innovative features to help you meet your respiratory protection and comfort needs. The respirator incorporates 3M's proprietary technology with advanced electrostatically charged microfiber filter media.

P/N 09-04753.....**$2.25**

3M™ VFLEX™ PARTICULATE RESPIRATOR



This disposable N95 particulate respirator is designed to help provide quality, reliable worker respiratory protection for certain non-oil based particles. It has a unique folded design with 3M proprietary filter media and V-shaped pleats that expand to help make breathing easier. In addition, the V-shaped pleats flex with mouth movement for easier talking. The respirator features uniquely designed tabs for positioning the respirator on the face and embossed front panel to help the respirator retain its shape. P/N 09-04754.....**$0.65**

PARTICULATE RESPIRATOR



95% filter efficiency level effective against particulate aerosols free of oil; time use restrictions may apply. Maintenance-free construction. Adjustable nose bridge with foam strip to reduce the potential for eyewear to fog. Latex-free stapled fixed head strap. 20 masks per box.

Box of 2..... P/N 01-01558.....**$2.75**
Box of 20..... P/N 01-01556.....**$12.50**

VALVED PARTICULATE RESPIRATOR



95% filter efficiency level effective against particulate aerosols free of oil; time use restrictions may apply. Maintenance-free construction. Exhalation valve for easy breathing. Adjustable nose bridge with foam strip to reduce the potential for eyewear to fog. Latex-free stapled fixed head strap. 10 masks per box.

Box of 2..... P/N 01-01559.....**$2.25**
Box of 20..... P/N 01-01557.....**$11.85**

3M RUGGED COMFORT HALF REUSABLE RESPIRATOR



The 3M™ Rugged Comfort 6500 Series Half Facepiece Reusable Respirator helps provide respiratory protection in harsh, dirty environments against airborne contaminants when used with approved 3M™ cartridges and filters. When properly fitted and used with approved 3M™ cartridges and filters, this respirator helps provide respiratory protection at concentrations up to 10 times the Permissible Exposure Limit (PEL).

Color	Part No.	Price
Small	09-04755	**$19.80**
Medium	09-04756	**$18.95**
Large	09-04757	**$19.80**

DRAEGER RESPIRATORS – PROTECTIVE COVERALLS

X-PLORE 3300 SERIES RESPIRATORS



The 3300 Series Mask is an economical half mask made of TPE material with a continuous grey color neck strap.

Under the new particulate filter rules, there are three series of filters: N, R, and P. The N filters are Not resistant to oil; the R filters are resistant to oil; and the P filters are oil proof.

The N series of filters is appropriate for airborne particles such as silica or lead, when there are no oil-based products also in the air.

For example, an N series filter would be recommended during the removal of old lead paint. However, for spraying an oil-based lead paint, an R or P series filter would be recommended as protection against the airborne mist of oil-based solvent.

The R series (resistant to oil) should only be used for a single shift when solvent or oil mist is present in the air. This filter resists oil but may break down in contact with oil or solvent over a long time.

When using P series filters, check the manufacturer's instructions to determine how long the filter can be used when airborne particles are present. NIOSH originally thought that P series filters were oil-proof but recent tests have found there may be some breakdown of the filter material with long-term oil exposure.

Note: N, R, and P filters do not provide protection against organic vapors.

3300/N95 RESPIRATOR KIT

Kit includes 3300 Mask, 2 each N95 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02261 .....**$32.00**

3300/R95 RESPIRATOR KIT

Kit includes 3300 Mask, 2 each R95 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02262 .....**$35.00**

3300/P100 RESPIRATOR KIT

Kit includes 3300 Mask, 2 each P100 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02263 .....**$49.00**

X-PLORE 3300 COMBINATION CARTRIDGE KIT



The combo cartridge is a P100 filter, and also filters out organic vapor/acid, gas, formaldehyde, chlorine dioxide, and hydrogen floride. Kit includes mask and one combo cartridge.
P/N 12-02267 .....**$43.00**

X-PLORE 3500 COMBINATION CARTRIDGE KIT



The combo cartridge is a P100 filter, and also filters out organic vapor/acid, gas, formaldehyde, chlorine dioxide, and hydrogen floride. Kit includes mask and one combo cartridge.
P/N 12-02268 .....**$51.25**

3M™ DISPOSABLE PROTECTIVE COVERALL 4530



The 3M™ Protective Coverall 4530 is disposable safety work wear made of lightweight, breathable polypropylene with flame resistance. Designed to be worn over primary FR garments, it helps provide protection against dusts and light liquid splashes. Features: Breathable material to help reduce heat buildup and promote comfortable wear. Knit cuffs with elasticized waist and ankles for increased comfort and freedom of movement Three panel hood design for compatibility with complementary PPE. Two-way zipper with sealable storm flap Reinforced gusset for increased durability. Flame resistant treatment offering secondary protection against heat and flames Anti-static coating on both sides.

L..... P/N 12-02663 ..... **$7.50** XL ..... P/N 12-02664.....**$7.80**
2XL ..... P/N 12-02665 ..... **$7.50** 3XL ..... P/N 12-02666.....**$6.60**
4XL ..... P/N 12-02667 ..... **$8.50**

X-PLORE 3500 SERIES RESPIRATORS



The 3500 Series Mask is a premium half mask made of Draeger Flex Material. Clasped Slide-Down feature with a black neck strap.
Under the new particulate filter rules, there are three series of filters: N, R, and P. The N filters are Not resistant to oil; the R filters are resistant to oil; and the P filters are oil proof.
The N series of filters is appropriate for airborne particles such as silica or lead, when there are no oil-based products also in the air.
For example, an N series filter would be recommended during the removal of old lead paint. However, for spraying an oil-based lead paint, an R or P series filter would be recommended as protection against the airborne mist of oil-based solvent.
The R series (resistant to oil) should only be used for a single shift when solvent or oil mist is present in the air. This filter resists oil but may break down in contact with oil or solvent over a long time.
When using P series filters, check the manufacturer's instructions to determine how long the filter can be used when airborne particles are present. NIOSH originally thought that P series filters were oil-proof but recent tests have found there may be some breakdown of the filter material with long-term oil exposure.
Note: N, R, and P filters do not provide protection against organic vapors.

3500/N95 RESPIRATOR KIT

Kit includes 3500 Mask, 2 each N95 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02264 .....**$43.00**

3500/R95 RESPIRATOR KIT

Kit includes 3500 Mask, 2 each R95 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02265 .....**$44.75**

3500/P100 RESPIRATOR KIT

Kit includes 3500 Mask, 2 each P100 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02266 .....**$58.50**

REPLACEMENT PARTS FOR 3300/3500 KITS

Description	Part No.	Price
3300 Series Mask Only	12-02253	**$18.99**
3500 Series Mask Only	12-02254	**$28.55**
N95 Filter Pad Only	12-02255	**$1.83**
R95 Filter Pad Only	12-02256	**$2.69**
P100 Filter Pad Only	12-02257	**$9.60**
Filter Pad Retainer	12-02258	**$2.66**
Filter Pad Base	12-02259	**$2.89**
P100 Combination Cartridge Sold in pairs	12-02260	**$24.50**

3M™ DISPOSABLE PROTECTIVE COVERALL 4520



The 3M disposable protective coverall 4520 key features include: Breathable material (SMMMS) to help reduce heat stress and comfortable wear. Elasticated waist, ankles, and wrists for convenience and freedom of movement. Three panel hood design for compatibility with complimentary PPE. Two-way zipper with storm flap for convenience and to help provide additional protection. Anti-static coating on both sides. Protect against light liquid splashes and hazardous dusts.

XL ..... P/N 12-02692 ..... **$5.35** 2XL ..... P/N 12-02693.....**$6.70**
4XL ..... P/N 12-02694 ..... **$4.55**

3M™ DISPOSABLE PROTECTIVE COVERALL 4540



The 3M™ Protective Coverall 4540 is disposable safety work wear made of a high quality laminated material with a breathable back panel for improved air circulation.Protection against light liquid splashes and hazardous dusts. Features: Constructed of a low-linting, non-woven, laminated microporous material with anti-static coating on both sides, Knit cuffs with elasticized waist and ankles for increased comfort and freedom of movement Three panel hood design for compatibility with complementary PPE Two-way zipper with sealable storm flap Reinforced gusset adds extra durability Breathable back panel to help improve air ventilation and reduce heat buildup.

L..... P/N 12-02658 ..... **$7.50** XL ..... P/N 12-02659.....**$7.50**
2XL ..... P/N 12-02660 ..... **$6.50** 3XL ..... P/N 12-02661.....**$6.95**

TO

OXYGEN SYSTEMS

AEROX HIGH-DURATION AVIATION OXYGEN SYSTEMS



Aerox 2D system



Aerox 4M system

Add to your flying comfort by using oxygen at altitudes as low as 5000 ft. Aerox Oxygen Systems include lightweight aluminum cylinders, regulators, all hardware, flow meter, and nasal cannulas (masks available as option). Oxysaver oxygen saving cannulas & Aerox Flow Control Regulators increase the duration of oxygen supply about 4 times, and prevent nasal irritation and dryness. Complete brochure available on request.



500 SERIES REGULATOR – AN AIRCRAFT SPRUCE EXCLUSIVE!

- Low profile
- 1, 2, & 4 place
- Standard Aircraft filler for easy filling
- Convenient top mounted ON/OFF valve
- Equipped with Aerox standard plug sockets
- Over pressure safety valve
- Built in cylinder pressure gauge

COMPLETE AEROX SYSTEMS (ADJUSTABLE FLOW)

Part No.	Model	Description	Price
13-18895	1A	1 outlet, 6 Cu Ft. Cyl. w/Flow Meter & Cannula	$377.60
13-18896	1C	1 outlet, 9 Cu. Ft. Cyl. w/Flow Meter & Cannula	$385.60
13-18897	1D	1 outlet, 13 Cu Ft. Cyl. w/Flow Meter & Cannula	$396.00
13-18898	2A	2 outlet, 6 Cu. Ft. Cyl. w/Flow Meters & Cannulas	$464.80
13-18899	2C	2 outlet, 9 Cu Ft. Cyl. w/Flow Meters & Cannulas	$468.80
13-18900	2D	2 outlet, 13 Cu. Ft. Cyl. w/Flow Meters & Cannulas	$477.60
13-18901	2E	2 outlet, 22 Cu Ft. Cyl. w/Flow Meters & Cannulas	$495.20
13-18902	2M	2 outlet, 22 Cu. Ft. Cyl. w/Flow Meters & Cannulas	$513.60
13-18903	4C	4 outlet, 9 Cu Ft. Cyl. w/Flow Meters & Cannulas	$580.00
13-18904	4D	4 outlet, 13 Cu. Ft. Cyl. w/Flow Meters & Cannulas	$652.00
13-18950	4E	4 outlet, 22 Cu Ft. Cyl. w/Flow Meters & Cannulas	$663.20
13-18906	4M	4 outlet, 22 Cu. Ft. Cyl. w/Flow Meters & Cannulas	$666.40
13-18915	6M	6 outlet, 22 Cu Ft. Cyl. w/Flow Meters & Cannulas	$848.80
13-18905	6F	6 outlet, 33 Cu. Ft. Cyl. w/Flow Meters & Cannulas	$1,011.20

AEROX ACCESSORIES

Part No.	Description	Price
13-18910	CC Oxysaver Cannula	$44.50
13-18920	CR-A Regular Cannula	$6.85
13-18970	Metal Clamp Bracket for 13 or 22Cft cyl	$29.75
13-18930	CR-C Reg. Cannula (Child)	$6.85
13-18940	MSK-A Rebreather Mask	$9.97
13-03271	Aerox Oxysaver Pendant	$45.85
13-08023	MSK-A Rebreather Mask Child	$9.50
13-07737	1 Place Regulator With Gauge For 540 Valve	$197.50
13-07735	2 Place Regulator With Gauge For 540 Valve	$298.00
13-07736	4 Place Regulator With Gauge For 540 Valve	$446.00
13-05250	Glo-tec Pressure Gauge	$29.55
13-04683	Flowmeter with needle valve	$96.75



RK-SC
RK-SK
PB-2 Old Style
PB-1 New Style
MS

FITTING IDENTIFICATION CHART (Not Sold Separately)

AEROX RETROFIT KITS FOR BUILT-IN SYSTEMS OR OTHER PORTABLES

1.) Oxysaver® Cannula—this comfortable device may be used in place of your mask up to 18,000 ft. MSL. It has a conserving feature which can extend your oxygen supply by up to four times. 2.) Aerox Flowmeter/indicator—this combination device conveniently reads both mask and cannula flow rates in MSL altitude. 3.) Aerox Adjustable Flow Restrictor—a thumb screw operated needle restrictor valve allows you to precisely control flow. Shown are most of the connectors for general aviation. If you want us to supply the connector, be sure to indicate which is your type.

Model	Retrofit Kits	Part No.	Price
RK-SC	Retrofit Kit plus Scott type fitting SC	13-18992	$112.00
RK-PB-1	Retrofit Kit plus Puritan-Bennett type fitting	13-18994	$89.60
RK-PB-2	Retrofit Kit plus Puritan-Bennett type fitting	13-18995	$89.60
RK-SK	Retrofit Kit plus Sky-Ox fitting (new style)SK	13-18996	$91.50
RKCPC	Kit with CPC fitting for Cirrus	13-05152	$104.75
RK-PB1	Retrofit Kit with RK-PB1 Fitting FMNV(Aerox Flow meter Needle Valve) Mask to 25,000 ft	13-05582	$96.00
---	Retrofit Kit for Aerox 350/400 Regulators	13-00787	$74.40
RK-SC	Retrofit Kit with Scott Type Fitting FMNV(Aerox Flow meter Needle Valve) Mask to 25,000 ft	13-19711	$98.75
RK-MS	Retrofit Kit With Military Type Fitting	13-07739	$119.75



AEROX PRO-O2 EMERGENCY HANDHELD OXYGEN SYSTEMS

Provides oxygen until the aircraft can reach a lower altitude. And because Pro-O2 is refillable, there is no need to purchase replacement O2 cartridges. During short flights at altitudes between 12,500ft. MSL and 14,000ft. MSL where maneuvering over mountains or turbulent weather is necessary, the Pro-O2 emergency handheld oxygen system provides oxygen to extend these brief legs. Included with the refillable Pro-O2 is a regulator with gauge, mask and a refillable cylinder.

Pro-O2-2 (2 Cu. Ft./1 mask) .....P/N 13-02735 ..... **$328.00**
Pro-O2-4 (2 Cu. Ft./2 masks) .....P/N 13-02736 ..... **$360.00**



AEROX EMT-3 PORTABLE OXYGEN SYSTEM

A small portable system designed for the occasional user who wants something smaller and less costly than a full portable system. The EMT-3 is also ideal for use as an emergency oxygen system. The system lasts 25 minutes at 2.5 LPM @ 25,000 FT. P/N 13-12773 ..... **$323.00**



AEROX 4110-712 SERIES OXYGEN MASK WITH MICROPHONE

The 4110-712 Series continuous flow oxygen mask with microphone is intended for crew and passengers in the general aviation industry at a maximum altitude of 25,000 feet. Optional equipment includes industry standard fittings for connection to portable and built-in oxygen systems.FAA 8130 Provided.

Description	Aerox No.	Part No.	Price
Small Without Microphone	4110-711-1	13-06652	$195.75
Medium Without Microphone	4110-711-2	13-06653	$179.00
Large Without Microphone	4110-711-3	13-06654	$209.00
Small	4110-712-1	13-06655	$409.00
Medium	4110-712-2	13-06656	$395.00
Large	4110-712-3	13-06657	$539.00

AEROX SMOKE GOGGLES





Aerox has introduced Smoke Goggles with face forming elastomer seals to keep smoke out. Aerox Smoke Goggles are the choice of the U.S. Special Forces. The case features reflective tape to make goggles easy to locate as well as a velcro strip on the back for mounting.

Goggles ..... P/N 13-06173..... **$96.00**
Soft Case..... P/N 13-06174..... **$80.00**

BR-M AEROX BRACKET



Bracket Assembly, SS, with Lock, or Cyl Diameter (2 needed per system) P/N: 13-04033 ..... **$37.00**

AEROX FBO-1 FILLING STATION



Whether making money or saving it, the Aerox FBO-1 Cascade Filling System makes it easy to fill all types of aviation systems, from portables to jets. The FBO-1 comes complete with 2 CGA 540 cylinder connectors, 6' high-pressure (3000 psi) braided stainless filler line, contents gauge, flow restrictor and adapters to fit Puritan-Bennett, Scott, and CGA 540 filler ports. P/N 13-04534..... **$360.00**

AEROX CGA-540 SINGLE CYLINDER FILLING STATION - Transfills between cylinders quickly and easily. 6' braided stainless line, gauge, restrictor, and CGA 540 filler. P/N 13-04535..... **$178.85**

OPTIONAL BUILT-IN ADAPTERS

Image	Description	Part No.	Price
	Aerox Scott Built-in Adapter Option (Piper, Beech, Mooney)	13-04536	$60.00
	Aerox Puritan-Bennett Built-in Adapter Option (all other makes)	13-04537	$87.00
Portable System Filling adaptors for standard CGA 540 supply cylinders:			
	Aerox Scott Portable Filling Adaptor	13-04538	$65.00
	Aerox Puritan-Bennett Portable Adapter Option	13-04540	$87.00



AEROX SEAT BACK DELUXE CARRIER

Fitted case with quick release, all point webbing. Available for "A", "C", "D", "E", and "M" cylinders. Doubles as a carrier with built in rubber handle. Webbing can remain on the seat when the case is detached. Internal velcro strap holds cylinder securely. Accessory pocket on side holds webbing for easy storage. Available in black. Complete Part no. with: -A, -C, -D, -E, or -M.

P/N 13-18990..... **$59.16**

PS

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

OXIMETERS - FACE MASKS

AEROX DILUTER DEMAND MASK



Comes standard with an electret microphone and an inflatable Quick Comfort head harness that provides maximum comfort The mask features a carbon fiber construction, and soft silicon rubber. Connectors are available for most built in systems. This mask is easily mounted with the available carbon fiber stowage cup, aerox® is also able to manufacture a portable walk around system with the same outlet plug that is on your aircraft, so you can easily disconnect from the on-board system and plug directly into a portable system allowing mobility. P/N 13-12359 .....**$3,850.00**

PULSE OXIMETER CO DETECTOR 455



Designed for all aircraft with limited panel space. This small pulse Oximeter with CO Detector mounts easily in most panels and transmits data to the MFD'S via RS232. Current MFD manufacturers include Electronics International, Advanced Flight Technologies, Grand Rapids Instruments and on upcoming releases of Avidyne Entegra Release 9. The unit transmits the pilot's blood oxygen levels, heart rate statistics, CO Level, Cabin temperature and Cabin Altitude to the MFD's display units. The pilot inserts an index finger in the unit and quickly gets readouts so he/she can determine his/her general physical and his environmental condition. Aero-455 reminds the pilot when he/she passes 10K and every 30 minutes above 10K. P/N 11-07993.....**$999.00**

IOXIMETER SMARTPHONE PULSE OXIMETER



Pulse Oximeter for Smart Phones. Reads Oxygen Saturation. Reads Pulse Rate. No batteries required. Powered through the headphone jack on your phone.
P/N 13-17632.....**$48.75**

FINGER PULSE OXIMETER



MD300 C201 is intended for noninvasive spot-check measurement of function oxygen saturation of arterial hemoglobin(SpO2). It can be used with adult and pediatric and widely used in family, clinic and hospital. Features; • SpO2%, PR are displayed on screen. • Simple and convenient operation • Light, compact (the weight is 50g including batteries) Low power consumption, two AAA batteries can be continuously Operated for 30 hours • Indication of low power consumption • Two display modes P/N 13-05666 .....**$84.95**

ALT ALERT PERSONAL ALTITUDE MONITOR



Exclusively licensed from NASA under U.S. Patent 6,452,510, the Alt Alert™ will alarm when the cabin reaches an imminent and dangerously high cabin pressure-altitude (relative cabin pressure), based on FAA regulations. Once activated by installation of the battery (provided), the unit will enter "sleep mode" while at ground level, but will begin sampling pressure and battery voltage every 15 seconds during climb and while in level flight (consistent flying altitude) at altitudes above sea level. It will operate as such until the battery is drained or removed (usually about 18 months, unless alarm is activated). At any time, the battery status can be tested by pressing the "test" button. The AltAlert™ may be easily mounted on a flat surface in the cockpit or cabin of the aircraft, clipped to a visor, or worn where sound is not muffled by clothing. P/N 13-17743.....**$349.00**

NORAL OXYGEN CANNULA CARRIERS



See www.aircraftspruce.com for our full line of Noral Oxygen Canula Carriers.

MOUNTAIN HIGH AVIATOR STANDARD CANNULA



Calibrated for use with the MH-4 flowmeter or any other device calibrated to the standard protocol of 1 liter per minute per 10,000 ft. per FAA-FAR 23.1447. This Cannula works great with a headset!
P/N 13-11590 .....**$6.25**

MOUNTAIN HIGH FLOWMETER MH-4



The MH-4 has two altitude flow scales. The left (compressed) scale is calibrated for the Oxymizer™ cannula and is limited to flight of 18,000 ft.and below. The right scale is calibrated for a standard cannula or facemask up to 25,000 ft.
P/N 13-06128 .....**$78.75**

MOUNTAIN HIGH OXYMIZER CANNULA



The Oxymizer 'M' type (mustache-style) oxygen-conserving cannula is the most popular version. The Oxymizer is standard issue with our XCR and XCP systems and may work with almost any adjustable constant flow regulator.
P/N 13-11592 .....**$29.85**

MH E-Z BREATHE II BOOM CANNULA EDS FOR PULSE DEMAND



Mountain High has redesigned their Boom Cannula system to make it even better. The redesigned nylon boom arm affixes to your headset with a ball mount and adhesive pad. It can swivel about and slides in and out for best fit. The new improved arm incorporates an adjustable friction lock to eliminate slippage. The nasal tips and the entire feed-tube assembly are easily replaceable, as well as the aluminum mount ball. The arm can be easily removed from the headset when not in use.
P/N 13-13067 .....**$98.95**

MOUNTAIN HIGH ALPS FACE MASK



MH ALPS FaceMask and the MH ALPS-M (for microphone) FaceMask. The ALPS-M is outfitted with an electronic "Clear-Speak" ambient noise-canceling microphone that enables pilots to fly with safety and comfort with clear, crisp voice communication and is compatible with most aircraft systems. The mask is easy to put on and exceptionally comfortable as it does not require a polyvinyl bag. The ALPS or the ALPS-M FaceMask can be used with any of the MH oxygen systems.
Alps Constant Flow Feed Tube Use with MH-4 Flowmeter only
P/N 13-11388 .....**$4.85**
Alps EDS Style Feed Tube..... P/N 13-13098 .....**$4.85**

Description	Part No.	Price
Facemask Med.	13-04155	**$169.80**
FacemaskSmall	13-05136	**$169.90**
Facemask Large	13-05137	**$169.75**
Facemask w/ Mic Small	13-05134	**$463.00**
Facemask w/ Mic Med.	13-05135	**$465.00**
Facemask w/ Mic Large	13-04156	**$465.00**

NATURAL BOOST OXYGEN



Boost Oxygen is a convenient, lightweight, and portable 95% pure Aviator's Breathing Oxygen. Perfect for hikers, athletes, and GA pilots flying at high altitude (but still below 12,000 feet), Boost can help you out on your next trip.
Instructions for use:
Place mask under the nose and over the mouth.
Press trigger down to activate flow.
Breathe deeply through the mouth.
Pocket Size - 2 Liters ..... P/N 13-12975.....**$7.95**
Medium Size - 5 Liters..... P/N 13-21167.....**$9.50**
Large Size - 10 Liters ..... P/N 13-12976.....**$14.50**

PS

OXYGEN SYSTEMS

MOUNTAIN HIGH XCP SYSTEMS

The MH-XCP Constant Flow series is our most economical single and multi-place, portable oxygen system for general aviation. Weight is kept to a minimum by our low profile, light weight regulators, MH-3 or MH-4 Flowmeters and Cylinders. The XCP systems come complete with Cylinder(of your choice), Regulator, Mountain High MH-3 or MH-4 Flowmeter, Oxymizer™ cannula, facemask, tote bag and cylinder carry case for easy transport and seat back mounting. Full-Pack The XCP System can be used up to 25,000 ft. with the MH-4 Flowmeter and Facemask. Choose the MH-3 Flowmeter fo flights up to 18,000 ft Each XCP System Includes: • Instructions • Cylinder with Valve, Gauge and carry case. • Pressure reducing Regulator with self sealing outlet for each user. • MH3 or MH4 Flow-Meter (Your choice when ordering) • Oxymizer (oxygen conserving) Cannula.• Facemask • Tote-Bag.



Model	Description	Part No.	Price
00XCP-0064-34	682 liter (24 cu. ft.) 4-place carry-on system with Full-Pack padded cylinder carry/strap-down case	13-03657	$1,037.00
00XCP-0064-32	682 liter (24 cu. ft.) 2-place carry-on system with Full-Pack padded cylinder carry/strap-down case	13-03658	$847.00
00XCP-0064-31	682 liter (24 cu. ft.) 1-place carry-on system with Full-Pack padded cylinder carry/strap-down case	13-03659	$652.00
00XCP-0060-34	415 liter (15 cu. ft.) 4-place carry-on system with Full-Pack padded cylinder carry/strap-down case	13-03660	$904.00
00XCP-0060-32	415 liter (15 cu. ft.) 2-place carry-on system with Full-Pack padded cylinder carry/strap-down case	13-03661	$737.00
00XCP-0060-31	415 liter (15 cu. ft.) 1-place carry-on system with Full-Pack padded cylinder carry/strap-down case	13-03662	$567.00
00XCP-0054-31	180 liter (6 cu. ft.) 1-place carry-on system with Full-Pack padded cylinder carry/strap-down case	13-03663	$536.00

MOUNTAIN HIGH HANDHELD OXYGEN SYSTEM



The CO-PILO2T oxygen system is a small, light-weight, hand-held oxygen system. Precision manufactured in Japan, this unit was especially designed for supplemental breathing while at high altitudes. The regulator has an on/off and volume control knob adjustable from off to a max setting of 2-ltr./min. which will last aprox. 9 minutes. The removable face mask can be replaced by an optional Oxymizer cannula for continuous “hands off” operation. When using the Oxymizer cannula each 18 liter replacement cylinder lasts up to 30 minutes at 15,000 ft. The regulator can hold a cylinder for several months without any noticeable drop in pressure. Cylinders can be changed by hand. Weight with cylinder 17oz. Cylinder weight 9.5oz.....P/N 13-01016.....**$219.95**
Single 18 Liter Replacement Cylinder.....P/N 13-02222.....**$26.50**
Pack of 3 18 Liter Replacement Cylinders.....P/N 13-13093.....**$74.95**

MOUNTAIN HIGH EDS O2D1 OXYGEN SYSTEMS



The EDS-02D1 System enables the general aviation pilot to fly at pressure altitudes up to 25,000 feet with safety and comfort. The EDS-O2D1 digital Pulse- Demand™ system reduces Oxygen consumption dramatically. Different from the “standard” constant flow systems, the EDS-O2D1 Pulse-Demand™ system wastes no Oxygen during the breathing cycle when oxygen is is not being delivered to the lungs. The average user will enjoy a duration increase of two to three times compared to the constant flow systems. The built in Barometer adjusts for Altitude increase while reducing the pilots work load. The unit operates for up to 100 hours on two AA batteries. The EDS-O2D1 should be used with any of our XCR, XCP, or 4-place FPR regulator. for correct pressure and oxygen delivery. The low-pressure service line is a high quality polyurethane line that is kink-resistant and flexible under varying temperatures. The cannula, face mask and service line connect to the EDS unit via color-coded “Quick-Connects” providing an air-tight fitting by hand. These fittings can be connected and disconnected many times. With the optional XCP connecting kit, the EDS can be used with an XCP system at the same time flow meters are being used. In addition, the optional ALPS Facemask with or without microphone, is the perfect addition to any EDS system. All systems are shipped empty.

Model	Description	Part No.	Price
00EDS-0084-01	EDS-O2D1 with CFF-480 Silica Cylinder and XCR-540 regulator with tote bag - 1 Place	13-02387	$1,595.00
00EDS-0054-01	EDS-02D1 with AL-180 Aluminum Cylinder and XCR-540 Regulator with tote bag - 1 Place	13-03668	$921.00
00EDS-0002-01	EDS-O2D1 with KF-011 Kevlar cylinder and XCR-540 regulator with tote bag - 1 Place	13-03666	$1,563.00
00EDS-0004-01	EDS-O2D1 with CFFC-022 carbon fiber cylinder, XCR-540 regulator with tote bag - 1 Place	13-03665	$2,144.00
00EDS-0004-02	(2) EDS-O2D1 with CFFC-022 carbon fiber cylinder, XCR-540 regulator with tote bag - 2 Place	13-03670	$2,784.00
00EDS-0060-02	(2) EDS-O2D1 units with AL-415 Aluminum cylinder, FPR-540 regulator with tote bag - 2 Place	13-03671	$1,662.00
00EDS-0084-02	(2) EDS-O2D1 and CFF-480 Silica cylinder, XCR-540 regulator with tote bag - 2 Place	13-03672	$2,324.00
00EDS-1052-00	EDS-02D1 with XCR-540 regulator	13-02390	$822.00
00EDS-1054-01	EDS-02D1 with XCR-540 regulator with gauge	13-02391	$847.00
00EDS-1062-02	EDS-O2D1 with XCR DIN-477 (Euro Inlet) Regulator with gauge	13-02392	$919.00
00EDS-02D1-26	Oxygen Controller	13-18719	$693.95

MOUNTAIN HIGH EDS O2D2 OXYGEN SYSTEMS



The MH EDS-O2D2 Pulse Demand Oxygen Delivery System is the only single unit, portable, two-place oxygen system currently available for general aviation. A variety of options allow you, the pilot, to customize a system to your specific needs. The O2D2 kit comes with (3) AA batteries, 2 standard cannulas, 2 flare tip cannulas, and 2 face masks all in a handy carry bag.
Note: Our EDS O2D2 and O2D1 are portable systems designed and calibrated to be used with our regulators (~15 psig. dynamic to 25 MAX. psig. static). However, if you wish to operate from the outlets of a built-in system, we offer the EDS-STR stabilizing regulator. This will allow our portable EDS systems to operate with built-in systems that supply up to 90 psig. to the outlets in the aircraft

Model	Description	Part No.	Price
00EDS-2060-02	EDS-O2D2 with AL-415 Aluminum cylinder and XCR-540 regulator - 2 Place	13-05068	$1,199.00
00EDS-2062-02	EDS-O2D2 with AL-647 Aluminum cylinder and XCR-540 regulator - 2 Place	13-05069	$1,287.00
00EDS-2053-02	EDS-O2D2 with AL-180 Aluminum cylinder and XCR-540 regulator with holster pack	13-07313	$1,126.00
00EDS-2060-04	(2) EDS-O2D2 units with AL-415 Aluminum cylinder, FPR-540 regulator - 4 Place	13-07315	$2,121.00
00EDS-2062-04	(2) EDS-O2D2 units with AL-647 Aluminum cylinder, FPR-540 regulator - 4 Place	13-07316	$2,193.00
00EDS-2064-02	EDS-O2D2 with AL-682 Aluminum cylinder and XCR-540 regulator - 2 Place	13-07317	$1,145.00
00EDS-2064-04	(2) EDS-O2D2 with AL-682 Aluminum cylinder, FPR-540 regulator - 4 Place	13-07319	$2,140.00
00EDS-2002-02	EDS-O2D2 with KF-011 Kevlar cylinder and XCR-540 regulator - 2 Place	13-07321	$1,606.00
00EDS-2004-02	EDS-O2D2 with CFFC-022 carbon fiber cylinder, XCR-540 regulator - 2 Place	13-07323	$2,075.00
00EDS-2084-02	EDS-O2D2 and CFF-480 Silica cylinder, XCR-540 regulator - 2 Place	13-07324	$1,674.00
00EDS-2000-00	EDS-02D2 Kit only- Regulator or Cylinder Not Included	13-07312	$893.00
00EDS-2084-02	EDS-O2D2, CFF-480 Silica cylinder, XCR DIN-477 (Euro Inlet) regulator.	13-07326	$1,689.00
00EDS-02D2-26	Oxygen Controller	13-18720	$895.00

PS

MOUNTAIN HIGH TRANSFILLER UNITS



TR-55 00GSE-1008-00 Standard length 18 inches. The TR-55 is the most economical way to fill your cylinder. One side has a CGA-540 nut & nipple with an O-ring seal, while the other end is equipped with a large hand nut with bare nipple. This allows you to slowly and safely bleed the line so the fittings can be easily removed from the cylinder.
P/N 13-03923.....**$144.75**

TR-75B 00GSE-1012-00 Standard length 24 inches. The TR-75b is our most popular personal transfiller. It is equipped with O-ring seals on both of the CGA-540 (oxygen) ends for a positive and air-tight fit by hand. A handy bleed valve is included to relieve the pressure in the system so that the fittings can be easily removed from the cylinder without damage to the O-ring seals. P/N 13-03924.....**$310.00**

TR-95B 00GSE-1016-00 Standard length 48 inches. The TR-95b is an economical transfilling system for soaring and flying clubs where many cylinders are serviced frequently. Both connecting ends have O-ring seals for a positive air-tight fit. The pressure/contents gauge shows how much oxygen remains in the master (rental) cylinder.
P/N 13-03925.....**$424.00**

02 TRANSFILLER FBO KIT - The standard kit comes with a non-venting style regulator, and the four most common fill adapters that you will need. Incorporates a flow restrictor to prevent filling too fast, as well as built-in filters. All Components are cleaned and ready for Oxygen use.
With 8t. Hose.....P/N 13-14949.....**$1,259.00**
Without Hose.....P/N 13-12735.....**$1,155.00**

TA-916-S Adapts CGA-540 to the Scott fitting (9/16-18 threads). Commonly known as the Scott 26875, 5020-1 Airline or AS1046 fitting. A socket is on the CGA-540 end to attach to transfiller lines. P/N 13-14773.....**$137.75**

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OXYGEN SYSTEMS



SOLOPACK PERSONAL OXYGEN PACK

The ALL-IN-ONE SOLO Pack with A-5 Flow Meter and ALL-IN-ONE Connector Kit is a complete and simple oxygen kit for the pilot and/or passenger. The Connector Kit allows you to connect to virtually all general aviation aircraft. This package includes a standard face mask, Oxymizer Cannula, A-5 Flow Meter, and FLOWGLOW to illuminate your flow meter in the dark. Includes all necessary tubing and connectors.

P/N 05-14888.....**$169.75**

PILOTPACK PERSONAL OXYGEN PACK



The PILOTpack with ALL-IN-ONE Connector Kit is the perfect solution for the pilot who needs complete breathing gear AND a Mic Mask. The ALL-IN-ONE Connector Kit allows you to connect to virtually all general aviation aircraft, and the comfortable silicone Mic Mask ensures crystal clear communication when flying at high altitudes. This convenient ALL-IN-ONE package includes: the Comfort Mic Mask, Oxymizer Cannula, the popular A-5 Flow Meter, and a FLOWGLOW to illuminate your flow meter in the dark. Includes all necessary tubing and connectors.

P/N 05-14890.....**$579.00**

X3 SOLO PACK



Pilot tested and pilot approved! The X3 Demand Conserver is the best demand conserver in the aviation industry. The X3 Demand Conserver is the only fully mechanical demand conserver (no batteries required). By giving you oxygen only when you "demand" it, the X3 will extend the duration of your oxygen supply by at least 300%. The X3 Solo Pack includes everything you need, including a dual lumen cannula, dual lumen mask, connectors, and tubing. The X3 is STC'd for Cirrus and certified up 25,000 feet. P/N 05-14889.....**$899.00**

X3 PILOT PACK



This package includes the X3 Demand Conserver PLUS a Comfort Mic Mask certified up to 25,000 feet! The X3 Demand Conserver is the only fully mechanical demand conserver (no batteries required). By giving you oxygen only when you "demand" it, the X3 will extend the duration of your oxygen supply by at least 300%. This X3 Pack includes everything you need PLUS a Comfort Mic Mask for crystal clear communications at high altitudes. Includes: dual lumen cannula, dual lumen Mic Mask, connectors, and tubing. The X3 is STC'd for Cirrus and certified up 25,000 feet. P/N 05-14891.....**$1,149.00**

PLANE PACK - 4 PERSON



The PLANEpack with ALL-IN-ONE Connector Kits is a versatile kit that fits a number of passengers and/or pilots with all the breathing gear they need. The Connector Kits allow you to connect to the majority of General Aviation planes flying today. In the box: • 4 - A-5 Oxygen Flow Meter With Tubing • 2 - Comfort Microphone Mask with Premium Mic • 4 - Oxymizer Cannula For Use With Flow Meters • 2 - Standard Face Mask - Certified to 25,000 Feet • 4 - ALL-IN-ONE Connector Kit • 4 - FLOWGLOW for use with A-5 Flow Meter • 2 - Oxygen Equipment Bag - PFI • 1 - Pulse Oximeter. P/N 05-14896.....**$1,499.00**

PLANE PACK - 6 PERSON



The PLANEpack with ALL-IN-ONE Connector Kits is a versatile kit that fits a number of passengers and/or pilots with all the breathing gear they need. The Connector Kits allow you to connect to the majority of General Aviation planes flying today. In the box: • 6 - A-5 Oxygen Flow Meter With Tubing • 2 - Comfort Microphone Mask with Premium Mic • 6 - Oxymizer Cannula For Use With Flow Meters • 4 - Standard Face Mask - Certified to 25,000 Feet • 6 - ALL-IN-ONE Connector Kit • 6 - FLOWGLOW for use with A-5 Flow Meter • 3 - Oxygen Equipment Bag - PFI • 1 - Pulse Oximeter.

P/N 05-14897.....**$1,850.00**



PLANE PACK - 8 PERSON

In the box: • 8 - A-5 Oxygen Flow Meter With Tubing • 2 - Comfort Microphone Mask with Premium Mic • 8 - Oxymizer Cannula For Use With Flow Meters • 6 - Standard Face Mask - Certified to 25,000 Feet • 8 - ALL-IN-ONE Connector Kit • 8 - FLOWGLOW for use with A-5 Flow Meter • 4 - Oxygen Equipment Bag - PFI • 1 - Pulse Oximeter. P/N 05-14898.....**$2,195.00**



OXYPACK1 - 2 PERSON OXYGEN SYSTEM

In the box: • 1 - 6.3 CU. Ft. Aluminum Oxygen Cylinder • 1 - 6.3 Cubic Foot Case With Shoulder Strap • 2 - A-5 Oxygen Flow Meter With Tubing And CPC Connector • 2 - Oxymizer Cannula For Use With Flow Meters • 2 - Standard Face Mask - Certified to 25,000 Feet • 1 - Two-Person Oxygen Pressure Regulator.

P/N 05-14892.....**$599.00**



OXYPACK2 - 2 PERSON OXYGEN SYSTEM

In the box1: • 1 - 15 CU. Ft. Aluminum Oxygen Cylinder • 1 - Carrying Case With Seatback Harness • 2 - A-5 Oxygen Flow Meter With Tubing And CPC Connector • 2 - Oxymizer Cannula For Use With Flow Meters • 2 - Standard Face Mask - Certified to 25,000 Feet • 1 - Four-Person Oxygen Pressure Regulator

P/N 05-14893.....**$799.00**



OXYPACK3 - 2 PERSON OXYGEN SYSTEM

In the box: • 1 - 22 CU. Ft. Aluminum Oxygen Cylinder • 1 - Carrying Case With Seatback Harness • 2 - A-5 Oxygen Flow Meter With Tubing And CPC Connector • 2 - Oxymizer Cannula For Use With Flow Meters • 2 - Standard Face Mask - Certified to 25,000 Feet • 1 - Four-Person Oxygen Pressure Regulator.

P/N 05-14894.....**$899.00**



OXYPACK4 - 2 PERSON OXYGEN SYSTEM

In the box: • 1 - 22 CU. Ft. Aluminum Oxygen Cylinder • 1 - Carrying Case With Seatback Harness • 4 - A-5 Oxygen Flow Meter With Tubing And CPC Connector • 4 - Oxymizer Cannula For Use With Flow Meters • 4 - Standard Face Mask - Certified to 25,000 Feet • 1 - Four-Person Oxygen Pressure Regulator • 4 - FLOWGLOW for use with A-5 Flow Meter

P/N 05-14895.....**$1,099.00**



OXYGEN CHARGE FILL ADAPTER WITH DUST CAP

1/4 JIC/AN-4 to 9/16-18 UNF-2B aircraft connection. Includes dust cap/protective nipple with chain/lanyard. Shipped certified clean for immediate use.

P/N 12-04870.....**$109.75**



OXYGEN CHARGE FILL ADAPTER 30° BEND

1/4 JIC/AN-4 "Male Flared Tube" connected by 1-inch tube with AN800-3 (3/8-24 UNF-2B) aircraft connection. Includes dust cap/protective nipple with chain/lanyard. Shipped certified clean for immediate use.

P/N 12-04869.....**$148.75**

PS

GROUND SUPPORT TOW BARS



CESSNA - This two piece telescoping tow bar fits all Cessnas with 5/8" lugs on nosegear. Overall length 42.5", collapsed 24".
P/N 13-01800.....**$52.75**



MOONEY - A simple "T" handle design for the Mooney axle. Overall length 33.5".
P/N 13-02000.....**$53.80**



CHEROKEE - This one piece tow bar has a retractable locking mechanism that gives a positive lock when installed. Overall length 31". P/N 13-01600.....**$54.85**



BEECHCRAFT - The compact design of this tow bar makes it very popular among Beech owners. Overall length 38", collapsed 21.5". P/N 13-01900.....**$54.85**



ARROW - This offset "T" handle design fits into the Arrow axle making it a simple and easy design to use. Overall length 33".
P/N 13-01700.....**$54.95**



TWIN CESSNA - The extra length provides extra nose clearance and leverage for Twin Cessnas and remains very compact. Overall length 55", collapsed 34". P/N 13-01850.....**$54.95**



TWIN PIPER - (HH-007) Piper Twin Comanche, Apache, Aztec, and Navajo Towbar. Two section until 28" collapsible, 49-1/2" overall length.
P/N 13-01778.....**$54.95**



COMANCHE - The same as our P/N HH-007 except one piece construction. Overall length 33". P/N 13-02100.....**$54.85**



DELUXE CESSNA - The deluxe Cessna towbar is very popular and designed for those who demand the ultimate in convenience and durability. Spring loaded forks allow easy one handed engagement without getting on your hands and knees. Length 45.5" extended, 26" collapsed. Wt. 3.75 lbs. Ideal for Cessna RGs Including 210 series. P/N 13-01540.....**$65.95**



DUTCHESS/PIPER - Fits Dutchess and Piper nose gear axle. Telescoping design provides extra nose gear clearance. Overall length 48", collapsed 28". P/N 13-02210.....**$55.75**



RV-A M-340-026 - Two piece spring loaded design. 26" collapsible, 43" overall. Code 7.
P/N 13-18476.....**$64.95**



DELUXE PIPER - The deluxe Piper towbar offers all the features of a standard Piper towbar plus the convenience of a two-piece design. When extended, this model provides additional propeller clearance and leverage. Length: 42" extended, 23" collapsed. Wt. 3.5 lbs. P/N 13-01550.....**$65.95**

UNIVERSAL TOW BAR WITH CLEVIS HITCH



CESSNA/ BEECH/ MOONEY - This universal tow bar is excellent for use with tug, tractor, or by hand. It fits most Cessna singles & twins with 5/8" lugs, Beech singles and twins with 1/4" lugs, all Mooneys, Twin Commanders, Lake and Commanche. Slide lock quickly adjusts and holds firmly. P/N 13-02350.....**$183.75**

PIPER - Same design as the universal tow bar above, this towbar fits Piper single fork design, Arrow, Malibu, Lance, Seneca, and Seminole. Slide lock quickly adjusts and holds firmly. P/N 13-02351.....**$169.90**



SCOTT TAILWHEEL - A tow bar designed for aircraft using a Scott 3000 series tailwheel. Overall length 48", collapsed 28".
P/N 13-02205.....**$66.80**



BEECHCRAFT AXLE - Its collapsible design makes it easy to fit in the baggage area. Collapsible Length: 26" Overall Length: 43".
P/N 13-02215.....**$63.80**



CHEETAH/CIRRUS - This tow bar is designed to fit Grumman aircraft. Its collapsible design makes it easy to fit in the baggage area. Overall length 43", collapsed 26". P/N 13-02200.....**$68.75**



ERCOUPE -Specially designed for Ercoupes. This tow bar has a spring loaded lever action for ease of operation. Overall length 46.5", collapsed 28.5". P/N 13-01580.....**$66.95**



1-1/8" AXLE - This is a universal tow bar designed for aircraft with 1-1/8" axles such as Cessna Skymaster and Piper Seneca. Overall length 56", colapsed 33". P/N 13-02110.....**$69.85**



COMMANDER - This model fits Rockwell 112 and 114. Spring loaded forks for ease of operation. Overall length 46.5", collapsed 28.5".
P/N 13-01570.....**$68.75**



DELUXE MOONEY - The deluxe Mooney towbar is a longer, two piece version of a standard Mooney towbar. Attractive black caps accentuate deluxe appearance. Length: 38", collapsed 21". Wt. 3 lbs. P/N 13-01560.....**$57.80**



UNIVERSAL - For the FBO this is an ideal hand held universal tow bar. Fits Cessna, Beech, Piper, Scott Tailwheel and many others. Overall length 57", collapsed 34". Fits aircraft with 5/8" lug on the nose gear strut. P/N 13-02250.....**$96.85**



VIKING - Designed especially for Bellanca Viking axle. Collapsible design and spring loaded fork. Overall length 46.5", collapsed 28.5".
P/N 13-02220.....**$79.75**



DELUXE BEECHCRAFT - Spring loaded forks for ease of operation. Overall length 47", collapsed 28". P/N 13-01905.....**$73.85**



AERO-TOW CIRRUS TOWBAR - This Cirrus Towbar is designed specifically to fit the gear of the Cirrus Aircraft. At just 6 lbs and a shipping box of 1-3/4" x 12" x 39" you will find this to be a quick and easy stowaway. P/N 13-17597.....**$185.00**

FBO UNIVERSAL TOW BAR WITH RING HITCH T-100



This heavy duty universal tow bar is standard equipment for FBOs. Fits most Piper, Cessna, Beech,Mooney, AeroCommander, and many others. The adjustable fork allows you to extend the fork assembly from 3" to 10". This tow bar is extra long at 7 ft. 6 inches.
The T-100 is not made for specific aircraft. It has spring loaded adapters that will fit and 1/4" to 5/8" towpins on the aircraft axle. This will not work with aircraft that have tow pins on the landing gear. P/N 13-02355..... **$249.95**

AIRCRAFT WINCH & MOUNTING KIT



AIRCRAFT WINCH - Floor mounting aircraft winch with hook cable to tail tie-down ring and press button operation. Easily moves aircraft up to 3,000 lbs. rolling weight. Comes with 100' of cable and 75' of control cord and has an automatic safety shut off. Cable speed is 30 feet per minute. Voltage 100 AC. Floor mount is required for operation (sold separately), Part No. 13-06124 ...P/N 13-01764.....**$445.00**



HEAVY DUTY AIRCRAFT WINCH - Winch includes metal wind up drum, 100' of cable 125' of control cord. Moves aircraft up to 6,000lbs. Includes a wall mount. If floor mount is desired P/N 13-06124 must be ordered. Code 7 .....P/N 13-06125.....**$465.00**



AIRCRAFT WINCH MOUNTING KIT - Aircraft Winch Mounting Kit Everything you need to secure the winch to the floor. Mounting kit only. Can be used with P/N's 13-01764 and 13-06125 in a floor mount is desired. .P/N 13-06124.....**$62.75**

PS

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TOW BARS

BOGERT TOW BARS (BOGI-BARS)



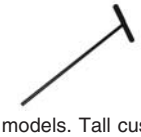
Light enough to stow Built from a combination of steel for maximum durability comfort grips on the handle and spreader bar chip resistant red bar will look great for years. Operation: extend the handle easily with high shear wick release pin apply forward pressure on the spreader bar to open the wishbone jays. Line up the Bogi-Bar attachment at the tow points or axle depending on model. Release the tension on the spreader bar and you are locked on! The tow bar will not slip off the plane. Reverse for removal.

TAIL WHEEL AIRCRAFT

Model	Fits	Extended Length	P/N	Price
4-API	Aircraft Products Tailwheel	48"	12-02097	**$148.75**
4-ABI	Alaskan Bushwheel 3400B	48"	13-06106	**$139.95**
04M-XP	Cessna XP Modification	48"	13-06107	**$138.80**
4-TDG	Scott 3200 & 3400/ABI 3200/3400	48"	13-10000	**$139.95**
4-F24	Fairchild 24, Beech Stagger Wing	48"	13-02410	**$152.75**
4-RV	Vans RV3, RV4, RV6, RV8, RV9	48"	13-02408	**$139.95**

NOSE WHEEL AIRCRAFT

Model	Fits	Extended Length	P/N	Price
4-35	Beechcraft- Bonanza, Debonair, Duchess, Duke & Skipper	49"	13-10030	**$139.95**
4-19/23B	Beechcraft-Musketeer, Sport, Super, Sierra & King Air	48"	13-01808	**$139.95**
4-17/30	Bellanca-Viking Series	48"	13-01809	**$138.95**
4-172	Cessna 150, 152, 172, 175, 177, 182, 310R, RV-4	48"	13-10040	**$139.95**
4-206	Cessna 205, 206 & 207	48"	13-10060	**$139.95**
4-210	Cessna 172RG, 177RG,182RG & 210 Series	48"	13-10050	**$178.95**
4-182-XL	Cessna 182 S (1996 and up) and T (2001 and up) models with long nose.	55"	13-11389	**$154.95**
4-SR	Cirrus SR 20 &22	48"	13-06108	**$139.95**
4-AA	Gulfstream American AA1 & AA5	48"	13-02407	**$139.95**
4-Lake	Lake Amphibian	48"	13-02411	**$178.75**
4-Moon	Mooney Aircraft	48"	13-01810	**$139.95**
4-24/30	Piper Comanche PA-24, PA-30 & PA-39 Also the Cherokee Six axle w/pants if tabs above wheel are broken	48"	13-10010	**$139.95**
4-22/28	Piper PA-22, & PA-28 Series (Not PA-28R)	48"	13-10020	**$139.95**
4-28R	Piper PA-28R Series - Hand Pull for dog-leg style	49"	13-02098	**$34.95**
4-34	Piper Seneca PA34 200/220/220T, and Aerostar 601P *handle extends to 78"	78"	13-01812	**$238.95**
4-PA46	Piper Malibu & Mirage–Vehicle Pull	72"	13-06112	**$252.95**
4-28R, 4-PA46	Piper PA-28R, PA- 32R, PA-46 Hand Pull Towbar. Malibu, Mirage, Meridiam and Saratoga Aircraft.	60"	13-11203	**$276.95**
4-RVA	Vans - RV6A, RV7A, RV8A, & RV9A	48"	13-01811	**$139.95**
4-LANCE	Lance Towbar	48"	12-02099	**$246.95**
4-20	Diamond DA20	--	13-06111	**$139.95**
4-DA40	Diamond DA40	--	13-06110	**$139.95**
4-DA42	Diamond DA42	--	13-06109	**$256.95**
4-RV10	Vans - RV10	48"	13-04282	**$139.95**
4-Socata	Socata Style Bogi Bar	49"	13-06113	**$138.75**
Agusta	Agusta Helicopter.Handle extends to 70"	70"	13-01813	**$252.95**



BOGI BAR EXTENDED T-HANDLE

Includes new grips and is 7" longer than the standard Bogi Bar T-Handle. The extra length can be quite beneficial for aircraft with extra-long noses like the Cessna 182 S (1996 and up) and T (2001 and up) models. Tall customers will find this T-Handle easier on the back since it lowers that overall angle of the tow. The Extended T-Handle works with any of the standard Bogi-Bars and will increase the overall length to about 55". Model 4-TXL. P/N 13-11199.....**$45.50**

BRACKET TOW BARS



MODEL TR-6

Excellent for towing aircraft such as the T-6, P-51, Stearman, Staggerwing Beech, or any aircraft with 3/4" or larger eye bolts. Length: 12' Spread: 12 ft. Weight: 62 lbs.

Ring Hitch..P/N 13-10131 .....**$939.00**
Ball Hitch ..P/N 13-10130 .....**$939.00**

BRACKETT TH-6 TOWBARS - The TH-6 is a light-weight universal towbar designed primarily for hand towing. The TH-6 eliminates the mad hunt for the proper towbar when moving a hangar full of singles and light twins. This towbar also has a good handle for pulling and a ring ,ball or clevis hitch for occasional light towing. NOTE: The piper manual states that the tow pins are for hand towing. For powered towing we suggest adapter set P/N 13-15488.



Ring Hitch.....P/N 13-18547 .....**$419.00**
Ball Hitch .....P/N 13-18548 .....**$436.00**
Clevis Hitch .....P/N 13-18722 .....**$423.00**
Piper Adapter - Qty 2 Required.....P/N 13-15488 .....**$17.95**

MODEL TR-34



The TR-34 has the light weight of the TR-3, and the strength of the TR-4. It has the same universal features that fit most aircraft from C-150 through aircraft up to 14,500 lbs. Wt: 35lbs. Available in 3 hitch styles.

Ring Hitch (TR-34R) P/N 13-10085 ..... **$698.00**
Ball Hitch (TR-34B) .....P/N 13-10086 ..... **$695.00**
Clevis Hitch (TR-34C) .....P/N 13-10087 ..... **$662.00**
TWA-10 Scott Tail Wheel Adapter (2 pcs. req)
P/N 13-10089 ..... **$21.90**



MODEL TH-53 - Features a tow bar length of 80" to 94" (extended). Wt: 22 lbs., Max. aircraft Wt: 7,000 lbs.

TH-53R Towbar w/Ring hitch .....P/N 13-03338 ..... **$620.00**
TH-53B Towbar w/Ball hitch.....P/N 13-03339 ..... **$620.00**
TH-53C Towbar w/Clevis hitch.....P/N 13-03340 ..... **$557.00**

MODEL TR-71, 72, & 73



Lightweight aluminum designed for Waco, Stearman, & Cessna 195 type aircraft. Length: 100", Spread: 90", Wt: 22 lbs. Hook dia: TR-71 (.850), TR-72 (1.25)

TR-71B Towbar w/Ball hitch.....P/N 13-01907 ..... **$586.00**
TR-72B Towbar w/Ball hitch.....P/N 13-01908 ..... **$586.00**
TR-73B Towbar w/Ball hitch.....P/N 13-01909 ..... **$586.00**
TR-71R Towbar w/Ring hitch .....P/N 13-01910 ..... **$586.00**
TR-72R Towbar w/Ring hitch .....P/N 13-01911 ..... **$586.00**
TR-73R Towbar w/Ring hitch .....P/N 13-01912 ..... **$586.00**

CUSTOM TOWBARS & OPTIONS FOR UNIVERSAL TOW BARS

Model	Description	Part No.	Price
TWA-10	Scott Tail Wheel Adapter (2 pcs. req.)	13-10089	**$21.90**
T-MU2-10	Kit-Crank & head assembly for converting TR-34 to TR-44	13-01890	**$144.75**
TWA-11	Tail Wheel Adapter for DGA-Staggerwing (2 pcs. req.)	13-01891	**$22.90**
T-4W	Wheel Set (Set of 2) for TR-34	13-01892	**$122.75**
T-375	Adapter .375" for Aerospatiale-Trinidad, Tabago (2 pcs.)	13-01893	**$19.50**
T-475	Adapter .475" Outer Diameter (2 pcs. req.)	13-01894	**$17.90**
T-625	Adapter .625" for Augusta 109 & Others (2 pcs. req.)	13-01895	**$17.85**
T-750	Adapter .750" for Commander 114, S-76 & Other	13-01896	**$17.50**
T-Maule	Adapter for Maule Tail Spring (1 pc. req.)	13-01897	**$86.75**
T-34-04	Shock Absorbing Ring Hitch (1 pc. req.)	13-01899	**$189.95**
TR-PC	Towbar; Pilatus PC-12, 3 pcs., 30 lbs.	13-01686	**$598.00**
TR-PCS	Towbar; Pilatus PC-12, 1 pc., 19 lbs.	13-01903	**$517.00**
TR-S2	Towbar; Ayres; 3 pcs., 18 lbs.	13-01755	**$335.00**

VISIT WWW.AIRCRAFTSPRUCE.COM FOR MORE TOWBARS AND ADAPTERS.

PS

TOW BARS – TUGS



THE TAIL-DRAGGER DRAGGER

This manual tow bar has heavy-duty solid rubber 8-inch wide tread wheels and will move most tail-draggers up to 2,000 lbs. and tail wheel tires up to 10 inches in diameter. Options Available: 3rd Wheel for heavier ships, and RV tail wheel lift pin.

Tail-Dragger Dragger™ Features:

- Patented Design
- No Winches
- No Hydraulics
- No Metal To Metal Contact
- No Adapters Required
- Superior Traction
- 5 Second Loading & Unloading
- Will fit Almost Any Aircraft
- Tail Wheel Stays In Trailing Position
- Lifting Pins Grip & Lift Tail Wheel
- Maneuver In Any Direction
- Operator Has Good View Of Wingtips

Description	Part No.	Price
Standard tail Dragger	13-01510	**$209.00**
Tail Dragger Dragger Gas	13-01824	**$1,595.00**

ACCESSORIES

Descriptions	Part No.	Prices
RV Tail Wheel Lift Pin	13-04936	**$7.85**

BOGERT UNIVERSAL BIG BOGI TOWBAR



The 04M-BBU is unique because it can attach to virtually any aircraft. It has interchangeable "Feet" that can be matched to any aircraft. Each of the "Feet" typically adapts to several models or series of aircraft and several sizes can be carried right on the tow bar. This is perfect for FBO's that deal with a variety of aircraft or aircraft owners that have more than one plane or shared hangars. "Interchangeable feet sold separately".

Description	Part No.	Price
Universal Big Bogi Bar	12-03168	**$330.00**
Jabiru Sport; Kit Fox	12-03171	**$49.95**
Cessna 150, 152, 172, 182, Vans, and many more	12-03172	**$53.95**
Cirrus SR20, 22	12-03174	**$64.75**
PA22, 28, 32, Cherokee Six	12-03175	**$49.75**
Aerostar 601, Bellanca, Mooney	12-03176	**$49.75**
Glastar, Legend Cub, Rockwell	12-03177	**$49.75**
Alaskan Bushwheel, Scott 3200, 3400	12-03178	**$49.75**
Diamond DA-40	12-03179	**$49.75**
Diamond DA-20	12-03180	**$64.75**
Cessna 172RG, 177RG, 182RG, 210	12-03181	**$64.75**
Beechcraft Bonanza, 35	12-03183	**$64.75**

See www.aircraftspruce.com for complete application list



2'' HITCH BALL RECEIVER

For the 12-03168 Universal Big Bogi Bar.
With Ring .....P/N 11-11516 ..... **$86.75**
With Clevis .....P/N 11-11517 ..... **$86.75**

BRACKETT MULTI-LINK TOW BARS



User benefits: All tow bars and heads are interchangeable with other popular tow bar systems such as tronair© warranty on all materials and workmanship money saving alternative to multiple tow bars

Brackett aircraft's multi-link tow bar line consists of tow bars that utilize changeable heads which allow you to tow a large variety of turbo prop and jet aircraft. The tyga line offers a standard multi-link system for aircraft with maximum tow weights of up to 125,000 pounds. All heads and tow bars are interchangeable with many widely used multi-head tow bar systems. You now have a high quality and competitive source for tow bars, changeable heads, and accessories.

Description	Part No.	Price
TY-TB125 Multi-Link Towbar	13-04157	**$1,661.00**
TY-TB75 Multi-Link Towbar	13-04158	**$1,367.00**
TY-TB-FTD Flat Tire Dolly T/B	13-04159	**$3,146.00**
King Air/Queen Air Head Only	13-16150	**$554.00**

SEE WWW.AIRCRAFTSPRUCE.COM FOR COMPLETE MULTI-LINK SELECTION.

NOSE WHEEL DRAGGER DRAGGER



The Nose-Dragger Dragger features a swing gate front roller (for easy loading), 10 ball bearing rollers (which push and guide the nose wheel), and does not require the use of adapters, winches, or hydraulics. Effortless ground handling is accomplished by its lightweight design and slow walking speed. The Nose-Dragger Dragger accepts nose wheels up to 600 x 6 (with or without wheel fairings), and no metal-to-metal or metal-to-fiberglass contact. Available in gas or electric power models. The 12V electric powered Nose-Dragger Dragger will accept aircraft up to 3,000 lbs. The Nose-Dragger Dragger Gas powered model accepts aircraft up to 6,000 lbs. Please call 1-877-477-7823 for freight quote.

Gas Powered, 6.5HP (up to 12,000 lbs)..... P/N 13-05103... **$1,595.00**

ACCESSORIES

Snow Chains ..... P/N 13-04932..... **$69.00**
Battery Charger - 24V ..... P/N 13-04934..... **$105.95**
Mag-Light / Head Lamp..... P/N 13-04935..... **$58.75**

ELECTRIC DRAGGER® NOSE-DRAGGER



This powerful 24-volt electric aircraft tug will fit and move any nose wheel airplane up to 5,000 lbs. without wheel fairings as well as those with wheel fairings that have 3" or greater of clearance from the fairing to the ground. It utilizes a smooth thumb throttle speed control for precise forward and reverse movements. The built in differential allows for easier turning and even better control! Comes with batteries and smart charger! Ships fully assembled!

P/N 13-18726 ..... **$2,195.00**

ELECTRIC DRAGGER® TAIL-DRAGGER



This powerful 24-volt electric tug has heavy-duty 11 1/2 -inch air wheels and will move tail-draggers up to 5,000 lbs., tail wheel tires up to 16 inches in diameter. It utilizes a smooth thumb throttle speed control for precise forward and reverse movements. Uses 2 batteries hooked up in series that are supplied with the unit and on-board smart charger. The built in differential allows for easier turning and even better control! Ships on a skid. Comes with batteries and smart charger!

P/N 13-18727 ..... **$2,195.00**

TAILDRAGGER PICKER 1



The PICKER-1 is for tail-dragger/conventional gear aircraft and has 100% fully adjustable Picker-Pins on ((1)) side only. This towbar fits all Van's RV tail draggers and J3-Cubs thru 450 Stearmans. The PICKER you see here is a rugged built and powder coated tail dragger tow-bar made with heavy duty materials and hardware. A benefit of the design truly enables the pilot or ground crew to literally make an infinite number of adjustments to ensure a perfect fit every single time for a multitude of aircraft with tail wheels.

P/N 13-14774 ..... **$259.00**

BABY BUSH PICKER 1A



The Baby Bush PICKER-1A is for tail-dragger/conventional gear aircraft and has 100% fully adjustable Picker-Pins on ((1)) side only. This PICKER is intended for tail wheels up to 6-inches wide and up to 15-inches in diameter. Those dimensions just mentioned exceed the size of a 500 x 5.0 nose wheel. This towbar must be used for aircraft with over 10 inches of ground clearance FWD of the tail wheel. The PICKER you see here is a rugged built and powder coated tail dragger tow-bar made with heavy duty materials and hardware. P/N 13-16047 ..... **$269.00**

LSA SPORT PICKER-3 TOW BAR



This "Sport Picker-3" is great for years of use with almost all Sport & LSA "tail dragger" aircraft and alike that are 1,500 pounds fully loaded. The wheel is small for tight clearances, portability and has a medium capacity just for these aircraft. Easily comes apart "by hand" for stow-a-way in small aircraft. It's a "take it with you" tow bar. Below are some examples of a large number of aircraft to help you know this can be a good fit for you. P/N 13-18893..... **$119.00**

X - TENSION - 12 INCH - Consider this ADD-ON product when the reach to your tail wheel is just too far away. Works good and needed for Stearman, WACO, Swift etc. Also works with the "Sport Picker-3" for smaller aircraft with tailwheels too far away from the back side of the rudder. P/N 13-21072 ..... **$46.00**

HEAVY DUTY BABY PUSH PINS - As popularity grows for the BUSH tail wheels, so does the need for the BUSH pins when used with a Baby Push Picker. These longer pins reach 8". Alaska Bush tail wheels are wider and these Extra Long HD AK Bush pins will fit a Bush Plane, and even with the use of the collars have a fully contained 7-inch width.

P/N 13-21073 ..... **$31.65**

PS

Prices Subject to Change Without Notice

TOW BARS – TUGS



ROBOTOW PORTABLE TOW BAR

All weather Robotow 24SL. It is lightweight (33 lbs.) and portable, making it ideal for carrying onboard your aircraft. When the Robotow's heavy duty all weather knurled drive drum is held against the nose wheel, the aircraft is easily moved. A trigger on the handle controls the speed while a switch reverses direction on command. Powerful, portable, and dependable, Robotow is an ideal motorized towbar for the aircraft listed below. Kits include Robotow, Battery, and Charger (US Charger or International Charger). Order axle adapters separately.

Description	Parts #	Price
Robotow 6420 24V Towbar Cordless Kit with International Charger	13-03896	$1,332.00
Robotow 6426 24V Towbar Cordless Kit with U.S. Charger	13-04222	$1,285.00
Robotow 6351 corded 120V, with 80ft. extension cord.	13-03897	$1,151.00
ACCESSORIES		
Rowbotow 5 Amp/18V Battery	13-03898	$251.95
Robotow 6425 24SL 5 amp Battery	13-11264	$323.00
Robotow 6427 24SL 3 amp Charger	13-11265	$165.75
AIRPLANE ADAPTERS (SOLD SEPARATELY)		
Robotow Adapter Aero Commander	13-03904	$191.75
Robotow Adapter Beech 1 / Baron / Bonanza / Debonair Duke	13-03905	$113.75
Robotow Adapter Beech 2 / Queen Air / Twin Bonanza / Trigear 18	13-03906	$192.75
Robotow Adapter Cessna 1 / 150, 172, 182, 310, 340	13-03907	$114.75
Robotow Adapter Cessna 2/ 310R, 401, 414, 421	13-03908	$113.75
Robotow Adapter Cessna 3 / 182RG (Pre-1962), 206, 210 (Pre-1962)	13-03909	$113.75
Robotow Adapter Cessna 4 / 337, 303	13-03910	$191.75
Robotow Adapter Cessna 5 / 182RG and 210 (1962-1986)	13-03911	$192.75
Robotow Adapter Piper 1 / Apache, Comanche, Aztec, Navajo, Twin Comanche, Bellanca	13-03912	$113.75
Robotow Adapter Piper 2 / Colt, Cherokee, Tri-pacer	13-03913	$191.75
Robotow Adapter T28 Trainer	13-03914	$192.75
Robotow Adapter Navion	13-03915	$192.75
Robotow Adapter Commander 114B	13-03916	$192.75
Robotow Adapter Cessna Caravan	13-03917	$192.75
Robotow Adapter Trinidad	13-03918	$192.75



CESSNA TOWBAR EXTENSION

The "QUICK-FOLD COMPACT TOWBAR" also known as the "QFC--TowbarTM". No more back breaking, bend over towing. Simply attach the QFC-TowbarTM extension to your already existent Cessna tow bar and stand up straight. An added extension of 33". Folds flat and is stowed securely along side the factory tow bar. P/N 13-06722.....**$89.00**

POCKET TOW TAILWHEEL LEASH



Pocket tow makes tail wheel aircraft maneuvering easy. Made with one-inch heavy-duty nylon webbing, the lightweight tow bar alternative is small enough to fit in your pocket and works on tail wheel aircraft with a 360-degree full-swivel tail wheel assemblies. The small end loops around the tail wheel leaf spring and cinches up tightly to pull and steer the aircraft backwards without pushing or pulling on any flight surfaces.

Tailwheel leash - Black ..... P/N 13-04681.....**$19.95**
Tailwheel leash - Red..... P/N 13-04682.....**$19.95**



GENERAL AVIATION TOWBAR

This aircraft tow bar attaches to tow vehicle, or you can move by hand with the convenient handles. Improved with powder coating. This tow bar has been used on the following aircraft: Cessna 150, 172, 182, 205, 210, Cirrus SR-22, Mooney M20, Vans RV-9A. Check your aircraft owner's manual, some aircraft manufacturers warn against towing with a bar attached to a vehicle. Make sure you do not exceed the tow limits of your aircraft

P/N 13-19787.....**$250.00**

PIPER TOWBAR ADAPTER



Piper Adapter. This adapter fits any towbar with a 3/4" or larger hole. With this adapter you can move Piper 28 series aircraft with the attach holes approximately 4 inches apart.

P/N 13-19790.....**$39.95**

BEECH TOWBAR ADAPTER



Beech Adapter. With this adapter you can move Beech Aircraft with the little tow pin. This adapter fits any towbar with a 3/4" or larger hole. Note: The grip length; (distance from nut to bolt head) is 1 1/2". With this adapter you can move Beech series aircraft with the small pin.

P/N 13-19793.....**$30.00**



DELUXE TAILWHEEL TOWBAR

The new Deluxe Tail wheel Towbar uses a positive locking control cable to attach to the wheel from a straight-on position. No extra maneuvering or lifting is required, and it can be adjusted for various tail wheel sizes. Towbar Weight: 26 lbs.

Note: Maximum weight to lift is 1,200 to 1,500 lbs. P/N 13-04918 .....**$269.00**



STEARMAN TOWBAR

This towbar easily captures your tailwheel. Just push down on the bar and latch the pental hook or drawbar ball. It makes moving the Stearman from the rear quick and easy. Made with heavy duty wheels and pump up tires. Powder coated black. P/N 13-11618..... **$398.00**

TAILWHEEL TRANSPORTER I TOW BAR



An almost effortless way to move your light tail wheel aircraft on the ground. A perfect match for Piper Cubs, Aeronca Champs or most any other light taildragger airplane. Requiring only 10.5 inches of ground clearance where the tail wheel spring is mounted to the fuselage, the Tailwheel Transporter attaches to your aircraft in just seconds and with only one movement of the Lifting Arm it lifts and locks the tail wheel. No modifications to your aircraft.

Standard..... P/N 13-20273.....**$399.00**
Low Clearance for RV ..... P/N 13-20274.....**$399.00**

BOGERT ATC GROUND OPS KIT



ATC Ground OPS Kit. This Kit includes Bogert Tow Bars Bogi-Bars For Nosewheel, Rubber Wheel Chocks, Molded Wheel Chocks and Nylon Tie-Down Rope. In the box: • 1-Bogert Tow Bars Bogi-Bars For Nosewheel • 1-Rubber Wheel Chocks • 1-Molded Wheel Chocks • Nylon Tie-Down Rope.

P/N 01-01149..... **$1,389.00**

HEAVY DUTY TOW BUDDY CORDLESS POWERBAR



Features:• No Flammable gasoline needed in hangar • Easy To Use • Infinite Speed Control • Versatile Applications • Push button forward and reverse controls • Nose gear quick attach for easy nose gear hook up. • The adjustable fork height fits virtually any light aircraft • Trickle charger for battery • Large 16 x 6.50 - 8 turf tire • For aircraft weight of 3500 to 4500lbs. Battery no included. P/N 13-04513 ..... **$1,543.00**

NOSE PICKER HEAVY DUTY AIRCRAFT TUG



Recommended for up to a 4,000 pound aircraft. Entire chassis can be raised or lowered, and three different sized front wheels can be used to create exact measurements for aircraft. The 24-volt, ships assembled inside a wooden crate, Batteries not included.

P/N 13-21166..... **$2,150.00**

PS

REDLINE TOW BARS



Sidewinder attached securely to the front wheel.



Sidewinder extended.



Sidewinder collapsed.

REDLINE SIDEWINDER POWER DRIVER

Powerful and portable, the Sidewinder will forever change the way you move your aircraft. Powered by Milwaukee's top of the line 28V power unit with a long-lasting, lithium ion battery pack, Sidewinder weighs less than 22 pounds, collapses to 27" and stows easily in your baggage compartment. Made in the USA using 4130 Chromoly material. Comes with battery and charger.

Beechcraft bar fits: Bonanza, Baron, Travel Air, T-34
Cessna single engine bar fits: 172RG, 177RG, 182RG, 210, P210
15 inch Extension Tube is required on all models **except** 177RG
Cessna twin engine bar fits: C-310, C-320, C-340, C-414, C-421
Piper bar models: Arrow, Lance, Saratoga (RG), Malibu, Matrix, Meridian, Seminole. * Malibu and Matrix models require use of the 15 inch Extension Tube. * Meridian requires the 30" Extension Tube.
Mooney bar fits: All Mooney Models
Eclipse bar fits: All Eclipse Models 15 inch Extension Tube is required.

Sidewinder Application	Part No.	Price
Beechcraft	13-06838	**$1,675.00**
Cessna Single Engine	13-06855	**$1,675.00**
Cessna Twin Engine	13-06857	**$1,675.00**
Piper	13-06859	**$1,675.00**
Mooney	13-06860	**$1,675.00**
Eclipse	13-06861	**$1,675.00**
Cirrus	13-06862	**$1,675.00**
Rockwell 112/114	13-06863	**$1,923.00**
15" Extension Tube	13-06856	**$139.95**
30" Extension Tube	13-06858	**$139.95**
Sidewinder Carry Bag	13-06839	**$55.75**
Sidewinder Replacement Battery	13-06840	**$189.95**

REDLINE BE-3/BE-3XL TOWBARS



BE-3: 2-piece design for hand or powered use. Extends to 43.5", collapses to 24.5" and weighs 4 pounds. For attachment to a golf cart, tractor or other powered vehicle, please use the S-3 Vehicle Adaptor. Made in the USA using 4130 Chromoly material.

BE-3XL: 2-piece design for hand or powered use. For attachment to a golf cart, tractor or other powered vehicle, please use the S-3 Vehicle Adaptor. Made in the USA using 4130 Chromoly material.

Application	Part No.	Price
BE-3 **Beechcraft** - Fits Bonanza, Baron, Travel Air, T-34	13-06841	**$294.00**
BE-3XL **Cessna** - Fits 172RG, 177RG, 182RG, 210, P210	13-06843	**$294.00**
BE-3XL **Mooney** - Fits All	13-06846	**$294.00**
BE-3 **Piper** - Fits Arrow, Lance, Saratoga (RG)	13-06844	**$294.00**
BE-3XL **Piper** - Fits Arrow, Lance, Saratoga (RG), Malibu, Matrix	13-06845	**$294.00**

REDLINE BE-4 TOWBARS



2-piece design for hand or powered use for heavier airplanes. Extends to 61.5" and collapses to 33" and weighs 5 pounds. For attachment to a golf cart, tractor or other powered vehicle, please use the ST-1 Vehicle Adaptor. Made in the USA using 4130 Chromoly material.

Application	Part No.	Price
BE-4 **Beechcraft** - Fits Bonanza, Baron, Travel Air, T-34, Duchess	13-06849	**$389.00**
BE-4 **Piper** - Arrow, Lance, Saratoga (RG), Malibu, Matrix, Meridian, Seminole.	13-06851	**$389.00**
BE-4 **Eclipse** - Fits All	13-06852	**$389.95**
ST-1 Vehicle Adapter	13-04066	**$59.50**

REDLINE ST-1 TOWBARS



If you own models 33, 35 or 55, the ST-1 is the least expensive, most versatile option for hand or vehicle towing. With an overall length of 38.5" and 3 pound 8 ounce weight, it fits neatly on the floor of your baggage compartment. This is our recommended tow bar for the STIFFY. For attachment to a golf cart, tractor or other powered vehicle, please use the ST-1 Vehicle Adaptor. Length is 38.5" and weighs 3 pounds 8 ounces. Made in the USA using 4130 Chromoly material. **FITS THESE BEECHCRAFT MODELS:** Bonanza, Baron, Travel Air, T-34 P/N 13-06848 ..... **$209.00**
ST-1 Vehicle Adapter..... P/N 13-04066 ..... **$59.50**

REDLINE PH-1 FOR ECLIPSE



Main gear axle adapter allow the use of floor jack or bottle jack for tire maintenance. Made in the USA using 4130 Chromoly material. ***FITS ALL ECLIPSE AIRCRAFT.***
P/N 13-06853 ..... **$349.00**

REDLINE UL/UL-XT TOWBARS



UL: Very light weight, 2-piece design for hand towing only. Extends to 43.5" and stows to 25.5" and weighs 3 pounds 4 ounces. Made in the USA using 4130 Chromoly material.

U.L- XL: CESSNA Very light weight, 2-piece design for hand towing only. Extends to 48.5", collapses to 31.5" and weighs 3 pounds 6 ounces. Made in the USA using 4130 Chromoly material.

U.L. XL: MOONEY 2-piece design for hand or powered use for heavier airplanes. Extends to 61.5" and collapses to 33" and weighs 5 pounds. Made in the USA using 4130 Chromoly material.

Application	Part No.	Price
UL - **Beechcraft** - Fits Bonanza, Bonanza, Baron, Travel Air, T-34	13-01914	**$209.00**
UL-XT - **Cessna** - Fits 172RG, 177RG, 182RG, 210, P210	13-01917	**$210.00**
UL-XT **Mooney** - Fits All	13-06847	**$209.00**
UL - **Piper** - Fits Arrow, Lance, Saratoga (RG).	13-01915	**$195.85**

REDLINE STIFFY



A 1-pound, spring-loaded, reversable-ratcheting mechanism that greatly increases the "leverage" available to help move your plane. Must be used with either the ST-1 or BE-3 Towbar, purchased separately. Made in the USA using 4130 Chromoly material.

Application	Part No.	Price
Beechcraft - Bonanza, Baron, Travel Air, T-34	13-04064	**$225.00**

REDLINE WEDGE-LOC LINK



Provides a solid "link" between your airplane and other brands of tow bars or power tugs that were designed to connect to either your axle or tow pins. With the WLL, nothing touches any exterior surface of your plane -- the result is no scratching or other damage! Made in the USA using 4130 Chromoly material.
FITS THESE BEECHCRAFT MODELS: Bonanza, Baron, Travel Air, T-34 P/N 13-01913 ..... **$249.95**

REDLINE SLIDER FOR ECLIPSE



The Slider adapter inserts into the front axle and tightens securily. It provides a short "stub" on each side for any universal type tow bar attachment. With the Slider in place, nothing touches any exterior surface of the nose gear, avoiding scratching and other damage. Made in the USA using 4130 Chromoly material. ***FITS ALL ECLIPSE AIRCRAFT.*** P/N 13-06854 ..... **$149.00**

PS

Prices Subject to Change Without Notice

AIRCRAFT TUGS

TRACE TOWBOTS REMOTE CONTROL AIRCRAFT TUG



The iTowBot's loading sequence is as easy as driving the unit directly under the nosewheel of your aircraft. It is engineered so that when the aircraft loads, the weight of the loaded aircraft does not inhibit its zero-turn capability. This allows the operator to articulate the aircraft in a manner that places it ahead of all other towing equipment. Releasing the aircraft is just as easy. A foot-operated release allows the operator to unlock the swivel carriage and merely back out from beneath the nosewheel. Can tow in any direction, allowing the user to position aircraft in close quarters with ease. It has the ability to rotate the aircraft inside of its own wingspan. The powerful 24VDC motors are regulated for smooth starts and stops while delivering the power you need to put your aircraft asset out on the ramp or back in the hangar. Specifically designed to provide adequate distance for the operator to tow an aircraft while stepping back to visually clear the areas around the aircraft.

Specifications: * Measures 38" Wide x 46" Long x 12" High * Powerful Reversible 24 Volt DC Motors * Rugged Steel Construction * Powder-Coated Frame * Virtually Zero Maintenance * Easy Ergonomic Remote Control Handset * Max Towing Speed 1.7 Feet Per Second * Overvoltage Thermally Protected * Tows Aircraft up to 15,000+ Pounds Gross Weight * Trouble Free Cast Iron Rims with Non-Marking Moldon * Solid State Heavy Duty Fully Articulating Motor Control Wheels * Hybrid Zero Turn Capability about Stationary Nosewheel * Equipped with Solid State Battery Charger/Maintainer * Also available with built-in 24V Auxiliary Power Plug (APU) & Power Cord

Descriptions	Part No.	Price
Standard Model (No APU) Up to 15,000 lbs.	13-05252	**$8,295.00**
Standard Model (With APU) Up to 15,000 lbs	13-05253	**$9,785.00**
Heavy Duty - Incorporates Gear Reduction and is 36V (No APU) up to 30,000 Lbs.	13-05734	**$10,800.00**
Heavy Duty - Incorporates Gear Reduction and is 36V (With APU) up to 30,000 Lbs.	13-05735	**$12,300.00**

PRICELESS TRANSAXLE BATTERY OPERATED TUG



Easily move small aircraft quickly and safely in tight areas. The model 701 is collapsible for compact stowing. Optional ball hitch attachment for movement of small trailers and campers. **Model 701 -** Move aircraft weighing up to 4,500 lbs. Max Tow. Tug performance data based on level, smooth, paved surfaces. **Features**: • 400W effective power • 24 V DC Electric motor • Operator can easily control steering • Rocker switch for forward/reverse • Adjustable speed • Virtually silent when moving • Environmentally friendly - no exhaust • Average battery life: 3 hr • Dual Battery Pack - 24v system • Easily remove 24v battery • Collapsible design • Easy adjust handle for user comfort • Universal adaptor attachment for quick tool-free connection to a wide range of aircraft. P/N 11-10807 ..... **$2,748.00**

PRICELESS TRANSAXLE GAS OPERATED TUG



Designed and built to save time and money for FBOs, Maintenance Shops, Corporate aviation or anyone needing to move aircraft. The 707 Tug makes it easy for one person to maneuver aircraft quickly and safely in tightly stacked hangars or staging on the ramp. **Model 707 -** Move aircraft weighing up to 9,500 lbs. Max Tow. Tug performance data based on level, smooth, paved surfaces. Features: • 340cc Honda OHV Engine - EPA approved • Gasoline (87-100LL) • Electric start • Heavy-Duty transmission • Disc brake • High-floatation pneumatic drive tires • Lazy Susan • Quick-Lock strap to secure nosewheel • Headlight.

P/N 11-10808 ..... **$6,795.00**

See www.aircraftspruce.com for Aircraft Application Charts



TUGMAXXE®SM 2.0 TWIN ENGINE AIRCRAFT TUG

Small, versatile, powerful, and reliable. Applicable for large single engine and twin-engine aircraft up to 8,800 lbs (2t) MOTW. Powerful high-torque rotary drive 24V 500W DC effective power electric motor resourcefully applied. Allows noiseless silent maneuvering and movement of single-and small twin-engine aircraft up to max 8,800 lbs (4t) quickly and safely in tight areas. Environmentally friendly - no exhaust. P/N 13-18770 ..... **$2,755.00**



TUGMAXXE®SM2.2 HELICOPTER TUG

Small, powerful, and reliable. Especially designed for Robinson Helicopters (R22, R44, and R66). Powerful high-torque rotary drive 24V 500W DC effective power electric motor resourcefully applied. Allows noiseless silent maneuvering and movement of Robinson helicopter rotary aircraft up to max 8,800 lbs (4t) quickly and safely in tight areas. Environmentally friendly - no exhaust. P/N 13-18771 ..... **$3,395.00**

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TUGMAXXE® ACCESSORIES

Description	Partt No.	Price
Tugmaxxe® 2 Light Aircraft Adapter Diamond DA42	13-20669	**$149.00**
Tugmaxxe® 2 Light Aircraft Adapter Diamond DA40	13-20670	**$149.00**
Tugmaxxe® 2 Light Aircraft Adapter Beech Bonanza B33 to B36	13-20671	**$149.00**
Tugmaxxe® 2 Light Aircraft Adapter Socata TB20 and TB21	13-20672	**$149.00**
Tugmaxxe® Power Outlet	13-20674	**$119.00**
Tugmaxxe® Three-Axis Tiller Control Handle	13-20673	**$559.00**
Tugmaxxe® Heavy Duty All Terrain Tires	13-20675	**$242.00**
Tugmaxxe® Snow Chains	13-20676	**$290.00**

PRICELESS AIRCRAFT TUGS



PRICELESS UTILITY 701D TUG

Easily move equipment quickly and safely in tight areas. The model 701D is collapsible for compact stowing. 4500lb Capacity.
P/N 11-15533 ..... **$2,995.00**



PRICELESS 701E MGTOW TUG

Easily move small aircraft quickly and safely in tight areas. The model 701E is collapsible for compact stowing. The articulating swivel attachment makes it easy to maneuver without having to pick up the unit. The model 701EL is equipped with an extra-heavy-duty battery for longer life. 4500lb Capacity.
P/N 11-15532 ..... **$3,245.00**



PRICELESS HELICOPTER 701HB TUG

Moves Robinson R22 & R44 Helicopters. The model 701HB tug, developed with the same technology used for the fixed wing market, is for easier transportation of a Robinson helicopter in hangars and air fields. As the industry has come to expect, the engineers have added many user-friendly features not found on today's market. The model 701HBL is equipped with an extra-heavy-duty battery for longer life. 4500lb Capacity.
P/N 11-15534 ..... **$4,995.00**



PRICELESS LAZYSUSAN 709 TUG

Designed and built to save time and money for FBOs, Maintenance Shops, Corporate aviation or anyone needing to move aircraft. The 709 LazySusan Tug makes it easy for one person to manuever aircraft quickly and safely in tightly stacked hangars or staging on the ramp. 12500lb Capacity.
P/N 11-15535 ..... **$7,295.00**



PRICELESS LAZYSUSAN HELICOPTER 709H TUG

Designed and built to save time and money for FBOs, Maintenance Shops, Corporate aviation or anyone needing to move aircraft. The 709H LazySusan Tug was designed specifically for low profile helicopters and other aircraft to make it easy for one person to maneuver aircraft quickly and safely in tightly stacked hangars or staging on the ramp. 12500lb Capacity
P/N 11-15536 ..... **$7,995.00**

PRICELESS CLAMP AND LIFT 717 TUG



Designed and built to save time and money for FBOs, Maintenance Shops, Corporate aviation or anyone needing to move aircraft. The 717 Clamp&Lift™ Tug makes it easy for one person to maneuver aircraft quickly and safely in tightly stacked hangars or staging on the ramp. 15500lb Capacity.
P/N 11-15538 ..... **$10,995.00**

PRICELESS CLAMP AND LIFT 737C TUG



Designed and built to save time and money for FBOs, Maintenance Shops, Corporate aviation or anyone needing to move aircraft. The 737 Clamp&Lift™ Tug makes it easy for one person to maneuver aircraft quickly and safely in tightly stacked hangars or staging on the ramp. 15500lb Capacity.
P/N 11-15539..... **$11,995.00**



PRICELESS CLAMP AND LIFT 737P TUG

Designed and built to save time and money for FBOs, Maintenance Shops, Corporate aviation or anyone needing to move aircraft. The 737 Clamp&Lift™ Tug makes it easy for one person to maneuver aircraft quickly and safely in tightly stacked hangars or staging on the ramp. 15500lb Capacity.
P/N 11-15540 ..... **$11,995.00**



PRICELESS PAN STYLE LIFT 747C TUG

Gas powered aircraft mover designed to move corporate jets, helicopters and transports for thousands of dollars less than the nearest competitor! The 757 Tug makes it easy for one person to maneuver aircraft quickly and safely in tightly stacked hangars or staging on the ramp. 15500lb Capacity.
P/N 11-15542 ..... **$17,995.00**



PRICELESS PAN STYLE LIFT 747C TUG

Designed and built to save time and money for FBOs, Maintenance Shops, Corporate aviation or anyone needing to move aircraft. The 747B Tug makes it easy for one person to maneuver aircraft quickly and safely in tightly stacked hangars or staging on the ramp. 15500lb Capacity.
P/N 11-15541 ..... **$24,995.00**

PRICELESS PAN STYLE LIFT 757BFBO-NJ TUG EXTENDED



Gas powered aircraft mover designed to move corporate jets, helicopters and transports for thousands of dollars less than the nearest competitor! The 757FBO-NJ Tug makes it easy for one person to maneuver aircraft quickly and safely in tightly stacked hangars or staging on the ramp. 35500lb Capacity.
P/N 11-15544 ..... **$27,395.00**

PRICELESS PAN STYLE LIFT 757BFBO TUG EXTENDED



Gas powered aircraft mover designed to move corporate jets, helicopters and transports for thousands of dollars less than the nearest competitor! The 757BFBO Tug makes it easy for one person to maneuver aircraft quickly and safely in tightly stacked hangars or staging on the ramp. All units have mechanical and electrical tug component warranties. 35500lb Capacity.
P/N 11-15543 ..... **$31,875.00**

PS

VISIT OUR WEBSITE FOR FEATURES & SPECIFICATIONS

AIRTUG® 6-S GAS POWERED



The AIRTUG Model 6-S model is extremely easy to use because of its' unique "Throttle Grip Control" system utilizing a hydrostatic transmission as the heart of the Airtug, a heavy duty variable speed , 6 horsepower gas engine. They guarantee your safety with their "Return to Brake" feature that absolutely prevents any unintentional movement of the plane when the throttle grip is released. There is no metal to metal contact, no gears to shift and no jerky clutching systems to quickly wear out. Finally, its' pinpoint handling makes this unit a great choice. All of these features simply make this aircraft tug the best in the industry! **Features**: • Loading System: Winch Strap/ Strut Strap with Accessory options • Parts Warranty: 1 Year • Tow Weight: Up to 8,100 lbs. • Turning Radius: 360° with handle-mounted Caster • Construction Details **Specifications:** • 11 Gauge Heavy Steel Frame • Hydrostatic Transaxle 16"x 6" - 6 ply on 8" Drive Wheels • Drive wheels capable of handling nosewheel weights up to 2000 lbs. • Welded load platform mounted between the drive wheels for added traction.

P/N 13-07284 .....**$3,595.00**

AIRTUG® 6-H GAS POWERED



The 6-H aircraft tug model is the tug of choice for those who need to lower the tail to enter a hangar, and might also need to handle nose-wheel fairing aircraft. The nose-wheel is loaded the same as the Model 6-H, and then it can be raised by a hydraulic jack up as much as needed to a maximum of roughly 9'', thus lowering the tail by approximately double this amount. Additionally, it is easy to use because of its' unique "Throttle Grip Control" system utilizing a hydrostatic transmission and a 6HP variable speed gasoline engine. They guarantee your safety with their "Return to Brake" feature that absolutely prevents any unintentional movement of the plane when the throttle grip is released. There is no metal to metal contact, no gears to shift and no jerky clutching systems to quickly wear out. Finally, its' pinpoint handling makes this unit a great choice. **Features**: • Loading System: Hydraulic Lift Shoe with Winch Strap/ Strut Strap • Parts Warranty: 1 Year • Type of Starter: Recoil • Engine: Four Stroke 6-HP • Tow Weight: Up to 8,100 lbs. • Turning Radius: 360 degree **Specifications**: • 2 Ton Hydraulic Jack for Lift Shoe • 11 Gauge Heavy Steel Frame • Hydrostatic Transaxle • 16"x 6" - 6 ply on 8" Drive Wheels • Drive Wheels Capable of Handling Nosewheel Weights up to 2000 lbs. • Low Profile unit for avoiding low aircraft hulls and flight controls with low axle and optional 13" Drive Wheels.

P/N 13-07285 .....**$3,795.00**

AIRTUG® 10-S GAS POWERED



Extremely easy to use because of its' unique "Throttle Grip Control" system utilizing a hydrostatic transmission as the heart of the Airtug, a heavy duty variable speed gas engine, with a built in electric starter. They garantee your safety with their "Return to Brake" feature that absolutely prevents any unintentional movement of the plane when the throttle grip is released. There is no metal to metal contact, no gears to shift and no jerky clutching systems to quickly wear out. Finally, its' pinpoint handling makes this unit a great choice. A light is built in for ease of seeing under the fuselage at night. **Features**: • Loading System: Winch Strap/ Strut Strap with Accessory options • Parts Warranty: 1 Year • Engine: Heavy Duty 10hp electric and recoil start • Tow Weight: Up to 16,000 lbs. • Turning Radius: 360° with handle-mounted Caster. Specifications: • 11 Gauge Heavy Steel Frame • Hydrostatic Transaxle • 16"x 6" - 6 ply on 8" Drive Wheels • Drive wheels capable of handling nosewheel weights up to 2000 lbs. • Welded load platform mounted between the drive wheels for added traction.

P/N 13-07288 .....**$4,595.00**

AIRTUG® 10-H GAS POWERED



The 10-H aircraft tug model is the tug of choice for those who need to lower the tail to enter a hangar, and might also need to handle nose-wheel fairing aircraft. The nose-wheel can be raised by a hydraulic jack up as much as needed to a maximum of roughly 9'', thus lowering the tail by approximately double this amount. Additionally, it is easy to use because of its' unique "Throttle Grip Control" system utilizing a hydrostatic transmission, electric starter and a heavy duty variable speed gasoline engine. They guarantee your safety with their "Return to Brake" feature that absolutely prevents any unintentional movement of the plane when the throttle grip is released. There is no metal to metal contact, no gears to shift and no jerky clutching systems to quickly wear out. A light is built in to ease seeing under the fuselage at night. **Features**: • Loading System: Hydraulic Lift Shoe with Winch Strap/ Strut Strap • Parts Warranty: 1 Year • Type of Starter: Electric • Engine: Four Stroke 10-HP or greater, electric or recoil start • Tow Weight: Up to 16,000 lbs. • Turning Radius: 360 Degree **Specifications**: • 2 Ton Hydraulic Jack for Lift Shoe• 11 Gauge Heavy Steel Frame • Hydrostatic Transaxle • 16"x 6" - 6 ply on 8" Drive Wheels • Drive Wheels Capable of Handling Nosewheel Weights up to 2000 lbs. • Low Profile unit for avoiding low aircraft hulls and flight controls with low axle and optional 13" Drive Wheels

P/N 13-07289.....**$4,795.00**

AIRTUG® EL3-S ELECTRIC POWERED



Same great power and moving capacity as the larger gas powered unit, but in a QUIET electric model! Extremely easy to use because of its' unique "Throttle Grip Control" system utilizing a Hydrostatic Transmission, Heavy Duty Electric Motor, powerful Batteries, and built-in Battery Charger. They guarantee your safety with their "Return to Brake" feature that absolutely prevents any unintentional movement of the plane when the throttle grip is released. There is no metal to metal contact, no gears to shift and no jerky clutching systems to quickly wear out. Finally, its' pinpoint handling combining twist grip control with a large, handle-mounted Caster makes this walk-behind Airtug a great choice. A light is also built in for ease of of seeing under the fuselage at night. **Features**: • Loading System: Winch Strap/Strut Strap with Accessories • Parts Warranty: 1 Year • Engine: Heavy Duty 3HP Permanent Magnet Motor • Tow Weight: Up to 16,000 lbs. • Turning Radius: 360 Degree **Specifications**: • 11 Gauge Heavy Steel Frame • Hydrostatic Transaxle • 16"x 6" - 6 ply on 8" Drive Wheels • Drive wheels capable of handling nosewheel weights up to 2000 lbs. • Low Profile unit for lower axle clearances and 13" Drive Tires optionP/N 13-07286.....**$5,395.00**

AIRTUG® EL3-H ELECTRIC POWERED



Same great power and moving capacity as the larger gas powered unit, but in an electric model! The choice for those who need to lower the tail to enter a hangar, and might also need to handle nose-wheel fairing aircraft. The nose-wheel can be raised by a hydraulic jack up to a max. of 9". It is easy to use because of its' unique "Throttle Grip Control" system. They guarantee your safety with their "Return to Brake" feature that absolutely prevents any unintentional movement of the plane when the throttle grip is released. There is no metal to metal contact, no gears to shift and no jerky clutching systems to quickly wear out. A light is also built in for ease of seeing under the fuselage at night. **Features**: • Loading System: Hydraulic Lift Shoe with Winch Strap/ Strut Strap • Parts Warranty: 1 Year • Engine: Heavy duty 3HP Permanant Magnet Motor • Tow Weight: Up to 16,000 lbs. • Turning Radius: 360 Degree. **Specifications**: 2 Ton Hydraulic Jack for Lift Shoe • 11 Gauge Heavy Steel Frame • Hydrostatic Transaxle • 16"x 6" - 6 ply on 8" Drive Wheels • Drive Wheels Capable of Handling Nosewheel Weights up to 2000 lbs.

P/N 13-07287.....**$5,495.00**

AIRTUG NFE-4 ELECTRIC FOR CIRRUS



Moves the CIRRUS Aircraft and other castering nose-wheel aircraft easily and makes moving the aircraft a simple task for a single person!

The BEST TUG for CIRRUS aircraft or any other castering or non-castering nose- fairing aircraft. Simply attach the small towbar by hand to the aircraft and then winch the tow-bar / nose-wheel onto the raised platform for total control by the tug. Much easier to hookup and control the aircraft than a single wheel tug that is not able to lift the nose wheel off the ground. Can move most nose-fairing aircraft including the Diamond and other aircraft weighing less than 4,000 lbs. Easy to Use and Economical with pin point handling allowing the operator to pivot as tight as desired as a result of the transmission Differential. 24 Volt Electric motor so no need to worry about gas going bad

Twist grip for infinite speed control forward and reverse with no gears to shift and no jerky clutching system. Reduces repair cost from accidents that result from moving aircraft while not having good control and good visibility and knowledgeable help. Assembles in minutes. Powder coated Frame & Handle. Dimensions: 85" long x 36" wide x 42" tall. 1 Year Warranty. 30 Day Money Back Guarantee!

P/N 13-14974 .....**$3,759.00**

ADDITIONAL ADAPTERS

Description	Part	Price
Airtug Nfe-4 Cirrus Adapter	13-14975	**$285.00**
Airtug Nfe-4 Diamond Da20 Adapter	13-14976	**$285.00**
Airtug Nfe-4 Diamond Da40 Adapter	13-14977	**$285.00**

PS

TIE-DOWNS

FLY TIES TIE DOWNS



FlyTies Tie Downs Rated "Top Choice" by Aviation Consumer

FlyTies® unique design allows quick insertion and quick removal using the easy-out extraction tool provided. Rugged, die-cast steel rods are 3/8" x 14" for deeper penetration into harder ground. Cumulative load capacity is 3,600 lbs. Kit includes 3 eas. Delrin hubs, 9 eas. steel rods, 3 ea. 3/8" x 12 ' ropes, easy-out extraction tool, and rugged compact canvas tote bag. Complete kit weighs only 6 lbs. (less than 1 gal of Avgas) and has a lifetime warranty.

P/N 13-22751 .....**$98.85**

TIE-DOWN EYE BOLT



For non-structual applications. The 7/16" dia. threaded shaft is 7/8" long. Hole is 5/8" dia. Overall length 2-1/2". Furnished with AN365-720 elastic stop nut and wide-area AN970-7 washer

P/N 13-04303 ..... **$9.75**

AIRCRAFT TIE-DOWNS



These Aircraft Tie-Downs offer strong, durable, and easy to use tie downs for any weather condition. These tie downs are rated up to 3,000lbs. and tighten up with one quick pull. A sliding cap protects the buckle from freezing during cold weather and keeps grit out during windy field conditions. Each kit comes with: * Three 9 foot long tie down straps * Choice of tie down strap colors: black, red, or royal blue * A Dupont Cordura carrying bag with choice of colors; black, forest green, red, royal blue or navy. Embroidery is available for an additional $5. Color is Red. P/N 13-06328.....**$67.75**

TAIL TIE DOWN GUARD 162TG



Fits Cessna 162 And Other Light Aircraft.

P/N 05-08294 ..... **$131.95**

AIRCRAFT TIE-DOWN WITH EMBROIDERY



Aircraft Tie-Down offer strong, durable, and easy to use tie down for any weather condition. Rated up to 3,000lbs. and tighten up with one quick pull. A sliding cap protects the buckle from freezing during cold weather and keeps grit out during windy field conditions. Kit Contains: A Dupont Cordura matching carrying bag. Specifications: • Strap Color: Red • Embroidery Color: White.

P/N 13-12672 .....**$85.75**

SHOCKSTRAP™



ShockStraps™ are a unique shock absorbing tie down that incorporates three of the most versatile tie down principals into one superior system. It is quick and easy like a motorcycle tie down, has the reliability of a ratchet system , and versatility of a shock cord. ShockStrap™ stretches acting like a shock absorber and contracts with the load keeping it secure.

6' Red Single Strap	P/N 13-18502.....	**$19.95**
6' Red Double Strap	P/N 13-18501.....	**$39.95**
7' Black Single Strap	P/N 13-20707.....	**$32.99**
7' Black Double Strap.....	P/N 13-20706.....	**$64.99**
10' Red Single Strap	P/N 13-18504.....	**$23.95**
10' Red Double Strap	P/N 13-18503.....	**$43.75**
15' Red Single Strap	P/N 13-20709.....	**$37.99**
15' Red Double Strap	P/N 13-20708.....	**$74.99**

TIE DOWN STRAPS



MEDIUM STRAP KIT - 1500 lb. universal, 14 foot tie-down straps with 3000 lb. spring clip climbing type carabiners and 3000 lb. ground stakes.

P/N 13-11228 ..... **$173.75**

LARGE STRAP KIT - 3000 lb. universal, 14 foot tie-down straps with 3000 lb. spring clip climbing type carabiners and 3000 lb. ground stakes..... P/N 13-11229 ..... **$199.75**

HEAVY STRAP KIT - 5000 lb. universal, 14 foot tie-down straps with 5000 lb. spring clip climbing type carabiners and 5000 lb. ground stakes ..... P/N 13-11230 ..... **$214.95**

16" CORKSCREW TIEDOWN KIT



A versatile, general-purpose spiral anchor made from cold, rolled steel. Design for lightweight applications. Folding ring reduces profile to minimize obstruction in high traffic areas. Bright orange color powder coating resists corrosion and helps provide added visibility. Use to secure small tents, trees, recreational use and patio furniture. **Features**: • High pull force performance; 500 pounds per anchor (results may vary dependent on soil types) • Installs in most soils in minutes • Lightweight, individual weight of 1 lb 13 oz. or 5 lbs. 7 oz. per kit • This kit includes: three 16" corkscrew tiedown anchor, one 3/8" nylon tiedown rope, and one tiedown bag - all complete with a manual including installation instructions! P/N 13-09652 ..... **$56.50**

PIPER/BEECH TIE DOWN RINGS



45° Angled Stainless Steel Tie-Down Rings Gold Titanium Nitrite Coat Stainless Safe to 230 mph Wind. Also 45° Angled Aircraft Aluminum Tie-Down Rings. With Stainless Strike Plate: 6 X Stronger than OEM. Also offered in Nickel Plated Aircraft Aluminum (+Great for Fueling Ground). Nickel Plated with White Powder Coat (190+MPH Wind Speeds). Parts Look Streamline and Attractive. FAA-PMA Certified- Directly Interchangeable with all OEM Parts. Sold as Pair.

Description	Part No.	Price
Piper Tie Down Rings - aluminum painted - white	13-11221	**$198.00**
Piper Tie Down Rings - aluminum plated - white	13-11220	**$198.00**
Piper Tie Down Rings - buffed stainless	13-11996	**$198.00**
Piper Tie Down Rings - stainless - gold	13-17626	**$236.95**
Beech Tie Down Rings plated - white	13-11222	**$198.00**
Beech Tie Down Rings painted - white	13-11223	**$198.00**
Beech Tie Down Rings stainless steel	13-11994	**$198.00**
Beech Stainless Steel Tie Down Rings - gold	13-17628	**$236.95**

PIPER/BEECH SKID & STRIKE PLATES



45° Angled Stainless Steel Tie-Down Skids. Gold Titanium Nitrite Coat Stainless Safe to 230 mph Wind. Also 45° Angled Aircraft Aluminum Tie-Down Skids. With Stainless Strike Plate: 6 X Stronger than OEM. Also offered in Nickel Plated Aircraft Aluminum (+Great for Fueling Ground). Nickel Plated with White Powder Coat (190+MPH Wind Speeds). Parts Look Streamline and Attractive. FAA-PMA Certified- Directly Interchangeable with all OEM Parts. Sold as Pair.

Description	Part No.	Price
Piper Tail Skid - aluminum w/Stainless Steel plate painted - white	13-11225	**$198.00**
Piper Tail Skid - aluminum w/Stainless Steel plate plated - white	13-11224	**$198.00**
Piper Tail Skid - aluminum w/Stainless Steel plate - gold	13-17627	**$236.95**
Beech Stainless Steel Tail Skid & Strike Plate painted - white	13-11227	**$198.00**
Beech Stainless Skid (no plate necessary)	13-11995	**$198.00**
Beech Stainless Skid - gold (no plate necessary)	13-17629	**$236.95**
Beech Stainless Steel Tail Skid & Strike Plate - buffed & plated	13-11226	**$198.00**

HOOK-N-PULL TIE DOWNS

Tie-down bar is guaranteed for 10 years under normal use.

When making your own length of tie-downs, add at least 30" for rope reversal and knots.



Hook-N-Pull Tie downs feature closed end "s" hooks made from high quality steel with heavy plating, and tie down bards are made from high grade aluminum, hardened for strength and ball burnished and anodized. Furnished with 3/8" diameter nylon rope.

High wing

P/N 13-00448 ..... **$24.75**

Low wing or tail

P/N 13-00449 ..... **$23.50**

AEROSPOILER KIT, AEROSPOILER EXTENSION KIT



Kit contains 10 cup/receiver assemblies and 8 30"X3" inch blade assemblies. Each kit contains 20' of wing coverage. The AeroSpoiler will reduce the lift producing capability of your aircraft wing by as much as 96% on the area of wing covered by the Spoiler. Extension kits are available for aircraft requiring more than 20' of wing coverage.

Aero Spoiler Kit ..... P/N 13-06505.....**$179.00**

Extension Kit ..... P/N -13-06506.....**$99.00**

PS

TIE-DOWNS

"THE CLAW" TIE-DOWN SYSTEM



Features: Easy installation...Easy removal. No more struggling with screw-in anchors The "Claw®" is designed exclusively for aircraft. The "Claw®" system has a 3600 lb. combined capacity. The last tie down you will ever have to buy - Lifetime Warranty, Tremendous holding strength. The harder you pull, the more The "Claw®" grips. Ideal for all aircraft, Works in hard clay, sandy soil or anything in between Large foot print spreads the load over a larger area for maximum holding power, Low profile will not puncture tires, Complete System weighs only 8 lbs (Including Hammer), Light-weight aircraft aluminum with hardened corrosion resistant die cast zinc plated steel spikes 25 ft 3/8" dia. solid braid polyester rope, Anchoring System hammer doubles as removal tool The "Claw®" includes: Bag that is easy to carry and store that contains: 3 Anchors; 9 spikes; 1 hammer; 25-ft rope Wt: 8 lbs. P/N 13-02448.....**$97.00**



JEB'S REMOTE TIE-DOWN KIT

Remote Release System - This new safety device will be appreciated by anyone who hand starts their plane.Release and retrieve without leaving the cockpit - get off to a safe start.

P/N 13-04787.....**$59.95**

BAGGAGE TIE-DOWN



A very strong, light weight, and quick way to secure your baggage. The photo shows two units; One with the clamp/ring installed in the base and one with the clamp/ring removed to show more detail. The unit parts are made of anodized 6061 T-6 aluminum with a stainless ring. 2 rivnuts and 2 countersunk 10-32 cad-plated screws are furnished with each complete unit. Extra bases can be purchased individually, and include rivnuts and screws. Note: Use rivnuts to attach to surfaces with no rear access - simply drill a .25" hole and install rivnut. By installing additional bases you can tailor your baggage tie-down options to suit your current needs. P/N 13-01729.....**$46.50**

E-Z LOCK TIE DOWNS



EZ-Lock Tie Downs allow for simple, one-person tie-down of aircraft, with no knots to tie. Features weather-, oil- and gas-resistant polypropylene rope for long product life. 72" Fully Extended. P/N 13-00159.....**$15.50**

SLIDEDOWN AIRCRAFT TIE DOWN



Made as a "one size fits most aircraft", the SlideDown is easily adjustable to reach most anchor points. Maximum reach on the wings are approximately 100 inches and the maximum reach on the tail is approximately 54 inches. The SlideDown can be shortened to accommodate just about any length. The SlideDown is proudly Made in the USA and available in a variety of colors. Features: Powder Coated Aircraft Grade Aluminum Slide, 7/16" Kernmantle Braided Rope available in a variety of colors, Vinyl Coated Hooks, and a maximum Reach: Wings 100", Tail 54". Sold in sets of 3.

Color	Part No.	Price	Color	Part No.	Price
Orange/Blue	13-14797	**$82.75**	Red/White	13-14804	**$82.75**
Yellow	13-14799	**$82.75**	Red	13-14805	**$82.75**
Green/Blue	13-14801	**$82.75**	Blue/White	13-14806	**$82.75**
Blue	13-14807	**$82.75**	Black	13-14808	**$82.75**

CARAVAN TAIL TIEDOWN HANDLE



Airforms P/N AF2612035-1, Tail tie down handle, rear. Direct replacement for Cessna P/N 2612035-1. Eligible for all S/N aircraft, Cessna models 208 and 208B. FAA PMA Approved. Specifications: • Precision fit – drop in replacement for the original part • Aircraft interface unchanged • Tail stand interface unchanged – works with your existing tail stand • Comes primed and ready for installation • FAA PMA Approved • All S/N aircraft, Cessna models 208 and 208B. P/N 05-12267.....**$445.00**

SMART ANCHOR TIE DOWN SYSTEM



SmartAnchor is an advanced 3-pin anchoring system developed for securing aircraft. It has below features: • Patented design enables it for both vertical pull and 45° pull; • Weight is 8 lbs;• Lifetime Guarantee. Includes: • 3 ea. steel alloy casting anchors; • 9 ea. 1045 hi-carbon steel spikes; the diameter of the spike is 3/8" and length is 12"; • 3 ea. 10-ft in long 3/8" dia diamond braid nylon ropes; • 1 16 oz hammer; • 1 black durable carrying bag. P/N 13-18783.....**$79.95**

RANS TIE DOWN SHACKLE



This stainless steel tiedown shackle will fit any 1 inch wide attach point, but is made special for most RANS aircraft that have RANS aluminum lift struts.The shackle is designed to accept chain or rope without marring the struts.

P/N 13-10435.....**$9.80**



NELSON AIRCRAFT TIE-DOWNS

• Three 15" welded (not bent) steel anchors with sharp tips for easy installation • Three 15' nylon ropes• Cordura, Int'l. Orange, 8"x15" case • Wt: 4 lbs.

P/N 13-00663.....**$78.75**



THE PILOT BUDDY

A pillot actuated safety and restraint system for hand propping and tail tie down.Constructed to meet and exceed the load for purpose of positive restraint. Has a Black Velour storage Pouch (4" x 5"), and a slighty smaller restraint loop ring. The entire device and storage package weighs less than 2 OZ, and fits in the palm of your hand. Both the restraint loop (Left side-4 Yards=12'); and the release lanyard (Right side -6 yards = 18') are constructed of MIL Specification, MIL-C-5040, 750 pound test line. The Swing Latch Shackle release is test certified to 800 pounds tensils strength for operating loads. The Swing Latch mating ring on the Restraint loop (Left Side), is a ring contructed to MIL Specification. MS27762, with a tensile strength of more than 750 pounds. Package comes with instructions, a checklist for use, and other increasing safety materials. P/N 13-04259 .....**$37.50**



NYLON TIE-DOWN ROPE

American-made 100% duPont filament fiber nylon rope. Over twice the strength of manila. Highly resistant to sunlight, rot & mildew. Don't be fooled by foreign imitations.

3/8" Rope (4000 lb. test)

P/N 13-05400..... **$0.28 /Ft.**

1/2" Rope (6250 lb. test)

P/N 13-05500..... **$0.60 /Ft.**

15% Discount on 100 ft.



AIRCRAFT TIE DOWNS

Three 17" x 3/8" plated steel cork screw stakes. Three 10' x 3/8" polypropylene ropes. Cloth draw string bag.

P/N 13-06634 .....**$31.50**



GENUINE VELCRO

5819 Genuine Velcro Two 4 1/2" pressure sensitive hook and loop strips. P/N 13-06404 .....**$2.50**



TRACK CARGO ANCHORS

A series of anchors specially designed for "T" type tracks. FAA-PMA approved to fit most G.A. aircraft seat rails. Quality constructed from solid aluminum alloy anodized per MIL-A-8625 and permanently fitted with a stainless threaded sleeve and welded stainless steel ring with heat treated steel alloy stud.

Aircraft	L	Description	Part No.	Price
Piper	1.5"	T Type Track Cargo Anchor Blue 5501	13-20137	**$89.95**
Cessna	1.5"	T Type Track Cargo Anchor Purple 5502	13-20139	**$89.95**
Cessna	2.5"	HD T Type Track Cargo Anchor Black 5502-1	13-20140	**$89.95**
Beech	1.5"	T Type Track Cargo Anchor Green 5503	13-20141	**$89.95**



TOUGHMAN TIE-DOWN

Incorporates the patent protected Toughman™ Rope Clamp which has only two moving parts and is manufactured from high performance engineered nylon resin. It is very easy to use, extremely lightweight, high strength and permanently corrosion proof. The Toughman™ Tie-Down product package includes one rope clamp, ten or fifteen feet of rope and one corrosion resistant steel hook. Military Tough: The Toughman™ Rope Clamp has undergone rigorous testing by the US Army Soldier Systems Center, "Natick" test labs and has been approved for use on cargo nets and rope support lines on military tents.

3/8" Camo 10'.....P/N 13-05115.....**$11.75**

3/8" Red & Yellow 10'.....P/N 13-06142.....**$11.75**



BIG SCREW EZ TIE DOWN

Big-Screw EZ Tie-Down is an innovative tie down system combining a lightweight 18" cast aluminum ground screw, and a custom aviation designed attachment strap. The 18-inch long cast aluminum screw provides stronger ground holding in all soil types. The screw penetrates deeply into compacted soils resulting in superior holding strength. This exclusive design provides two to three times the holding strength of spike type angled-in tie-downs. Large 1¾" Wide screw provides 80 Square inches of Ground Contact Area, 40 times more than a spike. The screw can be positioned either directly below or set out from aircraft attachments. Quick easy installation and removal using a 1" ratchet, 1" socket, or a portable impact wrench (not included).....P/N 13-21308...**$159.95**

Big Screw Straps (3 each 9 Ft.).....P/N 13-21309.....**$69.95**

PS

CHOCKS

ASA WHEEL CHOCKS



These tire stops are for keeping aircraft securely parked. A pair of black molded plastic wheel stops are connected with 22" bright yellow and black braided nylon rope that won't rot or retain water. The bottom cleats keep aircraft securely parked. Lightweight; 7-3/4" x 2-1/2" x 4-1/2"; concave design fits any aircraft tire. One pair is needed for each wheel.

P/N 13-05752 ..... **$33.50**

FOLD DOWN MINI CHOCKS



These mini chocks are so small and light you can take them with you. They work perfectly on both hard and dirt surfaces. Anodized aluminum, each wheel pair folds down to 3.75"x 2"x.5" & weighs just 4 oz. A 18" lanyard is attached.

P/N 5229 ..... **$17.95**

MOLDED WHEEL CHOCKS



The "Perfect" lightweight orange urethane aircraft wheel chocks. Oil and chemical resistant and connected by a 22-inch nylon rope. Concave design that fits into tire. Larger sizes available.

Orange ..... P/N 13-03550 ..... **$31.85**
Yellow ..... P/N 13-11857 ..... **$44.75**

PARK IT PLATES



Park It Plate™ "Standard Series" Plates are made from 100% HDPE and come in a thickness of 1/4". They are designed to be used on solid, flat surfaces found in hangars, garages, showrooms, and are resistant to most chemicals. They protect your investment in your finished floor coatings from stains and permanent tire marks and will greatly reduce the possibility of paint blistering and delamination. Most importantly, they do all this and make your aircraft, look good at the same time!

24x24..... P/N 13-18429 ..... **$53.95**
30x30..... P/N 13-18430 ..... **$83.95**

HANDY CHOCKS



5904 "Handy Chocks"* Light Weight - 8 oz* Powder Coated Aluminum Chock* 1 Pair per Package

Red ..... P/N 13-06405 ..... **$22.95**
Yellow ..... P/N 13-06406 ..... **$22.95**

SAFE T CHOCKS



"Safe T Chock Line" pull rope is a new patented product invented to prevent injuries while chocking wheels on aircraft, GSE, trucks and trailers. The Safe T Chock Line is a high visibility poly braided rope with a vinyl tube sleeve for a handle that will not freeze or cause rope burns. It is also sleeved to slide thru the center hole in the chock blocks. It can easily be modified to fit almost any type of chock block. This type of chock block pull rope is designed to reduce wrist, hand and finger injuries as well as making it safer to chock and un-chock aircraft and vehicles.

Description	Part Number	Price
Safe T Chock Line 12" Set	05-12011	$29.95
Safe T Chock Line 24" Set	05-12012	$34.75
Safe T Chock Line 36" Set	05-12013	$39.95
Safe T Chock Line 48" Set	05-12014	$43.85

CHOCKERS PROTECTIVE WHEEL COVER/CHOCK



Chockers is a protective wheel cover with built in aluminum chocks. The chocks hold the wheel cover in place as well as chocking the aircraft. Chockers will also work with RVs, boat trailers, and any other type of vehicle.

500x5/600x6..... P/N 13-19776 ..... **$62.95**
700x6/800x6..... P/N 13-19777 ..... **$68.95**

CUSTOM WHEEL CHOCKS FOR LARGE JETS



These custom wheel chocks are lightweight aluminum for large corporate jets. These wheel chocks are carefully fabricated, engraved and then covered with durable powder coating available in grey, black, or orange. In addition to being stylish, these wheel chocks are very durable, long lasting and won't corrode. These are offered as a single pair for nosewheel or as two pair (one for each main wheel). Designed for single main wheel aircraft and are 12" long and made of .25" thick aircraft grade aluminum.

Description	Part No.	Price
Bare Aluminum - 1 Set	13-16051	$99.95
Bare Aluminum - 2 Sets	13-16052	$174.95
Powdercoat Black - 1 Set	13-16053	$149.95
Powdercoat Black - 2 Sets	13-16054	$249.95
Powdercoat Orange - 1 Set	13-16055	$149.95
Powdercoat Orange - 2 Sets	13-16056	$249.95
Powdercoat Grey - 1 Set	13-16057	$149.95
Powdercoat Grey - 2 Sets	13-16058	$249.95

TRAVEL CHOCKS

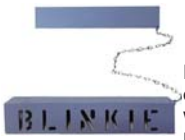


Very light weight wheel chock designed for airplanes and other vehicles. Compact and easily stored. Powder coated in durable red, blue, or yellow finish. Available in 3 sizes.Chock set is for one wheel only. **Small -** 1 1/2" angle x 6" long x 1/8" Thick Heat Treated Alum. **Medium -** 2" x 2" x 8" 1/8 Thick Angle Heat Treated Alum. **Large -** 3 1/2" x 3 1/2" x 8" Heat Treated 3/16" Thick Alum.

Description	Part No.	Price
Sm. Bare Alum.	13-01120-A	$23.50
Sm. Blue	13-01120-B	$23.50
Sm. Red	13-01120-R	$23.50
Sm. Yellow	13-01120-Y	$23.50
Med. Bare Alum.	13-01130-A	$25.50
Med. Blue	13-01130-B	$25.50

Description	Part No.	Price
Med. Red	13-01130-R	$25.50
Med. Yellow	13-01130-Y	$25.50
Lg. Bare Alum.	13-01140-A	$36.60
Lg. Red	13-01140-R	$36.60
Lg. Yellow	13-01140-Y	$36.50

LIGHTWEIGHT CUSTOM ALUMINUM WHEEL CHOCKS



Extremely lightweight compared to chocks made out of steel. Very Durable Powdercoat finish that will withstand the elements. Extremely corrosion resistant. The chocks include a front and rear chock, connected with a lightweight cable. Small Wheel Chocks- 1.5" angle and 8" wide. Available in Black Powdercoat, Orange Powdercoat, and Grey Powdercoat....Weight is only 9oz per pair, or 18oz for complete set of two pair. These wheel chocks are designed for aircraft up to approximately 3,000 lbs. They are low profile and will fit under the wheel pants of aircraft such as RVs.

Large Wheel Chocks- 2.5" angle and 10" wide. Available in Black Powdercoat, Orange Powdercoat, and Grey Powdercoat- 24oz per paid, 48oz for two pair

Description	Part No.	Price
1.5 inch Bare Aluminum - 1 Set	13-13118	$57.75
1.5 inch Bare Aluminum - 2 Sets	13-13120	$105.75
1.5 inch Powdercoated - 1 Set	13-13119	$119.75
1.5 inch Powdercoated - 2 Sets	13-13089	$153.75
2.5 inch Bare Aluminum - 1 Set	13-13121	$84.75
2.5 inch Bare Aluminum - 2 Sets	13-13123	$126.75
2.5 inch Powdercoated - 1 Set	13-13122	$140.75
2.5 inch Powdercoated - 2 Sets	13-13124	$186.75

Specify color for Powdercoated Chocks.

WOOD WHEEL CHOCKS



These chocks feature heavy duty wood construction and are finished in bright safety yellow. Connected with 18" of braided nylon rope.

Attention: Total of charactors may not exceed 6.

Example: (N#) xxxxx - (Text) abcdef

Standard chocks..... P/N 13-01765 ..... **$33.95**
Chocks w/ your N# or company name..... P/N 13-01766 ..... **$51.75**

RUBBER WHEEL CHOCKS



These ribbed rubber wheel chocks measure 4"x4"x8" and have reflective tape on all three sides. Connected with nylon rope. Very popular with corporate operations & FBOs.

P/N 13-01767 ..... **$53.75**

AIRGIZMOS WHEEL CHOCKS



These chocks are unique because they are stackable. Cuts down on the amount of space required to carry them in the plane. Durable plastic sides are lightweight, but are made to take a lot of abuse. There is space on the sides to put your airplane's n-number (you supply the vinyl lettering). The edges of these chocks are made of non-skid material, so they stay where you put them.

P/N 13-04298 ..... **$17.95**

VECTOR CHOCKS



Hangar rash is the leading cause of ground handling insurance claims. Vector Chocks reduces the chance of hangar rash and will save you a considerable amount of money.

Vector Chocks cradle the wheel with their unique ramp design and the energy yellow colored industrial grade safety tape will help guide you from the hangar door to your safe parking place.

Installation is a snap with the peel-n-place feature, which sticks to asphalt as well as concrete.

Vector Chocks come as a complete kit, each kit containing two Vector Chocks and a roll of industrial grade energy yellow safety tape.

P/N 13-11694 ..... **$39.95**

PS

Prices Subject to Change Without Notice

WINDSOCKS

SCOTT'S WINDSOCKS



Scott's windsocks are manufactured of long-life polyester fabric that is treated to resist the effects of wind and weather. All seams are double stitched with polyester thread for strength. The windsock throat is reinforced and has solid brass grommets for easy attachment and corrosion resistance. Nylon ties are included with each windsock to attach it to the frame. Windsocks are available in high visibility orange, white or alternate orange and white stripes. Fully extended at 20 MPH or 15 Knots.

BRIGHT ORANGE

Throat Dia.	Length	Part No.	Price
8"	30 inches	13-04147	**$30.80**
10"	36 inches	13-02026	**$34.80**
13"	55 inches	13-04145	**$38.50**
18"	5 feet	13-20200	**$54.75**
18"	8 feet	13-20202	**$62.75**
24"	8 feet	13-20204	**$79.95**
28"	7 feet	13-20205	**$83.75**
36"	10 feet	13-20206	**$143.75**

INTENSE WHITE

Throat Dia.	Length	Part No.	Price
18"	5 feet	13-20210	**$54.75**
18"	8 feet	13-20212	**$63.85**
24"	8 feet	13-20214	**$81.75**

WHITE/ORANGE STRIPE

Throat Dia.	Length	Part No.	Price
18"	5 feet	13-20220	**$68.80**
18"	8 feet	13-20222	**$79.95**
24"	8 feet	13-20224	**$96.75**
28"	7 feet	13-20225	**$114.85**
36"	10 feet	13-20226	**$156.85**
36"	12 feet	13-20228	**$164.85**

SCOTT'S STANDARD WINDSOCK FRAMES



These very popular frames are constructed of welded steel for strength & durability. They have 2 ball bearings for easy swiveling and are painted for corrosion resistance. The frame is mounted to a 1-inch diameter support pipe threaded to fit a 3/4" size pipe or conduit. Order windsocks separately.

8"..... P/N 13-20229.....**$54.95**
24"..... P/N 13-20232.....**$96.75**
10"..... P/N 13-20005.....**$58.75**
13"..... P/N 13-20231.....**$64.90**
36"..... P/N 13-20235.....**$109.85**
18"..... P/N 13-20230.....**$65.95**

SCOTT'S EXTENDED WINDSOCK FRAMES

The extended frame turns much easier and keeps the windsock headed into the wind like a weathervane. The frame holds the windsock open fully so it will "fly" in lighter winds. Constructed of all welded steel with 2 ball bearings. The frame is mounted to a 1-inch diameter support pipe threaded to fit a 3/4-inch size pipe or conduit. ***ORDER WINDSOCKS SEPARATELY***

18" ..... P/N 13-20244 ..... **$98.75** 24" ..... P/N 13-20245 ....**$129.75**

STANDARD WINDSOCK FRAMES



These windsock frames are perfect for both our "long life" and "extra long-life" series windsocks.

The "Long Life" windsock is made of 100% nylon and is very durable. Even in tough weather conditions, this windsock can hold its own. Order windsocks Separately.

The "Extra Long Life" windsock is a heavy-duty cross-woven Aviation blend Poly. Nylon material with special Rip-Stop characteristics, Medium-weight for more flexibility, chemically resistant treated, and Polyurethane coated for bonding strength and water repellency. Ultra-violet dyed for best retention. Nylon support webbing on intake opening with brass grommets. Colorfast International Bright Orange in color. "Extra Long Life" windsocks have an estimate 50% longer life and color retention.

Size (in)	Part No.	Price
12 x 48	13-04318	**$78.85**
13 x 48	13-04319	**$82.75**
15 x 55	13-04320	**$73.75**

Size (in)	Part No.	Price
18 x 60	13-04326	**$93.75**
20 x 60	13-04327	**$86.75**
24 x 96	13-04328	**$107.75**

MINIATURE 15" WIND SOCK



For home, office, hangar or workshop. The 15" long wind cone of Flame-Orange sailcloth material swivels on 23" high steel shaft. Wind directionals are cast aluminum with flat black finish. Furnished with mounting hardware and instructions.

Complete Kit ..... P/N 13-03747 .... **$59.75**
Replacement Sock..... P/N 13-03748 ..... **$14.50**

27" VINYL WINDSOCK



Features 27" long x 6-1/2" diameter fluorescent orange vinyl sock. Aluminum mast adjusts from 33" to 54" and up to 12 ft. with extension kit. Perfect for private strip, helicopters, or runway threshold.

Complete Windsock w/frame.....P/N 13-20015 ... **$59.95**
Replacement Sock.....P/N 13-20025 ... **$22.85**

8 FOOT VINYL WINDSOCK



18" diameter sock is double stitched, durable, fluorescent orange vinyl coated nylon. Ball bearings let sock turn easily even in light winds. Aluminum frame holds mouth open. Mount on appropriate pipe. Order frame and sock separately

8 Foot sock only....P/N 13-20035 ..... **$64.75**

NYLON WINDSOCKS



These socks are windtunnel tested and designed for conditions in which safety and wind direction are of greatest importance. They are constructed of nylon oxford cloth for strength and flyability and dyed a bright orange for higher visibility. The throat and tail bands are stitched with multiple rows of tough synthetic thread. The throat band is finished with #1 brass grommets and nylon ties are included. Unlike canvas or vinyl, these Socks fly in the slightest breeze.

Part No.	Throat Diameter	Length	Price Each
13-20040	10"	36"	**$32.95**
13-20045	18"	48"	**$41.95**
13-20060	36"	144"	**$152.90**
13-20050	18"	60"	**$53.85**

LONG LIFE WINDSOCKS



All Long Life Windsocks are made of heavy-weight cross-woven Aviation blend material having special Rip-Stop characteristics, flexible, chemically resistant treated, Polyurethane Coated for bonding strength and water repellancy, Ultra-violet dyed, with Nylon Web support and brass grommets. Color: Colorfast International Orange. Estimated 50% longer life and color retention. Aviation sized windsocks. FAA approved sizes per FAA Advisory Circular #AC 150/5345-27C dated 07/85. Estimated wind speeds: Fully extended shape for all sizes listed below, (wind tunnel tested) to be special cut Specification of 15 knots = 16.5 mph. 18" - 28" diameter windsocks 96" in length. 36" diameter 144" in length.

Size (in)	Part No.	Price
6 x 18	13-04306	**$30.50**
9 x 30	13-04307	**$36.50**
10 x 36	13-04308	**$41.75**
12 x 48	13-04309	**$44.90**
13 x 48	13-04314	**$47.75**

Size (in)	Part No.	Price
15 x 55	13-04315	**$48.60**
18 x 60	13-04321	**$56.75**
20 x 60	13-04323	**$56.80**
24 x 96	13-04324	**$99.85**

EXTRA LONG LIFE WINDSOCKS



"Extra Long Life" is a heavy-duty cross-woven Aviation blend Poly./Nylon material with special Rip-Stop characteristics, Medium-weight for more flexibility, chemically resistant treated, and Polyurethane coated for bonding strength and water repellency. Ultra-violet dyed for best retention. Nylon support webbing on intake opening with brass grommets. Colorfast International Bright Orange in color. "Extra Long Life" windsocks have an estimate 50% longer life and color retention.

Size	Part No.	Price
6"X18	13-20110	**$34.50**
9X30	13-20111	**$38.50**
10X36	13-20112	**$45.50**
13X48	13-20113	**$53.75**
18X60	13-20114	**$58.85**
20X60	13-20115	**$61.75**
12"X48"	13-04316	**$49.95**

Size	Part No.	Price
15"X55"	13-04317	**$56.75**
20"X96"	13-02039	**$85.75**
18"X96"	13-02038	**$76.75**
24"X96"	13-02040	**$99.85**
28"X96"	13-02041	**$132.75**
36"X144"	13-02042	**$169.75**

PS

WINDSOCKS

AIRPORT WINDSOCKS



What makes these aviation windsocks different?

Two major things make a windsock, its material and its construction. Starting off with a premium nylon fabric that is made right here in the USA to exact standards. Nylon offers unparalleled windsock durability to the elements and will not become rigid in cold weather, keeping these windsocks extremely responsive in even the slightest of wind. From there it gets urethane coated and UV protected, giving the windsock superior fade resistance and color retention. The material is subjected to a variety of tests by an independent lab to verify its structural integrity and UV resistance. This superior material is then cut and sewn. Our reinforced double stitched hems and heavy duty brass grommets, assures these windsocks long life reliability.

The added expense of a superior material and manufacturing process meets the needs of even the most demanding windsock customers. Such as: US Military, US Coast Guard, US Embassies, State Airports, Offshore Oil Rigs, Nuclear Power Plants, Medical Heliports, Government Bio Hazard Units.

ORANGE WINDSOCKS

Description	Size	Part No.	Price
Orange Windsock	4" x 15"	13-06386	**$17.80**
Orange Windsock	6" x 24"	13-06387	**$18.50**
Orange Windsock	8" x 36"	13-06388	**$24.70**
Orange Windsock	10" x 36"	13-06389	**$31.95**
Orange Windsock	13" x 54"	13-06465	**$36.50**
Orange Windsock	18" x 60"	13-06466	**$46.90**
Orange Windsock	18" x 72"	13-06467	**$53.75**
Orange Windsock	18" x 96"	13-06468	**$57.50**
Orange Windsock	20" x 96"	13-06469	**$59.75**
Orange Windsock	24" x 96"	13-06470	**$69.75**
Orange Windsock	36" x 144"	13-06471	**$137.90**

ORANGE AND WHITE WINDSOCKS

Description	Size	Part Number	Price
Orange & White Windsock	4" x 15"	13-06472	**$19.85**
Orange & White Windsock	8" x 36"	13-06473	**$29.50**
Orange & White Windsock	10" x 36"	13-06474	**$38.85**
Orange & White Windsock	13" x 54"	13-06475	**$39.95**
Orange & White Windsock	18" x 60"	13-06476	**$54.75**
Orange & White Windsock	18" x 72"	13-06477	**$63.50**
Orange & White Windsock	18" x 96"	13-06478	**$65.80**
Orange & White Windsock	24" x 96"	13-06479	**$73.75**

BALL BEARING FRAMES



The ball bearing windsock frames are a rugged design constructed of a welded steel construction and then a powder coated finish for corrosion protection. They incorporate a two bearing pivoting design for effortless pivoting. These frames are ready to be mounted on a ¾" female pipe thread for the 8", 13", 18" and 24" and a 1" pipe thread for the 36".

Description	Size	Part No.	Price
Ball Bearing Frames	8"	13-06481	**$42.75**
Ball Bearing Frames	13"	13-06482	**$63.75**
Ball Bearing Frames	18"	13-06483	**$67.75**
Ball Bearing Frames	24"	13-06484	**$76.85**
Ball Bearing Frames	36" Non Collapsible	13-06485	**$133.75**

EXTENDED BALL BEARING FRAMES



These windsock ball bearing extended frames are a rugged design constructed of a welded steel construction and then a powder coated finish for corrosion protection. They incorporate the same high quality construction as our standard ball bearing frames with the added performance of an extened frame. They incorporate a two bearing pivoting design for effortless pivoting. These frames are ready to be mounted on a ¾" female pipe thread for the 13"and 18" frames. Use 1" female pipe thread for mounting the 24" and 36" frames.

Description	Size	Part No.	Price
Extended Ball Bearing Frames	13"	13-06487	**$85.75**
Extended Ball Bearing Frames	18"	13-06488	**$99.75**
Extended Ball Bearing Frames	24"	13-06489	**$122.75**

VERTICAL SOCK KITS



These complete kits include our standard frame, windsock, windsock ties, pole, and brackets. They are a stand alone unit for mounting on a flat vertical surface or they can be installed right onto an existing 3/4" pipe thread pole.

Description	Size	Part No.	Price
Vertical Mount Windsock Kit	8" x 36"	13-06491	**$92.75**
Vertical Mount Windsock Kit	13 " x 54"	13-06494	**$98.85**
Vertical Mount Windsock Kit	18" x 60"	13-06495	**$112.75**
Vertical Mount Windsock Kit	18" x 96"	13-06496	**$122.75**

TRIPOD MOUNT WINDSOCK KIT



These complete kits include our standard frame, windsock, windsock ties, pole, and tripod. They are a stand alone unit for mounting on a flat horizontal or peaked roof surface or they can be installed right onto an existing 3/4" pipe thread pole.

Description	Size	Part No.	Price
Tripod Mount Windsock Kit	8" x 36"	13-06497	**$91.75**
Tripod Mount Windsock Kit	13" x 54"	13-06498	**$118.80**
Tripod Mount Windsock Kit	18 x 60"	13-06499	**$119.75**
Tripod Mount Windsock Kit	18" x 96"	13-06501	**$121.99**

PORTABLE WINDSOCK KIT



This rugged, stand alone unit comes complete with the pole, frame, windsock and windsock ties. This free standing system measures over 7' tall in its assembled configuration. * It features an extremely rugged design that incorporates a pole with a foot lug and handle for easy installation and removal. The two part pole disassembles for easy transportation. * The frame conveniently screws onto the top of the pole. Its aluminum hoop and bail pivot on a stainless steel shaft for years of reliable and responsive action. These high quality socks are constructed from U.S. made nylon fabric that is urethane coated and UV protected.

Description	Size	Part No.	Price
Portable Windsock Kit	6 " x 24"	13-06502	**$119.75**
Portable Windsock Kit	8 " x 36"	13-06503	**$122.95**
Portable Windsock Kit	13" x 54"	13-06504	**$140.75**

AVIATION UNLIGHTED WINDSOCK FRAMES



Non-lighted, heavy duty ball-bearing frame, with 1-75 to 300W lamp, extended to 30" double hoop frameworks. (3/8" round metal frameworks) FAA approved sizes per FAA Advisory Circular #AC150/5345-27C dated 07/19/85. Furnished complete with windsocks.

Description	Part No.	Price
13" w/ Windsock	13-04330	**$126.99**
18" w/ Windsock	13-04331	**$259.95**
20" w/ Windsock	13-04332	**$208.95**
24" w/ Windsock	13-04333	**$239.95**
36" w/ Windsock	13-04334	**$654.00**
Windsock Stationary Base	13-04335	**$79.50**
Windsock Hinged Base	13-04336	**$179.95**
Windsock Heavy Duty Pole	13-04337	**$93.80**
Windsock Galvanized Pole	13-04338	**$50.75**

AVIATION LIGHTED WINDSOCK FRAMES



Internally lighted, heavy duty ball-bearing frame, with 1-75 to 300W lamp, extended to 30" double hoop frameworks. (3/8" round metal frameworks) FAA approved sizes per FAA Advisory Circular #AC150/5345-27C dated 07/19/85. Furnished complete with windsocks.

18" dia.....P/N 13-02043..... **$965.00**
20" dia.....P/N 13-05729..... **$813.00**
24" dia.....P/N 13-05730..... **$998.00**
36" dia.....P/N 13-05731... **$1,498.00**

WINDSOCK FRAMES



Totally enclosed housing prevents heavy duty ball-bearing from lock-ups, corrosion, and excessive premature wear. Bearings are grease packed, metal shielded. Self contained unit easily attaches with 3/4" standard threaded pipe.

6" dia.....P/N 13-20120 ..... **$63.75**
9" dia.....P/N 13-20121 ..... **$69.90**
10" dia.....P/N 13-20122 ..... **$73.75**

PS

Prices Subject to Change Without Notice

WINDSOCKS



WINDCONES

Windcones come in 3 different materials, Vinyl, Nylon or Cotton Duck. The standard color for all windcones is International Orange. Windcone Material: Vinyl - This material is heavy duty and works well in coastal environments. We use vinyl coated polyester that does not delaminate as laminated vinyls can. This material is oxidation resistant. Windcones 12" and smaller are made of 7 oz. vinyl. All other windcones are made of 9 oz. vinyl. Nylon - This is a light weight (6 oz.), easily inflatable material that is UV coated. Cotton Duck - A heavy duty (9 oz.) cotton army duck which is water repellent and mildew resistant.

Throat Dia (TD)	End Dia (ED)	Length	Material	Part No.	Price
6"	3"	24"	Cotton	13-17649	$23.50
8"	4"	42"	Cotton	13-17652	$24.65
10"	5"	42"	Cotton	13-17655	$30.80
12"	6"	48"	Cotton	13-17658	$35.50
13"	6.5"	48"	Cotton	13-17661	$41.75
15"	7.5"	48"	Cotton	13-17664	$52.75
18"	9"	48"	Cotton	13-17667	$61.75
18"	9"	60"	Cotton	13-17670	$66.75
18"	9"	96"	Cotton	13-17673	$70.80
20"	10"	96"	Cotton	13-17676	$80.00
22"	11"	96"	Cotton	13-17679	$84.75
24"	12"	96"	Cotton	13-17682	$92.75
28"	14"	96"	Cotton	13-17685	$121.75
36"	18"	144"	Cotton	13-17688	$198.75
6"	3"	24"	Nylon	13-17648	$14.75
8"	4"	42"	Nylon	13-17651	$20.00
10"	5"	42"	Nylon	13-17654	$21.55
12"	6"	48"	Nylon	13-17657	$23.50
13"	6.5"	48"	Nylon	13-17660	$23.85
15"	9"	48"	Nylon	13-17663	$29.50
18"	9"	48"	Nylon	13-17666	$46.50
18"	9"	60"	Nylon	13-17669	$46.50
18"	9"	96"	Nylon	13-17672	$49.50
20"	10"	96"	Nylon	13-17675	$55.75
22"	11"	96"	Nylon	13-17678	$67.75
24"	12"	96"	Nylon	13-17681	$69.75
28"	14"	96"	Nylon	13-17684	$84.75
36"	18"	144"	Nylon	13-17687	$138.75
6"	3"	24"	Vinyl	13-17647	$21.60
8"	4"	42"	Vinyl	13-17650	$23.50
10"	5"	42"	Vinyl	13-17653	$24.65
12"	6"	48"	Vinyl	13-17656	$30.80
13"	6.5"	48"	Vinyl	13-17659	$32.80
15"	9"	48"	Vinyl	13-17662	$44.65
18"	9"	48"	Vinyl	13-17665	$60.00
18"	9"	60"	Vinyl	13-17668	$60.00
18"	9"	96"	Vinyl	13-17671	$64.85
20"	10"	96"	Vinyl	13-17674	$73.90
22"	11"	96"	Vinyl	13-17677	$83.75
24"	12"	96"	Vinyl	13-17680	$89.75
28"	14"	96"	Vinyl	13-17683	$112.75
36"	18"	144"	Vinyl	13-17686	$167.75

WINDCONE WINDSOCK FRAMES



Small Frames (12" and smaller) - Light-weight frames made of galvanized steel wire. Large Frames (18" and larger) - These are heavy duty frames designed to withstand storm force winds and harsh environmental conditions. Large frames are made of galvanized steel (WCF18) or a combination of steel and cast aluminum (WCF20, WCF22, WCF24).

Manufacter No.	Hoop Dia.	Mounting Collar ID	Max Pipe OD	Part No.	Price
WCF6	6"	1"	7/8"	13-17689	$21.50
WCF8	8"	1"	7/8"	13-17690	$22.75
WCF10	10"	1"	7/8"	13-17691	$23.95
WCF12	12"	1"	7/8"	13-17692	$27.70
WCF18	18"	1 5/8"	1 1/2"	13-17693	$121.75
WCF20	20"	1 5/8"	1 1/2"	13-17694	$129.75
WCF24	24"	1 5/8"	1 1/2"	13-17695	$148.75



STANDARD WINDSOCKS

These windsocks are fabricated with doubly sewn seams and brass grommets for attachment. Bright red/orange nylon provides good long distance visibility.

Description	Part No.	Price
8" x 30"L Sock	05-05222	$31.70
13"x 55"L Sock	05-05223	$46.70
18" x 71"L Sock	05-05224	$59.75
24"x 120"L Sock	05-05225	$77.75
36"x 120"L Sock	05-05226	$115.75



STANDARD FRAMES

Internally supports the windsock for more accuracy. Frames are finished using a powder coated weather guard finish. Smooth free swiveling movement with low maintenance. Mounts on standard pipe.

Description	Part No.	Price
8" Frame requires 3/8" pipe mount	05-05227	$53.75
13" Frame requires 1/2" pipe mount	05-05228	$61.75
18" Frame requires 3/4" pipe mount	05-05229	$69.75
24" Frame requires 3/4" pipe mount	05-05230	$72.99
36" Frame requires 1-1/4" pipe mount	05-05231	$194.75

REPLACEMENT WINDSOCK FOR LIGHTED FRAME

Description	Part No.	Price
13" x 55" long Sock	05-06249	$29.95
18" x 60" long Sock	05-06250	$38.95

13" WINDSOCK & FRAME



Made of bright red-orange Nylon and a white powder coated frame.

P/N 05-05232.....**$79.75**

36" COMMERCIAL/ MILITARY WINDSOCK



Designed to conform to rigid Federal Standard #595 with International Orange Mil Spec CCC-C-476 nylon. This sock has a four-fold reinforced collar, throat, and tail, with double-stitching. Incorporates precipitation drain, and has direct frame attach clinch fastener. Includes fastening hardware. 135" mounted length. Frame not included.

P/N 05-05233.....**$281.95**



INTERNATIONAL EUROSOCK™

Multi-panel sock of bright red/orange and white provides very distinctive visibility, both from air and ground. Fits the standard frames (sold separately).

13" Eurosock x 55"Length ....P/N 05-05234 .....**$46.50**
18" Eurosock x 71"Length ....P/N 05-05235 .....**$69.85**



WINDSOCK-IT WINDSOCK

Windsock-It is a small calibrated windsock for accurate wind speed and direction information. The orange windsock measures 6.5" dia. x 27" long. Sock is mounted on a specially designed internal frame, which keeps the mouth open at all times. The windsock provides information in breezes as light as 2 mph, and is fully extended at 15 mph. Included chrome plated steel mast, adjustable in length from 33" to a full 4.5 ft. This windsock is not a toy, but an honest-to-goodness windsock! Ideal for heliports, hangers and private airstrips.

Windsock-it.....P/N 13-20015 .....**$59.95**

PS

MONTAGUE FOLDING BICYCLES

MONTAGUE CROSSTOWN BIKE



Color: Ghost White/Black. Frame: Custom drawn 7005 Series, Aluminum tubing with FIT System. Fork: Rigid Unicrown, with CLIX™ Rims: Alex. Alloy, 36 hole, Silver. 700c. Tires: Kenda Kwick. Spokes: 14 Gage Saddle: Performance comfort with Internal Springs and "Center Gap". Seatpost: 27.2 X 300mm Alloy. Handlebars: Riser style 30mm rise. 600mm wide. Alloy, Black. Stem: Octagon™ height adjustable stem. No tools required. Crankset: Single chainwheel. Alloy 170mm crank arm. Speeds: 7 Pedals: Trekking pedal with all-weather non-slip tread Folded Size: 36" x 28" x 12" Approx Weight: 27lbs

17in Frame: 4'8" - 5'2" 700C..... P/N 13-07241 ..... **$659.99**
19in Frame: 5'3" - 5'10" 700C..... P/N 13-07242 ..... **$659.99**
21in Frame: 5'11" - 6'4" 700 C..... P/N 13-07243 ..... **$659.99**

MONTAGUE PARATROOPER PRO



Color Matte Black. Frame Custom drawn 7005 Series Aluminum with FIT System. Alloy one piece lower. Disc Compatible. Rims Alloy, 32 hole. Double Wall. Black. Tires CST Critter. Knobby. 26 x 1.95". Hubset Formula Disc. Black, Alloy. Sealed front & rear with CLIX™ front quick release. Spokes 14 Gauge Stainless. Shifters Shimano RAPIDFIRE Plus Trigger Shifters. 27 Speeds. Brakeset Tektro Novela. Front & rear mechanical disc w/ pad adjustment. Alloy Levers. Pedals Platform pedal with steel cage. Bottom Bracket Sealed Cartridge. Frame Sizes 18", 20". Stand over heights 30", 31". Folded Size 36" x 28" x 12". Approx Weight 29lbs.

18in Frame: 5'3" - 5'10" ..... P/N 13-12970 ..... **$995.00**
20in Frame: 5'11" - 6'4" ..... P/N 13-12971 ..... **$999.99**

MONTAGUE BOSTON BIKE



Color: Matte Black Frame: Custom drawn 7005 Series. Aluminum tubing with horizontal dropouts and FIT System. Fork: Full Cro-Mo, with CLIX™ Rims: Alex. Alloy, 36 hole, Black. 700c. Tires: Kenda Kwick Roller Sport 700c x 28mm slick. Rear. Spokes: 14 Gage Handlebars: Riser style 30mm rise. 530mm wide. Crankset: SR Suntour. Alloy 42T chainwheel withIntegrated chain guard. Alloy 170mm crank arm. Speeds: Single Speed Pedals: Platform trekking pedal. Aluminum Cage. Folded Size: 36" x 28" x 12" Approx Weight: 24lbs

19 in Frame: 5'3" - 5'10" 700C..... P/N 13-07244 ..... **$699.00**
21in Frame: 5'11" - 6'4" 700C..... P/N 13-07245 ..... **$699.99**

MONTAGUE BOSTON 8 SPEED 700C



Color Matte Black. Frame Custom drawn 7005 Series. Rims Alex. Alloy, 32 hole, Black. 700c. Tires Kenda Kwick Roller Sport 700c x 28mm slick. Hubset Formula. Alloy, with CLIX™ front quick release. Shimano Nexus internal rear. Spokes 14 Gauge Stainless. Shifters Shimano Nexus 8-speed. Frame Sizes 19". Folded Size 36" x 28" x 12". Approx Weight 27lbs.

19in Frame: 5'3" - 5'10" 700C..... P/N 13-12973 ..... **$1,049.99**

MONTAGUE NAVIGATOR BIKE



Color: Midnight Blue/Black Frame: Custom drawn 7005 Series Aluminum with FIT System. Fork: Full Cro-Mo, with CLIX™ Rims: Alex. Alloy, 32 hole, Silver. Tires: Kenda Kwick Roller Sport 700c x 26mm semi-slick. Spokes: 14 Gage Handlebars: Alloy, 30mm rise. Stem: Octagon™ height adjustable stem. No tools required. Shifters: Shimano Rapid Fire Road for Flat Handlebar. 3-Speed Left. 9-Speed Right Crankset: SR Suntour. 48/38/28. Alloy 170mm crank arm. Black. Speeds: 27 Speeds Folded Size: 36" x 28" x 12" Weight: 27lbs

19 inch Frame..... P/N 13-07246 ..... **$949.99**
21 inch Frame..... P/N 13-07247 ..... **$959.00**

MONTAGUE FIT BIKE



Hunter: Green/Black Frame: Custom drawn 7005 Series Aluminum with FIT System. Fork: Full Cro-Mo, with CLIX™ Rims: XERO 700c. 28c hole rear, 24 hole front. Silver. Tires: Kenda Kwick Roller Sport 700c x 26mm slick. Spokes: 14 Gage Saddle: Double Density Performance, with "Center Gap" Comfort Technology. Handlebars: Kalloy. Alloy, double butted. 25mm rise, 8 degree backsweep. Stem: Octagon™ height adjustable stem. No tools required. Shifters Shimano trigger shifters. Speeds: 27 Speeds Pedals: Aluminum trekking pedal. Cro-Mo Spindle. Silver Aluminum Body. Folded Size: 36" x 28" x 12" Approx Weight: 26.5lbs

19 in Frame..... P/N 13-07248..... **$1,449.99**
21 in Frame..... P/N 13-07249..... **$1,295.00**

MONTAGUE PARATROOPER™



The Paratrooper is one of the many folding mountain bikes that Montague offers. Its patented folding design was developed to allow airborne soldiers to drop out of airplanes and helicopters and into combat. The Paratrooper offers advanced features with 24 speeds and front and rear mechanical disc brakes. Known for its durability and load bearing capabilities, this folding bike has also developed a following with everyday commuters and weekend warriors. The Folding Integrated Technology (F.I.T.) is based around frame construction concepts designed for serious full suspension downhill bikes.

18"..... P/N 13-01068..... **$849.99**
20"..... P/N 13-01069..... **$849.95**

MONTAGUE PARATROOPER HIGHLINE MOUNTAIN BIKE



The Paratrooper Highline Mountain Bike is a true cross country machine. 27.5 inch wheels provide superior rolling ability over obstacles and rough terrain. A Rockshox fork and hydraulic disc brakes satisfy the true XC rider looking for convenience. Like all Montagues, the Highline is designed to fit on the bus or train, and easily in your airplane, car trunk or boat.

The Paratrooper Highline is a rugged 27.5" wheel folding mountain bike with a 2×10 drivetrain. With fat tires and a wide range cassette, the Highline is built for after-work rides on your favorite trails and full-on weekend excursions in the mountains.

18"..... P/N 13-19002..... **$1,249.00**
20"..... P/N 13-19003..... **$1,249.00**

MONTAGUE SWISSBIKE X90



The Montague SwissBike X90 is an aggressive 30-speed folding hardtail with a stiff frame providing both performance and portability. With 26" wheels, it's a full-size bike with full-size performance, but folds to fit in the trunk of a car or in a small closet. These rugged folding bikes are built to outlast, handle any terrain, and carry a ton of gear.

Clever integration of the patented CLIX System allows the SwissBike X90 to be folded in under 20 seconds without the use of tools. A flip of the CLIX quick release lever on the top tube and the bike folds to a compact size.

The SwissBike X90 features top-of-the-line components including: SRAM Elixir 7 front and rear hydraulic disc brakes, a RockShox Sektor RL suspension fork, and a Truvativ X-9 crankset.

18in Frame: 5'3" - 5'10" ..... P/N 13-12006..... **$2,449.00**

MONTAGUE ACCESSORIES



MONTAGUE FOLDING PEDALS - These pedals reduce the width of the folded bike by 4 inches. While not ideal for high performance riding, they do serve a purpose for those with tight space constraints.

P/N 13-03745..... **$34.95**

MONTAGUE CARRYING CASE ..... P/N 13-08406..... **$99.95**



MONTAGUE KICK STAND - We offer a traditional steel kickstand that attaches to the Montague bike like a standard kickstand without interfering with the unique folding feature. ***Fits ONLY models from 2015 or earlier. 2016 Models are equipped with a multi purpose fitted rack to function also as kickstand.*** ..... P/N 13-03744..... **$19.95**

PS

Prices Subject to Change Without Notice

DAHON FOLDING BICYCLES

TRIKKE TRIBRED PON-E



Tribred Pon-e: transportation/fitness/joyride all in one vehicle. Lightweight high-performance aluminum frame with lithium battery power. Specifications: • Color: green or silver • WT: 38 Lbs • 10" air tire brushless • Geared hub motor 250W • Free wheel clutch • Removable 36V - 9Ah Lithium-Ion battery with Panasonic cells • Features key & lock • 2 Modes: ECONO max 12 mph / EXPRESS max 17 mph.

Trikke Green ..... P/N 13-06835..... **$1,699.99**
Trikke Silver ..... P/N 13-06836..... **$1,895.00**

PATMONT GSR CRUISER



The GSR Cruiser is the perfect machine for the customer wanting a quiet, reliable and economical motorized scooter with good performance, but also for beginners wanting an affordable, safe and easy to learn first scooter. The GSR Cruiser is also the perfect machine for motor heads and the after market community, as chassis upgrades and screaming engine mods are widely available. The GSR Cruiser's power plant, the new GPL290 , is based on the high performance GP290RS engine, designed to be a very reliable, quiet and economical cruiser. Top speeds for the GSR Cruiser are in the mid 20mph range, and its horse power is similar to the earlier GSR40.

P/N 13-06077 ..... **$969.22**

GO-PED LIGHTWEIGHT MOTORIZED SCOOTER



Operation is easy with the simple push start capability, just push and Go, stop and fold the bars for carry and you can take the Sport with you anywhere. Specifications: • Engine Model: GPL290 • Engine Description: Single Cylinder, Two Stroke, Air Cooled • Engine Displacement: 29cc *Engine Power: 2.5 HP • Engine Ignition: Electronic • Engine Cutoff: Handlebar Kill Switch • Carburetion: Walbro • Transmission: Direct Drive • Fuel Gas: & 2 Cycle oil @ 40:1 • Fuel Capacity: 1 Liter *Fuel Economy: 100 mpg *Max Speed 20 mpg • Dimensions: L-34" W-13" H-42", Folded L-34" W-13" H-14" • Handlebar: 6061-T6 aircraft aluminum • Frame Aircraft quality: 4130 Chromyl frame • Fork Patented: cantilevered aircraft quality 4130 Chromyl fork • Dry Weight 20 lbs • Max Load: 400 lbs • Wheel Type: 6" Solid Go-Active™ Rubber replaceable tire • Rims Mach: 12 reinforced high impact polymer rims • Front Brake: Wheel Caliper • Rear Brake: Compression • Folding Effortless folding feature for easy storage and carrying • Suggested Useage: City / Cruising.

Go-Ped (Sport Model) Blue..... P/N 13-08380.... **$728.47**
Go-Ped (Sport Model) Red ..... P/N 13-08381.... **$728.47**

ECO RECO ELECTRIC SCOOTERS



EcoReco M3 scooter is an eco-friendly, efficient, portable, and smart electric vehicle, designed for your everyday urban use. In the form of a kick scooter, it is the most practical and economical last mile solution on the market. EcoReco M3/M5 can be easily stored under chairs or a desk, in a car trunk, in a gym locker, and it also works well with public transportations. Whether you're going the distance or just that extra mile, EcoReco M3 provides a convenient and economical ride for you, and cleaner air for all.

M3 Scooter..... P/N 13-18595..... **$999.00**
M5 Scooter..... P/N 13-18594..... **$1,250.00**

DAHON MU P8



The Mu P8 is one of Dahon's most versatile, all-around bikes. It's wonderfully light, fast enough for long weekend rides, and stylish enough to turn heads everywhere you go. Great performance and a good value. Lighter, stronger, and faster are the goals and the Mu P8 delivers on all three. 20" Cloud White

P/N 13-00789 ..... **$799.00**

DAHON SPEED UNO



The answer for no-hassle riding anytime. Last year Dahon introduced the functional, simple, stealthy-looking Mu Uno and it quickly became the favorite of all who touched it. The Speed Uno is just as stealthy and portable but even simpler and more affordable. Take one everywhere. BioLogic FreeDrive keeps chain and clothes clean. Folds completely in under 10 seconds. Luggage Socket for attaching a variety of bags and baskets. Color: Shadow Black

P/N 13-10419 ..... **$399.00**

DAHON JACK D7



The Jack is designed to go at any pace you choose and to roll over anything in your path. Forget leaving your urban machine in that communal bike garage and getting nicked and scratched; keep it inside and safe…with you. That's how it should be, right? The Jack is designed around a beefy 7005 aluminum frame and phat Schwalbe Big Apple tires. The Jack has seven nicely-spaced gears to keep things simple, enough for most anything you're likely to encounter in the city. What kind of bike is this? It's a human powered urban machine, Jack. Color: Shadow Black.

Jack D7 16" ..... P/N 13-04795 ..... **$749.00**
Jack D7 18" ..... P/N 13-10423 ..... **$749.00**
Jack D7 20" ..... P/N 13-10424 ..... **$749.00**

DAHON ESPRESSO



The Espresso is the bike for urban adventures: to the park on a sunny weekend; down the street for a lazy Sunday brunch; or to the market for some fresh penne, tomatoes, and a bottle of wine. For 2010, the Espresso gets a complete makeover. The patented new Dahon Axis stem lets you fold the Espresso with a minimum of effort and Schwalbe Big Apple tires mean that you go faster, in a lot more comfort. The new Espresso is a shot of caffeine to your cycling lifestyle.

Espresso 16" ..... P/N 13-10421 ..... **$699.00**
Espresso 18" ..... P/N 13-10422 ..... **$699.00**
Espresso 20" ..... P/N 13-00791 ..... **$699.00**

DAHON SPEED P8



Probably the best combination of performance and value in our product line, the Speed P8 is perfect for long commutes, weekend exploring, or touring. The Speed P8 shares the same frame as the Speed Pro and combines it with our no compromise Premium component package. The Speed P8's stiff frame, rigid Radius handlepost, and plush-riding Schwalbe Big Apple tires inspire confidence on even the worst roads. Wheel Size: 20". Speed: 8. Folded Size: 30 x 77 x 64 cm (11.7" x 30" x 25"). Folding Time: 15 Seconds. Weight: 12.6 kg (27.8 lb). Max Rider Weight: 105 kg (230 lb). Colors Available: Fire Red, Obsidian.

P8 20" Fire Red ..... P/N 13-00043 ..... **$699.00**

DAHON ACCESSORIES

Description	P/N	Price
Rear Rack	13-08340	**$11.80**

VELOMINI PLUS WHITE ELECTRIC BIKE



VeloMinis are small, light weight, cute, versatile, convenient, and durable. They fold down so small and you can take it with you practically everywhere. Each VeloMini Plus includes a TrackR™ tracking system to assist with recovering your VeloMini should it be stolen or misplaced. The VeloMini+ has more power, which means a faster top speed and greater hill climbing capability. The battery, still hidden in the frame, uses the latest 26650 lithium cells. The VeloMini+ has an improved display showing speed, pedal assist, and battery level. All VeloMinis include front LED light, solar charging rear light, rack and carrying case. The VeloMini + is one of the lightest electric bikes in the world which folds to only 34"L x 24"H x 12"W.

P/N 13-20152 ..... **$1,295.00**

PS

PARA-CUSHION PARACHUTES

PARA-CUSHION 311 - WEDGE



The Para-Cushion 311 Wedge measures 24" (61cm) tall by 16" (40.5cm) wide by 1" (2.5cm) at the shoulders and 3" (7.5cm) at the lower back, and weighs approximately 16 lbs. (7.3 kg). This unique configuration allows for maximum comfort for the pilot by using the shape of the parachute system to put you in a slightly reclined position. The parachute assembly is designed to be used in airplanes where headroom is at a minimum and the backrest is at a straight upright angle with the seat bottom, such as a Pitts S1, Pitts Model 12, Christen Eagle, RV-4, RV-6, Harmon Rocket, and many others.
System Comes Complete with: Harness/Container, Mid-Lite Parachute, Ripcord, Lil Grabber Pilot Chute, Carry Bag, and Manual. TSO - C23c cat. B P/N 13-14779..... **$2,475.00**

PARA-CUSHION 304 - SEAT



The Para-Cushion 304 Seat, measures 12" (30.5 cm) tall by 16" (40.5 cm) wide by 1/2" (1.3 cm) thick throughout the back, and 3" (7.5 cm) thick in the seat cushion, and weighs approximately 18.5 lb. (8.4 kg). The 304 is designed to be used in place of a seat cushion. By using an additional Confor© Foam cushion the seat thickness of the pack may be from 1" (2.5 cm) to 6" (15 cm) thick depending on the type of airplane and how high the user desires to be in the cockpit. The parachute assembly is designed to be used in airplanes where head room is not restricted or moving forward in the cockpit is not possible including: Skybolt, Yak 52, Yak 55, CJ-6, Stearman, Great Lakes, Pitts S 2B, Decathlon, RV-4 and many others. For RV-4 and RV-8 aircraft the seat container is modified slightly to fit the exact size of the seat pan. The options for the RV version remain the same as the standard version.
System Comes Complete with: Harness/Container, Mid-Lite Parachute, Ripcord, Lil Grabber Pilot Chute, Seat Cushion, Carry Bag, and Manual. TSO - C23c cat. B. P/N 13-03441..... **$2,495.00**

PARA-CUSHION 306 - SQUADRON SEAT



The Para-Cushion 306 Squadron Seat measures 16.5" (42 cm) tall by 13" (33 cm) wide by 6.5" (16.5 cm) thick and weighs approximately 19.5 lbs. (8.8 kg). Color Options: Stock Colors are Black, Red, Navy Blue, Royal Blue, and Olive Drab. This applies to Container, trim, and harness colors. Color Choices: Black, Red, Navy Blue, Royal Blue, and Olive Drab. The pack and cushion combination are shaped to fit fully into the seat to provide a large stable, and comfortable seating area for the pilot. The harness is fully adjustable in the main lift webs (vertical straps), as well as in the lumbar area to ensure proper fit, provide support, and remain comfortable. The parachute assembly is designed to be used with the bucket style seat pan found in most warbirds such as: SN-J, T-6, Harvard, T-34, T-28, P-51, Stearman, and many others. TSO - C23c cat. B.
Strong 306 Seat ..... P/N 13-14781 ..... **$2,495.00**
Strong 306 Harness Container Only ..... P/N 13-15946 ..... **$1,395.00**

ACROPRO PARACHUTE



The AcroPro is designed with Aerobatic pilots in mind. At just 16 lbs., this lightweight, thin, and comfortable pack supports the pilot during high G maneuvers while maintaining comfort and safety. The AcroPro, measures 24" (60 cm) tall by 16" (40 cm) wide by 3" (7 cm) thick and weighs approximately 16 lbs (6.5 kg). In many cases, by removing the back cushion of the seat pan, the pilot may place the AcroPro in its place. Choose our Standard Harness or the Aerobatic Harness at no additional charge. AcroPro comes with: Harness/Container, Mid-Lite Parachute if desired or C-9 (call for price), Ripcord, Lil Grabber Pilot Chute, Carry Bag, and DVD Manual. TSO - C23c cat. B & SAE AS-8015A.
Standard Harness - Harness/Container Only... P/N 13-21184... **$1,349.00**
Standard Harness - Complete Mid-Lite..... P/N 13-21186... **$2,449.00**
Aerobatic Harness - Harness/Container Only.. P/N 13-21185... **$1,349.00**
Aerobatic Harness - Complete Mid-Lite ..... P/N 13-21187... **$2,449.00**

PARA-CUSHION 305 - CHAIR



The Para-Cushion 305 Chair measures 42" long (105 cm) by 16" (40 cm) wide by 2.5" (6cm) to 1" (2.5cm) thick and weighs approximately 16.5 lb. (7.5 kg).
This back mounted container is built to extend from the shoulders of the user to just above the knees. This long design allows the parachute to be packed in a larger area keeping the system as thin as possible. Confor© Foam padding throughout the system allows the user to comfortably sustain flight for many long hours. The parachute assembly is designed to be used in airplanes where your seat is reclined such as a Grob, Giles 202, the rear seat of an Extra, and many others. System Comes Complete with: Harness/Container, Mid-Lite Parachute, Ripcord, Lil Grabber Pilot Chute, Carry Bag, and Manual. TSO - C23c cat. B P/N 13-03442..... **$2,296.00**

PARA-CUSHION 303 - BACK



The Para-Cushion 303 measures 24" (60 cm) tall by 16" (40 cm) wide by 3" (7 cm) thick and weighs approximately 15 lbs (6.5 kg). In many cases, by removing the back cushion of the seat pan, the pilot may place the 303 in it's place. The 303 Back is recommended for use in airplanes where head room is at a minimum and moving forward in the cockpit is not a problem. Recommended for use in airplanes such as: ASW-27, PW-5, Cap-10, Zlin 50, and Christen Eagle.
System Comes Complete with: Harness/Container, Mid-Lite Parachute, Ripcord, Lil Grabber Pilot Chute, Carry Bag, and Manual. TSO - C23c cat. B.
P/N 13-03440..... **$2,130.00**

PARA-CUSHION L-39



The Para-Cushion L-39, measures 27" (68.6 cm) tall by 17" (43.2 cm) wide by 3.5" (8.9 cm) thick and weighs approximately 25.9 lb. (11.7 kg). The L-39 is designed exclusively for the L-39 Albatross. The design incorporates existing Russian designed pilot restraint system found on the original assembly, including shoulder roller guide for inertial reel and seat belt buckles at the hips. This provides you with fit-and-fly technology that perfectly replaces the original equipment and gives you peace of mind knowing that you have a comfortable, top of the line system.
System Comes Complete with: Harness/Container, 28' C-9 Parachute, Ripcord, Travel Cushion, G-Pad, Static Line, Lil Grabber Pilot Chute, Carry Bag, and Manual. TSO - C23c cat. B.
P/N 13-15068..... **$3,398.95**

MID-LITE CANOPY



The 26' Mid-Lite is the finest reserve canopy available! It is a highly reliable 24 gore canopy. It is tested and approved to FAA TSO C23c Category B.
The canopy has been tested to withstand a 5000lb shock load, which means it is built to withstand the rigors of an emergency bail-out. In production since 1987 the Mid-Lite has proven time and time again that it is the most rugged and reliable reserve you can own!

Canopy Shape	Conical	**Canopy Cloth**	30-50 cfm (PIA-C-44378d)
Size	26'	**Turn Speed**	Approx. 7 sec
Number of Gores	24	**Forward Speed**	6 -8 mph (10-12 km/h)
Line Length	17' 6"	**Opening Time**	1.1 - 2.3 sec
Panels Per Gore	4	**Rate of Descent**	18.5 fps @ 225 lbs (5.7 mps)
Suspension Line Material	Type 1A	**Canopy Weight**	Approx. 7 lbs
Suspension Line Strength	400 lbs	**Maximum Weight**	254 lbs (115 kg)

P/N 13-14782..... **$1,037.00**

ACCESSORIES

CUSTOM MONOGRAMMING - Monogram your name, N number, or anything that space will allow on the front of your container.
P/N 13-04907 ..... **$42.90**

CAPEWELL RISER RELEASE - For landing in high wind conditions allows the pilot to release the parachute, to prevent dragging. Disadvantages -- Heavy and expensive hardware. P/N 13-04908 ..... **$355.00**

LUMBAR SUPPORT PAD - A rounded Tempor® foam pad that attaches in existing channel. Adjustable to just the right position in the small of your back. P/N 13-15065 ..... **$84.95**

PARA-CUSHION G-PAD CUSHION - An auxiliary pad that attaches to the back pad of any Para-Cushion. G-pad is formed to snugly fit around the pilot's sides providing extra support during high G maneuvers.
P/N 13-15066 ..... **$149.95**

ELT POCKET - This external pocket snaps onto the system and holds the pilots ELT system. P/N 13-15949 ..... **$115.95**

STATIC LINE - 15' Static Line including B-12 Snap and RW-3 Ring.
P/N 13-16009 ..... **$40.00**

SHEEPSKIN BACK PAD - Sheepskin pads keep you cool in the summer and warm in the winter.
Smoke.....P/N 13-11307 ..... **$179.00**
Natural .....P/N 13-11309 ..... **$179.00**
Black .....P/N 13-04911 ..... **$195.00**

QUICK EJECTOR SNAPS - This is the Military type hardware that can be used in place of the standard B-12 snaps. Works best for former military pilots who have become accustomed to this type of hardware.
Snaps.....P/N 13-04909 ..... **$155.00**
Aerobatic Snaps .P/N 13-04910 ..... **$115.00**

AEROBATIC HARNESS - ***This is an option that can be added at no additional cost.*** This harness option moves the snaps that normally sit on top of the pilots legs, to your chest, where there is no pressure from a seat belt. This works best where a Hooker Harness Ratchet type seat belt is used. .....P/N 13-04912

AERO PAD - A zip-on seat pad held in place by the pilot's weight to restrain the Para-Cushion and prevent shifting during high G maneuvers.
P/N 13-15067 ..... **$104.95**

PS

Prices Subject to Change Without Notice

NATIONAL PARACHUTES

NATIONAL 360 PREMIUM BACK PARACHUTE



360 Premium Trim Emergency Back Parachutes: Standard design includes a tapered width and teardrop shape that hugs the back and also provides comfortable lower lumbar support.
National parachutes are the choice of numerous aerobatics champions and professionals. Designed thin, light weight and with comfort in mind and incorporates a user-adjustable main lift web (hip junction) harness.
Color Choice: Black or Red or Navy Blue (Black Trim & Harness)

Description	Part No.	Price
B2 = 2 ea B12 Snaps Legs & (TT) Thread Thru Adapter Chest	13-06263	**$2,067.00**
B3 = 3 ea B12 Snaps Legs & Chest	13-12280	**$2,093.00**
T3 = 3 ea (TT) Thread Thru Adapters Legs & Chest	13-15773	**$2,034.00**
Q2 = 2 ea QE Snaps Legs & (TT) Thread Thru Adapter Chest	13-15772	**$2,155.00**
Q3 = 3 ea QE Snaps Legs & Chest	13-15780	**$2,230.00**

NATIONAL PARACHUTE 360 PREMIUM SEAT



National's Seat Pack is especially desirable when the cockpit has more vertical space than horizontal. For added comfort, the seat pad has one inch of "Astronaut Foam" above the parachute container (user accessible/ adjustable via Velcro closure).
Color choices include: Navy blue, Royal Blue, Red, Red and Black. All four color choices are available with matching binding and harness or black binding, diamond quilting and harness.
*360 = Recommended Pilot Weight is up to 177 lbs.

Description	Part No.	Price
B2 = 2 ea B12 Snaps Legs & (TT) Thread Thru Adapter Chest	13-15784	**$2,180.00**
B3 = 3 ea B12 Snaps Legs & Chest	13-15786	**$2,323.00**
Q2 = 2 ea QE Snaps Legs & (TT) Thread Thru Adapter Chest	13-15785	**$2,311.00**
Q3 = 3 ea QE Snaps Legs & Chest	13-15787	**$2,397.00**

NATIONAL 425 PREMIUM BACK PARACHUTE



Standard design includes a tapered width and teardrop shape that hugs the back and also provides comfortable lower lumbar support. National parachutes are the choice of numerous aerobatics champions and professionals. Designed thin, light weight and with comfort in mind and incorporates a user-adjustable main lift web (hip junction) harness.
Color Choice: Black, Red, Royal Blue or Navy Blue (Black Trim & Harness)

Description	Part No.	Price
B2 = 2 ea B12 Snaps Legs & (TT) Thread Thru Adapter Chest	13-06264	**$2,065.00**
B3 = 3 ea B12 Snaps Legs & Chest	13-12281	**$2,091.00**
T3 = 3 ea (TT) Thread Thru Adapters Legs & Chest	13-15775	**$2,085.00**
Q2 = 2 ea QE Snaps Legs & (TT) Thread Thru Adapter Chest	13-15774	**$2,203.00**
Q3 = 3 ea QE Snaps Legs & Chest	13-15781	**$2,283.00**

NATIONAL PARACHUTE 425 PREMIUM SEAT



National's Seat Pack is especially desirable when the cockpit has more vertical space than horizontal. For added comfort, the seat pad has one inch of "Astronaut Foam" above the parachute container (user accessible/ adjustable via Velcro closure).
Color choices include: Navy blue, Royal Blue, Red, Red and Black. All four color choices are available with matching binding and harness or black binding, diamond quilting and harness.
*425 = Recommended Pilot Weight is up to 208 lbs.

Description	Part No.	Price
B2 = 2 ea B12 Snaps Legs & (TT) Thread Thru Adapter Chest	13-15788	**$2,229.00**
B3 = 3 ea B12 Snaps Legs & Chest	13-15790	**$2,262.00**
Q2 = 2 ea QE Snaps Legs & (TT) Thread Thru Adapter Chest	13-15789	**$2,358.00**
Q3 = 3 ea QE Snaps Legs & Chest	13-15791	**$2,449.00**

NATIONAL 490 PREMIUM BACK PARACHUTE



490 Premium Trim Emergency Back Parachutes: Standard design includes a tapered width and teardrop shape that hugs the back and also provides comfortable lower lumbar support. National parachutes are the choice of numerous aerobatics champions and professionals. Designed thin, light weight and with comfort in mind and incorporates a user-adjustable main lift web (hip junction) harness.
Color Choice: Black or Red or Navy Blue (Black Trim & Harness)

Description	Part No.	Price
B2 = 2 ea B12 Snaps Legs & (TT) Thread Thru Adapter Chest	13-06265	**$2,197.00**
B3 = 3 ea B12 Snaps Legs & Chest	13-12283	**$2,202.00**
T3 = 3 ea (TT) Thread Thru Adapters Legs & Chest	13-15779	**$2,148.00**
Q2 = 2 ea QE Snaps Legs & (TT) Thread Thru Adapter Chest	13-15778	**$2,270.00**
Q3 = 3 ea QE Snaps Legs & Chest	13-15783	**$2,348.00**

SOFTIE EMERGENCY PARACHUTES



MINI-SOFTIE - Extremely small, lightweight and comfortable backpack parachute system designed for use in today's restricted cockpit enviroments, and by persons weighing up to 240 lbs. Choice of Conventional Harness or Aerobatic Harness. Container is 2.25" thick x 15" wide x 23" long. Canopy Type: Steerable Conical. Total weight: 15 lbs. P/N 13-03505-X..... **$2,475.00**

MICRO-SOFTIE - Designed to fit and stay secure over the shoulder of smaller individuals. Used by persons weighing up to 180 lbs. Choice of the Conventional or Aerobatic harness. Container is 2.25" thick x 13" wide x 22" long. Canopy Type: Steerable Conical*. Total weight: 14 lbs.
P/N 13-03510-X..... **$2,475.00**

LONG-SOFTIE - Designed to conform to and maximize the comfort of the seating found in todays high performance gliders and aerobatic aircraft. Available in either 180 lb.(13" wide) or 240 lb. (15" wide) versions. Choice of standard H harness or the unique crossover style Aerobatic Harness. Container specifications: 2.25" thick x 13" or 15" wide x 35" long. Canopy Type: Steerable Conical. Total weight: 16 lbs.
P/N 13-03515-X..... **$2,525.00**

SOFTIE-SEAT PACK - Designed for use in aircraft that have no room for a backpack style parachute. Used by persons weighing up to 240 lbs. Container is 15" wide 14" fore & aft 2 1/2" thick. Canopy Type: Steerable Conical. Total weight: 16 lbs. P/N 13-09052-X..... **$2,575.00**

WEDGE-SOFTIE - Designed specifically to add lumbar and sacral support during high, positive G maneuvers. Ideal for the upright seating found in Pitts style seating. Available in either 180 lb. or 240 lb. versions. Choice of standard H harness or our unique crossover style Aerobatic Harness. Container is 2 1/2" thick at bottom, 1/2" thick at top x 15" wide x 23" long. Canopy Type: Steerable Conical*. Total weight: 15
P/N 13-03524..... **$2,475.00**

WARBIRD SEAT PACK SOFTIE - Designed to fit into the older style "bucket" seats found in warbird aircraft, and for persons weighing up to 240 lbs. The container is 14" wide 11" fore & aft 6" thick. Canopy Type: Steerable Conical. Total weight: 17 lbs P/N 13-03520-1A.... **$2,575.00**

VISIT OUR WEBSITE FOR ADDITIONAL OPTIONS AND HARNESS CHOICES.

NOTE: Complete the Part Number with Color (-1) Red, (-2) Black (-3) Royal Blue, (-4) Navy Blue, (-5) Grey, (-6) Sage Green or (-7) Olive Drab. Also complete P/N with "C" for Conventional or "A" for Aerobatic. Example: P/N 13-00000-5A.

NATIONAL PARACHUTE 490 PREMIUM SEAT



National's Seat Pack is especially desirable when the cockpit has more vertical space than horizontal. For added comfort, the seat pad has one inch of "Astronaut Foam" above the parachute container (user accessible/ adjustable via Velcro closure).
Color choices include: Navy blue, Royal Blue, Red, Red and Black. All four color choices are available with matching binding and harness or black binding, diamond quilting and harness.
*425 = Recommended Pilot Weight is up to 208 lbs.

Description	Part No.	Price
B2 = 2 ea B12 Snaps Legs & (TT) Thread Thru Adapter Chest	13-15793	**$2,295.00**
B3 = 3 ea B12 Snaps Legs & Chest	13-15792	**$2,327.00**
Q2 = 2 ea QE Snaps Legs & (TT) Thread Thru Adapter Chest	13-15794	**$2,423.00**
Q3 = 3 ea QE Snaps Legs & Chest	13-15795	**$2,513.00**

PS

CHECKMATE CHECKLISTS



CHECKMATE CHECKLISTS

Checkmate is the only checklist that contains virtually all data desired by pilots to fly the airplane while excluding the extraneous information which leads to inefficiency, confusion and even refusal to use. They eliminate the tedious and cluttered 15-page flip-book that pilots quickly become discouraged from using. Checkmate contains the most comprehensive V-speed section in the industry. V-speeds are listed in Knots and MPH. Checkmate not only makes a dramatic difference in everyday use, but also in critical situations. Emergency procedures are right there! Every time! With most of the emergencies there is no time to flip pages looking for the correct procedures.

Available for over 300 single and twin engine aircraft. All follow a standard format. Used by some of the best flight schools in the country. Checkmate Standard Checklists is 6.5" x9" size. Checkmate Compact Checklist 5"x7" size.

Description	Part No.
Alarus/Zenith CH2000	13-04627
Aviat Husky A1-B	13-05490
Aviat Husky A1-B Amphibian	13-05491
Beechcraft Baron B55 64'-76'	13-04649
Beechcraft Baron B55 77'-82'	13-04650
Beechcraft Baron 58 285 HP	13-04651
Beechcraft Baron 58 300 HP	13-04652
Beechcraft Baron 58P 310 HP	13-04653
Beechcraft Baron 58P 325 HP	13-04654
Beechcraft G58 G100	13-04655
Beechcraft Bonanza A36 '84 & On	13-08699
Beechcraft Bonanza F33A	13-04601
Beechcraft Bonanza G36 G1000	13-04608
Beechcraft Bonanza JKM35	13-04602
Beechcraft Bonanza NP35	13-04604
Beechcraft Bonanza V35	13-04605
Beechcraft Bonanza V35TC	13-04606
Beechcraft Bonanza A36 thru '83	13-04607
Beechcraft Debonair CEF33	13-08697
Beechcraft Duchess 76	13-04648
Beechcraft Bonanza S35	13-08698
Beechcraft Sundowner	13-08696
Cessna 150 D-K	13-08605
Cessna 150 '59-'63 Quickmate	13-00708
Cessna 150 '59-'63	13-07301
Cessna 150L	13-08606
Cessna 150M	13-08607
Cessna 152	13-08610
Cessna 172 F, G, H	13-08612
Cessna 172 I, K, L	13-08613
Cessna 172 M	13-08615
Cessna 172 N	13-08620
Cessna 172 P	13-08625
Cessna 172 P 6.5"x4"	13-08630
Cessna 172 R G1000	13-04575
Cessna 172 RG	13-08635
Cessna 172 S	13-04576
Cessna 172 S G1000	13-04577
Cessna 177	13-08636
Cessna 177 RG	13-08637
Cessna 182 E-M	13-08638
Cessna 182 P	13-08639
Cessna 182 Q	13-08640
Cessna 182 R	13-08641
Cessna 182 RG	13-08645
Cessna 182 S	13-04578
Cessna 182 T	13-04579
Cessna 182 T G1000	13-04580
Cessna T182T	13-04581
Cessna T182T G1000	13-04582
Cessna 206H	13-04583
Cessna 206H G1000	13-04584
Cessna T206H G1000	13-04585
Cessna T206H G1000,GFC700 S	13-05637
Cessna T206H G1000,GFC700 C	13-05638
Cessna T206H G1000 Amphibian	13-05394
Cessna 210M	13-05476
Cessna T210M	13-05483
Cessna 210N	13-05482
Cessna T210N	13-05484
Cessna 303 Turbo Crusader S	13-05635
Cessna 303 Turbo Crusader C	13-05636
Cessna 310Q	13-04629
Cessna 310R	13-04630
Cessna 340A	13-04631

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Citabria 7ECA	13-11858
Citabria 7KCAA	13-11859
Citabria 7KCAB	13-11860
Citabria 7GCBC	13-11861
Diamond DA20 C1	13-04621
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Diamond DA40-180	13-04623
Diamond DA40-180 G1000	13-04624
Diamond DA40-180 FP	13-04625
Diamond DA40-180 FP G1000	13-04626
Diamond A42 G1000	13-04656
Maule MT 7-235	13-04613
Mooney 201 (M20J)	13-08700
Mooney Encore M20K	13-05492
Mooney M20K-231	13-04616
Mooney M20K-252	13-04617
Mooney M20M/Bravo	13-04618
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Mooney M20R/Ovation	13-05493
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Mooney M20S/Eagle	13-05494
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Piper Malibu 310	13-04598
Piper Mirage 350	13-04599
Piper Navajo 310	13-04645
Piper Navajo 350 Chieftan	13-04647
Piper Saratoga FG	13-04595
Piper Saratoga SP	13-05489
Piper Saratoga II HP	13-04596
Piper Saratoga II TC	13-04597
Piper Seminole	13-08690
Piper Seneca I	13-04639
Piper Seneca II	13-08695
Piper Seneca III	13-04640
Piper Seneca IV	13-04641
Piper Seneca V	13-04642
Piper Tomahawk	13-08650
Piper Twin Comanche	13-04638
Piper Warrior	13-04588
Piper Warrior II	13-08665
Piper Warrior III	13-04590
Piper Warrior III with Avidyne Entegra	13-05640
Piper Warrior III	13-05639
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CHECKMATE IFR

In the IFR environment organization and management lead to smoother, stress-free and safer outcomes. CheckMate IFR will assist you through preflight planning to touch-down on the IFR flight. Whether you are cleared for the complete approach or radar vectored to the FAF, CheckMate IFRs format will help keep the flight business orderly and functional. It is precise & specific to the different phases of those sometimes precarious flights. You will be reminded when to prepare and look ahead to each phase. A quick review of CheckMate IFR before flight will help you determine pilot and aircraft preparedness and legalities, how to give those greatly appreciated pilot reports on icing and turbulence, and what ATC expects you to do after radio failure; Professional information in a concise and orderly manner.

Standard (6" x 9") ..... P/N 13-08805 ..... **$14.95**
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Surviving the First 24 Hours CheckMate® clearly details the procedures and equipment that you will need to survive a forced landing and the subsequent 24 hours. The preparation before a flight can easily make the difference between surviving or not surviving. This is one of the most important pieces of equipment in a pilot's pre-flight planning.

Available in three sizes.
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CHECKBOOK CHECKLISTS

Aviation Checkbook is a high quality, multi-page laminated checklist utilizing factory type information for FAA Part 141 and 61 schools. Designed as a primary checklist giving all details and responses needed by new students or pilots wanting a multi-page checklist without the usual bulk. Shirt pocket size with mark and erase surface for notes. The various checklists for your aircraft are stacked and color tabs allow you to locate the checklist you need.

Part No.	Description (Checkbook Checklist for:)	Price
13-03091	Cessna150 D-K	**$17.95**
13-01262	Cessna 150M	**$9.95**
13-01264	Cessna 172FGH	**$9.95**
13-01268	Cessna 172R	**$17.95**
13-01270	Cessna 172P	**$9.95**
13-03102	Cessna 172RG	**$17.95**
13-01272	Cessna 182E-M	**$17.95**
13-01273	Cessna 182N	**$9.95**
13-01288	Piper Seminole	**$13.95**
13-01291	Piper Seneca I	**$13.95**
13-01275	Cessna 182Q	**$9.95**

Part No.	Description (Checkbook Checklist for:)	Price ea.
13-01276	Cessna 182R	**$9.95**
13-01277	Cessna 182S	**$9.95**
13-01278	Cessna 182RG	**$9.95**
13-01280	Cherokee160	**$9.95**
13-01282	Piper Warrior	**$9.95**
13-01283	Piper Warrior II	**$9.95**
13-01284	Piper Archer II	**$9.95**
13-01286	Piper Arrow II	**$17.95**
13-01287	Piper Arrow III	**$9.95**



FLYWRITE COCKPIT WRITING PAD

FlyWrite™ is not another "flight planning" layout. It is designed to give you a dedicated place for all the information that flows while in the cockpit of the aircraft. Convenient top-bound writing pad. Each pad contains 50 5" x 8" sheets and can be used with or without standard junior legal vinyl binders. IFR clearances, ATIS, AWOS, frequencies, flight times, hobbs times, tach times, airport information , frequency changes, hand-off's, altitude changes, weather, etc, now have a home. There is also an area for random information or diagrams. FlyWrite™ also contains a handy vertical scale which measures mileage for WAC, SEC, TAC, NOS, JEPP, & ELA charts, eliminating the need for that ruler you can never find.

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MOUNTAIN FLYING CHECKMATE

CheckMate Aviation's new Mountain Flying CheckMate™ is a full color, plastic card that is a compilation of the special knowledge required for mountain flying. Competent flying in mountainous terrain requires knowledge far beyond what is taught in standard flight courses; and as most pilots discover, sooner or later, flying in mountainous terrain is inevitable.

CheckMate Aviation's Mountain Flying CheckMate™ covers both the rules and common sense of flying that are critical when in this aspect of flight. Available in 3 sizes.
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CHECKLISTS

PROPILOT CHECKLISTS



Step up to professional quality with ProPilot Checklist! These handsome booklets are fully laminated and wire-bound for durability and long life, and are perfect for VFR and IFR pilots of all skill levels. All Preflight, Normal, and Emergency procedures are included. IFR checklist items are integrated into phase of flight, and IFR Approach and Departure Briefing sections are also provided. Flight planning is simplified by the inclusion of aircraft-specific performance data (V-speeds, takeoff distance, climb performance, cruise power settings, true airspeed, fuel burn, and landing distance), as well as weight and balance graphs. 6" x 9".

Description	Part No.	Price
ProPilot Checklist Cessna 150M	13-06103	**$29.95**
ProPilot Checklist Cessna 152	11-05187	**$29.95**
ProPilot Checklist Cessna 172P	11-05188	**$29.95**
ProPilot Checklist Cessna 172R	11-05189	**$29.95**
ProPilot Checklist Cessna 172RG	11-05192	**$29.95**
ProPilot Checklist Cessna 172S/SP	11-05190	**$29.95**
ProPilot Checklist Cessna 172S/SP NAV	11-05191	**$29.95**
ProPilot Checklist Cessna 172M	13-05121	**$29.95**
ProPilot Checklist Cessna 182R	13-05122	**$29.95**
ProPilot Checklist Cessna 182S	13-05123	**$29.95**
ProPilot Checklist Cessna 182T	13-05124	**$29.95**
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ProPilot Checklist Cessna Turbo T182	11-05194	**$29.95**
ProPilot Checklist Cessna 172N	13-04940	**$29.95**
ProPilot Checklist Cessna 206 NAV III	13-04941	**$29.95**
ProPilot Checklist Cessna Turbo T206H	13-04942	**$29.95**
ProPilot Checklist Cessna Turbo T206H NAV III	13-04943	**$29.95**
PropPilot Checklist Cessna A36-927 up	13-05127	**$29.95**
ProPilot Checklist Diamond DA20-C1	11-05195	**$29.95**
ProPilot Checklist Diamond DA40-180	11-05196	**$29.95**
ProPilot Checklist Piper PA28-161	13-04792	**$29.95**
ProPilot Checklist Piper PA28-181	11-05197	**$29.95**
ProPilot Checklist Piper PA28R-201	13-04794	**$29.95**
ProPilot Checklist Piper PA28-161 Warrior II	13-04944	**$29.95**
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THE PRECIFLIGHT CHECKLIST



More than just a checklist, PRECIFLIGHT® will actually help pilot along all phases of flight: from preparation to tie-down and through emergencies. It is a brightly colored 18 pages booklet at is logically divided to minimize page flipping. Once used to it, it is a natural as good landings.

It regroups important information such as light gun signals, VFR minimums, weather symbols and all that with easy to interpret drawings. Even better, it has features that pilots have to look for in other publications and equipment like a built-in 1/500 000 ruler, frequently used aviation phone numbers and Internet sites and more.

PRECIFLIGHT® was also designed for convenience: it will fit in your shirt pocket or clip on the aircraft yoke where it will be available to use with one hand. Made of a sturdy waterproof paper, it will last a lifetime. It is designed to conform to FAA and Transport Canada regulations by a team of flight instructors and airline pilots

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Cessna 150/152	13-04979	**$28.50**
Cessna 172	13-04980	**$28.50**
Piper PA 28-160	13-04981	**$28.50**
Piper PA 28-180	13-04982	**$28.50**
Universal Model	13-04983	**$28.50**

THE PRECIFLIGHT CHECKLIST



Normal Procedures - Before Start, Start-up, Run-up, Before Takeoff, Climb, Cruise, Descent, Before Landing, After Landing, & Shutdown. Emergency Procedures - Engine Failures (Takeoff Roll, After Liftoff, & In Flight), Fires (During Start, In Flight, Electrical, Cabin, & Wing), Electrical, & Power-Off Landing. Communications Template. Includes V speeds & light gun signals. Durable lamination. Fits on any kneeboard or inside any iPad case. Made by full-time Certified Flight Instructors.

Description	PN	Price
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Cessna 172	13-20157	**$10.00**
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QREF CHECKLISTS



Qref Books - Topics Covered: Preflight, Takeoff/Cruise, Landing, Comprehensive Abnormals and Emergencies, V-speed list, cruise performance chart.

Qref Cards - Topics Covered: Preflight, Takeoff/Cruise, Landing, Abnormals and Emergencies, V-speed list.

Description	Part No.	Price
Cessna 150 Qref 0	13-15560	**$19.95**
Cessna 152 Qref Book	13-15561	**$19.95**
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Cessna R182 Skylane RG Qref Book	13-15572	**$24.95**
Cessna Turbo 182T Qref Book	13-15575	**$29.95**
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Cessna 172 Universal Qref Card	13-15627	**$12.95**
Cessna R182 Skylane RG Qref Card	13-15635	**$12.95**
Cessna 185H-K QRef Book	13-17523	**$18.95**
Cessna Turbo 182T Qref Card	13-15640	**$12.95**
Cessna Turbo 182T G1000 Qref Card	13-15641	**$12.95**
Cessna Turbo 206H Qref Card	13-15642	**$12.95**
Cessna Turbo 210M Centurion Qref Card	13-15643	**$12.95**
Cessna 210A Qref Book	13-17524	**$18.95**
Cessna 210G/H/J Qref Book	13-17526	**$18.50**
Cessna 210L/M Qref Book	13-17527	**$18.55**
Cessna Turbo 210M Qref Book	13-17528	**$18.50**
Cessna 210N Qref Book	13-17529	**$18.50**
Cessna Turbo 210N Qref Book	13-17531	**$18.50**
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SEE WWW.AIRCRAFTSPRUCE.COM FOR COMPLETE LISTING OF QREF CHECKLISTS.

E.S.P. CHECKMATE™



E.S.P. CheckMate™ is a 1st for Aviation, and the only product of its kind available. Our new "Emergency Substitute Pilot "™ could save the lives of you and your passengers by providing the most basic and simplest of terms and procedures to the NON-PILOT, in the unfortunate event the real pilot becomes incapacitated. E.S.P. CheckMate™ assists the NON-PILOT in controlling the aircraft, reaching help on the radio, and if necessary, landing the aircraft. The graphical format makes it easy and comfortable to follow. E.S.P. CheckMate™ can easily be the difference in the outcome of this most serious type of emergency. For safety and readability, we are publishing only in 7.5" x 10" size. P/N 13-01834 .....**$14.95**

PS

PLOTTERS

FLIGHT COMPUTERS



E6B METAL FLIGHT COMPUTER - The best slide-rule-style flight computer on the market, with solid aluminum construction and easy-to-read lettering. ASA's E6-B features a wind component grid and comprehensive cross-wind correction chart, and on the other side the slide computes time, speed, distance, altitude, true airspeed, and density altitude problems as well as conversions. Nautical and statute scales are included.
P/N 13-00813 ..... **$24.95**



E6B PAPER FLIGHT COMPUTER - Made from solid, heavyweight fiberboard, an economical version of the aluminum model described above including all its problem-solving features. P/N 13-02298 ..... **$10.95**



MICRO E6-B - This pocket-sized, brushed aluminum E6-B is a full function aviation computer. Popular among military pilots, it features a high-speed and low-speed wind correction slide, high-speed compressibility table, and instruction manual. Micro E6-B performs all the standard manual flight computer functions, and it conveniently fits in a shirt pocket or glove box.
P/N 13-02299 ..... **$23.95**



E6-B HIGH SPEED SLIDE - A companion product, this slide picks up where the traditional metal flight computer leaves off (ASA-E6B), providing calculations for the high-speed realm of flight (in the range of 220-700 knots or miles per hour). Pilots simply replace their current slide with this one, which then continues to use the circular computer from traditional E6-Bs. The slide also includes compressibility correction chart, ICAO Standard Atmosphere reference table, worldwide time conversion table, speed limits for the United States, and most frequently-used weight & balance formulas. All of the pertinent formulas & information required for high-altitude, high-speed operations. Meets both FAR & JAR (international) requirements. P/N 13-02301 ..... **$11.75**

E6-B CIRCULAR FLIGHT COMPUTER



The E6B Circular Flight Computer combines high-quality construction with easy-to-read lettering to deliver the most efficient, accurate, and convenient manual flight computer availalble. Perform multiple calculations ranging from basic arithmetic and flight planning problems to complex in-flight computations. The E6B Circular Flight Computer is a great tool to use during flight planning, flight training or studying, and may be used during FAA written knowledge exams. Pilots flying faster aircraft at higher altitudes will find this computer useful in gaining insight to the external atmospheric conditions and the effects they have on in-flight performance. P/B 13-16352 ..... **$24.75**

PROFLIGHT FIXED AZIMUTH PLOTTER



The ProFlight Fixed Azimuth Plotter is: • Manufactured & Packaged in the U.S.A. • Made from Premium Clear 8010 Polycarbonate • More Flexible & Warp Resistant than Acrylic or PVC • Printed using Ultra Violet Resistant Ink • Laminated for Lifetime Scratch Protection • Clearly Distinguishable White, Sectional/ Terminal Side & on Reverse, a Blue WAC Scale

ProFlight PF-AP-1 Plotter - Your PF-AP-1 is a premium Fixed Azimuth Plotter designed for measuring distances and courses on VFR navigational Sectional, Terminal & World Aeronautical Charts. This plotter has been designed to exacting standards and slight variations with chart scales may exist as a result of the instability of paper charts in certain temperature and humidity conditions.
P/N 13-11676 ..... **$8.75**

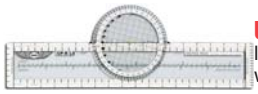
SQUARE AVIATION PLOTTER



Constructed of durable Lexan®, this plotter won't melt, warp or break in extreme temperatures. Its convenient 5-1/8" square size and ease of use make this plotter a pilot favorite for simple, accurate flight planning. Uses a 1:500,000 scale and includes 5 NM and 10 NM radius rings for quick and easy measurement. The 2 NM grid makes alignment with parallels simple. Plus, it's guaranteed for life! P/N 13-08056 ..... **$5.75**

PLOTTERS

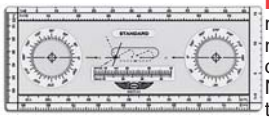
Durable Lexan® resin won't melt, warp or break in extreme temperatures - guaranteed! Each plotter features 8 scales to meet the needs of all VFR aeronautical charts - nautical on one side, statute on the flip. Nautical-Statute conversion scale also included. Made in USA.



ULTIMATE ROTATING PLOTTER - 13-1/4" long. Rotating azimuth eases flight planning with direct readout of course. Made in USA.
P/N 13-02302 ..... **$14.85**

ULTIMATE FIXED PLOTTER - 13-1/4" long. Quick scale reference is provided for both statute and nautical miles. Made in USA.
P/N 13-02424 ..... **$12.75**

ULTIMATE MICRO PLOTTER - 8" long. Convenient for flight bag, shirt pocket, or airplane storage. Made in USA.
P/N 13-02303 ..... **$7.95**



INSTRUMENT PLOTTER - ASA's instrument plotter features: 12 scales to accommodate both NOS & Jepp instrument charts, including a conversion scale for Nautical and Statute miles; holding patterns depicted for both Standard and Nonstandard entries; compass roses allowing quick course & bearing information; and professional layout enabling easy reading during en route spot checks.
P/N 13-02306 ..... **$10.95**

FIXED PLOTTER - Constructed of sturdy clear plastic with easy-to-read numbers and scales. It includes WAC, Sectional, and Terminal Area scales, and is checked and approved by the Weights and Measures Department. Quick scale reference is provided for both statute and nautical miles.
P/N 13-02304 ..... **$7.60**



ROTATING PLOTTER - Made from the same material and having the same features as the Fixed Plotter, but with the addition of a non-slip rotating azimuth to ease flight planning. P/N 13-02307 ..... **$10.95**



THE PILOT POCKET PEN HOLDER



The Pilot Pocket PEN holder is the easy solution to stowing pens, pencils and sunglasses in the cockpit. The compact design and suction cup mounting o er a variety of placement options in any type of cockpit. A convenient temperature conversion chart is printed on the front for quick reference. Secures firmly to any smooth plastic or glass window surface with its 3 suction cup design. Each suction cup has a pull-off tab, making it easy to detach and reattach. It's perfect for airplane renters. Built-in pen slots. Convenient holder for your sunglasses. Constructed of high quality, transparent acrylic that is strong, resistant to scratches and won't discolor in sunlight. A convenient temperature conversion chart is printed on the front for quick reference. 4" high, 1.25" wide and 1.25" front to back.
P/N 13-16371 ..... **$16.95**



PEN AND TOUCH PAD STYLUS

A dual-purpose, twist action (black ink) ballpoint pen featuring a soft stylus end for use with touch-screen mobile devices such as iPads, tablets, smartphones, etc. Black barrel with chrome accents.
P/N 13-12066 ..... **$3.95**

PS

ASA PILOT SUPPLIES

APPROACH PLATE BINDER



Made of durable black vinyl with a reinforced spine, it has easy-to-open, 1-1/2" steel rings that accommodate the drill pattern of the approach plates. ASA wings tastefully silver-foiled on the front cover. Choose from either 4-ring NACO or 7-Ring design.

NACO.....P/N 13-01066 ..... **$12.75**
7-Ring.....P/N 13-02316 ..... **$10.95**

FLIP BINDER



Perfect for Instrument Pilots who carry a smaller number of approach charts. One-inch rings are attached to a sturdy poly backing, with a loose poly cover. Scoring on front and back covers allows you to flip charts completely around the rings and display the one you want on top. Compact, convenient, and practical.

P/N 13-02321 ..... **$10.95**
Replacement Rings.....P/N 13-12055 ..... **$4.95**

7 RING BINDER KIT



Contains 1 binder, 10 sheet protectors, 5 color side dividers and a sheet of area stickers.

7-Ring .....P/N 13-02322 ..... **$19.95**

ASA DELUXE RING BINDER



The Deluxe 2" 7-Ring Binder is is made of richly-grained simulated leather with edge stitching. It's bound for maximum durability and equipped with a ring system that will keep your approach plates securely organized and easily accessible. Convenient 8.5" x 9" size makes it easy to fit in almost any flight bag.

ASA Deluxe 1" 7-Ring Binder.....P/N 13-05759 ..... **$25.75**
ASA Deluxe 2" 7-Ring Binder.....P/N 13-05760 ..... **$29.95**

ASA 1 INCH 7 RING TRIP BINDER



The 7-Ring Trip Binder is made of durable poly. It's bound for maximum durability and equipped with a ring system that will keep your approach plates securely organized and easily accessible. The three rings are spaced to match the 7-hole approach plate drill pattern. Convenient 7" x 9" size makes it easy to fit in almost any flight bag. P/N 13-05825.....**$12.50**

SHEET PROTECTORS



Made of durable, translucent plastic to protect the most frequently used approach plates. Sold in packs of 10.

NACO Vinyl Pocket pk of 10.... P/N 13-02317.. **$6.50**
NACO Poly Folders pk of 10.... P/N 13-05820.. **$3.95**
7-Ring Vinyl Pocket pk of 10.... P/N 13-02318.. **$5.95**
7-Ring Poly Folders pk of 10 ... P/N 13-05821.. **$4.35**

5 COLOR DIVIDERS



For quick reference of various sections of both types of approach plate charts, these five distinctly-colored dividers extend out beyond the side of the charts. Set of 5.

7-Ring ..... P/N 13-02323..... **$6.95**

ASA 4 RING NOTEPAD



Compact, convenient writing pad that fits in your approach plate binder. 100 sheets per pad. Weight .80lbs

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Cross-country planning sheets contain a flight plan section, weight & balance calculation chart, special equipment suffix chart, fuel management, space for radio frequencies, & more. Sold in pads of 48. P/N 13-18431 ..... **$3.95**

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ASA Flight Record Folders provide areas to record pertinent student information, stage checks passed, lesson content, lesson performance, flight hours, instructor notes & endorsements, solo endorsements or aircraft checkout records, and are current to both Part 61 & Part 141 program requirements. Sturdy & durable, these flight records are available separately, as part of ASA's pre-packaged training kits, or as part of an ASA PACK - Personalized Aviation Custom Kit.

SFR Private ..... P/N 13-01548 ..... **$2.35**
SFR Commercial ..... P/N 13-01549 ..... **$2.35**
SFR Instrument ..... P/N 13-01551 ..... **$2.35**
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CERTIFICATES AVIATION ACHIEVEMENT AWARDS



Authentic, full-color certificates are perfect for framing yet sturdy enough to slip into the student's flight record as a pleasant surprise to be discovered on their next visit to the airport. Mark progress with style, while further motivating students. 9"x12". Sold in packs of 10.

Solo Flight Certificate ..... P/N 13-02326..... **$11.95**
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HOLDING PATTERN VISUALIZER

This useful tool shows a pilot which entry is appropriate given the assigned holding radial, making it a superb learning tool.

P/N 13-06940 ..... **$11.95**

LANDING PATTERN COMPUTER



Easily helps determine appropriate headings for each leg when landing or departing the airport - great teaching aid! P/N 13-06935 ..... **$13.95**

FLIGHT PLAN AND CLEARANCE NOTEPAD



Posting pad for obtaining IFR Clearances by pilots. Provides in-flight writing for Aircraft ID, Departure Point, Route Of Flight, Destination, and more. 6" H x 4" W.

P/N 17-00328 ..... **$1.95**

YOKE CLIP



ASA's new yoke clip holds all the necessary flight paperwork right where pilots need it, leaving their hands free to fly. Simple to install, the black plastic, I-Beam construction is strong enough to serve as a pilot's third hand. The clip is higher than other yoke clips, holding sectionals, approach plates, flight logs, checklists, flight computers, and pens in easy view. The unique, over-centering cam easily adjusts to fit all general aviation aircraft yokes without modification.

P/N 13-01043 ..... **$12.50**

ASA PILOT HAT



Pilot cap featuring comfort headband and classic wings logo. Stylish baseball cap. Black with neatly embroidered white ASA wings. Adjustable headband for maximum comfort. No button to interfere with headset band. Long bill for sun protection. Perfect for cross-country flying, lounging with friends or on the tarmac hangar flying. Wear it proudly!

P/N 13-12964.....**$10.95**

PS



AERO PRODUCTS RESEARCH CR COMPUTERS

CR computers are very popular with pleasure and professional pilots. They solve T/8/D and wind triangle problems for light aircraft as well as those which approach Mach 2 speeds. Corrections for errors of compressibility and temperature rise are computed with ease. The wind solution is displayed graphically using the small back-side discs. Each computer comes with fully illustrated manual.

CR-3 - 3-3/4" dia. shirt-pocket size (same as Jepp CR-5); vinyl
P/N 13-03499 .....**$22.75**

CR-4 - 4-1/4" dia. (same as Jepp CR-2); vinyl. Standard model used by the military. P/N 13-03501 .....**$23.75**

CR-6 - 6" dia. Used by navigators for maximum readability (Same as Jepp CR-3); vinyl. P/N 13-03502 .....**$24.75**



AERO PRODUCTS RESEARCH FLIGHT DESK

Folded size 8" x 9" Extends to 16" x 9" Anodized aluminum. Versatile space-saver lap desk locks in open position; folds in half for drop-in storage in your flight case. Heavy-duty clips hold charts and flight plans. Important VFR and IFR information always visible when open. Foam strips on back keep lap desk from slipping..... P/N13-03517 ..... **$23.95**

AERO PRODUCTS RESEARCH TIME/ SPEED/ DISTANCE COMPUTER



Time/Speed/Distance computers. "How-to-use" instructions printed right on the unit. Text printed in straight, easy-to-read lines; desired scales and windows located at a glance. Perfectly calibrated 2-color dials eliminate parallax errors. Fully illustrated instruction manual with each model. APR-303 3-3/4" dia. T/S/D computer with traffic pattern orientator; anodized alum. P/N 13-01133..... **$15.95**

ATIS WHEEL PRO



The Atis Wheel™ PRO is a mechanical device designed to help the airplane pilot in recording all ATIS information while presenting the data as a graphic depiction. The Atis Wheel™ PRO is presented on a 3.5"x 5.5" rectangular durable format with seven individual 1.5" wheels positioned about the perimeter of the device along with two, 3" concentric wheels positioned in the center. The Atis Wheel™ PRO information follows the sequential presentation of the ATIS information, providing the pilot the following data: • The ATIS information phonetic letter identifying this specific ATIS report, named sequentially after a phonetic letter of the alphabet. • Example: This is Providence ATIS information ALPHA. • The time the ATIS information was recorded - in ZULU (GMT) time. • In as much as all ATIS information should be current, there is no wheel on the Atis Wheel™ PRO to record the ZULU time. • The DIRECTION from which the wind is blowing. • The VELOCITY of the wind, and wind GUSTS, if any. • The VISIBILITY and SKY condition. • The CEILING of the sky (if any) and cloud height, if OVERCAST. • The TEMPERATURE and DEW POINT. • The RUNWAY in use for LANDING and TAKEOFF. • The instrument APPROACH in use for landing. • The BAROMETRIC pressure, in order to calibrate the altimeter Additional tower comments (i.e., notice of closed taxies, etc.) ..... P/N 13-05003..... **$3.49**

EZ ATIS REMINDER PILOT TOOL



The EZ ATIS Reminder makes it easy to communicate the ATIS identifier. No more fumbling through papers for the ATIS identifier - or worse yet, having to recall the prefix from memory! The 1-5/8" diameter knob with 1/2" pointer has a peel and stick adhesive tape on the back that can be easily mounted on your instrument panel, knee board, or anywhere you need a quick ATIS recall. P/N 13-04920 .....**$12.95**

ATIS-MINDER



Designed in 2000, the ATIS-MINDER™ solved several issues for many pilots and those involved in regular use of the phonetic alphabet. The ATIS-MINDER™ meets this demand with precision and adds efficiency to any cockpit. Excellent teaching tool for the student pilot preparing for their licensing criteria. Can be mounted on the yoke, panel, or kneeboard with the hook and loop fastener provided in the purchased package.

Left Hand..... P/N 13-16442..... **$34.95**
Right Hand ..... P/N 13-16441..... **$34.95**



AERO PRODUCTS RESEARCH T/S/D COMPUTER KEYCHAIN

1-1/2" diameter. Identical to the real thing, this traditional usable Time/Speed/Distance keychain has a beautiful compass star with flight plan on the back side.

The computer keychain is calibrated meaning the ability to relate the key chain to the functions of the E6-B type Time/Speed/Distance computers.
P/N 13-03505 .....**$7.95**



AERO PRODUCTS RESEARCH CR COMPUTERS

Simplify VFR or IFR navigation with these handy logs which provide for listing of intersections, radials, frequencies, clearances and complete flight plan.

EFL-100 Pad of 5-1/2" x 8-1/2" sheets; VFR Flight Logs P/N 13-03526 .....**$3.95**

EFL-200 Pad of 5-1/2" x 8-1/2" sheets;IFR Flight Logs P/N 13-03527 .....**$3.95**



AERO PRODUCTS RESEARCH PLACARDS

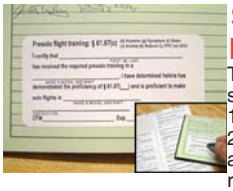
Now you can customize your cockpit with APR's easy-to-apply placards. Just cut out and press these stick-ons into place for that "factory-fresh" cockpit look. For all single and multi-engine aircraft systems, seaplanes, and gliders. Includes most-used legends (on, off, open, close, etc.), common amperage, voltage values, arrows, numbers and blanks. 8-1/2" x 10-1/2"; aircraft panel placard set; over 250 aluminum placards.

APR Instrument Panel Placard Set..... P/N 13-03522.....**$11.95**



EXPERIMENTAL AIRCRAFT CERTIFICATION KIT

A new amateur-built aircraft certification kit created by the Experimental Aircraft Association (EAA) gives builders a simplified way to complete the required FAA paperwork for their new projects. The Amateur-Built Aircraft Certification Kit includes everything you need to register and certify a new experimental amateur-built aircraft in the United States. The 15-page, step-by-step guide walks you through the entire process from getting an N-number to the aircraft inspection, and provides samples to help complete each required form. The kit includes all FAA forms, Experimental sticker (in black), data plate, and a convenient placard decal sheet. P/N 13-04244 .....**$19.95**



SPORT PILOT PRE-PRINTED LOGBOOK ENDORSEMENTS

The Instructors Endorsement Pack contains 14 sheets of labels. Each sheet of labels contains 10 copies of a specific endorsement. Each 2" x 4" endorsement label is identified by title and FAR number, has the exact wording as required by the regulations, and has data-prompted blanks for the students' name, your name, CFI cert.#, Biennial Flight Reivew Certification 61.56(a).

Description	Part No.	Price
INSTRUCTOR ENDORSMENT PK ENPAK	09-01310	$18.75
PRE-SOLO AERONATICAL KNL 6187B	09-01311	$1.95
PRE-SOLO FLIGHT TRAINING 6187C	09-01312	$1.95
PRE-SOLO TRNG & 90 DAY RENL	09-01313	$1.95
SOLO AT ANOTHER AIRPORT 6193B	09-01314	$1.95
1ST SOLO X-C 61.93(C)(1) 6193C	09-01315	$1.95
SOLO X-C 61.93 (C)(2) 6193C2	09-01316	$1.95
REPEATED SOLO X-C <=50NM6193B2	09-01317	$1.95
SOLO IN CLASS B,C &D 6194A	09-01318	$1.95
SOLO TO/FROM CLASS B,C OR D	09-01319	$1.95
TAKING KNOWLEDGE TEST 6135A	09-01320	$1.95
PROFICIENCY CHECK 61321	09-01321	$1.95
PASSING FLIGHT TEST 61309	09-01322	$1.95
TAKING SPORT PILOT PRACT 61313	09-01323	$1.95

PS

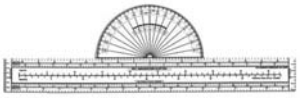
Prices Subject to Change Without Notice

ASA CX-3 ELECTRONIC FLIGHT COMPUTER



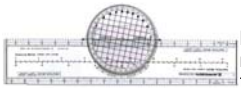
Note: To mount the CX-3 flight computer, use the MGF Sport Stratus mount combined with any MGF Sport yoke, suction, glare shield mount. (See Accessories)
The CX-3 Flight Computer provides a fast, accurate flight computing solution and takes confusion out of the equation for ground school study, preflight planning, and enroute navigation. Fast, versatile and easy to use, the CX-3 delivers accurate results quickly and efficiently through an intuitive menu structure designed to follow typical flight planning sequences with a minimum of keystrokes. It can be used on all FAA and Canadian pilot, mechanic, and dispatcher knowledge exams.
A multitude of aviation functions can be performed on the CX-3 flight computer including those related to time, speed, distance, heading, wind, fuel, altitude, cloud base, standard atmosphere, glide, climb & descent, weight & balance, as well as a holding pattern function to help determine entry method and holding details. A calculator, clock, timer and stopwatch are also built in along with multiple settings for lighting, backlighting, themes, scrolling speed, time zones and more. Weight: 0.70 lbs. Dimensions: 3-1/3" W x 6-1/2" H x 3/4" D
P/N 13-01040 ..... **$79.95**

PN-1 NAVIGATION PLOTTER



Allows easy identification of WAC and Sectional chart scales. Calibrated in statute & nautical miles.(Size: 12.25" x 4")
P/N 13-21724.....**$12.00**

PJ-1 ROTATING AZIMUTH



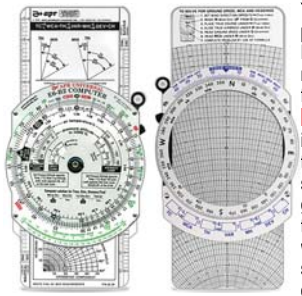
Measure the true course or to determine the magnetic course. Includes scales for sectional terminal area & WAC charts in statute & nautical miles. Size: 3.25 x 13"; 3-3/8 " Dia.
P/N 13-21726 .....**$12.50**

BLIND SPOT'S ALL-IN-ONE PILOT'S RULER



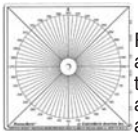
The Blind Spot's Original Pilot's Ruler has been designed to offer pilots maximum support, in the simplest way. The concept enables the pilot to solve VFR navigation problems and provide useful information, both at a glance, in only a few seconds and with only one instrument! The use of the ruler is extremely simple & fast. The pilot can concentrate more on flying, less on calculating, thus fly more relaxed and safer. Blind Spot's Original Pilot's Ruler (for USA airspace) is a two-sided pilot's ruler designed for flight preparation and use in flight. Size: 1.8" x 12". P/N 13-11733 .....**$19.95**

AERO PRODUCTS RESEARCH E6-B UNIVERSAL FLIGHT COMPUTERS



The very latest in air navigation computers include not only T/S/D and Dead Reckoning calculations, they now incorporate "Universal" features for world-wide use.
E6-B2U - Deluxe, top-of-the-line quality, 5" x 9-5/8", all aluminum construction. Includes: • "Universal conversions: feet to meters, pounds to kilograms, liters to US gallons, US gallons to IMP. gallons or fuel weight or oil weight. • Patented micro-set (aligns scales to perfect accuracy).• Flush dials to eliminate parallax; answers are read with absolute accuracy. • Scales with contrasting colors for easy computation. • "Universal" conversions color-coded for quick and easy use. • Heavy gage anodized aluminum for added rigidity and non-glare surface. • 2-color fully illustrated instruction manual plus supplement on Dead Reckoning, Wind Effect Theory and Calculations ..... P/N 13-03492.....**$27.85**
E6-B4 - Pocket-size deluxe, all anodized aluminum; high/low wind slide. P/N 13-03960.....**$31.90**
E6-B8 - Budget student computer, plastic body, plasticized wind slide..... P/N 13-03495.....**$13.95**
E6-B8P - Budget student computer, plastic body, plasticized wind slide; includes an 8"Navigation Plotter. ..... P/N 13-03496.....**$16.50**

RADIALMATE COMPASS ROSE



RadialMate™, a 3.5" clear 20 mil plastic compass rose allows you to instantly read a desired course by placing the product over any sectional, chart, or graphic. There are no reciprocals to calculate. RadialMate™ comes with a hole in the middle, allowing additional use as a string compass. It is conveniently sized to fit in your pocket. RadialMate™ also contains Safe Flight's vertical scale which measures mileage for WAC, SEC, TAC, NOS, JEPP and ELA charts eliminating the need for that ruler you can never find. P/N 13-08799 ..... **$4.50**

JEPPESEN STUDENT CSG COMPUTERS



This computer made of composite materials works just like an aluminum computer with all the same functions and features, but at a lower cost. Ideal for new students or as an extra to keep in your desk at home. Printed numbers are sharp, clear, and easy to read. Like all Jeppesen products, the quality is superior.
Plastic .....P/N 3866 ..... **$14.49**

ASA E6B METAL FLIGHT COMPUTER



The best slide-rule-style flight computer on the market, with solid aluminum construction and easy-to-read lettering. ASA's E6-B features a wind component grid and comprehensive crosswind correction chart, and on the other side the slide computes time, speed, distance, altitude, true airspeed, and density altitude problems as well as conversions. Nautical and statute scales are included.
Standard..... P/N 13-00813.....**$24.95**
Mini..... P/N 13-02299.....**$23.95**

ASA COLOR E6-B COMPUTER



ASA's color E6-B is enhanced with color for quick identification of key elements and easier readability. The new color E6-B is based on ASA's most popular model: slide-rule-style flight computer, the ASA-E6B. It's identical in size to the venerable favorite, made with the same solid aluminum construction and featuring all the functionality pilots have relied on for decades. On the circular side, black is used for the rate arrow and units to be calculated, red is used for weight and volume and blue is used for distance, time and temperature scales. On the wind side, colors are used to identify wind variation: blue identifies west (or right wind correction angle) and red identifies east (or left wind correction angle). Measures 9-3/4" x 5". In The Box: Vinyl case, and Instruction booklet. P/N 13-10288.....**$29.50**

VOR FLASH CARDS



Designed to show any pilot how to look at a VOR receiver and read it at a glance. There's no time in the cockpit to spend slowly analyzing the CDI needle and To/From indicator! VOR-At-A-Glance flash cards will teach you: • The difference between VOR courses and VOR radials • What the VOR does not show you • The best way to think about the course deviation indicator • Inbound vs. outbound course indications • How to instantly know your position relative to the VOR • Tricks for reading interception courses right off the VOR • Pilots need to be able to look at a VOR and read the information off immediately. It's just like when you first learned how to read. There is a big difference between the ability to sound the words out and the ability to look at a work and just read it. Pilots need to be able to "read" the VOR!
P/N 13-05773 .....**$39.95**

CAPTAIN BARRY SCHIFF X-COUNTRY PLANNING LOG



Covers all necessary flight planning "from the ground up" Capt. Barry Schiff comprehensive pre-flight & en route complete "cross-country planning program", assures safe, error free, cross-country flight planning before and during all flights. Guides you trough all stages in your pre-flight planning, organizes the required estimates to determine ground speed, time en rout em and arrival. Records distances to check points, arrival times, and the related radio frequencies needed.
P/N 13-12108 .....**$5.95**

PS

PLOTTERS - COMPUTERS



VOR TRAINING AID

Learn and practice the principals of VOR and NDB navigation, with ease, prior to flight. Instructors can effectively teach and discus navigation with clear, realistic, high quality visual aids.

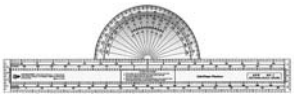
P/N 13-16037.....**$18.95**



ADF TRAINING AID

The ADF Training Aid features realistic rotating ADF bearing indicator needle and a heading indicator dial. List, depict and erase NDB intercept instructions and holding clearances in the practice area.

P/N 13-16038.....**$15.95**



APR PLOTTERS

Scales on white background for easy readability set on see-through "clear vision" vinyl. Statute and nautical scales are parallel, making conversion easy. One side scaled for WAC charts, one for Sectional charts. "How-to-Use" instructions printed on plotter. Includes illustrated practice problems.

Description	Part No.	Price
13" Plotter NP-13 S tandard for WAC and Sectional Charts	13-19913	**$9.95**
13" Plotter WSNP-13 WAC and Sectional Charts (Lexan) Lifetime Guarantee	13-03509	**$12.50**
13" Plotter NPR-13 Rotatable Azimuth WAC and Sectional Charts	13-03511	**$10.90**
13" Plotter WSNPR-13 Lifetime Guarantee Rotatable AzimuthWAC and Sectional Charts (Lexan)	13-03512	**$15.00**
Universal IFR Plotter UIP-V (Same as Jeppesen PV-5) Jepp/NOS Charts Holding Pattern Entry (Vinyl)	13-03514	**$8.50**
Description	**Part No.**	**Price**
Universal IFR Plotter RFC-1 Jepp/NOS Holding Pattern 3-1/2" x 8"	13-03513	**$8.85**
13" Plotter FAA-170 Military WAC and Sectional Charts	13-03516	**$9.95**
INTERNATIONAL NAVIGATION PLOTTERS		
Description	**Part No.**	**Price**
Plotter/Protractor CPP-5 Douglas International Combination Plotter/Protractor	13-03506	**$5.95**
13" ICAO Plotter IP-13 Fixed Azimuth, Nautical/Kilometer Scales	13-03507	**$12.25**

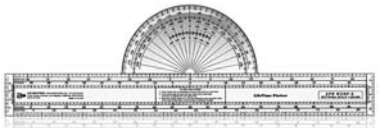


APR FCL-12 & 24 FLIGHT CHECKLIST HOLDER

Used by private, corporate, and military pilots. Adjustable lighting and viewing angle, color band isolates each item being checked. Mounts for right or left hand use. 84" pachment scroll lets you customize your specific checklists for review in flight. Designed to U.S. Military Pilots specification. 5" x 4" x 1-1/2" NSN 1680-00-489-1313

APR FCL-12 Flight Checklist Holder.....P/N 13-06714 .....**$115.75**

APR POCKET NAVIGATION PLOTTER - 8"

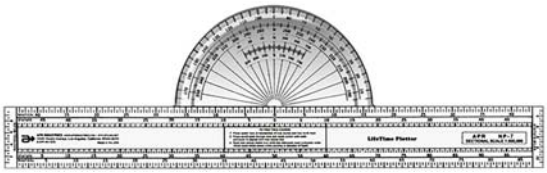


Now you can own the easiest and most accurate plotter available for use on all World Aeronautical & Sectional Charts.

WSNP-8 Pocket Navigation Plotter is the best in-flight plotter. It has four protractor scales and fourteen nautical, statute, and terminal area scales for Sectional, WAC, and Terminal Charts.

P/N 13-15121.....**$9.90**

PLOTTERS AND SLIDE COMPUTERS



These are specially-designed for easy use. The APR plotter has parallel statute and nautical scales, with one side scales for WAC charts and the other for sectional. Made of clean white heat-resistant hi-flex vinyl. Operating instructions are included. The slide computer is printed with speed ring lines representing values of one speed unit. Includes formula boxes added to the plate below the azimuth ring.

E6-B4 Aluminum.....P/N 13-03960 .....**$31.90**

E6-B HIGH SPEED SLIDE



Picks up where the ASA-E6B metal flight computer leaves off, providing calculations for the high-speed realm of flight (in the range of 220-700 knots or mph). Pilots simply replace their current slide with this one, which then continues to use the circular computer from traditional E6-Bs. The slide also includes a compressibility correction chart, ICAO Standard Atmosphere reference table, a worldwide time conversion table, speed limits for the U.S., and the most frequently used weight and balance formulas; all of the pertinent formulas and information required for high-altitude, high-speed operations. Comes with easy-to-follow instructions.

E6-B High Speed Slide .....P/N 13-02301 .....**$11.75**



RUNWAY SELECTOR

Runway Selector is a simple tool pilots use to select the best runway based on prevaling winds. Runway Selector is a quick easy visual reference for all pilots! As an added bonus, the tool can also be used to confirm your take-off runway as well!

Together, all the features of Runway Selector serve to provide multiple quick references for any pilot. The tool is also an excellent tool for instructors to use in teaching a new student pilot in a myriad of situations and teaching situations!

P/N 13-14811.....**$19.95**

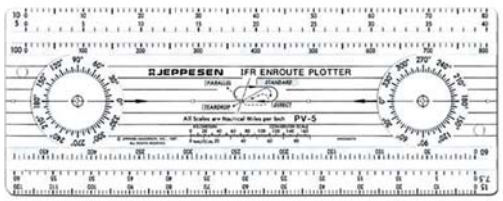


TRAFFIC PATTERN ORIENTER & SPEED COMPUTER

Graphically displays the headings required for standard or non-standard traffic patterns. Time, speed , distance computations, fuel consumption, true airspeed, mach and true altitude conversions.

P/N 13-01133.....**$15.95**

JEPPESEN PV-5 IFR ENROUTE PLOTTER



Size 3-3/16" x 8-1/2" P/N 13-21718.....**$9.50**

PS

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AERO PRODUCTS RESEARCH PLOTTERS

APR PLOTTERS



PROTRACTOR PLOTTER PCP-202 T/S/D - APR has designed the first combination T/S/D pocket computer combined with rotatable plotter cursors. Align the airplane cursor along any appropriate meridian. PVC plastic discs, 3-3/4" dia. Plastic cursor 4-3/4"
P/N 13-06681.....**$13.75**



TRAFFIC PATTERN ORIENTATOR TPP-203 - The TTP-203 Traffic Pattern Orientator graphically displays all headings for left (standard) and right (non-standard) traffic patterns when the runway heading is aligned with the compass rose. Light signal "acknowledging" instructions are also shown. PVC Plastic discs, 3-3/4" dia. Cursor 4-1/4 P/N 13-06682.....**$13.95**

DENSITY ALTITUDE PERFORMANCE COMPUTER DAP-204 - Shows the aircraft's rate of climb and minimum - required takeoff distance. PVC plastic discs. 3-3/4" dia. Important: Always consult your pilot's operating handbook as their computer does not supplement or replace the manufacturer's performance data. Not applicable to turbocharged aircraft. P/N 13-06683.....**$13.75**



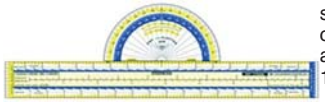
T/S/D PROTRACTOR PLOTTER PCA-302 - APR has designed the first combination T/S/D pocket computer combined with rotatable plotter cursor. Align the airplane cursor with the true or magnetic course. Align the arrow cursor along any appropriate meridian. Anodized aluminum discs, 3-3/4" dia. Plastic cursor 4-3/4"
P/N 13-06684.....**$15.95**



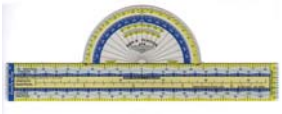
TRAFFIC PATTERN ORIENTATOR TPA-303 - The TPA-303 Traffic Pattern Orientator graphically displays all headings for left (standard) and right (non-standard) traffic patterns when the runway heading is aligned with the compass rose. Light signals and "acknowledging" instructions are also shown. Anodized aluminum discs, 3-3/4" dia. Cursor 4-1/4" P/N 13-06687.....**$16.75**



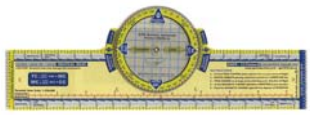
DENSITY ALTITUDE PERFORMANCE COMPUTER DAA-304 - The Density Altitude Performance computer shows the aircraft's rate of climb and minimum-required takeoff distance. Anodized aluminum discs. 3-3/4" dia. Important: Always consult your pilot's operating handbook as their computer does not supplement or replace the manufacturer's performance data. Not applicable to turbocharged aircraft. P/N 13-06688.....**$16.75**



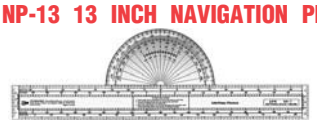
DNP-13 - 13" Deluxe Navigation Plotter with nautical and statute scales, sawtooth graduated color-coded scales for Sectional, WAC, and Terminal Charts. PVC plastic 13-5/16" x 4"
P/N 13-06696.....**$10.75**



DNP-8 - 8 " Deluxe Pocket Navigation Plotter with sawtooth graduated color-coded, nautical, statute, and terminal area scales for Sectional, WAC, and Terminal Charts. PVC plastic 8-1/8" x 2-7/8"
P/N 11-07723.....**$8.95**

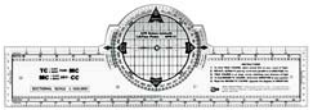


DNPR-13 - 13 " Deluxe Plotter with Rotatable Azimuth Compass Rose, nautical & statute sawtooth graduated color-coded scales for Sectional, WAC, and Terminal Charts. PVC plastic 12-5/16" x 4-1/2"
P/N 11-07724.....**$12.95**



NP-13 13 INCH NAVIGATION PLOTTER - Four precision protractor scales and fourteen nautical and statute scales for Sectional, WAC, and Terminal Charts. Plotting is easy and accurate when done with an APR plotter. Instructions are printed on the plotter. Constructed with durable plastic. Dimension: 13 5/6" x 4"
P/N 13-19913.....**$9.95**

NPR-13 13 INCH AZIMOUTH COMPASS ROSE NAVIGATION PLOTTER



Four protractor scales and fourteen nautical and statute scales for Sectional, WAC, and Terminal Charts. Instructions are printed on the plotter. Durable plastic. Dimension: 13 5/16"x 4 ½"
P/N 13-03511.....**$10.90**



HPC-206 - Holding Pattern Computer. Pocket size. Visually displays entry headings from all directions for both standard and non-standard holding patterns. Shows holding speeds and inbound time to fix. Colorful segments for easy learning and use. 4" x 5" HOLDING PATTERN COMPUTER displays entry to standard and non-standard holding patterns, maximum indicated holding speeds, and time of inbound leg to fix. Complete instructions. "Best on the market" designed by Capt. Barry Schiff P/N 11-07722.....**$12.50**



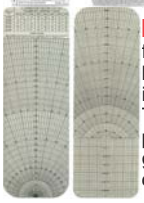
E6-B2- H/S - E6-B2 D with High Speed Wind Slide of 100 to 800 ks or miles. Compressibility "F" factor scale shows the "F" correction factors for TAS. Gives calibrated airspeed from 200 to 550 knots at pressure altitudes of 10,000 to 50,000 feet. Crosswind grid shows method to calculate crosswind and headwind components. Anodized aluminum computer, 4-7/8" x 11-1/8" P/N 13-06673.....**$39.95**



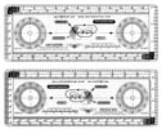
E6-B8D - Deluxe all plastic student Pilot Wind Triangle & T/S/D navigation computer. Features the new exclusive windspeed cursor which shows the speed and drift without pencil marks. Color-Coded sawtooth scales. Calculates all necessary flight planning & enroute navigation requirements. Easy to learn and use with the instructions printed on the computer. 4-1/2" x 8-3/4" P/N 13-06675.....**$17.75**



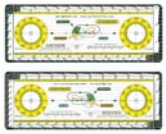
E6-B9 - Universal Standard Wind Triangle & T/S/D Large anodized aluminum computer. calculates all necessary flight planning & enroute navigation requirements. 4-7/8" x 9-5/8"
P/N 13-03497.....**$24.75**



LOW & HIGH SPEED SLIDES - Low & High Speed Slide for E6-B9 or E6-B2 models. Low wind speeds 10 to 270, high wind speeds 100 to 800 kts or miles, compressibility "F" factors scale shows the "F" correction factors for TAS. Gives calibrated airspeed from 200 to 550 knots at pressure altitudes of 10,000 to 50,000 feet. Crosswind grid shows method to calculate crosswind and headwind components. 3-7/8" x 11-1/8"
P/N 13-06680.....**$12.50**



JNP - Enroute IFR Radio Facility Chart Plotter for NACO and Jeppesen Radio Facility Charts, 12 high visibility scales, displays entry diagrams of standard and non-standard holding pattern, compass rose plotter, km to nm and nm to km conversion scales. 8-3/4" x 3-1/4" P/N 13-06704.....**$10.85**



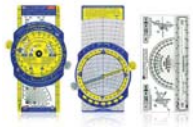
DJNP - Deluxe Enroute IFR Radio Facility Chart Plotter for NACO and Jeppesen Radio Facility Charts, 12 high visibility scales, displays entry diagrams of standard and non-standard holding pattern, compass rose plotter, km to nm and nm to km conversion scales. Lifetime guarantee, LEXAN® 8-3/4" x 3-/1/4" P/N 13-06706.....**$11.95**



APR DRFC-1 POCKET IFR & RNAV FOR JEPPESEN & NACO CHARTS - Has 13 scales for Jeppesen Radio Facility and NACO Charts. Shows a compass rose and a color-coded illustration for parallel, teardrop, and direct entries to standard and non-standard holding patterns. 6" x 3 ½". Lifetime Guaranteed. P/N 13-06701.....**$10.95**



DELUXE INTERNATIONAL PROTRACTOR & PARALLEL RULE PLOTTER - Designed with high visibility color graphics, a tinted grid, and larger numbers and lines for easier positioning and reading. This plotter eliminates the need to use dividers and parallel rulers. A hole in the center of the instrument is used to conveniently mark and rotate the plotter. WAC/ONC 1:1,000,000 VIS/TERM 1:250,000 Scales, PVC plastic Dimension: 5" x 5" P/N 13-06707.....**$8.50**



E6-B8DP DELUXE STUDENT PILOT FLIGHT COMPUTER WITH NP-8 PLOTTER - Features the patent pending exclusive Wind Speed Cusor Arm that quickly tells you groundspeed, wind correction angle, and magnetic heading. Eliminates two set-ups and the need to mark dots on the plastic disc. The E6-B8DP calculates all necessary flight planning and en route navigation requirements. Color-coded sawtooth scales are user-friendly and allow for quick, accurate reading. P/N 13-06676.....**$19.75**

PS



ERASABLE HIGHLIGHTERS

These erasable highlighters allow you to highlight all necessary information. They also allow you to erase any marks you've made by mistake! With dual ends, these highlighters will make everything you do in the cockpit easier and more efficient.

Yellow.....P/N 14-01636 .....**$2.95**
Orange .....P/N 14-01637 .....**$2.95**
Pink .....P/N 14-01638 .....**$4.40**
Blue .....P/N 14-01639 .....**$2.95**

CHINA MARKERS



The economical solution for marking on porous and non-porous surfaces such as paper, cardboard, plastic, wood, glass, ceramics, and some metal.

Blue .....P/N 14-01623 .....**$1.35**
White .....P/N 14-01625 .....**$0.88**
Yellow.....P/N 14-01626 .....**$1.50**

UNBREAKABLE SUPER PLOTTER



Here's a special flight planning tool we really like. A colorful little plotter with a rotating azimuth that makes it much easier to plot a courseline. Place the compass rose over your departure point and rotate the straight edge towards destination. Presto.. an instant readout of your course! Reads distance in statute miles or nautical miles for both sectional and WAC charts. Made of bullet proof Lexan. Won't crack, break, or warp in extreme heat or cold. P/N 13-03473 ..... **$18.95**

PILOTS FREQUENCY REMINDERS



This little prompter is designed to allow the pilot (especially students) to pre-plan which frequencies will be used during a flight and hang this handy item close at hand in the cockpit. this is ideal when operating in a high density airport area. Helps eliminate cockpit clutter and searching for often used frequencies. P/N 13-04391 ..... **$5.50**

ON COURSE AVIATION PRODUCTS CHART MARKS



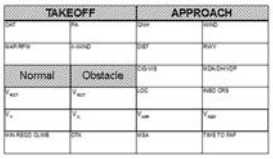
Customize your charts with these highly visible, self sticking, removable accents, outlines, & notes. Add a compass rose to any airport or airway intersection, outline VOR information, accent airport or communication information. 20x20nm see through notes accept pencil or pen for your special information. All are easily removable after your flight.

.....Note (11/package).....P/N 13-30110 .**$3.50/ea.ea.**
Accents (16/package).....P/N 13-30113 .....**$3.50/ea.**



PILOT & COPILOT SEAT HEIGHT PLACEMENT TOOL

This tool is a must have for any pilot and/or Flight School. Here are a few questions to ask yourself that will help explain why a pilot should use this Seat Height Placement Tool before every flight. This cockpit tool gives the pilot the advantage of consistency in their seat height placement in any airplane they fly. Industry wide, landing accidents have been on the rise. A majority of these can be attributed to improper seat height adjustment and sight picture. The Eye Aligner takes the guesswork out of where to adjust your seat, as well as where the proper Eyeline should be. P/N 13-19015 .....**$89.95**



TOLD CARDS

Told Cards are a great cockpit accessory for pilots flying in VFR and IFR conditions.

Description	Part No.	Price
Told Cards SE VFR 3x5 Double Sided Cards 25 Pack	13-12011	$12.25
Told Cards SE IFR 3x5 Sticky Note Pad 50 Cards	13-12012	$8.49
Told Cards ME IFR 2.5x3 Double Sided Cards 25 Pack	13-12013	$8.49
Told Cards ME Take off 3x3 Sticky Note Pad 50 Cards	13-12015	$8.99
Told Cards IFR Approach 3x3 Sticky Note Pad 50 Cards	13-12016	$8.99



HIGHLIGHTER TAPE

A removable alternative to highlighter pens for all kinds of valuable permanent documents. Sticks securely, yet removes easily without damage to most surfaces. Vivid colors can't be missed, yet transparent feature allows you to see what is underneath. Economical - use as much or as little as you want.

Pink..... P/N 14-00889..... **$4.95**
Yellow..... P/N 14-01860..... **$4.95**
Green..... P/N 14-01861..... **$4.95**
Orange..... P/N 14-01862..... **$4.95**



PILOT POCKET PLUS

The Pilot Pocket PLUS is the answer to all your cockpit organizational needs. Based on the original Pilot Pocket, this expanded model accommodates today's larger smartphones or Bluetooth GPS units. Additionally, The Pilot Pocket PLUS features two slots for pens and a convenient holder for your sunglasses, keeping everything you need close at hand. P/N 13-20980..... **$23.95**

PS

Prices Subject to Change Without Notice

CHART CLIPS - TOOL BAGS



PUT-IT SUCTION CLIP

This clip is strong enough to hold an approach plate, chart, or checklist. Attaches by a suction cup to the instrument panel, yoke or any other nonporous surface. ..... P/N 8197 ..... **$5.85**



NO CLUTTER CLIPS

No Clutter Clips * Holds checklists, approach plates, charts, etc. * Stick on most slick surfaces * UV Resistant

1 Small clip per package ..... P/N 13-06636 ..... **$4.80**
2 Small clips per package ..... P/N 13-06408 ..... **$9.55**
1 Large clip per package ..... P/N 13-06409 ..... **$6.50**



WATCH-IT ACCESSORY HOLDER

"World's most versatile holding device". Lets you mount time pieces and calculators exactly where you want-on the wheel, the yoke tube of clipboard. An ingenious bracket, an adjustable holding loop, and a little Velcro is all it takes. Once positioned, can be mounted & removed repeatedly. Non-reflecting, black materials, weighs less than 1oz. ..... P/N 8265 ..... **$10.90**



YOKE CHART CLIP

When you want the chart or approach plate right in front of you - this clip will hold it on the yoke. Adjustable band wraps around the yoke and holds the clip firmly. Fits all general aviation aircraft controls. Non-reflective black finish... P/N 8135 ..... **$9.95**



CESSNA YOKE CLIP

Yoke Mount Combo Clip (Large). Fits 1" - 1 1/2" Diameter Shaft..... P/N 13-02845 ..... **$9.50**



IFR CHART CLIP

Make IFR flying simpler by keeping vital instrument approach plates and charts in place. Attached to the yoke rather than in your lap or on the floor, this chart clip comes in various models designed to install easily on the yoke of your aircraft. Insures that your navigational charts stay in front of your eyes when you need them most. Handy for VFR charts as well. We'll be happy to assist you in determining what model chart clip will best fit your aircraft.

1.5" Post Standard Clamp ..... P/N 8131 ..... **$21.75**
1.5" Post Wide Clamp ..... P/N 8487 ..... **$21.75**
2" Post Standard Clamp ..... P/N 8690 ..... **$21.75**
2" Post Wide Clamp ..... P/N 8822 ..... **$21.95**
3" Post Standard Clamp ..... P/N 8674 ..... **$21.95**
3" Post Wide Clamp ..... P/N 8915 ..... **$21.75**



HOLD-IT CHART HOLDER

Simple and effective, this handy stainless steel clip holds charts right where you need them. Elastic strap attaches securely to leg, aircraft yoke, or visor.

P/N 13-01759 ..... **$9.95**



YOKE CLIPS

Clip this yoke on your aircraft so it does not interfere with movement of controls. Spring may be adjusted for smaller diameter shafts by pinching with pliers.

Large - Used on 1" tube ..... P/N 13-04392... **$12.75**
Small - Used on 3/4" tube ..... P/N 13-04393... **$12.75**



APPROACH PLATE HOLDER

• 10 leaf • Flip-over (not accordion) • Size: 6"x 9" • Vinyl ..

P/N 13-02772 ..... **$5.95**



CARRY-IT CORDURA TOTE CASE

This multi-functional tote case is made from black Cordura fabric and features 8 pockets and velcro closures. Holds radios, flashlights, pens, pocket PC, maps, charts & more.

P/N 13-01757 ..... **$21.50**



PROFLIGHT BOOSTER SEAT POUCH

• End cockpit clutter • Made or durable Cordura • Stores flashlight, fuel tester, flight guides, approach plates, charts, plotter, E6-B, sunglasses and more. • Available in black, AF blue, red, gray & olive drab

Black ..... P/N 13-31871 ..... **$16.85**
Blue ..... P/N 13-03005 ..... **$18.95**
Red ..... P/N 13-31870 ..... **$18.85**



23 POCKET BIGMOUTH BAG

17 Multi-use pockets inside and 6 outside organize tools and accessories. Opens wide for easy access to bag's contents. Padded reinforced web carrying handles. 12"L x 8 1/2"W x 8"H

P/N 12-00329 ..... **$19.85**

12 POCKET TRAYTOTE BAG - This bag has 2 pockets inside and 10 pockets outside with a 11"x 6" multi-compartment tray which slides securely into bottom of bag. Opens wide for easy access to contents and has reinforced web carrying handles. 12"L x 8"W x 12"H

P/N 12-00163 ..... **$52.50**





14 POCKET TRAYTOTE BAG - This bag features 2 pockets inside, 12 pockets outside, with a 13.5" x 6" multi-compartment plastic tray slides securely into bottom of bag. Opens wide for easy access. 16"L x 9"W x 12"H

P/N 12-00164 ..... **$56.95**



MILITARY STYLE TOOL BAGS

These tool bags are made of heavy-duty military-type tough 18oz./sq.yd. cotton duck with a water repellent mildew-resistant treatment. The mechanics Tool Bags have compartmentalized side pockets with flaps. Hardboard bottoms are completely sewn into each bag and are unexposed. All stitching is of heavy duty nylon thread and the handles are made from heavy military spec. webbing. All inside seams are bound to eliminate raveling of the fabric.Long-tab, self-locking slider. Color: O.D. Green. Available in 2 sizes:

O.D. Green Small: 6" x 6" x 12" Bag..... P/N 13-02500 ..... **$59.75**
O.D. Green. Large: 5" x 5" x 16" Bag..... P/N 13-02600 ..... **$64.50**



UNIVERSAL BEVERAGE HOLDER

This Universal Beverage Holder made of billet aluminum installs easily in any thickness dash or instrument panel. Available in two styles, with square or oval face-polished surfaces, its compact design permits vast installation possibilities.

Oval Face..... P/N 13-03792.. **$139.00**



AIRMAN CERTIFICATION LEATHER WALLET

Airman Certificate real genuine leather wallet with imprinted FAA symbol. .... P/N 13-19713.... **$23.95**



FLIGHT OUTFITTERS PILOT CLIP WALLET

The Flight Outfitters leather wallet is simply designed to carry just what you need. Easily fits into your front pocket so it saves your rear end from uncomfortable seating. Made from soft brown leather to give a professional look. Features 4 card slots and a money clip on the back. The Flight Outfitter logo is debossed into the front leather face and the money clip has Flight Outfitter's plane logo laser etched on the money clip. ..... P/N 13-19008.... **$29.95**



LICENSE HOLDERS

Black leatherette with clear plastic window to display ownership certificates. P/N 13-07900 only includes eyelet holes for mounting and metal plates to keep corners from fraying.

4-7/8" X 6-7/8" ..... P/N 13-07900 . **$12.95**
7-1/2" X 8" ..... P/N 13-17904 . **$14.75**
7.5" x 5.5" ..... P/N 13-17905 . **$14.95**
14" x 5.5" ..... P/N 13-17906 . **$17.95**



NELSON AIRCRAFT DOCUMENT CASE

• Made of Cordura
• Two compartments

Red..... P/N 13-02934 ..... **$19.95**

PS

KNEEBOARDS

SOFT-G PLUS KNEEBOARD



This kneeboard is originally designed for high performance fighter & attack aircraft. Standard features include: reversible clip board which allows pocket and document loops to be reversed right or left side, 1-1/2" wide adjustable plastic strap, clear plastic information pocket, removable document loops, 4 elastic pen/pencil slots, side release buckle, durable wire clip, and NEG-G strap. P/N 13-12655 ..... **$52.85**

The performance package includes: information cards, clear document protectors, removable document protectors, and releasable cable ties (holds document protectors securely to kneeboard).
P/N 13-12656 ..... **$72.75**

TRIFOLD KNEEBOARD



The standard features include: right and left light pockets that double as pen/pencil pockets, 1.5" wide adjustable plastic strap, 4 clear plastic information pocket, right & left document loops, side release buckle, durable wire clip, and padded backing P/N 13-12660 ..... **$54.75**

The performance package includes: information cards, clear document protectors, flex light with fixed or adjustable beam, and releasable cable ties (holds document protectors securely to kneeboard) optional.
P/N 13-12661 ..... **$69.95**

9-G PLUS KNEEBOARD



This kneeboard is originally designed for high performance fighter and attack aircraft. The standard features include: right and left light pockets that double as pen/pencil pockets, 1.5" wide adjustable plastic strap, 3 clear plastic information pocket, right and left removable document loops, side release buckle, easy access pocket, durable wire clip, and padded backing. P/N 13-12650 ..... **$51.75**

The performance package includes: information cards, clear document protectors, removable document protectors, & releasable cable ties (holds document protectors securely to kneeboard).
P/N 13-12651 ..... **$69.95**

MINI TRIFOLD KNEEBOARD



This mini trifold kneeboard measures 8" x 16.5". The standard features include: reversible clip board which allows pocket and document loops to be reversed right or left side, 1-1/2" wide adjustable plastic strap, clear plastic information pocket, removable document loops, 4 elastic pen/pencil slots, side release buckle, durable wire clip, and NEG-G strap. P/N 13-12665 ..... **$48.50**

The performance package includes: information cards, clear document protectors, removable document protectors, and releasable cable ties (holds document protectors securely to kneeboard).
P/N 13-12666 ..... **$69.95**

JEPPESEN IFR THREE-RING TRIFOLD



The Jeppesen three ring trifold is great for holding approach charts and features three approach chart pockets, collapsible rings, elastic pen / pencil / penlight holders, and valuable IFR flight information the clip board. Includes free U.S. Low altitude planning chart. Size: 10"x 20" open.

Kneeboard/Clipboard .....P/N 13-06956 .....**$45.95**

VFR KNEEBOARD



This kneeboard places information at your fingertips. It holds charts, flight computers and much more. An elastic leg strap holds this unit comfortably in place with a velcro closure. The metal clipboard (also available separately) contains valuable information for your VFR flight needs. An additional strap is included allowing you to use your clip board independent of the kneeboard. You are really getting two products in one.

Kneeboard/Clipboard .....P/N 13-06955 .....**$40.95**



COVER FOR MILITARY KNEEBOARD

Cover for Military Kneeboard, red in color
P/N 13-02891 .....**$9.20**

AERO PRODUCTS RESEARCH KNEEBOARDS



5-3/4" X 10" X 2-1/2" Deluxe kneeboard. Official Air Force and Navy models with quick-release buckles and non-slip foam strips to keep the unit in place. Each model includes 2 heavy-duty paper clamps, pencil holder This is the unlighted version of MXU-163/C. Anodized aluminum. Meets all military specs.

MK-2A/C
P/N 13-03521.....**$63.75**

9" x 5-3/8" Contoured base, non-slip kneeboard. 3" positive ext. clip for approach plates, etc. Pencil holder, comfortable leg strap, sturdy, lightweight. Black, non-glare aluminum.

MK-9.....P/N 13-03520.....**$45.95**

6" x 8-3/4" VFR kneeboard lists flight plan sequence, tower light signals, time zones, visibility and distance-from-cloud requirements plus much more. Anodized aluminum. Includes flight logs.

0-100.....P/N 13-03518.....**$12.95**

6" x 8-3/4" IFR kneeboard lists flight plan sequence, alternate flight planning and distance-from-cloud requirements, IFR required reports, plus much more. Anodized aluminum. Includes flight logs.

0-150.....P/N 13-03519.....**$12.95**

VFR/IFR PILOT FLIGHT DESK



The PFD-3 PILOT'S FLIGHT DESK, first designed and introduced by APR Industries, puts essential VFR and IFR information right at your finger tips. The VFR side, with a small bear clip, holds flight logs and approach plates while the larger bear clip on the IFR side opens to 1" and is designed to hold aeronautical charts and radio facility approach books. Non-slip foam on the underside of the board helps to hold everything securely in place. APR's PILOT'S FLIGHT DESK is the best available! The PFD-3 has 3 clips along with all the features PFD-1 provides additional uses such as clipping long sections of flight charts, aprroach charts and log sheets (VFR-100 / IFR-200). Includes a pad of logs with sample sheets designed by Capt. Barry Schiff. Dimensions: open size: 16" x 9", folds to: 8" x 9". Anodized Aluminum, .050" thick.....P/N 13-11734.....**$27.85**

ASA IFR& VFR KNEEBOARDS



These IFR and VFR Knee- boards are an attractive, light gray, brushed aluminum. Instrument and visual information is clearly silkscreened on the boards so pilots can quickly reference rules at a glance when operating a cyclic or stick. All information on the Kneeboards match current Federal Aviation Regulations. The Kneeboards feature a comfortable, 1.5" wide elastic legband that hugs the leg without binding. Velcro fasteners can be adjusted without removing the kneeboard and fits all leg sizes. A pencil/pen holder is designed into the leg for fast note taking. The Kneeboards also feature a 4-3/4" wide metal clip that is easy to lift and strong enough to hold NOS charts and other necessary papers. Paper-protector elbows secure material, yet papers won't rip when pulled out.

VFR Kneeboards ..... P/N 13-06925.....**$13.95**
IFR Kneeboards..... P/N 13-06930.....**$13.95**

NAV-DATA LIGHTED KNEEBOARD



Nav-Data KB-170 Lighted Kneeboard
Rugged molded construction used by the U.S. Military with heavy duty elastic strap and buckle to keep it firmly in place. Also has a contoured bottom and foam strips for extra stability. Rheostat control for perfect lighting. Holder for multiple pens or pencils plus built in pencil sharpener. Upper clip opens 1" wide to hold even large approach plate books. Lower clip allows for more versatility. Compact dimensions: 10"x5.5". Lightweight: approx 16 ounces Operates on 3 AA batteries (Not Included).....P/N 13-11997.....**$59.95**

PS

Prices Subject to Change Without Notice

KNEEBOARDS

FORCE PROTECTOR GEAR KNEEBOARD



Go full electronic with the ability to use an IPad, or old school. Perfect companion for any COCKPIT OR VEHICLE. "FPG Knee Chocks" lock down the Kneeboard from slipping with less tension on the leg strap. They are adjustable to any size leg and any position needed. Retention strap to keep pages neat and tidy. Removable writing station with a clipboard that you place as needed. Cell phone pocket. Plenty of small item storage with Velcro enclosure.

Color	Part No.	Price
Black	13-20221	**$79.95**
Multi-Camo	13-20633	**$85.75**
ABU Camo	13-20635	**$85.75**
Coyote	13-20636	**$85.75**

TRI-FOLD KNEEBOARD



For the pilot who has a little more to juggle, the Tri-Fold Kneeboard uses the expertly styled VFR Kneeboard in a 3-panel jacket. The high-quality construction features durable material & double-sewn seams where extra stress takes place. The color is jet black with a logo attractively embroidered in silver on the front. The left panel has ample room for small books, papers and unusually shaped items. The center panel holds the kneeboard under clear plastic. Either side of the center includes a pen/pencil holder and buttonholes that allow the pilot to fold back one or both panels of the kneeboard with the legband. This is ideal when operating a cyclic or stick.The right-hand side contains a clear pocket for easy map viewing. The elastic legband has velcro closures and will comfortably fit any leg size. Try the kneeboard that puts everything at your fingertips. .....P/N 13-06950 ..... **$37.75**

MYCLIP KNEEBOARD



MyClipKneeboard replaces the MyClip Thigh and the MyClipMini. This updated design works with all tablets and phones from 3 inches (7.5cm) to 12 inches (30cm). A great way to use your Phablet or Tablet in the cockpit without worrying about its security. Plastic clips to be adjusted to accomodate may different size tablet and phaplets. Clips can hold a Galaxy Note in portrait mode all the way up to an full size iPad in the landscape mode. With this kind of versatility upgrading your tablet will not require a change of kneeboard. For iPad versions, tablets and smart phones. P/N 13-16535 .....**$23.95**

MYCLIP MY BIG KNEEBOARD



The MyBigKneeboard is a tablet and iPhone kneeboard for use with almost any tablet or smartphone with dimensions from 3 inches (7.5 cm) to 12 inches (30 cm) and a thickness (including case) up to .95 inches. This is the product to choose if you want to keep your tablet in your everyday case when flying or if you are using an armored case such as the Otterbox® or Lifeproof® case. Plastic clips to be adjusted to accomodate may different size tablet and phaplets. Clips can hold a Galaxy Note in portrait mode all the way up to an full size iPad in the landscape mode. With this kind of versatility upgrading your tablet will not require a change of kneeboard. For all iPad versions, tablets and smart phones in a thick case.

P/N 13-16550 .....**$26.85**

EFB CADDY



In a word it is all about "SAFETY"! With the advent of Electronic Flight Bag(EFB) software, Tablet technology and ADS-B receivers, today's GA pilot has access to reasonably priced, portable technology that greatly improves the safety conditions, under which they can now operate. Enhanced situational awareness and reduced pilot workload, both preflight and in-flight, are but two of the several benefits. EFB CADDY was designed to further improve the pilot experience, by addressing the deficiencies found in many of the current Tablet holder products. Secure physical attachment and head-up, unobstructed panel and outside view are critical features.

Description	Part No.	Price
Model: A - Cradle / Size: Large Height 8.25" to 11.25", Width 7.75" Max., Depth 0.56" Max.	11-14025	**$224.95**
Model: B - Cradle / Size-Small Height 8.25" to 11.25", Width 6.80" Max., Depth 0.50" Max.	11-14026	**$224.95**
Model: C - No Cradle	11-14027	**$210.95**

W-2 KNEEBOARD



Kneeboard is made from highly durable and water resistant nylon. Removable strap for the checklist on the left side and two pockets on the right side- one pocket for an E6B and the other for a flashlight. RTwo pencil pockets. RFastened to the leg using an adjustable elastic strap complete with buckle and quick release clip.

P/N 13-19805 .....**$27.95**

W-4 KNEEBOARD



Kneeboard is made from highly durable and water resistant nylon. Removable strap for the checklist on the left side and pencil holders, a small pocket for CEPs, and a larger pocket for an E6B on the right side. An added feature is the clear strap that goes across the clipboard to keep pages form flying around. Fastened to the leg using an adjustable elastic strap complete with buckle and quick release clip. P/N 13-19806 .....**$27.95**

W-4 KNEEBOARD WITH FLIP POCKETS



Kneeboard is made from highly durable and water resistant nylon. Removable strap for the checklist on the left side and pencil holders, a small pocket for CEPs, and a larger pocket for an E6B on the right side. An added feature is the clear strap that goes across the clipboard to keep pages form flying around. Fastened to the leg using an adjustable elastic strap complete with buckle and quick release clip. 6 clear pockets that flip up and down. P/N 13-19807 .....**$37.95**

FLIGHT OUTFITTERS IPAD MINI KNEEBOARD



The Flight Outfitters iPad Kneeboards take cockpit organization to a whole new level. Loaded with innovative, pilot friendly features, these kneeboards provide a sturdy mounting bracket for an iPad Mini or Air. The bracket rotates for both portrait and landscape orientation. How about a place to take notes or hold a cell phone? The side of the kneeboard consist of a structured pocket that, when unzipped, creates a rigid platform. This platform is sized perfectly for a small 3" x 5" notepad (included) or cellphone. Lined with soft felt, this platform holds any size of iPhone. The unique design is completely reversible for use on either leg. Heavy-duty elastic leg strap securely holds the kneeboard in place. Includes drawstring bag for storage.

For iPad Mini 1,2,3,4 .....P/N 13-18868 .....**$59.95**
For iPad Air 1,2,3 .....P/N 13-18869 .....**$69.95**

PS

KNEEBOARDS

FLIGHT DESK TRI-FOLD KNEEBOARD



Flight Desk Kneeboard greatly improves cockpit organization of charts & accessories. Unlike some other kneeboards with limited utility, will hold sectional charts, a large E6B type computer, and has two elastic loops on either side of the clipboard to hold a goose-neck type flashlight. If the middle loop is not used for a computer, it can be used to hold a handheld transceiver.

P/N 13-03474 ..... **$16.75**

APR KNEEBOARDS



P-IFR - Professional Pilot's Deluxe IFR Flight Kneeboard. Essential IFR flight information printed on top of kneeboard, large clip opens to 1" for approach book, adjustable strap. Board will manually rotate to best writing angle. Anodized aluminum, 9-1/2" x 6-3/8"

P/N 13-06712.....**$13.95**



P-VFR - Professional Pilot's Deluxe VFR Flight Kneeboard. Essential VFR flight information printed on top of kneeboard, large clip opens to 1" for approach book, adjustable strap. Board will manually rotate to best writing angle. Anodized aluminum, 9-1/2" x 6-3/8"

P/N 13-06711.....**$13.95**

INSTRUMENT MANUAL AND CHARTS BAG



It will hold all your required instrument manuals and charts. This bag has a flap with velcro closure, two handle straps for added strength, and outside pockets perfect for pen and pencil supplies.

Small Dimensions: 9.5"H x 5"D x 6.5" W.....P/N 13-19813.....**$12.95**
Large Dimensions: 9.5"H x 5"D x 7"W.....P/N 13-19814.....**$14.95**

SECRET POCKET PHONE CASE GENUINE LEATHER



This travelers accessory is made of lightweight / flexible genuine leather. Capacity for a phone up to 3-1/4" in width x 5" in length. The extended secret pocket 6" in depth fits smoothly along side your hip underneath clothing to easily hide: Passport, Money, Credit Cards, Small Valuables, and much more. P/N 13-15692.....**$33.75**

TRIFOLD WITH POCKET KNEEBOARD



Kneeboard is made from highly durable and water resistant nylon. Compact kneeboard made with the small cockpit in mind. One pocket on the front, two pockets on the left, two pencil holders, and a plastic pocket on the right. An elastic band to hold a flight computer and a plastic clipboard in the center. When closed, the kneeboard is held together with velcro fasteners. Fastened to the leg using an adjustable elastic strap complete with buckle and quick release clip.

Small Dimensions: 5" x 8" when closed, 14 ½" x 8" when open
P/N 13-19810.....**$23.95**
Large Dimensions: 7" x 9 ½ " when closed, 20" x 9 ½ " when open
P/N 13-19811.....**$27.95**

ULTIMATE KNEEBOARD IPAD HOLDERS



Embroidery Tab is Optional

The Ultimate Kneeboard iPad® holder has a seven ring design so it will fit both models of the Ultimate Kneeboard®. It is also is designed to fit all models of the iPad® and iPad® mini. The Ultimate Kneeboard iPad® holder is made from the same durable materials as the Ultimate Kneeboard®. It is held in place at each corner with heavy-duty elastic and offers easy access to the Home button and connecter port. Just like the Ultimate Kneeboard®, the iPad® holder comes with a money back guarantee and is made in the USA by folks from Boise, Idaho.

Standard iPad.....P/N 13-16346 .....**$36.95**
Mini iPad.....P/N 13-16345 .....**$37.50**
iPad Air.....P/N 13-16347 .....**$36.90**
See Website for custom embroidery.....P/N 13-16348 .....**$10.00**

HARPER KNEEBOARDS



FIXED RING ULTIMATE KNEEBOARD™

- The fixed-ring model is the most popular kneeboard. The convenience of the snap-open, ring binder design makes it ideal for quickly changing pages, charts and checklists. Pilots flying into multiple airports or flying a variety of planes will find the fixed-ring design perfectly suited for them.

P/N 13-07022 .....**$46.50**



LOOSE RING ULTIMATE KNEEBOARD™

- Our loose-ring model has seven independent rings which are not bound together. The result is a kneeboard that molds perfectly to the shape of the pilot's leg. It is ideal for pilots who primarily fly the same airplane in and out of the same airport.

P/N 13-07023 .....**$46.50**

NELSON KNEEBOARDS



MILITARY TRI-FOLD - • Size: 19.5"x11.5" (open), 11.5"x7" (closed) • Holds sm E6-B, stopwatch, pencils • Supplied w/pad of 50 flight logs • Aluminum board holds approach plates

Gray ..... P/N 13-06910.....**$21.75**
Red..... P/N 13-02884.....**$21.00**
Olive..... P/N 13-02903.....**$21.00**
Replacement Flight Logs
P/N 13-02888.....**$5.35**

ARMBOARD



The ArmBoard provides agronomical, space saving writing surface as natural to wear as a wrist watch. Regardless of how large or small the cockpit is, the ArmBoard truly frees up much needed space. The product was also tested by CFIs and proved extremely useful in taking notes during flight lessons and jotting down student performance comments for follow up during ground school. A writing pad is included with a flight planer version sold separately along with various flight reference cards to be used on the inside flap of the ArmBoard. P/N 13-06021 .....**$31.95**

ACCESSORIES

Set of 3 blank pads for the armboard.....P/N 13-06025 .....**$5.95**
Set of 3 mixed pads (Blank, Flight Planner & Ruled) for the armboard.
P/N 13-06024 .....**$6.99**

LARGE TRIFOLD KNEEBOARD



Kneeboard is made from highly durable and water resistant nylon. One pocket on the front (when closed), two pockets on the left, two pencil holders, and a plastic pocket on the right. An elastic band to hold a flight computer and a plastic clipboard in the center. When closed, the kneeboard is held together with velcro fasteners. Fastened to the leg using an adjustable elastic strap complete with buckle and quick release clip. Dimensions: 7" x 9 ½ " when closed, 20" x 9 ½ " when open.
P/N 13-19812.....**$32.95**

PS

Prices Subject to Change Without Notice

IPAD ACCESSORIES



THE APPSTRAP FOR IPAD

Converts the iPad or iPad2 into a pilot kneeboard. iPad™ instantly detachable from leg strap via Velcro™ joint. Great for flight crews who must share or stow device. Change between portrait & landscape effortlessly. Made of high-quality Aluminum & professional grade webbing.

For full size iPads. Works with slim cases 1/2" or less
P/N 11-10398 .....**$47.95**

For iPad 2, 3, and 4 & allows for power plug or GPS booster.
P/N 11-10399 .....**$54.75**



APPSTRAP IPAD GEL CASE 2/3

The original AppStrap now with a Gel case. TPU Gel Case. Fits the iPad2 & iPad3. Instantly share, stow or reposition.
P/N 13-12952 .....**$44.95**



APPSTRAP FOR IPAD AIR

This clip is approximately .75 inches thick. The original AppStrap architecture now with a full skin instead of clips. Works well with both the iPad Air 1 and the new iPad Air 2. Product includes black, form-fitting protective gel case, adjustable leg strap and buckle, and 2 Tilt Pads for glare reduction and stability
P/N 13-15458 .....**$45.75**



THE APPSTRAP 5

Fits most tablets (8" - 10") when used with large protective case (Not Included) Devices: iPad1-4, iPad mini, Fire 8.9, Galaxy 10.x, Nexus. Cases: Otterbox Defender, Gumdrop Droptech, Griffin Survivor. Larger clip accommodates most heavy-duty cases. Fits cases 3/4" thick or less
P/N 13-14753 .....**$47.85**

G-FORCE MOUNT FOR APPLE IPAD



The G-Force GF260 iPad Mount is everything you need to re-take control of your cockpit and restore confidence to your passengers. Your passengers? You bet! What are they thinking while you're fiddling with that thing in your lap. The G-Force GF260 iPad Mount comes complete: with a custom-designed cradle, tailored to your iPad-1 or iPad-2, secured to the remarkable G-Force GF2 Twin base.
P/N 11-10741 .....**$66.75**

IPAD DOUBLE SUCTION CUP MOUNT



The Fat Gecko iPad Mount uses industrial grade locking suction to secure your iPad to any smooth surface in or around your cockpit View fight plans, maps, weather and more. Non damaging and 100% removable. Mounts to glass, plastics, metal and other smooth surfaces. Adjustable ball head rotation and extension. Hands free viewing & operation. Holds securely, even in turbulence.

iPad 1 Mini Mount (1 suction cup) .....P/N 11-10017 .....**$53.75**
iPad 2 Mini Mount (1 suction cup) .....P/N 11-10021 .....**$29.95**



IPAD AVIATION ACCESSORY KITS

This affordable accessories kit contains products you will need to start using your iPad in the cockpit. Our kit includes a Dual Universal XGPS150 receiver, a Genesis iPad nylon kneeboard and case, and a Lonestar 2 amp 12V/24V charger. We supply a premium charger which charges iPads, iPhones, iPods, etc. even during heavy use.

iPad 1 Kit.....P/N 11-10452 .....**$222.40**
iPad 2 Kit.....P/N 11-10453 .....**$215.70**



ASA IPAD MINI KNEEBOARD

A multitasking kneeboard, binder and versatile cover that is functional, durable, and stylish. The elastic strap secures the binder-like case to your leg while in flight and is easily removable for everyday use. The cover folds into a flap to serve as a horizontal desktop stand. Beautiful black leatherette with embossed wings; fits iPad mini, and iPad mini with Retina display. Dimensions: 8-5/16" x 5-7/8" closed, 9-11/16" x 12-1/4" open. P/N 13-18051 .....**$42.95**



ASA IPAD AIR KNEEBOARD

Made from eco-friendly leather and features a wide hook and loop leg strap to hold the kneeboard in place during flight. Great for use both in the cockpit and out, the built-in adjustable easel folds to position the iPad Air at a convenient tilted viewing angle; alternatively, it can lay flat. Dimensions: W 7" (closed) x H 10" x D 1"; W 14-1/2" (opened).
P/N 13-18052 .....**$54.75**



AIRGIZMOS IPAD PANEL DOCK (GEN 1, 2, & 3)

If you need to mount your iPad in your plane this might be the solution you are looking for. The base mount is designed to be screwed to a panel using a standard instrument mounting holes. The iPad snaps in and is held securely.
P/N 11-10830 .....**$98.50**

POWER IBOX FOR IPAD2



Power iBox fits like a second skin for the iPad2 all the while providing protection and power without adding bulk. Equiped with an 8,000mAh lithium polymer battery, the Power iBox packs enough charge to double iPad2's battery life. Its low profile casing provides durable protection against drops or mishaps while its silver finish and stylish design adds personality to the iPad2. iPad2 Not Included.
P/N 13-11684 .....**$129.99**



HAND-E-HOLDER™

The Hand-e-holder™ allows you to hold and view your iPad™/ tablet device comfortably in your hand, while providing a 360 degree rotation. The Hand-e-holder™ is the key component to using all the other accessories. The Hand-e-holder™ comes with the portable Mini Stand. The Mini Stand is clear acrylic and utilizes the Hand-e-holder™ strap and hand plate to give you 6 viewing positions. The Mini Stand still allows for the Hand-e-holder™ to rotate 360 degrees.

Hand-E-Holder .....P/N 13-11553 .....**$37.50**

Accessories

Hand-E-Holder Rectangle Stand.....P/N 13-11551 .....**$45.99**
Hand-E-Holder Leg Strap kit .....P/N 13-11548 .....**$49.75**
Hand-E-Holder Adapter Plate.....P/N 13-11549 .....**$19.99**

PS

THE APPSTRAP FOR IPAD MINI



The original AppStrap architecture now with a full skin instead of clips. Compatible with the iPad Mini 1, 2, and 3. TPU Skin Protects iPad-mini. Functional & Protective. Instantly share, stow, or repositionNote: Product received will be strap & skin only. This is not a kneeboard, only a strap & skin that your iPad mini fits in.

P/N 13-12709 .....**$38.95**

APPSTRAP TILT PADS



The original tilt-pad will convert any device or case into a kneeboard. Heavy-duty leg strap. Velcro joint. 2 Tilt Pads.

P/N 13-12954 .....**$15.95**

APPSTRAP CONVERSION KIT



Turn any tablet into a kneeboard with our DIY kit! Die cut velcro joint. Compatible with most covers/skins. Portrait or Landscape. Instantly share or stow. .P/N 13-12953 .....**$29.95**

APPSTRAP FOR THE IPAD MINI 4



The new AS-mini 4 maintains AppStrap's commitment to excellence and pilot-approved design. The form-fitting gel-case adds protection to the damageable device and mates to the elastic leg strap using a unique and secure Velcro mating system. This allows the iPad to be repositioned with ease, stowed during flight, or adjusted to portrait/landscape mode. The unique modular tilt pad allows the device to be positioned at the optimum viewing angle and helps reduce annoying glare.

As with all of AppStrap's product offerings, the AS-mini 4 employs most-needed features for routine cockpit use. These tablet kneeboard devices maintain a low-profile design without sacrificing on quality or durability.

P/N 13-18750 .....**$38.95**

GENESIS X IPAD ROTATING KNEEBOARD / CASE



Made to fit all generations of iPads and port locations. Main frame is made of tough ABS and the corners made of Polyurethane. The frame is contoured around the rear camera and the front camera is completely unobstructed to allow access for Facetime TM, photos or video. Size: 10" x 7.8" x 1".

P/N 13-12391 .....**$33.50**

GENESIS IPAD CLIPBOARD ADD-ON



A sturdy 3001 grade aluminum clipboard is riveted to a soft velvet backing to protect your iPad touch screen. Pen holder at the top. This is an add-on accessory for the genesis and genesis 2 iPad cases. Not a standalone kneeboard.

P/N 13-14734 .....**$24.75**

W-4 IPAD MINI KNEEBOARD



Kneeboard is made from highly durable and water resistant nylon. Has a pocket for your E6B, 5 pencils holders, a pouch for your CEPs/ earplugs, a removable grommet for your checklist, and a clear plastic strap that goes across your paper to keep them from flying away. One removable flip-up page with two pockets and a clipboard for PPC and notes. The middle of the kneeboard has 4 elastic bands at each corner to hold your mini IPad firmly in place. Fastened to the leg using an adjustable elastic strap complete with buckle and quick release clip.

P/N 13-19808 .....**$37.95**

W-4 IPAD MINI KNEEBOARD



Kneeboard is made from highly durable and water resistant nylon. Has a pocket for your E6B, 5 pencils holders, a pouch for your CEPs/ earplugs, a removable grommet for your checklist, and a clear plastic strap that goes across your paper to keep them from flying away. One removable flip-up page with two pockets and a clipboard for PPC and notes. The middle of the kneeboard has 4 elastic bands at each corner to hold your mini IPad firmly in place. Fastened to the leg using an adjustable elastic strap complete with buckle and quick release clip.

P/N 13-19809 .....**$37.95**

AIRGIZMO IPAD KNEEBOARD



The AirGizmo iPad Kneeboard allows accessing charts and apps on the iPad or iPad2 while flying easier and safer than ever. Molded plastic and a wide velcro strap allow for a secure, comfortable fit. Fold over tablet holder drops out of the way when not in use. Ability to adjust the angle of the iPad for best viewing angle and the ability to cut down glare. Designed to work with both the iPad and the iPad2.

Width: 7.93 in.. Height: 9.79 in.. Depth: 3.75 in. Weight: 13.1 ounces.

P/N -13-11218 .....**$73.95**

MOTM MOBILE WRIST MOUNT



MOTM™ works with any hand held unit: phone, music players, medical, GPS, and other mobile device units.

MOTM™ is the only Wrist Mounting System (Patent Pending) that lets you integrate your mobile device with your active "on the move" lifestyle. MOTM™ securely attaches your mobile device to your wrist for quick and easy access at your finger tips. Whether driving, walking, working, traveling, cycling, hiking, or listening to your favorite music, the everyday uses of your MOTM™ are endless. With its fully rotational, non-magnetic features the MOTM™ makes it much easier, and safer, to interact with the sports, fitness and navigation Apps on your device

The innovative MOTM™ Mounting System allows you to mount and remove your mobile device instantly. The MOTM™ Mounting Adapter attaches to your mobile device so it is always securely attached – without the need for lanyards, straps, or non-user friendly plastic sleeves or pouches. You can also use the MOTM™ Mounting Adapter to attach your device to the outside of your belt, pocket, backpack or purse for easy, immediate access. With MOTM™ you will never have to dig in your purse, pocket, or backpack looking for your mobile device again! Once you try it you will wonder how you ever got by without it! Made In USA.

Description	Part No.	Price
Mobile Wrist Mount iPhone 6	13-17638	**$59.00**
Mobile Wrist Mount Galaxy S5	13-17639	**$59.00**
Mobile Device Wrist Mount / Fit to Your Make & Model	13-17640	**$59.00**

PS

IPAD KNEEBOARDS

MGF IPAD MINI 4 ULTRA-THIN IPAD PANEL MOUNT



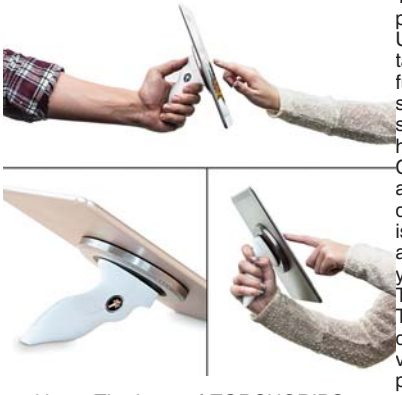
The UltraThin iPad Panel Mount is a lightweight aircraft grade aluminum mounting system to easily dock and seamlessly integrate your Apple iPad into your aircraft instrument panel – giving it an elegant, professional appearance in an easy to view position! Once installed, the UltraThin iPad Panel Mount allows your iPad to be mounted in seconds, and fully connected to power and audio with built-in cable ports. Removal is just as easy - just slide the face plate off and remove the iPad. iPad can be mounted in portrait or landscape mode. P/N 13-19797 .....**$199.00**

MGF IPAD AIR 2 / PRO 9.7 ULTRA-THIN IPAD PANEL MOUNT



The UltraThin iPad Panel Mount is a lightweight aircraft grade aluminum mounting system to easily dock and seamlessly integrate your Apple iPad into your aircraft instrument panel – giving it an elegant, professional appearance in an easy to view position! Once installed, the UltraThin iPad Panel Mount allows your iPad to be mounted in seconds, and fully connected to power and audio with built-in cable ports. Removal is just as easy - just slide the face plate off and remove the iPad. iPad can be mounted in portrait or landscape mode. P/N 13-19798 .....**$199.00**

CLASSIC TORCHGRIP®



TORCHGRIP® is a patented, made-in-the-USA, universal computer tablet accessory that functions as both a versatile stand and handle providing secure and comfortable handling of your device. Compatible with all iPads and most other tablets. Its durable and stylish design is ergonomically crafted and lightweight. Every time you set down your tablet, TORCHGRIP® is a stand. The handle rotates 360 degrees allowing multiple viewing angles in both portrait and landscape positions. The base of TORCHGRIP® securely attaches directly to the back of your tablet or case (reference "Specifications" for incompatible surfaces) using pre-mounted 3M® VHB™ adhesive which can be removed later to transfer TORCHGRIP® to a new device. The handle detaches by pushing a release button to slide it out of its mounting slots for easy stow and go.

Black/Black.....P/N 13-19321 .....**$59.95**
White/Whte.....P/N 13-19322 .....**$59.95**

ASA IPAD PORTFOLIO KNEEBOARD



The iPad Portfolio Kneeboard is the ideal stylish multitasking kneeboard, binder, and versatile cover. It is functional and durable and protects your iPad in flight and on the ground making it your favorite cockpit companion. Fits the iPad, iPad 2, and New iPad (iPad 3).
The inside sleeve holds your iPad securely on the right side with full access to iPad controls and button. The left side has pockets to store your documents and provides a writing surface. The elastic strap secures the binder-like case to your leg for inflight use and is easily removable for everyday use. The cover folds into a flap to serve as a vertical or horizontal desktop stand providing easy landscape viewing and full keyboard access. Beautiful black leatherette with embossed wings. Height: 9-11/16", Width (closed) 7-15/16", Width (open) 15-15/16".

P/N 13-11337 .....**$48.95**
Replacement Strap.....P/N 13-19794 .....**$4.35**

ASA IPAD MINI KNEEBOARD



Versatile kneeboard portfolio for your iPad mini that's functional both inside the cockpit and out. Fits iPad mini and iPad mini with Retina display. A multitasking kneeboard, binder and versatile cover that is functional, durable, and stylish.

Standard.....P/N 13-18469 .....**$41.95**
With holding clip.....P/N 13-18051 .....**$42.95**
Replacement Strap .....P/N 13-19794 .....**$4.35**

ASA IPAD KNEEBOARD WITH COVER



The iPad Kneeboard is a versatile case and kneeboard that helps pilots protect and use their iPad in flight and on the ground. The elastic strap secures the case to the pilot's leg for in-flight use. The unique plastic cover keeps the iPad screen safe while maintaining full viewing and complete touch-screen functionality, and opens easily to insert or remove your device. The easel folds to position the iPad at a convenient "wedged" viewing angle; alternatively, it can lay flat. The pocket on the back offers room for papers and maps. Openings are provided for charger and headphone/earbuds. Made of durable fabric with embossed wings. Fits the iPad, iPad 2, and New iPad (iPad 3). Features: • Easel folds up or down for optimal viewing and pocket provides access to charts and papers • Dock connector / power port accessible with the cover closed • Openings are provided for charger and headphone/earbuds • Fits both iPad, iPad 2, and New iPad (iPad 3) • Pocket on back offers room for papers and maps.

P/N 13-11701 .....**$24.95**

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IPAD ACCESSORIES – MGF PRODUCTS



EXECUTIVE IPAD KNEEBOARD KIT

This is the premium iPad kneeboard for the executive aviator on the go. Take it with you on land or in the air. This innovative, 3-in-1 iPad mount can be used as a standalone, or be clipped onto a kneeboard band to be used as a kneeboard. Use the optional RAM adapter and clip onto your RAM mount without changing mounting cases!

P/N 13-12765 .....**$59.95**



EXECUTIVE IPAD MINI KNEEBOARD KIT

This is the premium iPad Mini kneeboard for the executive aviator on the go. Take it with you on land or in the air. This innovative, 3-in-1 iPad mount can be used as a standalone, or be clipped onto a kneeboard band to be used as a kneeboard. Use the optional RAM adapter and clip onto your RAM mount without changing mounting cases!

P/N 13-12766 .....**$47.95**



EXECUTIVE IPAD CASE

This is the premium iPad case for the executive aviator on the go. Take it with you on land or in the air. Rotating case - view your iPad in landscape or portrait mode. Landscape folding cover - the cover closes even in landscape mode.

P/N 13-12774 .....**$32.95**



EXECUTIVE IPAD MINI CASE

This is the premium iPad Mini case for the executive aviator on the go. Take it with you on land or in the air. Rotating case - view your iPad in landscape or portrait mode. Landscape folding cover - the cover closes even in landscape mode.

P/N 13-12775 .....**$32.95**



EXECUTIVE IPAD KNEEBOARD KIT ACCESSORIES

Includes strap and Ram adapter.

P/N 13-12776 .....**$18.95**

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MGF UNIVERSAL FLEX CLIP KIT

This is the first and only mount that you can secure anywhere you wish with four screws of an AMPs pattern or with semi-permanent VHB adhesive. Since the Flex Clip uses Flex Arms, it is infinitely adjustable so pilots are able to mount their device in the exact position they wish that was thought not possible before. Simply take the metal base and secure it in the desired location with screws or adhesive. Then take the Flex Arm with the clip base and slide it into the base and lock it down by tightening the knob.

P/N 13-21196 .....**$223.95**

MGF SPORT MOUNT AMPS TILT & SWIVEL SLIDE



Note: Mount only, does not include required case. See Accessories for compatible options. The Sport Mount - AMPs Tilt & Swivel Slide is a fixed base for attaching your iPad/EFB to the aircraft utilizing the industry standard AMPs hole pattern or the optional Petal Base with 3M VHB tape. The mount provides maximum stability and reliability. The slide function of this mount allows the pilot(s) to slide the iPad/EFB AFT when on the ground providing easy access to the egress window. Once in the air the pilot can then slide the iPad/EFB FWD to an optimal viewing angle. P/N 13-20735 .....**$149.00**



MGF SPORT MOUNT AMPS FLEX SLIDE

Note: Mount only, does not include required case. See Accessories for compatible options. The Sport Mount - AMPs Flex Slide is a fixed base for attaching your iPad/EFB to the aircraft utilizing the industry standard AMPs hole pattern or the optional Petal Base with 3M VHB tape. The mount provides maximum stability and reliability. The slide function of this mount allows the pilot(s) to slide the iPad/EFB AFT when on the ground providing easy access to the egress window. Once in the air the pilot can then slide the iPad/EFB FWD to an optimal viewing angle. P/N 13-20736 .....**$169.00**

MGF POWER BANK PORTABLE CHARGER



This MGF 12000mAh Ultra-slim Power Bank is designed with two Smart USB output ports will quickly and effectively help to solve the low power problem for your digital device while traveling out. With high capacity, in such a compact package, it is perfect for traveling, business trips, or just any time you're away from an outlet. It is convenient to carry anywhere with a compact size. It is your optimal choice. P/N 13-20661 .....**$55.75**

MGF SMARTCHARGER WALL CHARGER



With SMART Charger, the magic is all in the details. It has dual USB-A ports to charge two devices at once, Smart IC Technology to guarantee your devices are charging at their maximum speed, and sophisticated protection measures to ensure safety for you and your device. SMART Charger's small and compact design with foldable pins makes it pocket-sized for travel and perfect for those tricky to reach power sockets. SMART Charger's two universal USB-A ports can charge up to two devices at once, including Apple mobile devices, smartphones and tablets. Using Smart IC Technology, it auto-detects your device's output so it's always charging at maximum speed (3.1A max, up to 2.4A per port). P/N 13-20662 .....**$29.99**

MGF ARMORGLAS SCREEN PROTECTORS



Armorglas is made of premium, ultra-thin tempered glass material. It is designed to preserve the feel and clarity of the standard screen on your device while adding a substantial level of protection. Choose between two styles: Anti-Glare: a matte finish subdues and removes the mirror effect of the traditional glass screen. Crystal Clear: high transparency, clear glass.

Model	Anti-Glare No.	Price	Crystal No.	Price
iPad Mini	13-16362	**$49.99**	13-16488	**$49.99**
iPad Mini 4	13-18743	**$49.99**	13-18744	**$49.99**
iPad Air	13-16363	**$49.99**	13-16487	**$49.99**
iPad 2/3/4	13-16364	**$49.99**	13-16486	**$49.99**
iPad Pro	13-19554	**$59.99**	13-19587	**$59.99**
iPad Pro 10.5	13-20668	**$49.95**	---	**---**
iPhone 5	---	**---**	13-16485	**$24.99**
iPhone 6	13-19551	**$24.99**	---	**---**
iPhone 6+	13-19553	**$24.99**	13-19586	**$24.99**
iPhone SE	13-19552	**$24.99**	---	**---**

MGF IPAD MINI / AIR SPORT KNEEBOARD



The iPad Kneeboard Sport™ is the perfect aviation kneeboard, mount and everyday case for the iPad Air. It is designed for the pilot looking to secure their iPad on either leg, who needs the minimal case, but still wants a very secure fit, or for the pilot that wants to mount their iPad. In black, smooth polycarbonate, the Sport™ adds protection and great feel to the iPad. The iPad Kneeboard Sport™ was designed for pilots by pilots. It is designed to work in aircraft where space is tight or where there is a cyclic, or control stick being used between the legs. It is perfect for pilots of helicopters, sport aircraft, and when there is tight yoke clearance or when mounting is desired. NOTE: This is the iPad Kneeboard only. Mounts sold separately. **Compatible iPad Aviation Mounts:** The iPad Kneeboard Sport™ is designed to mate using a quick-connect Sport™ Adapter wmounting system and an iPad Sport™ Mount. Mounting options include a iPad yoke mounts, panel/glare shield, or suction cup mounting system offering flexibility in its use in different aircraft and are sold separately. For more information, go to the Mounts category.

Mini Sport .....P/N 13-16366 .....**$89.00**
Air Sport .....P/N 13-16368 .....**$129.00**

IPAD 2/3 KNEEBOARD SPORT



The iPad Kneeboard Sport is designed for the pilot looking to secure their iPad on either leg, who needs the minimal case, but still wants a very secure fit. In black, soft to the touch polycarbonate, the Sport adds protection and great feel to the iPad. The iPad Kneeboard Sport was designed for pilots by pilots. It is designed to work in aircraft where space is tight or where there is a cyclic, or control stick being used between the legs. It is perfect for pilots of helicopters, sport aircraft, and when there is tight yoke clearance. Features: • The iPad Kneeboard Sport is made of black, soft-to-the-touch polycarbonate and is strong and lightweight. It is a form fitted case that holds the iPad securely in place. The cut-out design provides access to all of the iPad's ports, buttons and controls. The Sport is compatible with Apple's Smart Cover. • There are two aluminum rails on the underside of the case that frame your leg and, with the wide elasticized Velcro strap, allows the case to be held securely and comfortably to your leg. There are four rubber pads on the rails that allow the case to sit on a desk or table securely as well. • It is designed to be thin with a removable cover so as to be clear of the yoke, cyclic or control stick. It has a sleek look when used outside of the plane. • The removable knee strap can be left in the plane leaving you with a beautiful, sleek case for every day use. .....P/N 13-11310 .....**$99.00**

MGF IPAD 2/3 KNEEBOARD FOLIO



The iPad Kneeboard Folio™ (excluding clipboard) is the perfect high quality leather, rotating aviation kneeboard, lapboard and everyday case for your iPad 2 and iPad 3. All of the ports and controls remain accessible so the iPad can be charged, synced and controlled when it is in its case. Designed to accommodate both right and left hand, attached to the right or left leg, as a traditional kneeboard with the clipboard on the outside or as a lap desk. Black .....P/N 13-12413 .....**$99.00**

MGF IPAD MINI 4 KNEEBOARD SPORT



The iPad Kneeboard Sport™ is the perfect aviation kneeboard, mount and everyday case for the iPad Mini 4. It is designed for the pilot looking to secure their iPad on either leg, who needs the minimal case, but still wants a very secure fit, or for the pilot that wants to mount their iPad. In black, smooth polycarbonate, the Sport™ adds protection and great feel to the iPad. The iPad Kneeboard Sport™ was designed for pilots by pilots. It is designed to work in aircraft where space is tight or where there is a cyclic, or control stick being used between the legs. It is perfect for pilots of helicopters, sport aircraft, and when there is tight yoke clearance or when mounting is desired. NOTE: This is the iPad Kneeboard only. Mounts sold separately.....P/N 13-18845 .....**$99.00**

MGF KNEEBOARD STRAP



A Strap made to go with MGF kneeboards for additional security while in-flight. This strap is made out of a heavy duty, wide elastic and a generous amount of Velcro to provide long-lasting use and comfortable wear.

P/N 13-19564 .....**$9.00**

MGF IPAD PRO 12.9 / 11-13 INCH TABLET KNEEBOARD FOLIO C



The iPad Pro Universal Kneeboard Folio™ C (including clipboard) is the perfect high quality leather, rotating aviation kneeboard, lapboard and everyday case for your iPad Pro, and all other 10-13" tablets. Now you can bring any 11-13" iPad/Tablet with you into the cockpit of any airplane, train, car or truck where it can be held secure on your knee and lap. High quality, rich leather wraps the outside while soft and protective micro-fiber material lines the inside. The iPad/Tablet is held by four adjustable clips that are attached to a rotating cradle. All of the ports and controls remain accessible so the iPad/Tablet can be charged, synced and controlled when it is in its case.

P/N 13-19537 .....**$129.95**

MGF IPAD MINI UNIVERSAL 7-8 INCH TABLET KNEEBOARD FOLIO C



The iPad Mini Universal Kneeboard Folio™ C (including clipboard) is the perfect high quality leather, rotating aviation kneeboard, lapboard and everyday case for your iPad Mini 1/2/3/4, and all other 7-8" tablets. Now you can bring any 7-8" iPad/Tablet with you into the cockpit of any airplane, train, car or truck where it can be held secure on your knee and lap. High quality, rich leather wraps the outside while soft and protective micro-fiber material lines the inside. The iPad/Tablet is held by four adjustable clips that are attached to a rotating cradle. All of the ports and controls remain accessible so the iPad/Tablet can be charged, synced and controlled when it is in its case. .....P/N 13-19535 .....**$129.00**

MGF UNIVERSAL SMARTPHONE KNEEBOARD FOLIO C



The Universal Smartphone Kneeboard Folio™ C (including clipboard) is the perfect high quality leather, rotating aviation kneeboard, lapboard and everyday case for your iPhone 6, iPhone 6 Plus, and all other large smartphones. You can bring any large smartphone with you into the cockpit of any airplane, train, car or truck where it can be held secure on your knee and lap. High quality, rich leather wraps the outside while soft and protective micro-fiber material lines the inside. The smartphone is held by four adjustable clips that are attached to a rotating cradle. All of the ports and controls remain accessible so the smartphone can be charged, synced and controlled when it is in its case.

P/N 13-19536 .....**$129.00**

MGF APPLE CERTIFIED PREMIUM LIGHTNING CABLE (3FT)



This premium Charge + Sync cable makes it easy to connect your Apple portable to a computer, USB charger, or compatible car receiver. It features high end aluminum casing around the heads for added durability. The cable is wrapped in a high quality braided fabric that resists tangles, kinks and knots. Nylon Sleeve:The cable is wrapped in a high quality braided fabric that resists tangles, kinks and knots. Metal Connectors: High end aluminum connectors ensure you'll have a snug, reliable connection every time. 3 Feet: 3.28 feet of cable. Lightning Connector: For use with any iPhone, iPad, or iPod that uses the lightning connector. .....P/N 13-19558 .....**$24.99**

MGF FOLDKEY - BLUETOOTH MINI KEYBOARD



MGF proudly presents a cross platform Bluetooth Ultra-Slim Keyboard with foldable keyboard. Users can enjoy creating and communicating across multiple platforms on bluetooth supported devices wirelessly. Travel anywhere portably without the hassle of tangling wires. Allows you to get work done from anywhere. Only folding keyboard that has all keys including numbers. Performs any task necessary.

P/N 13-19561 .....**$49.99**

PS

MGF PRODUCTS

MGF FLIGHT BAG PLC LITE



MGF Flight Bag PLC Lite - Created to be the perfect bag for pilots looking for a light iPad ready flight bag. The PLC Lite is a high quality flight bag built to the same high standards as all other MGF products. Designed by pilots to meet the exacting needs of the cockpit environment. The PLC Lite is built from the ground up to be the ultimate solution for storing and protecting the essentials you will need while flying, with a special focus on your most important tool, the iPad. It has a specially designed, protective pouch to hold an iPad, laptop computer or many other electronic flight bag devices.

P/N 13-19545.....**$99.00**

MGF IPAD FLIGHT BAG PLC PRO



The Flight Bag PLC™ Pro is for the pilot wanting to move from a conventional flight bag to one for the "Paperless" cockpit. It has a specially designed, airport check-point friendly protective pouch to hold an iPad, laptop computer or many other electronic flight bag devices. All of the compartments are easy to see into, making it simple to find what you are looking for. There is room for everything a pilot needs to take with them in-flight. The Flight Bag PLC™ Pro bag is designed by pilots for pilots to be the ultimate flight bag for all aviators. This bag gives you the style, storage, organization, compact size and functionality like never offered before.

P/N 13-11594.....**$199.00**

MGF IPAD FLIGHT BAG PLC SPORT



A smaller version of the Flight Bag PLC Pro is finally here. The Flight Bag PLC Sport. Enough room to carry one headset, an iPad/EFB, a hand held radio, and other gear. Same industry leading quality, in a compact size. Headset Storage: Storage for 1 headset or overnight gear. iPad Storage Pocket: Padded pocket designed to protect the iPad or other tablets. Protects Laptop: Padded pocket can also store and protect up to a 13" laptop. Radio Storage: Large side pocket is designed to hold a hand held radio securely. Mesh Pockets: Interior pockets are made out of mesh to easily locate and access your gear. Water Resistance: Exterior of the bag is made of sail cloth making it water resistant. ..... P/N 13-18712 ..... **$139.00**

MGF BACKPACK STRAP



MGF Backpack Strap is intended for use with the Flight Bag PLC Pro, PLC Sport, and PLC Lite. Maximum comfort with much less pain on the shoulders which helps minimize fatigue. Helps items feel much lighter than actual weight. Padding and grip prevent straps from sliding off of shoulders. Clips onto bag with three easy hooks. Rotating hook heads make sure you never get tangled straps ever again!. Fully adjustable for all sizes. .... P/N 13-19546 ..... **$30.00**

MGF LUGGAGE CART



The Luggage Cart is the perfect accessory for those that want to add wheels to any flight bag or other luggage that doesn't already have wheels. The Luggage Cart is easily detachable from the flight bag, and folds to a compact shape for quick storage. Two strong elastic cords with plastic hooks can hold multiple bags steady for easy travel.

Both the Flight Bag PLC™ Pro and the Flight Bag PLC™ Duffel, not included with the Luggage Cart, have a pass through compartment on the back of the bag which allows the Flight Bag to be secured to the cart without the need to use the included straps. ..... P/N 13-19548 ..... **$35.00**

MGF PEN HOLDER



Add this self-stick pen holder to your MGF clipboard or any other clipboard to provide a convenient and secure place to store your pen. **** Not designed to work the MGF Mini Clipboard.*** Securely hold a variety of pen and pencil sizes with this unique little holder. Attaches with a strong 3M VHB tape.

P/N 13-19562 ..... **$7.00**

MGF LUGGAGE WORKS ADAPTER CLIPS



These clips can be used to attach any PLC Series Flight Bag to a Luggage Works bag. The hook latches attach to the shoulder strap loops on the bag, and are then secured via the female buckle on the Luggage Works bag.

P/N 13-19549 ..... **$9.00**

MGF IPAD CHECKLIST LUGGAGE TAG



The MGF iPad Checklist helps pilots ensure that their iPad is ready for flight. The Checklist is on the back of a luggage tag making the information very accessible. The MGF iPad Checklist contains important information organized in five categories: • Before Flight (5+ hours) • Pre-Flight • In-Flight • Post-Flight • And iPad In-Flight Settings • A unique tag lets you easily identify your bag and reduces the chances of someone else taking it • Split design allows personal information to be hidden from sight • Flexible steel cable attachment.

P/N 13-19547 ..... **$7.99**

MGF ARMORWIPES



Use ARMORWIPES to remove bacteria, smudges, dust, and other dirt from Avionics, GPS, Tablets, Laptops, Phones, Glasses, and more. Leaves screen streak free and dust free without damaging the surface. For pilots who fly airplanes that other pilots have flown before use ArmorWipes to wipe down the flight deck to prevent spreading of germs and other bacteria. Reduce the chances of getting sick. Product comes in a box of 25 individually wrapped wipes.

P/N 13-19555 ..... **$5.00**

MGF IPAD AIR 1-2 / PRO 9.7 SPORT CASE (KNEEBOARD / MOUNTABLE)



The iPad Kneeboard Sport™ is the perfect aviation kneeboard, mount and everyday case for the iPad Air or Pro 9.7. It is designed for the pilot looking to secure their iPad on either leg, who needs the minimal case, but still wants a very secure fit, or for the pilot that wants to mount their iPad. In black, smooth polycarbonate, the Sport™ adds protection and great feel to the iPad. The iPad Kneeboard Sport™ was designed for pilots by pilots. It is designed to work in aircraft where space is tight or where there is a cyclic, or control stick being used between the legs. It is perfect for pilots of helicopters, sport aircraft, and when there is tight yoke clearance or when mounting is desired. NOTE: This is the iPad Kneeboard only. Mounts sold separately..... P/N 13-19539 ..... **$99.00**

MGF HEADSET BAG



Micro-fiber lining cleans and protects the screen while the durrable diamond stich fabric on the outside prefents ripping and tearing. The Headset Bag is made out of durable mesh with a soft, padded lining on the inside, perfect for holding anything you don't want scrached: sunglasses, phones, iPads, and eReaders. The drawstring closure makes holding all of your small items secure and easy to find.

P/N 13-12407 ..... **$14.99**

MGF SCREEN CLEANING KIT



This Screen Cleaner Kit is a special glass wax used to clean and protect the screen of your iPad. It can also be used on other glass surfaces such as eye and sun glasses, computer monitors, and aircraft avionics. It includes a microfiber cloth and a special glass wax formulated to remove fingerprints and leave a layer of protection from dust. Kit Includes: Glass Wax, and Microfiber Cloth.

P/N 13-10427 ..... **$9.99**

PS

MGF SPORT™ MOUNT FLEX CLIP



* Fits Monorails sized, 5/16" - 1/2". The infinitely articulating and adjustable arm attaches to the Universal Cradle to hold any iPad or Tablet, or to the iPad Sport Case for a specific iPad fit. This feature makes this mount future proof. Once attached, the iPad can be viewed in either portrait or landscape modes simply by rotating the device, nothing has to be loosened or tightened to make this happen. ***NOTE: You must have a Device Holder to use this mount.***

P/N 13-19518 .....**$139.00**

MGF SPORT™ MOUNT FLEX SUCTION PRO



This one mount can operate as a compact suction cup, allowing a close position to the glass of 3.25 inches. It can also operate as a standard suction cup mount extending to 10.5 inches. The Mount utilizes one vacuum suction cup with a built-in finger pump that informs you if the mount is losing suction. Give it a couple pumps and it is quickly back to full strength. ***(NOTE: You must have a device holder to use this mount)*** P/N 13-19509 .....**$169.00**

MGF SPORT™ MOUNT COMPACT SUCTION CUP



The Sport Mount - Compact Suction Cup is the most versatile mounting solution for pilots that would like to install an device on almost any flat, smooth surface. The high strength suction cup twist and locks to provide a secure hold to the windshield or metal panel. The mount is portable and can easily fit in your flight bag or can be positioned and left on-board. Perfect for owners and renters alike. (NOTE: You must have a device holder to use this mount) P/N 13-19510 .....**$119.00**

MGF SPORT™ MOUNT FLEX DOUBLE SUCTION



This one mount can operate as a compact suction cup, allowing a close position to the glass of 3.25 inches. It can also operate as a standard suction cup mount extending to 10.5 inches. Portable and can easily fit in your flight bag or can be positioned and left on-board. Perfect for owners and renters alike. (NOTE: You must have a Sport Case/Cradle to use this mount.

P/N 13-19511 .....**$169.00**

MGF SPORT™ MOUNT FLEX YOKE COLLAR FOR BEECH WIDE YOKES



Attaches to control columns with a diameter between 1 5/8" - 1 3/4". This mount attaches to the thick yoke shaft on Beechcraft aircraft that have two yoke tubes coming out of the panel. NOTE: You must have a Device Holder to use this mount. P/N 13-19513 .....**$139.00**

MGF SPORT™ MOUNT FLEX GLARE SHIELD



The Sport Mount - Flex Glare Shield is for pilots who want to mount their iPad or other device off of the glare shield of their airplane or similar shelf-like surface. Can be configured to hang down, or push the iPad/Device up above the glare shield. This mount comes with the Generation 3 Sport Adapter. This is a perfect mounting solution in cockpits where space is tight. NOTE: You must have a Device Holder to use this mount. P/N 13-19514 .....**$119.00**

MGF SPORT™ MOUNT FLEX PANEL



Sport Mount - Flex Panel is the perfect mounting solution for pilots that would like to install a iPad/ Tablet directly into their panel. Same hole pattern as existing instrument gear. This is a perfect mounting solution in cockpits where space is tight. NOTE: You must have a Device Holder to use this mount.

P/N 13-19515 .....**$139.75**

MGF SPORT™ MOUNT FLEX YOKE BEECH CENTER COLLAR



Attaches to the retaining clamp (Silver Metal Piece) on the center yolk arm. The way it attaches is by removing the screws that hold the retaining clamp on, putting our mount on top of the retaining clamp, and then securing it with the same screws. NOTE: You must have a Device Holder to use this mount.

P/N 13-19512 .....**$139.00**

MGF SPORT™ MOUNT FLEX STUD



The iPad Mount - Flex Stud is the perfect mounting solution for pilots that would like to install an iPad directly into their panel, such as in many experimental aircraft. The stud secures easily to any hole in the panel for easy mounting. NOTE: You must have a Device Holder to use this mount.

P/N 13-19516 .....**$121.85**

MGF SPORT™ MOUNT FLEX RAIL



* Fits Monorails sized, 5/16" - 1/2". The infinitely articulating and adjustable arm attaches to the Universal Cradle to hold any iPad or Tablet, or to the iPad Sport Case for a specific iPad fit. This feature makes this mount future proof. Once attached, the iPad can be viewed in either portrait or landscape modes simply by rotating the device, nothing has to be loosened or tightened to make this happen. NOTE: You must have a Device Holder to use this mount.

P/N 13-19517 .....**$169.00**

MGF SPORT™ UNIVERSAL CRADLE XL



The Sport™ Universal Cradle XL (10"-13" Tablets) is designed to work with almost any tablet in virtually any case, or no case at all. As a mountable, it connects and easily rotates when paired with MGF Sport Mounts. Compatible with many tablets from 10 inches to 13 inches. P/N 13-19521 .....**$129.00**

MGF SPORT™ PHONE CRADLE



Phone Cradle is designed to work with almost any smartphone in virtually any case, or no case at all. As a mountable, it connects and easily rotates when paired with MGF Sport Mounts. Compatible with many smartphone as small as the iPhone 5 and as big as the iPhone 6 Plus (Minimum width = 2 3/8" | Maximum width = 3 15/16").

P/N 13-19524 .....**$39.00**

MGF SPORT™ GOPRO® / GARMIN VIRB ADAPTER



Mounting your GoPro® with the Sport - GoPro® Adapter and MGF Flex Arms allows you the ability to position your GoPro® camera anywhere you would like. MGF Flex Arms are infinitely adjustable so you can mount your GoPro® camera anywhere and everywhere. Something that you are not able to accomplish with any other mounting system. Sport - GoPro® Adapter works with all GoPro® models and all Garmin Virb models. P/N 13-19525 .....**$39.00**

MGF SPORT™ MOUNT GPS ADAPTER FOR GARMIN PORTABLES



Sport - GPS Adapter is the perfect solution for mounting all Garmin Portable Avionics, as well as any other device that uses the AMPs hole pattern. The Sport - AMPs Adapter securely connects to all Garmin portables including the aera® 660, aera® 796, aera® 795, aera® 510 GPSMAP® 696, GPSMAP® 695, and more. Once the GPS Adapter is connected to the GPS you can quickly and securely mount the portable avionics using any MGF Sport Mount (Sold Separately).

P/N 13-19526 .....**$39.00**

MGF SPORT™ CAMERA ADAPTER



The Sport - Puck Adapter is designed to work with almost any digital camera or any other device that has a 1/4"-20 screw on it. As a mountable, it connects and easily rotates when paried with MGF Sport Mounts. No matter how you use it, the Sport - Puck Adapter meets the demands of pilots and other individuals operating in extreme motion. Compatible with most cameras and devices that have a 1/4"-20 hole on them. P/N 13-19527 .....**$29.00**

MGF SPORT™ MOUNT CLIP ADHESIVE PETAL BASE



The Sport™ Mount Flex Clip Adhesive Petal Base - If you want to use a suction cup mount but do not have a smooth surface that the suction cup can adhere to, order this Adhesive Petal Base for the Sport Mount - Flex Clip. This aluminum Base Plate is held down using a "peel and stick" double sided semi-permanent adhesive disk - 3M VHB™ (very high bond) tape. This allows you to mount the iPad or any other device to the window or any other non-porous surface in the cockpit. No need to drill holes or worry about uneven surfaces. P/N 13-19529 .....**$24.00**

PS

MGF PRODUCTS

MGF FLEX CLIP EXTRA BASE



Flex Clip Mount by MGF. This is the first and only mount that you can secure anywhere you wish with four screws of an AMPs pattern or with semi-permanent VHB adhesive. Since the Flex Clip uses Flex Arms, it is infinitely adjustable so pilots are able to mount their device in the exact position they wish that was thought not possible before.

P/N 13-19528 .....**$24.00**

MGF SPORT™ MOUNT GULFSTREAM



The Sport™ Mount Gulfstream Easily mount an iPad/Tablet in almost any Gulfstream Jet. For pilots who want to mount their iPad/Tablet on the steering column of any Gulfstream jet that has the wedge mount used for mounting a clipboard. This mount comes with a Sport™ Adapter mounting system and an adjustable tilt plate which adds flexibility in how the iPad/Tablet is positioned. The adapter can tilt up to 15 degrees and can be positioned up and down approximately 3 inches. P/N 13-19530 .....**$169.00**

MGF SPORT™ MOUNT BOEING



The Sport™ Mount Boeing is for pilots who want to mount their iPad/Tablet on the checklist plate found on the yoke of most Boeing jets including the 737 and 757. This mount comes with a Sport™ Adapter mounting system and an adjustable tilt plate which adds flexibility in how the iPad/Tablet is positioned. The adapter can tilt up to 15 degrees and can be positioned up and down approximately 2 inches.

P/N 13-19531 .....**$169.00**

MGF SPORT™ MOUNT CHART HOLDER



The Sport™ Mount Chart Holder is for pilots who want to mount an iPad or Tablet to the chart holder found on the yoke of many jets - including Lear and Beech. This mount comes with a Sport™ Adapter mounting system and an adjustable tilt plate which adds flexibility in how the iPad/Tablet is positioned. The adapter can tilt up to 15 degrees and can be positioned up and down approximately 2 inches. Fits Chart Holders up to 4" wide.

P/N 13-19532 .....**$169.00**

MGF SPORT™ MOUNT UNIVERSAL FLAT SURFACE



The Sport™ Mount Universal is for pilots who want to yoke mount an iPad or Tablet on a chart holder or other smooth flat surface. The Sport Mount - Universal works great on TBM, Pilatus, Beech Jet, and other airplanes that have a smooth surface on their yoke for adhering the mount. P/N 13-19533 .....**$129.00**

MGF SPORT™ MOUNT AMPS SWIVEL



The Sport™ Mount AMPs Swivel is for pilots who want to mount any size iPad or Tablet in any size or type of case to the AMPs bracket found in many jets. This mount comes with a Sport™ Adapter mounting system and an adjustable tilt plate which adds flexibility in how the iPad/Tablet is positioned. The adapter can tilt up to 15 degrees. The iPad/Tablet can rotate between landscape and portrait mode while attached to the mount. All together, this system gives you the ultimate flexibility while keeping spaced used to a minimum. NOTE: You must have a Device Holder to use this mount. P/N 13-19534 .....**$89.00**

MGF SPORT™ UNIVERSAL SHORT CRADLE CLIPS



Universal Cradle is designed to work with almost any tablet in virtually any case, or no case at all. As a mountable, it connects and easily rotates when paired with MGF Sport Mounts. The arms of the cradle are adjustable via quick release knobs making it easy to insert and remove your tablet. Weighing only 8.2 ounces the Universal Cradle is incredibly light-weight. No matter how you use it, the Sport Cradle meets the demands of pilots operating in extreme motion. Compatible with any tablet from 7 inches to 11 inches. Compatible with Many protective cases. P/N 13-19523 .....**$20.00**

MGF SPORT™ UNIVERSAL LONG CRADLE CLIPS



Universal Cradle is designed to work with almost any tablet in virtually any case, or no case at all. As a mountable, it connects and easily rotates when paired with MGF Sport Mounts. The arms of the cradle are adjustable via quick release knobs making it easy to insert and remove your tablet. Weighing only 8.2 ounces the Universal Cradle is incredibly light-weight. P/N 13-19522 .....**$30.00**

MGF SPORT ADAPTER



This accessory is used to mate Sport™ and Sport™ NR cases to any existing RAM mount or RAM equivalent installation that will accept a 1" ball.

P/N 13-12419 .....**$59.00**

MGF SPORT MOUNT - FLEX YOKE MOUNT FOR IPAD / ANDROID



The Sport Mount - Flex Yoke is for pilots who want to mount their iPad Sport, iPad Kneeboard Sport™ or Nexus 7 Sport case on a yoke, rail, or support strut. This mount comes with a Sport™ Adapter – Generation 2. P/N 13-16369 .....**$119.00**

MGF SPORT FLEX SUCTION CUP MOUNT FOR IPAD



The Sport Mount - Flex Suction is for pilots who want to mount their iPad Sport, iPad Kneeboard Sport™ or Nexus 7 Sport case off a glass windshield, side window or other smooth surface. This mount comes with a Sport™ Adapter – Generation 2. For pilots looking for more articulation and distance from the iPad to the mounting surface, choose the Flex Suction EX.

P/N 13-16370 .....**$119.00**

MGF UNIVERSAL CRADLE SPORT MOUNT



The Sport - Universal Cradle is designed to work with almost any tablet in virtually any case, or no case at all. As a mountable, it connects and easily rotates when paried with MGF Sport Mounts. The arms of the cradle are adjustable via quick release knobs making it easy to insert and remove your tablet. No matter how you use it, the Sport Cradle meets the demands of pilots operating in extreme motion. P/N 13-16447 .....**$119.00**

MGF NIGHT VISION CLIP



The Night Vision Clip Light is designed to put green, eye protecting light exactly where you need it when you need it. The batteries are replaceable.

P/N 13-12404 .....**$19.99**

MGF DUAL MICRO CHARGER



Handles up to 35 Volts! DualMicro is a 12 to 35 Volt airplane/auto charger and an extra charging cable in one convenient bundle. It has two USB ports that can both be used at the same time. NOTE: For 12-35 volt DC systems.

P/N 13-15538 .....**$29.99**

MGF WATER BOTTLE



The MGF Bottle – a double walled, stainless steel bottle that will keep drinks cold for 24 hours and hot for 12 without any condensation on the outside ever. It is beautiful, fits in the side pocket of the Flight Bag PLC Pro or Sport, will never sweat, helps rid the world of plastic bottles and is beautiful to hold and to see. P/N 13-18887 .....**$35.00**

PS

IPAD MOUNTS – LIGHTNING CABLES

GUARDIAN INSTRUMENT PANEL FLUSH MOUNT FOR IPHONE 6 / 7



The iFDR Panel Mount series is a flush mounting system to easily dock and seamlessly integrate your Apple iPhone 6 or iPhone 7 into your aircraft instrument panel -- giving it a clean, professional appearance in an easy to view position! Once installed, the iFDR mount allows your iPhone to be docked in seconds, fully connected to power and audio with built-in cable ports. Removal is just as easy -- just slide, push, and remove!

P/N 13-18917 .....**$99.00**

GUARDIAN INSTRUMENT PANEL FLUSH MOUNT FOR IPHONE 6+ / 7+



The iFDR Panel Mount series is a flush mounting system to easily dock and seamlessly integrate your Apple iPhone 6+ or iPhone 7+ into your aircraft instrument panel -- giving it a clean, professional appearance in an easy to view position! Once installed, the iFDR mount allows your iPhone to be docked in seconds, fully connected to power and audio with built-in cable ports. Removal is just as easy -- just slide, push, and remove!

P/N 13-18918 .....**$145.75**

GUARDIAN INSTRUMENT PANEL FLUSH MOUNT FOR IPAD MINI



The iFDR Panel Mount for Apple iPad Mini is a flush mounting system to easily dock and seamlessly integrate your existing iPad Mini into your aircraft instrument panel -- giving it a clean, professional appearance in an easy to view position! Once installed, the iFDR mount allows your iPad to be docked in seconds, fully connected to power and audio with built-in cable ports. Removal is just as easy -- just slide, push, and remove!

P/N 13-18919 .....**$149.75**

GUARDIAN INSTRUMENT PANEL FLUSH MOUNT FOR IPAD AIR PRO 9.7 INCHES



The iFDR Panel Mount for Apple iPad Air (1 & 2) and iPad Pro 9.7-in is a flush mounting system to easily dock and seamlessly integrate your existing iPad into your aircraft instrument panel -- giving it a clean, professional appearance in an easy to view position! Once installed, the iFDR mount allows your iPad to be docked in seconds, fully connected to power and audio with built-in cable ports. Removal is just as easy -- just slide, push, and remove! P/N 13-18921 .....**$199.75**

GUARDIAN INSTRUMENT PANEL FLUSH MOUNT FOR IPAD PRO



The iFDR Panel Mount for Apple iPad Pro is a new flush mounting system to easily dock and seamlessly integrate your existing iPad Pro into your aircraft instrument panel -- giving it a clean, professional appearance in an easy to view position! Once installed, the iFDR mount allows your iPad to be docked in seconds, fully connected to power and audio with built-in cable ports. Removal is just as easy -- just slide, push, and remove! P/N 13-18922 .....**$279.95**

GUARDIAN LIGHTING CABLES



Decription	Part No.	Price
Apple MFI Certified Lighting Cable For IFDR Panel Mounts - 4-wire 3 Feet	13-18963	**$26.50**
Apple MFI Cert. Lighting Cable-3	13-18964	**$26.50**
Apple MFI Cert. Lighting Cble-10 USB Term	13-18966	**$26.50**
3.5mm Audio Cable 3 Male Jack	13-18968	**$28.50**
Braided Leather Apple Lightning USB Charging / Sync Cable For Ipad / Iphone - MFI Certified	11-14111	**$22.75**

X-NAUT KNEEBOARD KIT



Kneeboard rotates 360º and mounts to your leg with a universally adjustable strap. One size fits all elastic Velcro strap. Mounting hardware included. Work with both Mini and Air versions. *Active Cooling Mount not included.

P/N 13-19504 .....**$38.95**

GUARDIAN IPAD/IPHONE IFDR PANEL MOUNTS



The iFDR Panel Mount Packages are a flush mounting system to easily dock and seamlessly integrate your existing device into your aircraft instrument panel, giving it a clean, professional appearance in an easy to view position! Once installed, the iFDR mount allows your device to be docked in seconds, fully powered and ready for use, and able to be removed in seconds when done! This package gives you the mount along with a panel mounted single 2.7 amp USB-A port that also features a hard-wired 2.7 amp connection from the rear to power the device mount! This way you can provide power to an external component like a phone or GPS/ADS-B receiver while keeping your device is charged! Choose from a Single USB Round Faceplate or Single USB Square Faceplate. Can be mounted either horizontally or vertically.

Description	Part No.	Price
IFDR Panel Ipad Pro 12.9 Inch Mount Round	13-20272	**$489.95**
IFDR Panel Ipad Pro 12.9 Inch Mount Square	13-20600	**$489.95**
IFDR Panel Ipad Air/Pro 9.7 Inch Mount Round	13-20271	**$449.95**
IFDR Panel Ipad Air/Pro 9.7 Inch Mount Square	13-20599	**$439.95**
IFDR Panel Ipad Mini Mount Round	13-20270	**$389.95**
IFDR Panel Ipad Mini Mount Square	13-20598	**$389.95**
IFDR Panel Iphone 6+/7+ Mount Round	13-20269	**$369.95**
IFDR Panel Iphone 6+/7+ Mount Square	13-20597	**$369.95**
IFDR Panel Iphone 6/7 Mount Round	13-20268	**$339.95**
IFDR Panel Iphone 6/7 Mount Square	13-20596	**$339.95**

GUARDIAN IPAD SMARTPANEL MOUNTS



The SmartPanel Mount for Apple iPads is a flush mounting system to easily dock and seamlessly integrate your existing iPad into your aircraft instrument panel -- giving it a clean, professional appearance in an easy to view position! Once installed, the smartPanel mount allows your iPad to be docked in seconds, fully connected to power and audio with built-in cable ports. Each mount has a built-in Fan Blower (14 or 28V).

Description	Part No.	Price
Ipad Pro 10.5 Inch SmartPanel Mount and Power Supply Package 12V	13-20272	**$489.95**
Ipad Pro 10.5 Inch SmartPanel Mount and Power Supply Package 24V	13-20600	**$489.95**
Ipad Pro 10.5 Inch Panel Mount 12V	13-21188	**$449.00**
Ipad Pro 10.5 Inch Panel Mount 24V	13-21190	**$449.00**
Ipad Pro 10.5 Inch Panel Mount And Usb Package 12V	13-21193	**$499.00**
Ipad Pro 10.5 Inch Panel Mount And Usb Package 24V	13-21194	**$499.00**
Ipad Mini Panel Mount Round	13-20270	**$389.95**
Ipad Mini Panel Mount Square	13-20598	**$389.95**

X-NAUT ACTIVE COOLING MOUNT FOR IPAD AIR



The Active Cooling Mount was created with the safety of pilots and iPad™ users in mind. Works with iPad Air™ Versions 1 | 2 | Pro 9.7". Switch between using Micro USB or power by battery (8AA Air Version). Battery test button shows status of batteries. Green indicates high battery life, yellow indicates low battery life and red indicates battery replacement. Spring loaded latch makes loading your iPad easy and secure. Low noise fans (26 DBA) Weight: 9.7 oz (no batteries no iPad™) Dimensions: 9.17in x 7in x 1.5in. Compatible with RAM mounts. Compatible with MGF© mounts when used with the Sport - GPS Adapter by . Kneeboard accessory mounts Active Cooling Mount to your leg. Electronics are dust and moisture resistant. *iPad™, AA batteries and micro USB cord are not included. P/N 13-19502 .....**$181.85**

X-NAUT ACTIVE COOLING MOUNT FOR IPAD MINI



The Active Cooling Mount was created with the safety of pilots and iPad™ users in mind. Works with iPad™ mini Versions 1 | 2 | 3 | 4. Switch between using Micro USB or power by battery (4AA Mini Version). Battery test button shows status of batteries. Green indicates high battery life, yellow indicates low battery life and red indicates battery replacement. Spring loaded latch makes loading your iPad easy and secure. Low noise fans (26 DBA). Weight: 7 oz (no batteries no iPad™). Dimensions: 8.3in x 5.6in x 1.7in. Compatible with RAM Mounts. Compatible with MGF© mounts when used with our MGF© Amp Adapter and MGF Puck Adapter (You must purchase both of these adapters for this to work with your MGF Mount.). Kneeboard accessory mounts Active Cooling Mount to your leg. Electronics are dust and moisture resistant. *iPad™, AA batteries and micro USB cord are not included. P/N 13-19503 .....**$169.95**

PS

FLYBOYS GEAR FOR PILOTS



X-NAUT CARRYING CASES

Carrying Case comes in iPad™ Mini & iPad™ Air sizes. Adjustable and removable shoulder strap. Large zippered pocket houses the Active Cooling Mount. A small outer Velcro pocket stores accessories. X-naut embroidered logo. *Battery pouch and Active Cooling Mount not included.

Air.....P/N 13-19505 .....**$37.95**
Mini .....P/N 13-19506 .....**$34.50**



X-NAUT BATTERY POUCH

Battery pouch is used to hold USB external battery packs to power either your iPad™, Active Cooling Mount or other devices. Adjustable Velcro closure strap. Fits commonly sized USB external battery packs. Velcro strip on back of battery pouch attaches to knee board strap for convenient mounting. *USB external battery pack and Active Cooling Mount not included. P/N 13-19507 .....**$14.95**



X-NAUT MGF AMP ADAPTER - IPAD MINI VERSION

Adapter for the Active Cooling Mount Mini with a pattern to fit MGF© mounts. Works ONLY with iPad mini versions. You must also purchase the MGF Puck Adapter for this adapter to work with your MGF mount. P/N 13-19508 .....**$38.95**



FLY BOYS PUBS BAG

Top opening flap gives access to the main pockets. Additional smaller external pockets are located in the front, rear as well. Handy for smaller items or for sliding enroute charts and maps for quick access. Top, front and back are secured with sturdy Velcro™. Pocket on one side for a water bottle or sunglass case. Slots on the opposite side for 2 pens or pencils. The most popular choice of most fighter and trainer pilots no matter what the airframe. Also, an excellent option for civilians looking for a no frills - priced right bag. Measures 8 1/2" x 11" x 1" empty. Fully loaded it will expand out to 8 1/2" wide!

Black FB1020 .....P/N 13-05566 .....**$27.95**



FLYBOYS MISSION PUBS - BAG

Fits everything you will ever need for your mission plus some! Three main compartments comprise this model. Two large compartments and the third is divided in the middle. No external pockets on this model, however the internal capacity is awesome. Favored by F-15E, B-1, B-2, and C-130 aircrew. It's also popular in the USAF/USN pilot training environment. Outside dimensions are 9" x 11" x 1" empty, and fully loaded it will expand to 6 1/2" wide.

Black .....P/N 13-05622 .....**$25.95**



FLY BOYS HELMET BAG

420 Denier Cordura Nylon with 1/2" cloth poly-fill to cushion your helmet. Heavy duty nylon zipper - resists snags. Two interior pockets WITH VELCRO CLOSURE that fit your DTC, VTR tapes, sunglasses or water bottle. This super tight knit nylon shell is extremely water resistant and provides superior protection for YOUR expensive equipment. Oversized from standard issue versions, it is superior for helmets with with NVG or HMS mounts! Two NEW pockets for smaller items. Adjustable shoulder strap fitted with a gripping contouring rubber shoulder pad. Inside Dimensions (FLAT): 19 1/2" Wide 20" Tall.

Blue.....P/N 13-05571 .....**$39.95**
Black .....P/N 13-05572 .....**$39.95**
Green .....P/N 13-05573 .....**$39.95**



FLY BOYS IFR/VFR KNEEBOARD

Features seven eyelets for securing checklists, plastic checklist pages or your in-flight guide - (every base has different spacing.Includes the new flexible plastic clipboard (FB1060).Eyelets also correspond to JEPPESEN approach plates and chart protectors!! ..... Folded: 6.5" X 1.5" X 9.5" Unfolded: 10" X 8.5" X 1" Writing Surface Area: 8" X 5"

Blue ..... P/N 13-05568 ..... **$39.95**
Black ..... P/N 13-05569 ..... **$39.95**
Green ..... P/N 13-05570 ..... **$39.95**



FLYBOYS CHECKLIST PAGES

Heavy-uty plastic FlightCrew checklist pages. Sturdy construction extends the life of these pages. Easy to use at made at a thickness that helps prevent the pages from becoming brittle or tearing in cold environments. Pages are top loading and are great for protecting your local approaches or condensed aircraft checklist. No covers included.

Sheet Size: 8" X 5"..... PN 13-05627.....**$0.70**
Bulk back (25 Pk.) w/ Covers... PN 13-05629....**$15.50**



OVERSIZED CHECKLIST PAGES

These are great if you are ready to start putting originals in the pages instead of shrunken copies! As you can see, a full size Jeppesen chart slides right in! Now your mission data cards fit, your target photos can get more detail in them, and your attack cards slide right in without making a trip to the copier to shrink or the paper cutter to trim! These are the same construction as the regular, just bigger. Great in extreme temperatures and long lasting. Spacing on the holes matches up with the FlyBoys KneeBoard with Eyelets and Jeppesen charts.Size is 5 1/2" X 8 1/2" - really makes a difference.

Sheet Size: 8-1/2" X 5-1/2"..... PN 13-05628 .....**$0.95**



EXTRA TALL PAGES FOR BIG CHECKLIST

Heavy duty plastic FlightCrew checklist pages. Sturdy construction leads to a long life. Easy to use but heavy enough to not get brittle or tear in extremely cold environments. Pages are top loading and are excellent for protecting your local approaches or condensed aircraft checklist. USABLE interior dimensions: 5"x11", overall width including checklist ring holes 5 7/8"

Sheet Size: 5" X 11" ..... PN 13-05630 .....**$0.73**



FLYBOYS HARD PLASTIC COVER SET FOR EXTRA PAGES

The new Cover Set for the FB2203 pages are great. They are perfect for protection of the pages as well as providing structure for these tall pages. Without these covers, they tend to sag due to their height. Buy as many pages as you need, as many cover sets as you need. Sheet Size: 5" X 11" ..... PN 13-05632 .....**$6.95**



OVER SIZED FLIP CHART PAGES

Over sized top loading pages with three ring holes in the top for those checklists and situations that flow better than the normal "book format." Dimensions: 9.25" x 6".

Sheet Size: 8" X 5"..... PN 13-05633 .....**$0.79**
Bulk Pack (25 Pk.) ..... PN 13-05634 .....**$13.50**



FLYBOYS CHECKLIST RINGS

Durable. Unbreakable. Multi-Purpose. Safe. Opaque nylon ring to hold your checklists and in-flight guides . Or use them for outdoor use where metal rings would rust or wear out. Patented ball-lock design to prevent FOD out on the flight line. The nylon ring is very low resistance as well. Once they are closed, they stay closed. When closed, they are a 1.5" diameter ring. Opened, they stretch to 5". For most applications 4 rings is plenty for keeping your checklists or inflight guides secure. 10 per pack.

Opaque.....P/N 13-05621 .....**$10.50/ Pack**
Black.....P/N 13-08644 .....**$10.50/ Pack**
Red.....P/N 13-08643 .....**$10.85/ Pack**



FLYBOYS PILOT LOGBOOK

If you are serious about keeping track of your flight time, and operate Army or USAF rotary aircraft - this is the book you need with no question. Record your own flying history of missions, upgrades, checkrides and awards right in this beautiful and durable logbook. This book will hold at least 10 years worth of flight history.Dimensions: 9" tall x 7 7/8" wide x 1" thick

Airforce Pilots Fly Logbook..... P/N 13-05625 ..... **$29.95**
Army Pilots fly Logbook..... P/N 13-06410 ..... **$29.95**



FLYBOYS REMOVE BEFORE FLIGHT KEY CHAIN

This nylon strap streamer with the REMOVE BEFORE FLIGHT rubber patch is an instant reminder of the real warning flags that hang off of airplanes on the flight line. They're supposed to be visible and easy to find during the walk-around inspection. Well, now you won't have to "walk around" your house or fish through your gym bag trying to find it! ..... P/N 13-05626 ..... **$4.99**



FLYBOYS MAPSTRAP THIGH STRAP

adjustable to fit just about anyone and features a see-through strap with a healthy portion of hook-and-loop to keep paperwork secure. The leading and trailing edges of the lower strap feature no-slip PVC material to help keep the strap secure on your leg.

P/N 13-14943 ..... **$14.95**

PS

Prices Subject to Change Without Notice

KNEEBOARDS - HOODS

FLY INFORMED KNEEBOARD/CALCULATOR



This bottom opening pilot clipboard measures 8-1/2" x 12" and features a bottom storage compartment (1-1.25" deep) for charts, computers, checklists, pens, etc. Great for vertical or horizontal forms. Heavy duty aluminum construction with solid smooth writing surface. Furnished with battery powered calculator clip for in-flight calculations. Flexible light available separately.

Clipboard/Calculator..... P/N 13-00809 .....**$39.95**
Detachable Light (clear)..... P/N 13-00811 .....**$22.30**

ASA IFR TRI-FOLD KNEEBOARD



Strong aluminum tooled clipboard silkscreened with important IFR information fits into black 3-panel jacket. Has room for charts, books, flight computers, etc.

P/N 13-05840.....**$33.75**

ASA VFR TRI-FOLD KNEEBOARD



This kneeboard uses the VFR Kneeboard in a three-panel jacket. The left panel has ample room for small books, papers and oddly-shaped items. The center panel holds the kneeboard under clear plastic with a pen/pencil holder and buttonholes on either side.. The right-hand panel contains a clear pocket for easy map viewing, and the elastic leg band's Velcro closures fit any leg size comfortably. Black nylon with embroidered silver wings logo. Kneeboard is 6-1/2" wide x 9-1/2" high.

P/N 13-02712.....**$33.75**

BLOCKALLS TRAINING GLASSES



Designed by pilots for pilots. Blockalls™ resolve problems with existing view limiting devices. Weighing in at just under 1oz, it's easy to forget you are wearing them. Engineered to easily penetrate the seal of your headset eliminating the hassle of having to remove it first and can be worn for extended periods of time without discomfort, thanks to the soft rubber nose piece and streamlined temple tips. Tailored off center viewing also keeps more of your time inside the flight deck rather than outside. Recommended by AOPA/ Flight Training.

Description	Part Number	Price
Black	13-06240	**$20.95**
Silver	13-06241	**$20.95**
CFI Right Seat	13-20135	**$22.95**
Helicopter	13-18969	**$20.95**

OLD FOGGIES™ IFR TRAINING GLASSES



IFR Glasses' Old Foggies™ brand view limiting device was developed in order to balance the training value of a view limiting device without further limiting the pilot from being able to read his/her charts. Old Foggies™blend of precision fogging and custom powered corrective lenses allows for the precise amount of the instrument panel viewing without any view of the horizon. Old Foggies™ are available in customizable powers with no need for a prescription. Available in Clear and Light Mirrored Tint (a reflective coating that eliminates glare without further limiting visibility). Available Powers: 1.5, 2.0, 2.5

Description	Part No.	Price
Clear Lens Fog 1.0	13-05004	**$29.95**
Clear Lens Fog 1.5	13-05005	**$29.95**
Clear Lens Fog 2.0	13-05006	**$29.95**
Clear Lens Fog 2.5	13-05007	**$29.95**
Clear Lens Fog 3.0	13-05008	**$29.95**
Tint Lens Light Mirrored Tint Fog 1.5	13-05009	**$29.95**
Tint Lens Light Mirrored Tint Fog 2.0	13-05010	**$29.95**
Tint Lens Light Mirrored Tint Fog 2.5	13-05011	**$29.95**
Tint Lens Tinted Fog 1.5	13-05012	**$32.95**
Tint Lens Tinted Fog 2.0	13-05013	**$29.95**
Tint Lens Tinted Fog 2.5	13-05014	**$29.95**

THE HOODY



Provides a complete view of even the most sophisticated instrument panel. Weighs less than 2 oz. Stores easily in a flight bag with the flaps folded in. The Hoody® fits most caps. No hooks, no clips, just slips on and off. Easily molds to the bill of your favorite cap. P/N 13-12753 .....**$19.95**

JIFFYHOOD



A lightweight plastic hood that does the job inexpensively, Jiffyhood stows rolled up in a flight case, or even in your pocket. Has an adjustable elastic headband for comfortable fit. P/N 13-03457.**$10.95**

FRANCIS IFR HOOD



Francis hood restricts your vision totally to your instruments & because its small, will not block any part of an instructors vision. Made of lightweight, shock-resistant plastic, and has cushioned face pad for comfort. Adjustable elastic headband. P/N 3362 .....**$27.50**

JEPP SHADES



Replaces bulky, hard-to-use instrument training hoods. The improved design allows better student/instructor interaction. The Cockpit proven design works conveniently under headsets and the universal adjusting strap reduces pressure on the ears and temple. The Velcro™ strap fits comfortably and flip-up lens allows convenient IFR/VFR flight transition. The high quality polycarbonate lens is impact resistant. P/N 13-404311 .....**$24.50**

FOGGLES



A creative solution to the problems caused by wearing a large hood on your head. Foggles fit and feel like glasses, but the opaque frosting on the top and sides let you see only the instrument panel. Your out the window view is always foggy. Wear them with headsets and microphone with no interference or discomfort. They come with a protective carrying case and weigh only two ounces.

Clear .....P/N 13-06500 .....**$18.95**
Yellow .....P/N 17-00039 .....**$22.95**

SUPER HOOD



Ideal with eye glasses or headsets it slides in under the headset without relinquishing control of the aircraft and it can be instantly removed at any time for a safe approach or landing. Blocks outside reference but provides a full panel view to reduce vertigo. Light weight (3 oz.) and comfortable. P/N 13-30200 .....**$21.75**

IFR TRAINING GLASSES



Polycarbonate Lenses (UV Protected). Adjustable frames High brow area to prevent "peeking". Opaque frosting to simulate actual IFR conditions. Protective carrying bag included P/N 13-12050 .....**$17.95**

VIBAN IFR TRAINING HOOD



Weighs only 2 oz., making it easy to put on and take off during flight. Provides a perfect view of the instrument panel while providing complete occlusion forward and to the side. Even more, ViBAN folds compactly to fit in its own durable case and is easily stored in your flight bag.

Without Nosepiece.....P/N 13-02022 .....**$38.95**
With Nosepiece.....P/N 13-02023 .....**$38.95**

OVERCASTERS



Overcasters is a unique IFR training tool which clips to glasses (sunglasses or RX) in seconds. Flip-up in one easy motion for easy transition. Feather light with no straps, helmets, or hoods. Accepted by IFR examiners for check-riders. P/N 13-33799 .....**$16.85**

CLOUD-EEZE™ IFR TRAINING GLASSES



Developed in order to balance the training value of a view limiting device without further limiting the pilot from being able to read his/her charts. Old Foggies™blend of precision fogging and custom powered corrective lenses allows for the precise amount of the instrument panel viewing without any view of the horizon. Old Foggies™ are available in customizable powers with no need for a prescription. Available in Clear and Light Mirrored Tint (a reflective coating that eliminates glare without further limiting visibility). Available Powers: 1.5, 2.0, 2.5 Cloud-eeze Clear Lens ..... P/N 13-05015 .....**$17.50**
Cloud-eeze Tint Lens..... P/N 13-05016 .....**$18.95**

BEST HOOD: IFR TRAINING HOOD



The 'Best Hood' is a sturdy paper hood which is amazingly simple yet very effective. Its inexpensive, it folds flat for the flight bag and is an excellent vision limiting device for instrument pilot training.Easy to use, the hood has a comfortable elastic headband and it fits easily over glasses.

P/N 17-00020 .....**$7.95**

PS

AIRCRAFT LOG BOOKS

AERO PRODUCTS AIRCRAFT LOGS



Permanent, hard cover, logs with leatherette cover printed in gold. Pages are updated to current FAA requirements. Generous line spacing. Size: 5.75"x7.75"; 74 pgs; Green cover. Comprised of 9 sections: Aircraft Description, Installed Equipment, Major Alterations, Life Limited Parts or Overhaul Requirements, AD or Factory Bulletin Compliance Record, Altimeter and Static System Checks, Radio and Electronic Checks, Maintenance Record (FAR 43.9), Inspection Record (FAR 43.11-91.217).

AF-5 Hard Cover.....P/N 13-32385 ..... **$9.95**
AL-12P Soft Cover.....P/N 13-04670 ..... **$7.95**

CUSTOM-BUILT AIRCRAFT OWNERS & OPERATORS MANUAL



Contains spaces for listing of aircraft description, specifications, construction data, weight and balance calculations, operating limitations, operating instructions and servicing information. (L. Pazmany) P/N 13-20100 ..... **$25.00**

ASA AIRCRAFT LOG BOOKS



Designed to keep records of the entire aircraft in order: inspections, tests, repairs, alterations, ADs, service bulletins, and equipment additions, removals or exchanges.

SA-1 soft cover-hunter green; 7.25"x 4"; 64 pgs
P/N 13-32375 ..... **$4.75**

SA-2 Hard cover-Hunter Green; 7.75"x 5-5/8"; 96 pgs.
P/N 13-32384 ..... **$9.95**

ASA AIRCRAFT FLIGHT LOG/ LOGBOOK (SP-FLT)



Spiral-bound and perfectly sized to fit in an aircraft glove box or chart pocket, this logbook is a quick reference to the recent history of the airplane so pilots have immediate access to the airplane's records. P/N 13-03163.....**$9.50**

PLANEVIEW AIRCRAFT FLIGHT LOGS



Compact and can be easily stored in a glove box or side pocket. You only have to use the categories that are important to you. The owner of a Piper Cub would not use the logbook to the extent that a Piper Mirage owner/operator would, but it can easily accommodate the needs of both aircraft. Multiple pilots can use the book, so it can be used in an aircraft that is used in partnerships, fight schools, charter and many other operations where there are a number of different pilots flying the aircraft.

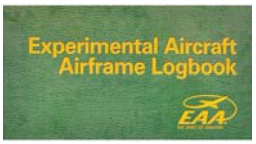
Single engine log .....P/N 13-01946 ..... **$7.95**
Multi-engine log.....P/N 13-01947 ..... **$7.95**

AIRCRAFT TECHNICAL LOG POST BINDER



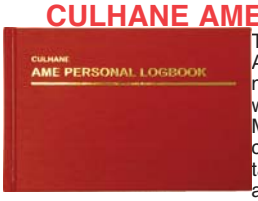
Logbooks will stay in top condition when kept in a sturdy binder. This binder is specially designed to keep any number of our maintenance logs together. The binder is a "must have" for a multi-engine aircraft that could have up to 12 individual logs. Capacity: 1 Binder can easily hold a dozen component logbooks, more than enough for a 4-engine aircraft. P/N 13-12324 ..... **$28.50**

EAA EXPERIMENTAL AIRCRAFT - AIRFRAME LOGBOOK



General Aircraft Record, Record of Ownership, Initial Condition, FAA Airworthiness Inspection pages. Entry pages that the owner fills in the information. Soft Cover 54 pages. Revised 2012. This logbook was developed to meet the special requirements of experimental aircraft. P/N 13-12860 .....**$6.95**

CULHANE AME PERSONAL LOGBOOK



This Culhane aviation training product AME personal logbook in hardcover format, fully meets CARs requirements. Those wishing to qualify for a Canadian Aircraft Maintenance Engineer license must successfully complete approved maintenance tasks appropriate to the rating sought in accordance with Part V of the CARs. This AME personal logbook is durable with a 4 mm textured imitation leather hardcover and Smyth-sewn binding. Also includes a bookmark ribbon. 128 pages, measures 5.75" X 8.75". P/N 13-18988 .....**$29.95**

AERO PRODUCTS ENGINE LOGS



Permanent, hard cover, logs with leatherette cover printed in gold. Pages are updated to current FAA requirements. Generous line spacing. Overall dimensions: 5.75"x 7.75"; 74 pages; Red cover. Comprised of 8 sections: Engine Description, Installed Record, Life Limited Parts or Overhaul Requirements, AD or Factory Bulletin Compliance Record (propeller or rotor only), Repair and Inspection Record (propeller or rotor only)

EF-5 Hard Cover P/N 13-32390 ..... **$10.85**
EL-13P Soft Cover .....P/N 13-03811 ..... **$6.50**

ASA ENGINE LOG BOOKS



Keep track of engine inspections, tests, repairs and alterations, airworthiness directives, manufacturers' mandatory service bulletins & equipment removal or exchange. Color: Burgundy

Hard Cover (7.75" x 5-5/8") 96 pages.....P/N 13-32382 ..... **$9.95**
Soft Cover (7.25" x 4"). 64 pages.....P/N 13-32380 ..... **$4.75**

EAA LOGBOOKS



Engine Log.....P/N 13-02253 ..... **$6.95**
Propeller Log.....P/N 13-02255 ..... **$6.99**

ASA AIRCRAFT FLIGHT LOG



The ASA Flight Log is the perfect tool for aircraft owners and aircraft flown by multiple pilots to keep track of the care and use of an individual aircraft. Spiral bound and perfectly sized to fit in an aircraft glove box or chart pocket. Logbook pilots will have quick reference to the recent history of the airpance without digging through those usually kept in the maintanance hangar. P/N 13-03163 ..... **$9.50**

ASA PROPELLER LOGBOOK



Record data for hub & blade inspections, repairs and alterations, airworthiness directives, & factory bulletins. Soft cover, Black, 7-1/4" x 4", 20 pages.
P/N 13-32370 .....**$3.95**

ASA AVIONICS LOG BOOK



Includes entries for avionics equipment, VOR accuracy, transponder & ELT checks, AD & SB compliance, maintenance records. Soft cover, blue/gray, 7.25"x4", 64 pgs.
P/N 13-02315 .....**$6.25**

ASA AMT LOG BOOK



Designed for Maintenance Technicians, IA-qualified mechanics, and students to log training and educational requirements, work performed, and experience for the purpose of tracking for future certification, recurrence, employment applications, school records, or insurance applications. Plastic coil binding stays open on current page. Soft cover, 6 1/2" X 11", 192 pages. P/N 13-02313 ..... **$14.95**

AIRCRAFT JOURNEY LOG



This is the full-size, hard-cover format (8.5" x 11") new Journey Log. 25% more pages! It has been designed to meet the requirements of the Canadian Aviation Regulations. As permitted by the CARs. There is now a page for Weight & Balance data at the front of the log. When open, the Journey Log pages lie flat to allow for easy data entry.
P/N 13-12323 ..... **$36.65**

AIRCRAFT TECHNICAL LOG SECTION 1 AIRFRAME



The Airframe Log (Section 1) is used to record details of airframe flight hours and related maintenance tasks. Three-hole drilled for keeping in a ring binder or Tech Log Book. Vary the number of engine and prop volumes for multi-engine aircraft. The 5 sections are ordered separately, depending on the number of engines, props, etc. Each tech record can be bound with all the others into the Tech Log Binder to make up the complete aircraft Technical Record. When bound together, the entire log is almost indestructible, yet each record can be removed easily for updating at any time.

Log Section 1 Airframe.....P/N 13-12325 ..... **$13.85**
Log Section 2 Record Of Installations.....P/N 13-12326 ..... **$8.75**
Log Section 3 Engine .....P/N 13-12327 ..... **$12.50**
Log Section 4 Propeller.....P/N 13-12328 ..... **$12.50**
Log Section 5 Component.....P/N 13-12329 ..... **$7.80**
Log Post Binder.....P/N 13-12324 ..... **$28.50**

PS

PILOT LOG BOOKS

JEPPESEN PROFESSIONAL LOGBOOK



This professional log book from Jeppesen, measuring 6-1/2" x 11" is constructed of sturdy, easy-to-read ledger paper & includes an elegant cover.
P/N 13-21728 ..... **$29.95**

JEPPESEN PROFESSIONAL EUROPEAN LOGBOOK



Complies with JAR 1.080 regulations for logging flight time in Europe. handles 10 years of data. Size: 17.1 x 28.6 cm P/N 13-02212..... **$29.95**

JEPPESEN PILOT LOGBOOK



Our 96-page permanent record offers large flight time category spaces, arranged according to FAA regulations. Printed on "easy-eye" green pages that resist "bleed through". Size: 8-5/16" x 5-5/16" P/N 13-21732..... **$13.95**

LITTLE PILOT LOGBOOK





The Little Pilot Logbook is the perfect gift for the aviation enthusiast. Record treasured stories and precious favorites, display adorable pictures and store mementos in this spiral bound 8.75" x 5.75" hard cover book that lays flat for easy entry and portable enough to carry with our on your next journey. This keepsake will be treasured not only by the parent but also by the future aviator that receives it as a record of childhood memories of flight.
P/N 13-08051 .....**$24.95**

STUDENT PILOT LOGBOOK



This Logbook is designed for Student Pilots preparing for Private, Sport, and/or Recreational Pilot licenses. The student's learning progress is comprehensively tracked from his first flight to his last prior to his completion ride. This Logbook was designed for 14 CFR Section 61 (FAR Part 61) flight training requirements using 14 CFR Section 141 (FAR Part 141) documentation methods. There are upwards of fifty (50) critical areas of airmanship presented and tracked per flight. These areas range from take-offs, flight maneuvers, to landings. Discussion time is also tracked along with ground school briefing subjects. The Student Pilot and Flight Instructor can quickly identify problem areas or areas which do not need to be stressed to help the student in progressing towards the license. P/N 13-12957..... **$19.95**

CANADIAN LOGBOOKS



A reprinted version of the now defunct Transport Canada AME log book. Hard-cover / Burgandy. 8-1/2" X 5-1/2"

Description	Part No.	Price
Professional Large Logbook Black	13-12345	$37.95
Small Student Logbook Black	13-12346	$16.95
Pilot Training Record Helicopter Logbook	13-12348	$12.95
Pilot Training Record Logbook	13-12347	$3.75

STANDARD LOGBOOKS



Standard Layout spacing allows for organized handwritten entries. Large Pages Allow for multiple entries per page. Pre-punched for easy 3 Ring Organizing.

Part no.	Description	Price
13-18059	Single Airframe Logbook	$10.95
13-18060	Single Engine Logbook	$10.95
13-18061	Single Prop Logbook	$10.95
13-18062	Single Avionics Logbook	$10.95
13-18063	Single Engine Logbook Kit	$33.95
13-18064	Twin Engine Logbook Kit	$44.95

FLIGHT SCHEDULE LOG



Essential to smooth dispatching, features include: a replaceable perpetual aircraft/instructor entry panel; standby request section; and time in 15-minute blocks. Charcoal Gray binder is 17-1/4" x 13-5/8" with 15" x 12" pages for easy viewing. 60 pages included, refill packs available.
P/N 13-02308 .....**$39.75**

FLIGHT SCHEDULE REFILL PACK - Can be used over and over with this 60-day refill. P/N 13-02309 .....**$21.85**

POWDER PUFF PINK LOGBOOK



The Powder Puff Pilot standard logbook has a pink, protective hard cover with the Powder Puff Pilot logo on the front. It's standard size (8¼ by 6¼ inches) with 52 pages of all the record keeping, endorsements, and flight log information that every pilot needs. Inspirational quotes from the famous pioneers of women aviation sprinkled throughout to keep you motivated, inspired, and flying high. P/N 13-06342 .....**$17.95**

POWDER PUFF PILOT AVIATRIX LOGBOOK



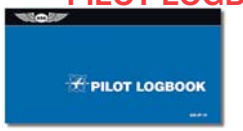
This logbook-scrapbook hybrid documents a youngster's early flying experiences. Its removable, cardstock pages record their First Flight Plan, First Pilot Report, and a flight log. It also has pages for listing favorite pilots, future aspirations, thoughts and quotes about flying, photos, and drawings.
Pink .....P/N 13-11471 ..... **$23.95**
Blue .....P/N 13-11472 ..... **$23.95**
Green .....P/N 13-11473 ..... **$23.95**

STANDARD PILOT MASTER LOG BLACK



The finest and most verstile logbooks for aviators. ASA's logbooks have been "The Standard" of the industry for over 30 years and comply with the FAA's recordkeeping requirements. With so many options, there is a logbook that's right for you. Versatile, easy-to-use and flexible enough to fit any pilot's needs, student or ATP. Columns provide standardization, but are flexible enough to allow pilots to customize to fit their needs. Summary pages allow pilots to track experience, aircraft types, currency, medical dates, flight review, and more for quick reference. Hard cover, black, 11" x 6-1/2", 278 pages. P/N 13-32392 ..... **$20.95**

PILOT LOGBOOK (ASA-SP-10)



This new introductory logbook is perfect for flight instructors and flight schools to start students out with an inexpensive logbook. With space for 16 separate flight entries, a ground instruction log, several solo endorsements, and a separate log for each type of aircraft flown, this logbook is great for introductory flights, first flight lessons, promotional give-aways and more. P/N 13-05670.....**$2.95**

ASA FLIGHT CREW LOGBOOK POCKET SIZE



Created with the input of airline pilots and instructors, these shirt-pocket size logs are designed for long-lasting and comprehensive recordkeeping on the road. Options are provided for tracking flight time, currency requirements, expenses, duty times, layovers, and much more. Soft cover. Black. Spiral bound. 108 pages. 3-1/2" x 4-1/4". P/N 11-08801.....**$5.75**

ULTRALIGHT PILOT'S LOGBOOK



This small logbook is perfect for the ultralight pilot. Includes sections for flight time, airframe repairs, and engine repairs, plus metric/inch conversion table and fuel/oil ratio chart. Measures 4 1/4" x 7".
P/N 13-11509.....**$1.95**

GLEIM PILOT LOGBOOK



The Gleim Pilot Logbook provides detailed entries for all inflight information, sections for certificates, ratings, and operating privilege endorsement section, table of contents, room for up to 450 entries, and much more. High quality paper and hard cover binding. 112 pgs. 5"x9. P/N 13-01822 ..... **$8.95**

CULHANE PILOT LOGBOOK



This Canadian pilot logbook by Michael Culhane fully meets CARs requirements and can be used by student pilots through professional pilots alike having all of the proper columns for flight times, dual, PIC, copilot, single engine, multi-engine, cross country etc. Page count: 160 pages with room for 852 separate entries. Actual size is 6 1/4" X 9 1/4". P/N 13-17634 ..... **$9.95**

ASA STANDARD UAS OPERATOR LOG



The Standard UAS Operator Log meets the needs of civilian, military, hobbyists, and professional operators alike so that critical flight details can be tracked. It provides record-keeping for flight operations of small and large unmanned aircraft systems (UAS) or unmanned aerial vehicles (UAV), remote-control aircraft (R/C), remotely piloted aircraft (RPA), and drones. Color : Grey
P/N 13-18544 ..... **$10.95**

PS

PILOT LOG BOOKS



PROFESSIONAL PILOT LEATHER LOGBOOKS

These are designed and made to last a lifetime. Available in Aviation leather and brown leather which are styled to look like a log book dating back to the early days of aviation, as well as black leather which is standard in modern log books. This logbook is bound from true leather. The log pages are designed to keep traditional logging info but to provide more flexibility. It has customary Date, Aircraft, Pilots, Route & Remarks sections. Each page is 8.5"x 9"; 20 entries per page; 288 pages which allows for 2600 entries.

Aviation Brown leather .....P/N 13-02139 ..... **$99.95**
Antique - Brown leather .....P/N 13-02141 ..... **$99.95**
Black leather .....P/N 13-02140 ..... **$99.95**

STANDARD PILOT LOG BLACK



The finest and most verstile logbooks for aviators. ASA's logbooks have been "The Standard" of the industry for over 30 years and comply with the FAA's recordkeeping requirements. With so many options, there is a logbook that's right for you. Versatile, easy-to-use and flexible enough to fit any pilot's needs, student or ATP. Includes all instructor endorsements. Hard cover, black, 8" x 4 1/2", 100 pages.

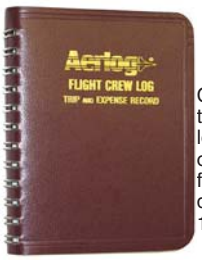
Black.....P/N 13-32365 ..... **$8.95**
Burgundy .....P/N 13-32360 ..... **$9.75**
Pink .....P/N 13-18545 ..... **$9.85**

STANDARD PILOT LOG



The finest and most verstile logbooks for aviators. ASA's logbooks have been "The Standard" of the industry for over 30 years and comply with the FAA's recordkeeping requirements. With so many options, there is a logbook that's right for you. Versatile, easy-to-use and flexible enough to fit any pilot's needs, student or ATP. Includes all instructor endorsements.

P/N 13-32355 ..... **$9.75**



MAROON FLIGHT CREW LOGBOOK

Created with the input of airline pilots & instructors, these shirt-pocket size logs are designed for long lasting and comprehensive recordkeeping on the road. Options are provided for tracking flight time, currency requirements, expenses, duty times, layovers, and much more. Soft cover, 108 pgs. P/N 13-04432 ..... **$11.50**

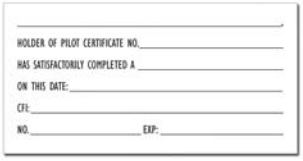
PROFLIGHT STUDENT PILOT LOG BOOK



Here is a great way to record a first flight experience for yourself or friends. The "Student Pilot Logbook' has a page for recording a name, address, airport and instructor or pilot's name. It has 4 standard pilot log book pages for recording all of the standard flight information. It has 2 pages of Instructor Endorsements and the 'Notes Section' on the last page is a great place to record first impressions. With room for 32 flight entries and a place to record Instructor Endorsements, these logbooks are great for students, flight schools, or those who like to give their guests a way to record their flight. Softcover. Size: 4"x 7 3/4".

Single.....P/N 13-10445 ..... **$2.95**
13 Pack.....P/N 13-10446 ..... **$38.35**

LOGBOOK ENDORSEMENT STICKERS



Can be used for Flight Reviews and Instrument Proficiency Checks, and comply with FAR 61.56 and FAR 61.57 on PIC recent flight experience and flight reviews. Each sticker measures 2" H x 4"L. 10 stickers per sheet on white paper.

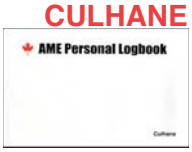
P/N 13-06585.....**$2.35**



FLIGHT CREW LOG BOOK

This shirt-pocket-sized crew log has 216 pages for recording flight times, expenses, duty rigs, crew names, phone numbers, door codes, and more. 12 monthly schedule pages, plus a provision for year totals in the appendix. Meets FAA & IRS record keeping requirements. Durable high quality vinyl cover. Red. 4.25" X 3.25". P/N 14-00066 ..... **$8.50**

CULHANE CANADIAN AME LOGBOOK



This AME personal logbook designed by Michael Culhane ATPL BSc BA JD is logically organized based on CARs requirements with separate sections for M1/M2, Avionics (E) and Structures (S) ratings, along with separate columns for completion dates and certifications by the supervising AME. Additional sections are provided for personal data, education, training and employment history. P/N 13-18041 ..... **$19.95**



FLIGHT CREW LOGBOOK

The Flight Crew Logbook has the same dimensions as a passport with a thickness of 1/2 inch and was designed to fit into the pocket of a pilot uniform shirt. Each logbook contains 90 days of flying. Each day of flying has 9 legs, a minutes conversion chart, time total lines, and a space for notes to record things such as flight crew names, tips, and other desired information. Flight Crew Logbook also meets FAA and IRS record keeping requirements.

P/N 13-12332 ..... **$6.50**



MASTER LOGBOOK CASE

Durable nylon logbook cover sized to hold master logbook, charts, and other aviation essentials. Loop forpen or pencil, hook and loop closure, clear pockets for license and medical certificate. 7.5"x12"; hold logbooks up to 6.5"x11".

P/N 13-02311 ..... **$19.95**

LOG BOOK COVERS



These nylon logbook covers are very light weight but cover and protect your logbook very effectively. The nylon material is extremely durable and is washable. The cover features a holder for two pens and a velcro pocket on the back for licenses, gas receipt, and other documents.

Color	Size	Description	PN	Price
Black	Medium	JEPP	13-04402	**$21.50**
Black	Medium	ASA	13-04403	**$21.50**
Black	Medium	Sporty's/Stafford	13-04404	**$21.50**
Blue	Medium	JEPP	13-04405	**$21.50**
Blue	Medium	ASA	13-04406	**$21.50**
Blue	Medium	Sporty's/Stafford	13-04407	**$21.50**
Red	Medium	JEPP	13-04408	**$21.50**
Red	Medium	ASA	13-04409	**$21.50**
Red	Medium	Sporty's/Stafford	13-04410	**$21.50**
Black	Large	JEPP	13-04411	**$23.95**
Black	Large	ASA	13-04411	**$23.95**
Black	Large	Sporty's/Stafford	13-04412	**$23.95**
Blue	Large	JEPP	13-04413	**$23.95**
Blue	Large	ASA	13-04413	**$23.95**
Blue	Large	Sporty's/Stafford	13-04414	**$23.95**
Red	Large	JEPP	13-04415	**$23.95**
Red	Large	ASA	13-04415	**$23.95**
Red	Large	Sporty's/Stafford	13-04416	**$23.95**

PS

Prices Subject to Change Without Notice

AOPA LUGGAGE COLLECTION

EXCLUSIVELY FROM AIRCRAFT SPRUCE

As a Strategic Partner with AOPA, Aircraft Spruce supports the efforts of AOPA to promote flying and defend the rights of general aviation pilots. Aircraft Spruce is proud to partner with AOPA to offer this high quality line of luggage from Clubglove.

CLUBGLOVE AOPA CARRY ON BAG



This premium carry-on fits easily in most overhead storage bins. With interior clothing divider. Includes set of large and small clothing organizers plus a J-Hook for carrying an additional smaller luggage piece. Made in USA. Limited lifetime warranty. AOPA logo will be embroidered on bag. • 22.5"H x 13"W x 9"D with 2300 cubic inch interior • 9 lbs • Telescoping, adjustable and retractable 42" length handles • Made with Invista™ CORDURA® brand 1000 d water resistant nylon fabric up to 3x stronger and lasts up to 5x longer than standard polyester • Reliable and durable YKK® zippers and ITW Nexus® Buckles • Patent-pending integrated carry handle integrates with Train Reaction™ (Patent Pending Ser#12/348,857) • 5-year NQA warranty available. P/N 13-16586 .....**$349.00**

AOPA MYGOFLIGHT IPAD FLIGHT BAG PLC PRO



The Flight Bag PLC™ Pro is for the pilot wanting to move from a conventional flight bag to one for the "Paperless" cockpit. It has a specially designed, airport check-point friendly protective pouch to hold an iPad, laptop computer or many other electronic flight bag devices. All of the compartments are easy to see into, making it simple to find what you are looking for. There is room for everything a pilot needs to take with them in-flight. • Quick access top pocket for glasses, keys, wallet, etc. • Each side has an expandable pocket for a radio w/antenna sleeve, water, etc. • Airport check-point friendly iPad, EFB or laptop computer (up to 13") protection sleeve. • Comfortable shoulder strap and ergonomic molded rubber handle.(Included) • Compact in size being 17" tall x 13" wide x 7" deep and very light weight. • Made in USA.
P/N 13-16591 .....**$172.80**

CLUBGLOVE AOPA SHOULDER BAG



This premium compact carry-on features access on both sides, 9 total pockets and can serve as an overnight bag or for business, and housing a laptop computer. Convenient front and back storage pockets plus cell phone pocket. Made in USA. Limited lifetime warranty. AOPA logo will be embroidered on bag. • 12" H x 16" W x 4" D • 32 linear inches • Single piece burst proof construction made with Invista™ Cordura® 1000 D water resistant nylon up to 3x stronger and lasts up to 5x longer than standard polyester • Removable padded shoulder strap • 3 exterior pockets, 4 mesh pockets plus 2 zippered pockets • Interior laptop strap.
P/N 13-16587 .....**$149.00**

CLUBGLOVE AOPA TRAVEL KIT



A smaller, premium compact size travel kit to conveniently organize small items or toiletries. Streamline design slips into Shoulder Bag or briefcase. Easy access large double zipper U-shaped top opening and smaller zippered front pocket. Compliments and completes your travel luggage ensemble. Made in USA. Limited lifetime warranty. AOPA logo will be embroidered on bag. • 2" H x 7.5" W x 6" D • High quality machine washable synthetic taffeta material • YKK® zippers • Black with colored accent piping and 1" web handle. P/N 13-16590 .....**$39.95**

CLUBGLOVE AOPA ROLLING DUFFLE



Premium medium travel bag (9.0 lbs) accommodates enough clothing for 1-week travel time. Lightweight and strong, glides effortlessly through airports and train stations, even when fully packed, for stress-free travel. Includes set of large and small clothing organizers. Made in USA. Limited lifetime warranty. AOPA logo will be embroidered on bag. • 28.5" H x 13.5" W x 11.5" D • 53.5 linear inches • Single piece burst proof construction made with Invista™ Cordura® 1000 D water resistant nylon up to 3x stronger and lasts up to 5x longer than standard polyester • YKK® zippers • Telescoping, adjustable and retractable handles • Over the top zipper for easy loading • 2 exterior side storage pockets • ID card holder • Collapses and stores flat for easy storage when not in use. P/N 13-16589 .....**$299.00**

CLUBGLOVE AOPA BACKPACK



This rugged backpack is both durable and versatile with 7 total pockets to keep all your gear organized and can easily accommodate a laptop computer. With adjustable, padded shoulder straps. Made in China. • 19" H x 16" W x 9" D - 44 linear inches • Constructed with Invista™ Cordura® 1000 D water resistant nylon up to 3x stronger and lasts up to 5x longer than standard polyester • 1600 D ballistic nylon base • Reliable and durable YKK® zippers • Sturdy top handle • Water bottle mesh pocket, 1 mesh zippered pocket plus 2 interior mesh pockets • 2 front pockets plus main pocket • Integrates with Train Reaction™ (Patent Pending Ser#12/348,857). P/N 13-16585 .....**$159.00**

CLUBGLOVE AOPA SUIT ORGANIZER



Protects your suits or garments from wrinkles. When double folded, it fits easily into any of the ClubGlove wheeled luggage pieces. Made in USA. AOPA logo will be embroidered on bag. • 42" H x 24" W x 4" D (flat) • 70 linear inches • Durable, lightweight nylon fabric • AOPA monogram • YKK® zippers • 2 tension straps secure clothing inside bag • 2 large magnets snap closure secures organizer when double folded. P/N 13-16588 .....**$89.95**

SCHEYDEN AOPA MICRO FIBER TOWEL SET



The Panel and Cabin towels are made from the finest waffle textured microfiber in the world. They will outperform any towel in their category. These lint free long lasting towels will wick dirt and stains out of carpet and upholstery while the panel towel will remove dust, oil, dirt and finger prints from your beloved panel. Give them a try. You will be amazed at their performance. • Premium Microfiber Strands • Holds 300% of its weight in water • Waffle-textured towel is super absorbent • Non-abrasive and virtually lint free • Perfect for washing, drying and polishing all surfaces • Machine wash with mild detergent, no bleach. P/N 13-16584 .....**$16.99**

PS

BRIGHTLINE FLIGHT BAGS

BRIGHTLINE B2 COMPUTE BAG



The B2 Compute starts with the 2" Center Section, which is designed to hold 13" laptops. Add a Front and Rear End Cap and you have an extraordinary laptop bag. The Front End Cap allows you to store items such as power cords, backup drives, flash drives, digital cameras, smart phones, tools, keys, etc. Meanwhile, the Rear End Cap allows you to store your manilla folders and documents. This can be used daily or you can attach the 2" Center Section to any other FLEX module. For example, you can zip it in between the Front Bag and the Rear Bag when traveling. This bag also includes the Portfolio Handle which can be attached to the Front End Cap. This will only be used when you decide to remove the Center Section Two and zip the Front End Cap and the Rear End Cap together to make a "Portfolio Bag". P/N 13-11848 .....**$133.00**

BRIGHTLINE FLEX B4 SWIFT FLIGHT BAG



The B4 SWIFT makes a perfect VFR Flight Bag with room for one or two headsets, an iPad, a handheld radio, and organization for all the little tech accessories. Remove the 4-inch Center Section and end up with the B-zero SLIM. Two different bags for the price of one. The B4 SWIFT is often recommended as the ideal VFR flight bag. It's designed to hold one or two full-sized headsets plus a handful of charts, and/or an iPad, plus all the small stuff you'll want along for the ride. It also serves as an unbeatable carry-on personal bag when traveling on commercial flights, or just as a terrific daily bag for a wide variety of personal and professional uses. P/N 13-19653 .....**$174.00**

BRIGHTLINE B7 PILOT FLIGHT BAG



The B7 FLIGHT is the FLEX version of our award-winning original Pilot Flight Bag updated by now being configured with End Caps and Center Sections to allow even more flexibility. The B7 FLIGHT is perhaps the most useful flight bag ever designed. It's a fact that some days you need more gear than others. The B7 lets you carry a full set of flight gear for cross country and basic IFR flight. And then it lets you downsize to a smaller bag for those days when you're just going to take a quick VFR flight. P/N 13-16012 .....**$215.00**

BRIGHTLINE FLEX B18 HANGAR FLIGHT BAG



A Flight Bag or Travel Bag that can handle all your gear. Adaptable by adding or removing center sections as needed. Eight different bags can be built with the included modules. Eight bags for the price of one. Designed primarily for aviators who need a Pilot Flight Bag to pack multiple overnight items, such as clothes, shoes, coolers, etc., the B18 HANGAR fits the bill when maximum space is required. Also excellent for those in the Law Enforcement and Emergency Medical field. The B18 is 13.5" x 10.5" x 22" with interior storage capacity of 18 inches. (And remember, it is a soft bag so it can expand slightly in every direction.) P/N 13-19654 .....**$345.00**

BRIGHTLINE FLEX PACK CAP REAR



This specialized Rear End Cap turns any BrightLine Bag into a backpack (with limitations). This End Cap has backpack straps built in, but doesn't look like a backpack when the straps are not in use. It's easy to deploy the straps in less than 20 seconds. Use both shoulders to carry the load and be hands free when necessary.
P/N 13-18166 .....**$48.00**

BRIGHTLINE FLEX SIDE POCKET ECHO



This new SIDE POCKET ECHO is an infinitely-adjustable insulated water bottle pocket. It will securely hold anything from a small 0.5 liter size, up to a huge 1.5 liter size. The pocket can be adjusted to exactly the size of any container in that range. Secures with two clips on two straps. Allows one-hand removal and replacement of the bottle. P/N 13-18167 .....**$19.00**

Brightline Bag Shoulder Strap Extension Set	P/N 13-19489	**$16.00**
Brightline Flex Holster	P/N 13-19495	**$17.00**
Brightline Flex Array Base Plate	P/N 13-19493	**$8.75**
Brightline Flex Array Kit - Tall	P/N 13-19492	**$60.00**
Brightline Flex Array Kit - Short	P/N 13-19491	**$54.00**
Brightline Bag Luggage Works Adapter Set	P/N 13-19490	**$16.00**

BRIGHTLINE SIDE POCKET DELTA



The Side Pocket Delta is a double pocket designed to provide greater outside storage with a larger pocket. Installs onto any two side-by-side attachment bays. Even bridges the gap between two modules.
P/N 13-11989 .....**$19.00**

BRIGHTLINE SIDE POCKET CHARLIE



The Side Pocket Charlie is a pen pocket designed to hold pens and pencils in flight. In addition, it will hold eyeglasses and larger markers in the pocket behind the slots.
P/N 13-11988.....**$13.00**



BRIGHTLINE SIDE POCKET BRAVO

The Side Pocket Bravo is a small radio pocket designed for the small aviation radio. There is also room for extra batteries and smaller items. P/N 13-11987 .....**$13.00**



BRIGHTLINE SIDE POCKET ALPHA

The Side Pocket Alpha is a radio pocket that is designed to hold a large radio or water bottle. The zipper conceals an expansion flap. P/N 13-11986 .....**$13.00**



BRIGHTLINE REAR END CAP

The Rear End Cap is designed to mimic the outside of the Rear Bag. It is used to finish the exposed rear area of a bag, center section, or end cap by zipping on to the exposed area. By adding a Rear End Cap, not only do you add functionality, you protect the exposed zipper, preventing possible damage. The Rear End Cap is 13.5" x 10.5". The Rear End Cap does not come with a Main Handle or a Shoulder Strap. P/N 13-11985 .....**$27.00**



BRIGHTLINE FRONT END CAP

This is the Front End Cap that mimics the front of the Front Bag. It is 13.5" x 10.5" x 1.5". The Front End Cap is designed to hold your cell phone, wallet, Multi-Tool, cords, cables, etc. It is not designed to be used alone as the zippers are exposed and could be damaged. Works well with a Rear End Cap. P/N 13-11984 .....**$52.00**

BRIGHTLINE CENTER SECTION 11 INCH



The CS11 was designed primarily for pilots that frequently travel overnight. It will swallow several changes of clothes, a 13" laptop with room for binders and documents, or a small cooler. The CS11 is 13.5" x 10.5" x 11". (And remember, it is a soft bag so it can expand slightly in every direction.) The CS11 comes with a handle and a shoulder strap.
P/N 13-11983 .....**$98.00**

BRIGHTLINE CENTER SECTION 5 INCH



The CS5 was developed primarily for our IFR Flight Customers. With the B10, you get enough storage for VFR to light IFR flying. By adding a CS5, you can now add IFR Binders and documents, without changing the setup of the B10. Also, perfect for a couple days worth of clothes, two more sets of headsets, or a 13" laptop. The CS5 is 13.5" x 10.5" x 5". (And remember, it is a soft bag so it can expand slightly in every direction.) P/N 13-11982 .....**$56.00**

BRIGHTLINE CENTER SECTION 2 INCH



The CS2 is designed for carrying 13" laptops, iPads and assorted documents. This center section is 13.5" x 10.5" x 2". Not designed to be used by itself due to the possibility of damaging the exposed zippers. Can be added to any configuration to add storage for your 13" laptop. Simply zip the CS2 into a B10, B16, or B25 to get added storage for your 13" laptop, iPad, or folders and documents.
P/N 13-11981 .....**$36.00**

BRIGHTLINE BAGS O-RINGS



Slide the two pairs of o-rings onto the main handle of the BrightLine Bag and nestle the J-hook from your main suitcase in between the two pairs of o-rings to keep the J-hook from sliding side-to-side on the main handle of the BrightLine Bag as you pull your main suitcase around. Includes two pairs of o-rings (total of 4). P/N 13-11991 .....**$2.00**

PS

Prices Subject to Change Without Notice

FLIGHT BAGS

AERO SQUADRON LEATHER BAGS

AERO SQUADRON LEATHER DUFFLE BAG



Desc:CARRY ON BAG 19" Length, 10" Height, 9.5" Width Color: Walnut
P/N 13-07202 ..... **$298.00**

AERO SQUADRON LEATHER BRIEF CS



Desc:SATCHEL BRIEF 16.5" Length, 12" Height, 4" Width Color: Walnut
P/N 13-07199 ..... **$358.00**



AERO SQUADRON LEATHER CARRY-ON -

Lambskin wheeled carry-on. Telescoping handle with in-line skate wheels. Exterior front zip compartment with file section & pockets for discs. Exterior back zip pockets. Roomy main compartment with support straps. Compartment for laptop. Import. Dimensions: 13L x 18H x 7W.
P/N 13-07206 ..... **$490.00**



AERO SQUADRON LEATHER TRAVEL SLING -

Desc:TRAVEL SLING 13.5" Width 9.75" Height, 6.75D Color: Walnut
P/N 13-07204..... **$170.00**



AERO SQUADRON LEATHER HANDBAG -

Desc:HANDBAG COLLECTION 8.25" Length, 10.5" Height, 3" Width Color: Walnut
P/N 13-07207..... **$170.00**



AERO SQUADRON LEATHER SHAVE KIT -

Desc:SHAVE KIT 10" Length, 6" Height, 4" Width Color: Walnut
P/N 13-07198 ..... **$104.00**

AERO SQUADRON LEATHER SHIELD TOTE -

Desc:MAN BAG W/SHOULDER STRAP Color: Walnut
P/N 13-07201 ..... **$128.75**



FLIGHTLINE FLIGHT BAGS

LARGE DELUXE FLIGHT BAG



The top of the line Flight Bag by Flightline boasts an incredible array of features for the price. This heavy-duty bag is double stitched and ideal for large loads. 12"H x 7-1/4"W x 14-1/2" L
P/N 13-04255 ..... **$67.75**

MEDIUM DELUXE FLIGHT BAG

This Flight Bag is ideal for pilots who have a lot to carry but not a lot of space to put the bag. It is currently any pilot's favorite flight gear! 10"H x 6-3/4"W x 12-1/2" L
P/N 13-04256..... **$62.95**





DELUXE HEADSET BAG

It is the perfect bag to protect and organize any fragile and expensive equipment. Not only will this bag hold a headset, but other necessary items as well! 10"H x 4-1/4"W x 10 " L
P/N 13-01416..... **$32.50**

BISON MOUNTAIN ULTIMATE FLIGHT BAG



Taller than most bags, it makes more use of the vertical room in your narrow baggage compartment or cockpit. At 19.5 inches long, 9 inches wide, and 14 inches tall you can pack everything you need to fly with and there is enough room left over for a couple days worth of clothes. The interior compartment is 14 inches long, 7.5 inches wide, and 14 inches tall. A removable interior divider velcros in place to increase storage options. There are nine exterior pockets. Exterior pockets include a padded headset pocket, padded pocket specifically for Garmin 496 or similar GPS's (or handheld radios), cellphone pocket, pocket for magazines or newspapers, water bottle pocket, chart pocket, 8.5 inch by 7 inch pocket for logbooks or aircraft manuals and pen, pencil, flashlight holder. Large padded laptop compartment that measures 14 inches long, 12 inches high, and 1.5 inches wide.A clear plastic identification card holder. There is a place for military or civilian wings that attach with velcro. It comes with sturdy carrying handles that velcro together and a removable carrying strap.

Color	Part No.	Price
Black Curdura	13-05329	**$144.75**
Grey Curdura	13-05331	**$144.75**
Black Leather	13-05333	**$221.95**
Grey Leather	13-05334	**$221.95**
Brown Leather	13-05336	**$208.00**

BISON MOUNTAIN RV FLIGHT BAG



A practical solution to organizing the cargo area of your RV-6, RV-7 or RV-9. Also makes a great overnight bag! The RV Flight Bag was designed to fit behind the pilots and co-pilots seat of the RV-6/7/9. It fits over the flap actuator bar and makes maximum use of the area behind your seat. 18 inches high and 12.5 inches wide. There are two side pockets, one 10" x 4 " and a 7" x 5.5" map pocket. The rear side of the bag has a pencil /flashlight/fuel tester pocket, a 10 inch x 7 inch headset pocket, and a 6"x 5 ¼" pocket for small tools. It has a nice carrying handle and comes with two straps that can be attached to your seat back to clip the bag to your seat to minimize movement. It also comes with a removable shoulder strap.

Color	Part No.	Price
Black Curdura	13-05321	**$117.00**
Grey Curdura	13-05323	**$117.00**
Black Leather	13-05324	**$179.00**
Grey Leather	13-05326	**$177.75**
Brown Leather	13-05328	**$177.75**

PS

NORAL FLIGHT BAGS



NORAL EXPRESS FLYER BAG

The swing hook for the adjustable shoulder strap is made of metal to ensure heavy load resistance. The shoulder strap has a soft rubber pad for your comfort and to keep the bag in fixed position while carrying on shoulder. Made of 1680 Denier Ballistic water repellant material. Its interior is fully padded and covered with the liner of water repellant taffeta.

Black ..... P/N 13-11441 ..... **$61.75**
Grey ..... P/N 13-11440 ..... **$61.75**



NORAL TRIPLE HEADSET BAG

The Noral Triple Headset Bag is made of 1680 Denier Ballistic water repellant material. Interior is fully padded and covered with the liner of water repellant taffeta.

Black ..... P/N 13-11430 ..... **$59.75**
Grey ..... P/N 13-11433 ..... **$59.75**



NORAL FLYING CLUB BAG

This bag is designed for all pilots, especially for the compact cockpit airline pilot, Military pilot and for private and student pilots. This bag can hold most essential instruments efficiently. The main compartment of this bag can hold a large headset, logbook and/or any other similar items. The rear pocket works well to hold books, boards, charts or similar items. There is also a small front pocket with zipper closure and two side pouches for Transceiver/ GPS etc. Made of 1680 Denier Ballistic water repellant material. Its interior is fully padded and covered with the liner of water repellant taffeta.

Black ..... P/N 13-11442 ..... **$55.95**
Grey ..... P/N 13-11444 ..... **$55.95**



NORAL ATTACHE FLIGHT BAG

This bag has two side pouches for large headsets. One of these side pouches has a flap pocket with zipper closure to store pens, flashlights, ID card and/ or license etc. Inside the main compartment there is two removable pouches for GPS/Transceiver and two dividers. The dividers can be adjusted to different positions and are removable. The front of the bag has a large open pocket for easy access. The back of the bag has a large zippered pouch with piano type opener and three dividers. At the bottom floor of this bag is a removable plastic board to reinforce it and to keep the bag from sagging when fully loaded. Made of 1680 Denier Ballistic water repellant material. Its interior is fully padded and covered with the liner of water repellant taffeta.

Black ..... P/N 13-11446 ..... **$206.95**
Grey ..... P/N 13-11448 ..... **$204.95**



NORAL IPILOT BAG

This bag can hold most instruments and is compact to save cockpit space. There are a total of 13 pockets inside and one large pocket outside for a headset. The main compartment of this bag can hold a large headset or other equipment. It has another zippered pocket in the front for a logbook or any other similar item. This bag also has some small rear pockets.

Grey ..... P/N 13-12432 ..... **$136.75**
Black ..... P/N 13-12433 ..... **$139.75**



NORAL AVIATOR FLIGHT BAG (DETACHABLE)

The main compartment of this bag has a removable divider which can be adjusted to a different position. The bottom floor has a removable plastic board to reinforce. The swing hook for the adjustable shoulder strap is made of metal to ensure heavy load resistance. The shoulder strap has a soft rubber pad for your comfort and to keep the bag in fixed position while carrying on shoulder. Made of 1680 Denier Ballistic water repellant material.

Black ..... P/N 13-11428 ..... **$165.95**
Grey ..... P/N 13-11429 ..... **$165.99**
Blue ..... P/N 13-15769 ..... **$142.75**



NORAL AIRCRAFT DOCUMENT HOLDER

This durable document holder is made of strong fabric with two clear pockets to hold your aircraft document secure and visible. It comes with two inches of velcro to be placed anywhere that velcro can be applied to.

Velcro ..... P/N 13-01134 ..... **$23.85**



NORAL ANGELS TOOL BAG

Two side pouches and over one of the side pouches is an open pocket for easy access. In the front of the bag is a large zippered pocket and both the front and back of the bag have reflector bands that can be seen at night time. The back of the bag can be opened like a portfolio and there are 21 elastic loops to keep organized. Also, inside this portfolio is a large zippered pocket. The main compartment has 10 more elastic loops for small tools and 3 easy access pockets. The main compartment also has a removable and adjustable divider to keep instruments organized. Color: Grey..... P/N 13-11421 ..... **$153.75**



NORAL SINGLE HEADSET BAG

This bag is ideal for the pilot that wants to carry a passenger headset or his own, separate from his flying bag. It is constructed with genuine DuPont® Cordura® 1000 Deniers, water resistant, fully padded with a 1/4" foam and backed with a layer of tricot. Features separate zippered compartment along with an extra side pocket.

Grey..... P/N 13-00286 ..... **$34.60** Black..... P/N 13-00288...**$34.60**



NORAL STUDENT PILOT BAG

The Student Pilot Bag has plenty of room for everything a student pilot needs to carry and more. It has 2 extra large zippered headset pouches plus another zippered section to store pens, flashlight, fuel tester, E6B computer and more! Access to the main compartment is through a double zipper flap with a pull cord. In addition to the carrying handles, a detachable padded shoulder strap is included. Size: 11"H x 10.5"W x 12"L.

Grey..... P/N 13-00294..... **$76.99** Black..... P/N 13-00297 ...**$76.75**



NORAL PRIVATE PILOT BAG

Fits all the goodies and gadgets a pilot needs and wants to carry. It has two extra large zippered headset pouches plus another zippered section to store pens, flashlight, fuel tester, E6B computer and more! Access to the main compartment is through a double zipper flap with a pull cord. In addition to the carrying handles, a detachable padded shoulder strap is included. Size: 11"H x 10.5"W x 15.5"L.

Black.....P/N 13-00313 ..... **$85.75**



NORAL MACH 1 FLIGHT BAG

The Mach 1 flight bag is compact yet roomy. The bag features a wide 5" double zippered access flap with a pen and pencil holder. There are two end compartments 6"X10". On the front, a zippered 11"X 6" compartment. On the back is a 4"X 8"X 8" headset compartment which will accomodate the largest of headsets. The Mach 1 is made of US Made Nylon with 1/4" Foam Padded, 1000 Denier and is water resistant. It comes equipped with a GPS/Transceiver Pouch that can be worn on your belt. Also included is a shoulder strap and carry handle. Dimensions: 15"LX11"WX10 1/2H

Black.... P/N 13-04088... **$109.75** Grey..... P/N 13-04092**$115.75**



NORAL MACH 2 FLIGHT BAG

A divider in the main compartment. can be adjusted in different position and can be removed if you want so. The shoulder strap has a soft rubber pad for your comfort and to keep the bag in fixed position white carry on shoulder. This bag is made of 1680 Denier Ballistic water repellant material. Its interior is fully padded and covered with the liner of water repellant taffeta to protect your instrument. All our Flight Bags have 7 years Warranty on Manufacturing defects.

Black.... P/N 13-11425... **$190.75** Grey..... P/N 13-11424 ..... **$188.75**



AIRCRAFT SPRUCE SINGLE HEADSET BAG

Safe and convenient way to protect a single headset. Features foam padded single zipper compartment with convenient webbing handle. Made in USA. Size: 7"L x 4"W x 9"H. Color: Black. P/N 13-55010 ..... **$15.25**



NORAL HEADSET FLIGHT BAG

The main compartment of this bag can hold a large headset and another space with divider for logbook and/or any other similar item. This bag has a rear pocket with secure touch fastener. It also has a small front pouch with touch fastener and one pouch in the left side for Transceiver/GPS. The right side has holders for pen and small flash light. The main compartment is H9" X W9" X G4.5".

Black ..... P/N 13-07468 ..... **$41.95**
Grey ..... P/N 13-11356 ..... **$42.50**



NORAL CFI / IFR PILOT FLIGHT BAG

This bag has two side pouches equipped for large sized headsets. One of these side pouches has a flap pocket with a zipper closure to store pens, flashlight, ID card and/ or license etc. Inside the main compartment is two removable pouches for GPS/Transceiver. The dimension of main compartment is H11" X W14.5" X G10". In the front of the bag is a large open pocket for easy access. The back of the bag has two open pockets and the bottom floor of the bag is a removable plastic board to reinforce it and to keep the bag from sagging when fully loaded. Also has two dividers in the main compartment that can be adjusted to a different position and can be removed if desired. P/N 13-15768 ..... **$167.99**



NORAL AIR MAP CASE 1000

The Noral Air Map Case 1000 is made of 1680 Denier Ballistic water repellant material. Interior is fully padded and covered with the liner of water repellant taffeta.

Black ..... P/N 13-11434 ..... **$28.50**
Grey ..... P/N 13-11437 ..... **$28.50**

PS

Prices Subject to Change Without Notice

FLIGHT BAGS

ASA AIRCLASSICS FLIGHT BAG



ASA has brought pilot gear to a new level with the AirClassics series of pilot bags. Focusing on a clean, sophisticated and professional look, they have been designed and engineered to be supremely functional. Padded 600D nylon for superior durability. Comfort Grip connectable handles. Non-slip detachable carry strap. Reinforcing straps around bag for strength. #10 zippers for easy handling. Headsetn pockets on both ends. Large single-pull, zippered & dividable main compartment. 18"L x 11"H x 7"W

P/N 13-02336 ..... **$69.75**



ASA AVIATOR FLIGHT BAGS

The Pilot Flight Bag and the Trip Bag, are made of fully padded nylon for extreme durability. They feature wraparound carry straps for strength, a non-slip detachable shoulder strap, and high-quality zippers on the main compartments.

Pilot Bag..... P/N 13-04057 ..... **$37.50**
Trip Flight Bag..... P/N 13-04058 ..... **$59.50**



ASA TECH FLIGHT BAG

Ideal for the computer-toting pilot. It includes a padded laptop sleeve for safe storage of your computer or favorite EFB (up to 15" x 11") and has plenty of pockets for carrying everything from headsets to sticky notes. Dimensions: 19" wide x 8" tall x 12 1/2 " deep * Made of 600D polyester with PVC backing for extreme durability * Non-slip removable shoulder strap * Molded carry handle for strength and comfort • Rugged zippers * Outside ID pocket * Padded interior divider panels with numerous compartments * Padded interior laptop/EFB sleeve.

P/N 13-06260.....**$85.75**



PROFLIGHT PREMIUM HEADSET BAG

Three small individual pockets. It is made to resist water and tears. Padded protection for an individual headset with a dual zipper on top makes access very easy. Will fit most ANR headsets. Size: 10-3/4" x 11-3/4" x 5"

P/N 13-06936.....**$19.95**



ASA FLIGHT BRIEFCASE

The Pilot Briefcase features an expandable, zippered main compartment with room for all ground and flight school necessities. The outer flap provides easy access to a chart pocket with multiple accessory storage areas to store everything from pencils and pens, to flashlights and flight computers. Also perfect for laptop computers. Each bag is black with the ASA wings logo tastefully silver-embroidered on the top. Count on ASA's AirClassics Flight Bags to bring many years of utility and pride. 15-1/2"L x 11"H x 3"W.

P/N 11-08805.....**$24.95**



CASE FLIGHT

The Case Flight luggage bag is roomy, has multiple pockets, lightweight, and holds plenty of pilot gear. This professional case is made with rugged dependability in mind for today's aviator. Dimensions: 19 x 14 ½ x 10.

P/N 11-09097.....**$109.75**



GELFLEX "CREW" LUGGAGE TAG DUAL SIDED

The Gelflex Crew Luggage Tag is a great version of a traditional Crew Tag. Black letters (CREW) on vibrant background. And best of all, it comes with a special flexible cord that enables you to attach it to your luggage or equipment without worrying about whether it will break or tear. 3-3/4" x 2-1/4.

White Tag..... P/N 14-02963 .....**$5.35**
Blue Tag..... P/N 14-02960 .....**$5.70**

AEROCOAST PRO I FLIGHT CASE



* Waterproof ballistic material * Metal piano hinge for added strength * Protective plastic plate * Multi access folder compartments * Multiple storage compartments * Flashlight holder * Leather wrapped handle * Side pocket compartment * Name card holder with clear cover * Embroidered gold logo * Added Velcro to both inside flaps * Outside dimensions 18 x 13 x 8 inches.

P/N 13-06041.....**$160.00**

AEROCOAST PRO SLIM NOTEBOOK BAG



A great addition to the 13-12894 Pro Cooler Bag sold separately. Shoulder strap connectiion points on both modular sections. Easy X-ray screening at TSA checkpoints so you will never take out your laptop again. You will save time and you will protect your laptop, iPad or EFB from physical damage. ipad compartment dimensions 15 x 11 x 1.5 inches.

P/N 13-12895.....**$24.95**

AEROCOAST PRO COOLER I



Eat healthy on the road and save money. This cooler bag has two separate insulated compartments with silver lining to keep your food warm or cold. Tired of lugging around more than you have to? Do you want to eat healthier and save money while on the road? You can eliminate a lot of day to day hassle at the TSA checkpoints. Ergonomically designed snap handle for quick, easy, and comfortable use. Four additional pockets for easy storage of accessories. Rigid case construction for added durability. A great addition to the 13-12895 Pro Slim Notbook Bag sold separately

P/N 13-16281.....**$94.95**

AEROCOAST PRO EFB & INSULATED COOLER BAG



Top pocket for sunglass. Shoulder strap connectiion points on both modular sections. Modular design lets the EFB & Cooler portion to be used independently or used in unison. Easy X-ray screening at TSA checkpoints so you will never take out your laptop again. Two separate insulated compartments to keep your food warm or cold. Four additional pockets for easy storage of accessories. Leak resistant main compartment design. Fits under aircraft seats for easy stowage on travel. Outside dimensions: 15 x 11 x 10 inches. Laptop compartment dimensions 15 x 11 x 3 inches

P/N 13-12893.....**$119.95**

ASA TABLET BAG



The Tablet Bag is the perfect size for student and professional pilots alike! This conveniently sized bag, handy for pilots and aviation professionals alike, holds a tablet, headset and other small personal items for your flight. This bag will hold a lot more than just a tablet, in fact, it has plenty of room for a 13" laptop and a tablet. It will also hold a headset, charts, a plotter, logbook, radio, or gps unit, and all of those other small ittems a pilot may need to carry. The outside of the bag has a spot for a flashlight or fuel tester and a zip pocket for a radio, GPS, or water bottle. The padded, adjustable shoulder strap can be worn cross body for a comfortable fit, and easy portability. Focusing on a clean, sophisticated and professional look, the ASA AirClassics® Tablet Bag is designed and engineered to be supremely functional, able to stand up to the toughest treatment possible, yet still look great at the end of the day.

P/N 13-18460.....**$69.95**

ASA AIRCLASSICS PILOT BACKPACK



The ASA AirClassics® Pilot Backpack is made of durable fabric and supported by a heavy-duty water-resistant bottom, this backpack keeps books and supplies organized and protected. Four zippered compartments provide ample room for just about anything a pilot-on-the-go needs. The front pocket will accommodate most aviation headsets, including the HS-1A Headset and Single Headset Bag (both sold separately). The second level interior compartment has a lanyard for keys, a zippered containment pouch, and plenty of pockets and slots for pens, pencils, flight computers and plotters. The spacious main compartment supports textbooks and manuals, and the checkpoint-friendly fold-down back panel contains a padded pocket for a laptop, and a felt-lined pocket for a tablet. The backpack's interior contrasting-color lining makes it east to find things inside.

P/N 13-18424.....**$83.75**

PS

JEPPESEN CASES & FLIGHT BAGS

JEPPESEN PILOT BACKPACK



A great backpack for the student pilot or certificated seasoned pilot. This backpack is a great option in offering convenience and flexibility. Perfect for carrying your laptop, charts, headset, and other pilot supplies. **Features**: • Padded laptop sleeve • Large center storage area • Computer accessory storage • Internal file sleeve • Fleece-lined audio pocket with headphone exit port • Digital-media pocket • Jeppesen zipper pulls 8 Sturdy neoprene grab handle **Specifications**: • 400x400 Dobby pindot nylon, 600-denier polyester • Weatherproof, fleece lined inner pockets •Overall dimensions: 21" x 14" x 9-1/2" • Laptop sleeve dimensions: 15-1/2" x 11-1/2" x 2" P/N 13-07311 ..... **$87.95**

SINGLE HEADSET BAG



For those who like to fly with minimum baggage, this holds one headset, has extra pockets, and allaround padding

P/N 13-02333 ..... **$16.95**

VOYAGER II FLIGHT ATTACHE FOR IPAD



The Voyager II has upgraded metal snap hooks and d-rings to attach the stretchy, comfortable Air Lift shoulder strap. There is a separate pocket inside to carry your iPad1, 2 or 3 and will fit most iPad cases. The outer side pocket features a removable AND adjustable strap. The handles are now made of 1680D and the entire bag is accented with Leatherette. All the same organizing features including the Co-Pilot organization flap, chart pockets and battery sleeves are all still where they were before. If you fly with an iPad, this is a great case to help organize during your pre-flight. Size: 17.0 X 11.5 X 5.5in. Weight: 2lbs 13oz

P/N 13-11877 ..... **$63.85**

FLIGHT BAG 1 V2



This bag is like the hard flight cases airline pilots use. There's no maze of compartments, just efficient, sensible storage. Maybe that's why a major US airline flight training academy chose Bag1 as standard issue for their students. This Cockpit Bag is simple, practical, and cockpit friendly. Perhaps its ease of use is a Brighter idea. Enjoy the simplicity of well thought out storage, just right for most pilots. Color: Black.

P/N 13-20149 ..... **$49.95**

PORTABLE FOLDING LUGGAGE CART



3-Way portable luggage cart (folding cart) in black plastic with 37.5" extension handle. Load up to 66 lbs. Store flat. Makes moving items easy. Fits the Brightline Bag perfectly!

To attach the bag, place the front of the bag (pocket-side) flush against the telescoping handle. Take the handle and clip it into the front buckle. Wrap the handle around the telescoping handle and reattach it to the opposite front buckle. The bag is now securely attached to the cart.

P/N 13-10007 ..... **$45.00**

FORCE PROTECTOR GEAR HELMET BAG



FPG HelmetBag design! This bag features a much larger storage capability without taking up too much cabin space in aircraft. The pleated bag design expands and contracts with your loadout to easily fit your helmet and accessories. Dimensions: 21.5" Wide x 19" Tall x 3.25" D (54.6cm Wide x 48cm Tall x 8.3cm D). Capacity: 1226 cubic inches internal / 20 liters / 676 cubic inches external pockets / 11 liters. Weight: 2 lbs / .9kg.

Color	Part No.	Price
Black	13-20223	**$175.75**
Multi-Camo	13-20637	**$175.95**
ACU Camo	13-20638	**$175.95**
ABU Camo	13-20639	**$175.95**
Coyote	13-20640	**$175.95**

THE AVIATOR BAG



Slightly smaller than the Navigator Bag, but still spacious enough for all your flight materials. Includes 1 exterior front pocket as well as detachable headset & transceiver cases. Constructed with durable PVC backed with 600 denier poly. 15"x 6.5" x 12" (black only) P/N 13-00998 ..... **$81.95**

THE STUDENT PILOT



A great first bag for the student pilot. Numerous outside pockets organize charts, flight computer, fuel tester, plotter, pens and pencils, flashlight and much more. Comfortable, wide removable shoulder strap; double zipper opening for easy access. Reinforced bottom. Constructed with durable PVC backed 600 denier poly. 10"x 5.5"x17" (black only)

P/N 13-00997..... **$35.95**

JEPPESEN STYLE FLIGHT BAG



Student/Book Bag: Same great bag Jeppesen uses for its training kits. The bag is made from heavy-duty 6000 denier Cordura for superior strength and with a PVC coating on one side for added water resistance. Includes outside pockets, removeable shoulder strap, reinforced bottom. Size 10" x 5.5" x 17"

P/N 13-06280..... **$29.95**

TUFF NUFF HEADSET CASE



A rugged built case with "clamshell" design for easy access. Your headset is well protected by a soft foam lining and tough Cordura outer shell. Fits all popular makes and models, with extra room for small accessories. Measures 9-1/2" x 10-1/2" x 3", and weighs 7 oz. P/N 4002 ..... **$24.95**

AIRCRAFT DOCUMENT CASE



This durable, flexible blue cordura pouch is an ideal way to keep aircraft registration, insurance, log books, operating manuals, and other important documents all in one safe location. Measures 18"W x 12"H. Features top quality zipper along front side for easy access and location to mark your aircraft number on front.

Color	Part No.	Price
Blue	13-20065	**$19.95**
Black	13-11883	**$19.50**
Red	13-02934	**$19.95**
Olive	13-11885	**$19.50**
Brown	13-11884	**$19.50**

TRASH BAG WITH ADJUSTABLE SEAT BACK STRAPS



Trash Bag with adjustable Seat Back Straps. Constructed of rugged 600D Nylon. Bottom Velcro opening for quick discarding of trash. Exterior tissue pocket. Hold up to four 20oz water bottles and trash. Color: Black.

P/N 13-17860 ..... **$19.99**

PS

FLIGHT BAGS

FLIGHT OUTFITTERS FLIGHT LEVEL BAG



The Flight Level bag is specifically designed to be all black, without any markings that uniform policies may not approve of. It features a rugged molded bottom and a steel-reinforced carrying handle to withstand years of abuse. Patent-pending hideaway pockets give pilots the flexibility and room they need to organize everything to suit every flight. The inside of the Flight Level has the signature Flight Outfitters orange, making it easy to find gear in a dark cockpit. There are 3 interior zip pockets for organizing cables, chargers and other smaller items that tend to find their way to the bottom of other bags. The Flight Level also features expanding file folders, tablet storage and a pass through pocket on the back to slide over rolling luggage handles. P/N 13-18538 .....**$129.95**

FLIGHT OUTFITTERS PROPACK BAG



The Pro Pack is an optional insulated bag that is designed to fit inside one of the hide away pockets of the Flight Level Bag. This handy pack provides extra protection for delicate items or an insulated place to put your snack out of the way of your flying gear. FLIGHT LEVEL Pro Series bag is not included.
P/N 13-18539 .....**$12.95**

WWP-102 HEADSET BAG



This padded carry bag provides inexpensive insurance against headset damage. Featuring dual zipper openings, inside pocket sectionals, computers, glasses, etc. Bag is constructed of black waterproof nylon with carry handle.
P/N 17-00231 .....**$15.95**

GARMIN EXECUTIVE BLACK FLIGHT BAG



This Garmin executive ballistic nylon shoulder bag was designed with the pilot in mind and includes custom-made pouches to hold Garmin portable devices, such as the aera 796, VIRB action camera and GDL 39. Some of these pouches are even removable. Special pass-through areas are included throughout the bag to allow you to charge your devices from a separate battery charger without having to take them out of the bag. P/N 10-05882 .....**$115.00**

ASA DISPATCH BAG



Adjustable comfort shoulder that can also be worn cross-body. Top grab-and-go handle. Contrast lining, to find items more easily. Made of durable, 600D Polyester. Spacious main compartment fits headset. 2 pockets within main compartment keep headset accessories or smaller items organized. Front interior compartment organizer with slots and pockets to store phone, keys, wallet, pens. Padded compartment to protect a tablet. Exterior slide-in back slot to store charts or easy access items. Exterior slots for flightline supplies like a fuel tester, flashlight, and pen. Side pocket with adjustable strap to secure, radio, gps unit, or water bottle. P/N 13-18458 .....**$46.60**

POWDER PUFF PILOT PINK FLIGHT BAG



In response to customers who lamented not being able to find a pink flight bag – here you are! A padded handle and gray shoulder strap makes it easy and convenient to tote – even when it's full The main compartment is roomy enough to carry headsets, charts, and flight gear for a cross-country adventure; or clothes, toiletries, and makeup for a weekend getaway. It also has two exterior pockets for easy access to your wallet, keys, and cell phone, as well as a mesh pocket for your water bottle. Bag dimensions: 10½ by 17½ by 10½ inches. P/N 13-11469 .....**$29.95**

FLIGHT OUTFITTERS LIFT FLIGHT BAG



This sturdy bag has room for all the essentials, but won't get in your way. Includes a large headset pocket, iPad pocket and multiple organizer sections with room for all your accessories. A helpful exterior pocket makes it easy to grab your backup radio in an emergency. Steel-reinforced carrying handles will haul even the heaviest load, and the reinforced sides offer additional protection. Signature orange interior makes it easy to find the flashlight or pen in the dark.
Brown ..... P/N 13-18181 .....**$99.95**

FLIGHT OUTFITTERS THRUST FLIGHT BAG



The unique sling pack design protects and organizes a surprising amount of gear, but is one of the smallest flight bags you can buy. It fits comfortably between iPad and headset pockets protect your most expensive equipment, while numerous mesh pockets keep your cords organized. Includes a carry handle and a single padded shoulder strap that can be adjusted for right or left shoulder use. P/N 13-18182 .....**$79.95**

FLIGHT OUTFITTERS CENTERLINE BACKPACK



The Centerline Backpack has organization for all the aviation gear you carry, but is versatile enough to use everyday, whether you're at the airport, the office or the classroom. There is a dedicated headset slot and a padded tablet/computer pocket. Inside the top flap, there are plenty of elastic pockets to keep your cords and electronic accessories organized, and the center divider can be folded down to create one large storage area. It's easy to move back and forth as your gear changes.
P/N 13-21195 .....**$99.95**

FLIGHT OUTFITTERS BUSH PILOT BAG



The Bush Pilot bag is canvas with leather accents, and carries an embossed leather flight outfitters patch on the front. The inside of the Flight Level has the signature Flight Outfitters orange, making it easy to find gear in a dark cockpit. There are two large padded side pockets for headsets. The large front zip pocket has 4 organization pockets, for chargers and other smaller items that tend to find their way to the bottom of other bags. The Bush Pilot Bag also features a pass through strap on the back to slide over rolling luggage handles and a leather shoulder strap pad. P/N 13-19105 .....**$139.95**

FLIGHT OUTFITTERS BUSH PILOT FOLIO BAG



Whether you're soaring above the clouds in your Cirrus or closing a big deal in your desk chair, this Folio Bag looks like it just left the flight deck of a DC-3. But while the Bush Pilot Folio has plenty of style, it's also a very practical bag, storing a surprising amount of gear without looking bulky or weighing you down. It has separate pockets for your tablet and laptop, plus a large center compartment and plenty of exterior pockets. You can keep everything separated but easy to find. For further utility, the Folio Bag has a rear strap to securely attach it to your roll-aboard.
P/N 13-20713 .....**$139.95**

FLIGHT OUTFITTERS FLIGHT CART



One of a kind patented design and function makes sure the Model 700 lives up to its moniker. An impressive 400lb capacity and generous loading tray (16"w x 13.5"d) allows you to move anything from presentation and display equipment to a washer/dryer. Easy single-motion squeeze handle telescopes the cart open and closed. Sleek design and limted lifetime warranty put the Super Cart in a league of its own. P/N 13-19651 .....**$179.95**

LARGE CARRY BAG WITH DIVIDER SYSTEM



Large Carry Bag with Divider System for Aviation Gear and Accessories. Constructed of rugged 1200D Nylon. Ample Storage compartment sizes. Dividers are movable to easily adjust. Handy 'Remove Before Flight' visual reminder. Bungee strap system for quick storage. Straps on the back are perfect for securing larger items. Color: Black. Handles: Carry Handle. Latches: Zippered. Interior L: 22.00" x W: 12.00" x H: 10.00". P/N 13-17855 .....**$99.99**

PS

FLIGHT BAGS

SKY HIGH GEMINI



The Gemini flight bag is a fully padded duffle designed to protect the pilot's important gear. It is made with full sized compartment flaps, allowing easy organization of flight materials and access during flight - there is even a special stow-a-way pocket designed to hold most kneeboards. Everything is right where it should be - especially important during IFR flights. The center compartment has a double zipper opening with a padded quad-modular divider to segment the compartment for custom organization and easy access. P/N 13-04254..... **$83.95**

SKY HIGH EXPLORER PRE FLIGHT POUCH



Our preflight pouch is made of durable 600D Polyester. It is designed to organize and hold your basic items for your preflight – Mini Mag size flashlight, fuel tester, pen/pencil, tire pressure gauge, and pliers or wrench. We have also included a grommet on the corner so you can attach a towel for wiping your hands clean. The Explorer will fit easily into any bag and has a Velcro strap to attach to your waist belt for convenience during the preflight. P/N 13-03276 ..... **$9.95**

PROFLIGHT STUDENT PILOT BAG



The ProFlight Student Pilot bag is a great value! Black Cordura type material, carry strap. Great for students; use alone or as an accompaniment to your travel luggage. This bag is similar to the Jeppesen Student Pilot Bag in style and materials with multi side pockets. Size: (L)17" x (W)6" x (H)10" P/N 13-06280 ..... **$29.95**

SCHEYDEN LUGGAGE VERY LIGHT KIT ENSEMBLE



The finest 3-piece flight crew luggage ensemble in the world. Manufactured in the USA using the finest materials and hardware available. Our ensemble is taller with a more slender profile (similar to that of a beverage cart) that allows you to slip down aisles of any aircraft to the flight deck with ease. Black.
VLK (Very Light Kit): • 12"H x 14"W x 5"D (2.8 lbs) • For pilots who have gone paperless • Perfect for iPads, laptops, or both • Ample storage for headset, flashlight, water bottle and gear • Removable padded shoulder pad • 1 Exterior zippered pocket • 1 Interior zippered pocket • 2 Interior breathable mesh pockets • 2 Interior side elastic loops to hold gear • Interior key holder • Interior ID holder • Made with Invista™ CORDURA® brand 1000 d water resistant nylon fabric up to 3x stronger and lasts up to 5x longer than standard polyester • Reliable and durable YKK® zippers and ITW Nexus® Buckles • Integrated Train Reaction™ luggage connecting system (Patent Pending Ser#12/348,857). Dimensions: 22.5. Weight: 13.2 Lbs. Limited lifetime warranty optional 5-Year NQA warranty upgrade. P/N 13-14968 ..... **$599.00**
Embroidery ..... P/N 13-14972 ..... **$20.00**
NQA 5 Year Warranty..... P/N 13-14973 ..... **$149.00**

SCHEYDEN LUGGAGE FLIGHT KIT ENSEMBLE



The finest 3-piece flight crew luggage ensemble in the world. Manufactured in the USA using the finest materials and hardware available. Our ensemble is taller with a more slender profile (similar to that of a beverage cart) that allows you to slip down aisles of any aircraft to the flight deck with ease. Black.
FK (Flight Kit): • 12"H x 14"W x 8"D • Ample storage for headset, flashlight, water bottle and gear • Removable padded shoulder pad • Two removable mesh clothing organizers • Interior horizontal clothing divider • Mesh zippered interior accessory pocket • One outside zippered pocket • Auxiliary side handle • Made with Invista™ CORDURA® brand 1000 d water resistant nylon fabric up to 3x stronger and lasts up to 5x longer than standard polyester • Reliable and durable YKK® zippers and ITW Nexus® Buckles • Integrated Train Reaction™ luggage connecting system(Patent Pending Ser#12/348,857). Dimensions: 22.5. Weight: 13.2 Lbs. Limited lifetime warranty optional 5-Year NQA warranty upgrade. P/N 13-14970 ..... **$529.00**
Embroidery ..... P/N 13-14972 ..... **$20.00**
NQA 5 Year Warranty..... P/N 13-14973 ..... **$149.00**

WEEKENDER COMBO FLIGHT BAG



The swing hook for the adjustable shoulder strap is made of metal to ensure heavy load resistance. The shoulder strap has a soft rubber pad for your comfort and to keep the bag in fixed position while carrying on shoulder. This bag is made of 1680 Denier Ballistic water repellant material. Its interior is fully padded and covered with the liner of water repellant taffeta.
Grey ..... P/N 13-11385 ..... **$88.85**
Black ..... P/N 13-01434 ..... **$88.90**

NORAL EXTRA PADDED HELMET BAG



The swing hook for the adjustable shoulder strap is made of metal to ensure heavy load resistance. The shoulder strap has a soft rubber pad for your comfort and to keep the bag in fixed position while carrying on shoulder. This bag is made of 1680 Denier Ballistic water repellant material. Its interior is fully padded and covered with the liner of water repellant taffeta.
Grey ..... P/N 13-11382 ..... **$114.85**
Black ..... P/N 13-00262 ..... **$115.75**

CFI / IFR PILOT FLIGHT BAG



This bag has two side pouches equipped for large sized headsets. One of these side pouches has a flap pocket with a zipper closure to store pens, flashlight, ID card and/ or license etc. Inside the main compartment is two removable pouches for GPS/Transceiver. The dimension of main compartment is H11" X W14.5" X G10". In the front of the bag is a large open pocket for easy access. The back of the bag has two open pockets. Has two dividers in the main compartment that can be adjusted to a different position and can be removed if desired. Size: 11" x 23" x 12" Black ..... P/N 13-00186 ..... **$191.75**
Grey ..... P/N 13-11375 ..... **$190.75**

BALLISTIC NYLON FLIGHT CASE 18''



Many RJ pilots requested a flight case design to fit the RJ cockpit. Using input from RJ pilots, CrewGear® created an RJ specific flight case. It has been flight tested by RJ line pilots who rated it an A+. Outside dimensions: 18.75" x 14.25" x 8.75" Color: Black. Fits most RJ flight case compartments
P/N 13-11599 ..... **$114.95**

HARDSIDE CARBON FIBER BRIEFCASE



Large-capacity attache. Styled in sleek carbon fiber frame. Patented Right-Side-Up feature prevents accidental upside-down opening. Accordion-style legal size portfolios and multiple compartments for all your pilot essentials. Secure combination lock. Body Dimensions: 18.2" x 12.7" x 5.2". Overall Dimensions: 18.2" x 12.7" x 5.2".
P/N 13-18537 ..... **$879.00**

ROLLING BALLISTIC NYLON FLIGHT CASE



Now roll your way through airports, crew parking lot, and down those eternally long concourses easily with CrewGear®'s Rolling Ballistic Nylon flight case. This flight case is loaded with unique features. Best of all, IT ROLLS! Color: Black. Inside dimensions: 18" x 13 1/2" x 8". Outside dimensions: 19 1/2" x 15 1/2" x 10 1/2".
P/N 14-00831 ..... **$229.95**

ULTIMATE ''MULTI-TASKER'' FLIGHT BAG PLUS



It's a Flight Case, an Overnight Bag, a Brief Case and Computer Bag all in one! Proudly designed by CrewGear®, this bag will accommodate a 2" JEP binder, pilot headset and all related work gear. There is a padded compartment for your Laptop Computer (14" or less), Net Book or iPad. The clothing compartment is perfectly sized for one pair of slacks, one shirt, and all your undergarments. The file-folder compartment is perfectly sized to hold documents, magazines and newspapers. That's not all; this bag also comes with a toiletry pouch, and a shock-absorbing shoulder strap. Weight: 5.15 lbs. (Empty) 6.10 lbs. (w/Accessories). Exterior Dimensions: 18" x 13.5" x 9.5". Color: Black P/N 13-11598 ..... **$151.90**

PS

Prices Subject to Change Without Notice

FLIGHT BAGS – AVIATION CASES



SCULLY AEROSQUADRON LEATHER DUFFLE BAG

2 Zip Carry-On lambskin duffle bag with Exterior zip pocket. This bag has two roomy center zip compartments. One compartment includes garment straps and the other compartment includes pockets for cell phone and pens. 2 roomy center zip compartments. Removable and adjustable shoulder strap w/faux shearling pad. Cotton lining shows schematics of aircrafts. Color: Walnut. 23" Width 13.5" Height x 6.5" Depth

P/N 13-18001 ..... **$239.95**



SCULLY AEROSQUADRON MESSENGER BRIEF BAG

Lambskin messenger brief bag for laptop. This bag comes with a front outer zip pocket under flap and a single gusset inside zip pocket in back and small open pockets in front. P/N 13-18002 ..... **$149.85**



SCULLY AEROSQUADRON LEATHER TRAVEL KIT

Leather travel kit with exterior dual zip entry compartment. It has a roomy main compartment w/open pockets to hold travel bottles, toothbrush, etc. Removable zip mesh pocket. Elastic loop for brush. Rear zip compartment includes hanger. 12.25" Length x 7.5" Height x 4" Width.

P/N 13-18004 ..... **$83.85**

ASA AIRCLASSICS FLIGHT BAG PRO



1000D Nylon for extreme durability and gear protection. Large, zippered side pockets. Unique detachable chart wallet. A zippered, mesh interior pocket. Smaller mesh compartment on the outside of the bag. Black with the ASA wings logo tastefully silver-embroidered on the top. Dimensions: 20"L x 10"H x 8"W. P/N 11-08804 ..... **$108.95**



DOUBLE HEADSET BAG

Doube-sided, 1/4" padding everywhere; can hold two headsets. ..... P/N 13-02334 ..... **$24.95**



LIGHTSPEED ADVENTURE FLIGHT BAG - THE GANN

Ready for a true journey, the Gann is imbued with the same insatiable thirst for adventure as the novelist it is named for. Spacious but cabin-friendly, this carpenter-style bag is a great companion to the pilot who has everything — and likes to take it along.

Dimensions: 16"W x 6"D x 13.5"H.

P/N 11-13505 ..... **$249.00**



LIGHTSPEED ADVENTURE FLIGHT BAG - THE MARKHAM

Ready for a true journey, the Gann is imbued with the same insatiable thirst for adventure as the novelist it is named for. Spacious but cabin-friendly, this carpenter-style bag is a great companion to the pilot who has everything — and likes to take it along. Dimensions: 16"W x 6"D x 13.5"H.

P/N 11-13506 ..... **$199.00**



LIGHTSPEED ADVENTURE FLIGHT BAG - ORGANIZER INSERT

Designed to help organize the interior of all of our flight bags, the organizer insert is made from 210 Denier polyester. Perfectly sized to hold a headset, camera, and other essential gear, it features padded, sewn-in dividers, multiple accessory pockets and woven bindings to protect the edges. Dimensions: 11"W x 4.5"D x 9"H.

P/N 11-13508 ..... **$25.00**



GATOR WATERPROOF AVIATION CASES

Gator Cases new line of water proof, dust proof, sand proof, crush proof, injection molded cases feature inpact-proof light weaight NK-7 resin and have a ATA-300 flight safe rating. Every case has a Auto Presure equlizer valve with a Mil-Std-810F Immersion test certification. Available in both NO FOAM and DICED FOAM version, all Gator Injection Molded Cases have Soft Grip carry handles, and unique easy relase Powerclaw(TM) latching system.

Part No.	Item Number	Description	Interior Dimentions	Price
13-17861	GU-0705-03-WPNF	Black Waterproof Injection molded case, with NO FOAM	7.4" x 4.9" x 3.1"	**$29.99**
13-17862	GU-0806-03-WPNF	Black Waterproof Injection molded case, with NO FOAM	8.4" x 6" x 3.7"	**$34.99**
13-17863	GU-0907-05-WPNF	Black Waterproof Injection molded case, with NO FOAM	9.4" x 7.4" x 5.5"	**$49.99**
13-17864	GU-1309-03-WPNF	Black Waterproof Injection molded case, with NO FOAM	13.2" x 9.2" x 3.8"	**$59.99**
13-17865	GU-1309-06-WPNF	Black Waterproof Injection molded case, with NO FOAM	13.8" x 9.3" x 6.2"	**$69.99**
13-17866	GU-1510-06-WPNF	Black Waterproof Injection molded case, with NO FOAM	15" x 10.5" x 6.2"	**$84.99**
13-17867	GU-1711-06-WPNF	Black Waterproof Injection molded case, with NO FOAM	17" x 11.8" x 6.4"	**$94.99**
13-17868	GU-1813-06-WPNF	Black Waterproof Injection molded case, with NO FOAM	18" x 13" x 6.9"	**$109.99**
13-17869	GU-2011-07-WPNF	Black Waterproof Injection molded case, with pullout handle and inline wheels and NO FOAM	20.5" x 11.3" x 7.5"	**$139.99**
13-17870	GU-2014-08-WPNF	Black Waterproof Injection molded case, with NO FOAM	20" x 14" x 8"	**$114.99**
13-17871	GU-2015-10-WPNF	Black Waterproof Injection molded case, withpullout handle and inline wheels and NO FOAM	20.5" x 15.3" x 10.1"	**$199.99**
13-17872	GU-2217-08-WPNF	Black Waterproof Injection molded case, with NO FOAM	22" x 17" x 8.2"	**$144.99**
13-17873	GU-2217-13-WPNF	Black Waterproof Injection molded case, with pullout handle and inline wheels and NO FOAM	22" x 17" x 12.9"	**$229.99**
13-17874	GU-1510-06-WPDF	Black waterproof injection molded case with DICED FOAM	15" x 10.5" x 6.2"	**$94.99**
13-17875	GU-1711-06-WPDF	Black waterproof injection molded case with DICED FOAM	17" x 11.8" x 6.4"	**$124.99**
13-17876	GU-1813-06-WPDF	Black waterproof injection molded case with DICED FOAM	18" x 13" x 6.9"	**$149.99**
13-17877	GU-2011-07-WPDF	Black waterproof injection molded case with pullout handle, inline wheels and DICED FOAM	20.5" x 11.3" x 7.5"	**$179.99**
13-17878	GU-2014-08-WPDF	Black waterproof injection molded case with DICED FOAM	20" x 14" x 8"	**$159.99**
13-17879	GU-2015-10-WPDF	Black waterproof injection molded case with pullout handle, inline wheels, and DICED FOAM	20.5" x 15.3" x 10.1"	**$249.99**
13-17880	GU-2217-08-WPDF	Black waterproof injection molded case with DICED FOAM	22" x 17" x 8.2"	**$194.99**
13-17881	GU-2217-13-WPDF	Black waterproof injection molded case with pullout handle, inline wheels, and DICED FOAM	22" x 17" x 12.9"	**$279.99**
13-17882	GX-20	Cargo Case w/ Lift-Out Tray, Wheels, Retractable Handle	13.5"X12.75"X14"	**$179.99**
13-17883	GxX-22	Cargo Case w/ Lift-Out Tray, Wheels, Retractable Handle	12"X24"X30"	**$269.99**

PS

SEAT FOAM - FLIGHT SEATS

BACKSAVER FOAM



Backsaver foam is temperature sensitive, softening when it comes in contact with a warm surface; thus, in a seat cushion, the foam softens and conforms to the persons body. This provides even pressure distribution and unconstricted blood circulation, significantly reducing discomfort, even over long periods. In addition, Backsaver foam has excellent energy absorption properties, which have made it excellent for use in the U. S. space shuttle program and in military aircraft and helicopters. Pilots find that Backsaver cushions reduce their discomfort and fatigue, even on missions of 8 hours or more. Aircraft Spruce now makes Backsaver foam available to the homebuilt and general aviation market.

BACKSAVER FOAM 16" X 18"..... P/N 01-09325 .....**$92.50**
BACKSAVER 36" X 80" FOAM..... P/N 01-09330.....**$541.00**

CONFOR FOAM SEAT CUSHION



Temperfoam is the conforming foam cushion that was developed for the "Astronaut's Couch" back in the Apollo space program. Seat foam has the capability of absorbing a tremendous amount of impact shock compared to common polyfoam and it is flame resistant. It is an excellent product that will give your seats enduring comfort that you never thought possible. It is not a soft seat, but it adapts to you for pressure- point-free comfort that is really incredible. The best universal cushion for aircraft use is a 3" T/38/T41/T47 laminate. Temperfoam is not currently FAA approved for certificated aircraft but is excellent for homebuilts. Some special sizes in 1", 2" or 3" thicknesses are available on special request.

1" x 16" x 18" .....P/N 01-09310 .....**$27.50 ea.**
2" x 16" x 18" .....P/N 01-09320 .....**$52.75 ea.**
3" x 16" x 18" .....P/N 01-09300 .....**$89.95 ea.**

SKWOOSH™ PILOT SEAT



SKWOOSH™ fluidized gel cushions elieve pressure on the "sitz" bones to help maintain circulation, and reduce numbness and lower back discomfort caused by prolonged sitting. The non-skid bottom makes SKWOOSH™ stay put, ensuring no movement during use while the low profile (½") allows for normal seat position. SKWOOSH™ cushions are made in the USA and are guaranteed for performance and workmanship. Weight: 8 oz. Open Dimensions: 10½"L x 15"W x ½"H. Folded Dimensions: 10½"L x 7½"W x 1"H. P/N 13-05827.....**$39.99**

SKWOOSH PRO TRAVELER



SKWOOSH™ fluidized gel cushions relieve pressure on the "sitz" bones to help maintain circulation, and reduce numbness and lower back discomfort caused by prolonged sitting. Non-skid bottom and is maintenance free. SKWOOSH™ cushions are made in the USA and are guaranteed for performance and workmanship. Weight: 8 oz. Open Dimensions: 10½"L x 15"W x ½"H. Folded Dimensions: 10½"L x 7½"W x 1"H P/N 13-10284.....**$49.99**

SKWOOSH EZ SWIVEL CUSHION



The SKWOOSH™ All Purpose with EZ Swivel Capability is lightweight, folds for portability, is less than 1" high and is almost invisible when in use. The low friction top fabric allows you to swivel freely with little effort while the Non-Skid bottom keeps the All Purpose locked in place. You turn with less effort while the All Purpose stays put. SKWOOSH™ is made in the USA and is guaranteed for workmanship and performance. P/N 13-18496.....**$39.98**

SKWOOSH LUMBAR CRADLE



The SKWOOSH™ LUMBAR CRADLE uses a cutting edge SPLIT LUMBAR DESIGN, TekPad® FLUIDIZED GEL and AIR-FLO3D breathable fabric to provide the best in back comfort. The "gel comfort-cradle" contours and cradles the back exactly as nature intended. SKWOOSH™ products are made in the USA and are guaranteed for performance and workmanship. P/N 13-18497.....**$49.99**

RAM SEAT WEDGE WITH PUMP



The Tough-Wedge™ is a mount that fits in the gap between the vehicle seat and center console or potentially a center seat. This allows for easy access and operation of a mobile device. The Tough-Wedge™ can also be used for back-seat applications by inserted into the pockets located on the back of the front seats. Included diamond adapter attaches to a variety of RAM mounts. Length: 13.25". Height: 8.25". Depth: 1". Inside Wedge Depth: 0.375" - 0.875"

P/N 11-14362.....**$67.99**

PROFLIGHT SEATS



Sit higher, and sit softer on 2 or 3 inches of high-density foam covered with durable, "breathable" Cordura. Made of USAF specifications, with segmented backrest. Really makes a difference on a long flight. Also available: 3 or 4-inch thick child's cushion that finally lets kids see outside, keeps them interested as well as comfortable during long trips. Both seat and cushion are available in either Air Force blue or red. Add B (blue), or R (red) after part number to indicate color.

Dimensions for all Seats: Back: Width - 16" Height - 17" Seat: Width -15" Depth - 12"

Description	Part No.	Price
Blue 2" Booster seat w/ 1-1/2" back	13-02916	**$84.75**
Red 2" Booster seat w/ 1-1/2" back	13-02917	**$86.75**
Blue 3" Booster seat w/ 1-1/2" back	13-02918	**$83.95**
Red 3" Booster seat w/ 1-1/2" back	13-02919	**$78.75**
Blue 3" Booster seat w/ 3" back	13-02920	**$83.95**
Blue 4" Booster seat w/ 1-1/2" back	13-31855	**$83.95**
Red 3" Booster seat w/ 3" back	13-02922	**$83.95**
Child's Blue 3" Booster cushion	13-02923	**$35.65**
Child's Red 3" Booster cushion	13-02924	**$38.55**
Child's Blue 4" Booster cushion	13-02925	**$36.80**
Child's Red 4" Booster cushion	13-31861	**$35.75**
Blue - 4" Seat x 3" back	13-31845	**$83.95**
Red - 4" Seat x 3" back	13-31850	**$84.75**
Red - 4" x 1-1/2" back	13-31860	**$59.95**
Blue - Cut for flight stick 4" Seat w/ 1-1/2" back	13-12077	**$84.75**

NORAL SEATS



This cushion is made with the finest materials available. It features a high back with a Lumbar Support for added comfort. The foam inside meets FAA FAR regarding fire materials. A strap is present for easy carrying and securing the cushion to the back of the seat when installed. Available in 2 sizes marked Type 'A' & Type 'B'.

Label 'A' is intended for larger aircraft such as Cessna 172, 182, 210, or Cardinal.

Label 'B' fits Intended for smaller aircraft such as Cessna 150, 152, Piper Cherokee or Warrior.

Available only in Black & Smoke Grey.

Color	Part No.	Price
2" Seat Cushion - Type B		
Black	13-00323	**$82.75**
Grey	13-00326	**$82.75**
3" Seat Cushion - Type B		
Black	13-00331	**$104.75**
Grey	13-00333	**$104.75**
4" Seat Cushion - Type B		
Black	13-00338	**$114.75**
Grey	13-00341	**$113.75**
Color	**Part No.**	**Price**
2" Seat Cushion - Type A		
Black	13-00327	**$87.80**
Grey	13-00329	**$86.75**
3" Seat Cushion - Type A		
Black	13-00334	**$109.75**
Grey	13-00337	**$108.75**
4" Seat Cushion - Type A		
Black	13-00342	**$119.75**
Grey	13-00344	**$119.50**

Color	Part No.	Price
2" Seat Cushion only		
Black	13-00346	**$49.95**
Grey	13-00348	**$49.95**
4" Seat Cushion only		
Black	13-00224	**$58.75**
Grey	13-00227	**$58.75**
Color	**Part No.**	**Price**
3" Seat Cushion only		
Black	13-00221	**$55.75**
Grey	13-00223	**$55.75**

BLACK MAX COMFORTLITE SEAT



* 18" Wide X 19" Deep x 26" High
* 6061-T6 Aluminum Base and tubing.
* Assembled with AN Hardware.
  Material made from durable cordura nylon
* Includes a large storage pocket in the back
* Additional storage between pan and seat
* Pivots down to make it easier to get in behind the seat on a tandem

P/N 13-05554.....**$229.00**

INFLATABLE LUMBAR SUPPORT



This inflatable air pillow can be installed just under the seat material and will give you the customized support just where you need it. A convenient palmsize pump and a release valve control the firmness of the lumbar support. The In-Flight Back Support is made of a heavy duty self-extinguishing neoprene rubber, specially designed to pass FAR 23.853 flame-test requirements.

Quantity One ..... P/N 13-01501.....**$49.75**
Quantity Two ..... P/N 13-01821.....**$81.95**

PS

Prices Subject to Change Without Notice

OREGON AERO® SEATING SYSTEMS

Oregon Aero® VK SmartCushion™ Systems for Experimental and Homebuilt aircraft offer maximum-comfort seating designed for your particular aircraft. The VK SmartCushion™ System shifts the hips, pelvis and back into a comfortable sitting position. At the same time, the seat cushions support occupants over as large an area of the seat surface as possible, preventing painful "hot spots." Pilot and passengers fly in comfort-no matter how long the flight. Simply put, Oregon Aero® offers the most comfortable seat in the industry **All Oregon Aero® Seating Systems are 100% Satisfaction Guaranteed.**



OREGON AERO® SEAT CUSHION GLASAIR I, II, III

GlasAir I (Pilot), II, III Left or Right Cushion Set un-upholstered cushion core.

NOTE: Cushion set includes: (1) back and (1) bottom cushion. Price per set.

Description	Part No.	Price
GlasAir I Pilot Left or Right Cushion Set	13-07474	**$357.95**
GlasAir II or III Left or Right Cushion Set	13-07475	**$364.00**



OREGON AERO® SEAT CUSHION GLASTAR

Glastar Left & Right Front Cushion Set un-upholstered cushion core.

Description	Part No.	Price
Glastar Left Front Cushion Set	13-07476	**$453.95**
Glastar Right Front Cushion Set	13-07477	**$453.95**



OREGON AERO® SEAT CUSHION LANCAIR 320/360/IV PILOT/LEGACY

Lancair 320/360/IV Pilot/Legacy Left or Right Cushion Set un-upholstered cushion core.

Description	Part No.	Price
Lancair 320/360 Left Front Cushion Set	13-07478	**$498.00**
Lancair 320/360 Right Front Cushion Set	13-07479	**$498.00**
Lancair IV Pilot or Co-Pilot Cushion Set	13-07480	**$321.95**
Lancair Legacy Left or Right Cushion Set	13-07481	**$575.00**



OREGON AERO® SEAT CUSHION RV-4

RV-4 Front & Rear Cushion Set un-upholstered cushion core

Description	Part No.	Price
RV-4 Front Cushion Set	13-07482	**$321.95**
RV-4 Rear Cushion Set	13-07483	**$429.95**



OREGON AERO® SEAT CUSHION RV-6

RV-6 Left or Right Cushion Set un-upholstered cushion core.

Description	Part No.	Price
RV-6 Left or Right Cushion Set 2"	13-07484	**$321.95**
RV-6 Left or Right Cushion Set 3"	13-07485	**$321.95**



OREGON AERO® SEAT CUSHION RV-7/RV-9

RV-7/RV-9 Pilot and Co-Pilot Cushion Set un-upholstered cushion core.

Description	Part No.	Price
RV-7 Pilot or Co-Pilot Cushion Set	13-07486	**$343.00**
RV-9 Pilot or Co-Pilot Cushion Set	13-07487	**$321.95**



OREGON AERO® SEAT CUSHION RV-8

RV-8 Front and Rear Cushion Set un-upholstered cushion core.

Description	Part No.	Price
RV-8 Front Cushion Set	13-07488	**$362.95**
RV-8 Rear Cushion Set	13-07489	**$453.95**

1 INCH PORTABLE UNIVERSAL SOFTSEAT® CUSHION SYSTEMS



Shifts your hips, pelvis and back into the proper, pain-free position. Helps minimize lower back pain from prolonged sitting. Eliminates pain from "hot spots." Can raise or move you forward. Zippered and interchangeable parts. 100% satisfaction guaranteed.
Two anchor options available: (1) Non-Skid Strips (most popular option) Two 1" wide x 10" long strips of black webbing with black non-skid rubber are hand sewn to the bottom of the cushion. (2) Straps - Best option if using Cushion Base for one purpose, such as in an aircraft. One-inch straps with adjustable buckle are hand sewn from side-to-side. Two hook and loop fasteners are hand sewn to the back.
1" Cushion is the most commonly used thickness. 1/2" Cushion is available for individuals with limited headroom. 2" Cushion available for individuals who need raised up. See www.aircraftspruce.com for additional sizes.

Color	Non-Skid Strips	Price	Straps	Price
Burgundy	13-08611-1	**$224.95**	13-08614-1	**$224.95**
Blue	13-08611-2	**$224.95**	13-08614-2	**$224.95**
Teal	13-08611-3	**$224.95**	13-08614-3	**$224.95**
Beige	13-08611-4	**$224.95**	13-08614-4	**$225.95**
Gray	13-08611-5	**$225.95**	13-08614-5	**$224.95**
Charcoal	13-08611-6	**$224.95**	13-08614-6	**$224.95**
Black	13-08611-7	**$224.95**	13-08614-7	**$224.95**

OREGON AERO® SEAT CUSHION VELOCITY

Velocity Cushion Set un-upholstered cushion core.

Description	Part No.	Price
Velocity Cushion Set	13-07490	**$352.95**

OREGON AERO® SEAT CUSHION ZENITH/ZENAIR

Zenith/Zenair Left and Right Cushion Set un-upholstered cushion core.

Description	Part No.	Price
Un-upholstered CH701 Left cushion	13-07491	**$298.00**
Un-upholstered CH701 Right cushion	13-07492	**$298.00**
Un-upholstered CH601 Left cushion	13-07493	**$301.95**
Un-upholstered CH601 Right cushion	13-07494	**$301.95**

PS

SEAT COVERS – SUN VISORS



SUPERLAMB SHEEPSKIN SEAT COVERS: NATURES OWN THERMOSTAT

The magic of 100% genuine sheepskin is quite simply that it will keep you cool in summer and warm in winter. No other natural or man-made fiber possesses the qualities of sheepskin. Whatever the temperature in your cockpit, sheepskin covers remain almost the identical temperature. Additionally, each hollow fiber absorbs up to 30% of its own weight in moisture. It keeps you dry, yet never feels wet itself. You avoid the heat and clamminess of vinyl, or even leather, because there's free flow of air between you and seat. Every cover is hand-made by master craftsmen from the finest chrome-tanned pelts, in colors to match or coordinate with any interior. Sold in pairs only, in 11 colors (request color samples when ordering). FAA Approved.
Available for the following planes: Beechcraft: Baron B-55, E-55, B-58, Bonanza V-35 (A or B), A-33, A-36, F-33A, A36TC. Cessna: 150, 152, 172, 177, 180, 182, 185, 210, 310, 340, 402, 414, 421. Aero Commander: 500, 600, 900, Piper: Archer, Cherokee, Warrior Tomahawk.
Specify year, make model and color choice when ordering. Car seat covers also available in same colors. Call for a price.
Superlamb Sheepskin Seat Covers (pair) .....P/N 7736 ..... **$513.00**
Sheepskin Samples - Order a sample then return it for a full credit after you have selected a color and ordered your seat cover. .....P/N 13-05553 ..... **$50.00**

COLORS AVAILABLE

Black	**Navy**	**Charcoal**	**Metallic Blue**	**Oyster**	**Natural**	**Bamboo**	**Beige**
Honey Tan	**Oak**	**Mushroom**	**Creme**	**Silver**	**Mid Grey**		



ROCKY MOUNTAIN SHEEPSKIN SEAT COVERS

Note: These are priced and sold individually.
Made in the US, our finest quality, 100% pure Australian merino sheepskin seat covers. Tailored from our exact current blueprints, or customized to your specifications, no matter what type of seat, the fit is perfect. Super plush, 1" thick sheepskin adds the greatest comfort, durability and protection for your seats. Hidden straps and elastic borders completely secure covers to seat. Available in 14 colors, shown below. Warranty: 4 years craftsmanship, 2 years materials. Fire testing compliance as per FAR 23.853
If requesting a color swatch please note: A refund is available for color swatch when returned in same condition received prior to order.

Description	Part No.	Price
Cessna 172s,182,210 (1995-2012) Sheepskin Cover	13-12242	**$245.00**
Cessna Sheepskin Covers (Specify Aircraft)	13-12243	**$289.00**
Beech King Air- All	13-12244	**$263.95**
Beech - BeechJet	13-12245	**$328.00**
Pilatus PC 12 Sheepskin Cover	13-12246	**$289.00**
Sheepskin Covers Rear Bench	13-12267	**$489.00**
Sheepskin Covers Headrest	13-12268	**$69.00**
Sheepskin Covers Armrest	13-12269	**$119.00**
Socata TBM 700/850 Sheepskin Cover	13-12271	**$289.00**
Quest Kodiak Sheepskin Cover	13-12272	**$269.00**
Custom Sheepskin Aircraft Seat Cover	13-12273	**$245.00**
Sheepskin Door Armrest Cap Small	13-12356	**$19.95**
Sheepskin Door Armrest Cap Large	13-12357	**$29.95**



PILOT ARMOR™ GENERAL PURPOSE SUNSHADES

This general purpose sunshade provide "spot relief" on windows of any size. They are easily attached and removed to provide sun and glare protection wherever you need it. Made of commercial grade exterior polyester blended Sun Protection screen that has been treated and sealed with a reflective polymer which gives the fabric its protective features. • Excellent solar protection-eliminates up to 86% of the sun's rays, excellent thermal reflective features. • Will not damage acrylic windows • Full custom sets available, call us at 877-477-7823 for a quote.

Size	Part No.	Price
9.5"x6"	13-09666	**$21.50**
11"x6"	13-09665	**$23.50**
16"x9"	13-09664	**$29.50**
15"x22"	13-09662	**$40.85**
16"x16"	13-09663	**$35.50**



FLEXIBLE COCKPIT SUN SHADES

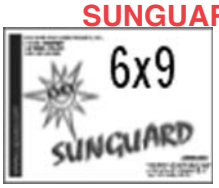
The CRAZEDpilot Sun Shade is a highly portable, easy to store, and easy to use for pilots with only one hand available for placement. Easily conforms to various curvatures of windscreen or side windows. A great lowcost investment to save your interior and panel, without the expense of custom made sunshades! 14.5" x 17" rounded oval shape. Coils/folds to a 6" dia. that can be stored in a seat pouch. Secures to any smooth surface (glass, plastic, metal, etc.) with one central suction cup. Easily installed with one hand, and moved quickly. Package contains TWO sun shades and TWO suction cups Place two sun shades under one Sunction cup for extra sun protection! P/N 11-13316.....**$7.95**



BONANZA/BARON ADJUSTABLE SUN VISORS

Aerospace construction means they work flawlessly, plus they are very adjustable. Rotate them up and down, turn to cover the side windows and slide them in and out for coverage where you want.
P/N 05-03434.... **$432.00**

SUNGUARD SLAP ON SUN VISOR



Sunguard is a transparent polymer, that will statically attach to any smooth surface (windows in cars, boats, aircraft, RV's and homes). It is available in "olive green" tinted shade and absorbs approximately 78% of the light spectrum.....
6X9..... P/N 13-08666..... **$4.65**
9X12..... P/N 13-08667..... **$7.95**

RAM MOUNT DARK GREEN SUN VISORS



The precision laser cut cast acrylic 8"x13" sun visor offers ideal blockage of glare while ensuring no obstruction or distortion of view. The dark green 50% tint is ideal for blocking sun and glare in a variety of applications. The RAM-B-166-326-VIS-G1U includes a 1" ball and complete suction cup mounting kit. The double ball and socket arm with a swivel feature in the center makes adjustment simple and effortless. This mount can be easily configured for left or right handed use as well as pilot and co-pilot use.
Ball and Suction Cup.....P/N 11-13584..... **$68.15**
1"' Ball Only.....P/N 11-14911..... **$35.49**

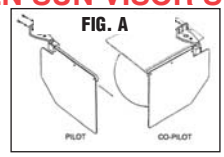
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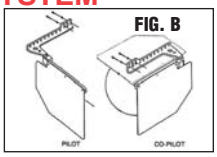
Prices Subject to Change Without Notice

SUN VISORS

ROSEN SUN VISOR SYSTEM







Attention: Products noted in "Application Guide" with an (*) are sold in pairs.

Don't fly blind! Give yourself and your passengers that extra margin of safety. These are transparent sun visors which rotate and extend to offer complete cockpit protection form the sun. The oversize, tinted lens filters out 95% of the ultraviolet rays, reduces glare by 94% and heat by 86%. Distortion free. Fully STC'd and PMA'd. The system, which includes pilot and co-pilot visors, installs in minutes (exceptions: Cessna non-pressurized 210 requires 1-1/2 hours, Cessna 152 requires rivnut installation by an A&P).

Aircraft	Part No.	Price
BEECH - Bonanza/Baron, standard	7568*	**$363.00**
Bonanza/Baron,2- Axis replacement lens	13-18718	**$72.75**
Bonanza/Baron,3rd Axis option	7311*	**$439.00**
Duke	7738*	**$362.00**
King Air	13-01927*	**$446.00**
King Air 200 Monorail with visors (not for A200)	13-12787	**$1,231.00**
MOONEY - 1968 and later models original visors mounted on right or left side (not on center post)	7762*	**$428.00**
PIPER - Comanche, All models,standard	7809*	**$381.00**
Comanche, Third Axis option	7924*	**$434.00**
Aerostar Monorail System	13-15027	**$1,204.00**
Cheyenne Monorail system w/visors	13-15028	**$1,111.00**
Malibu Mirage Monorail System	13-15030	**$1,352.00**
Malibu Meridian Monorail System	13-15031	**$1,352.00**
Arapaho Comanche	13-07454*	**$445.00**
Cherokee, Center mount	13-01315*	**$436.00**
Cherokee, swivel stud	13-01316*	**$436.00**
Seneca	13-01317*	**$439.00**
CESSNA 1980 and later - 170's to 206's (except 177's) Center Mount	7629*	**$376.00**
All 150's and 152's, Prior to 1980 - 170's - 206's (except 177's) Side Mount	7006*	**$376.00**
Cessna 2- Axis replacement lens	13-18343	**$72.75**
210's w/o air cond. (Older 210's, see above)	7152*	**$385.00**
P210's and 210's w/air conditioning	7426*	**$399.00**
177's	7582*	**$399.00**
T303	13-01928*	**$473.00**
310s & 340s, special order to replace units with ball-joint cover style visor only (shown)	7687*	**$439.00**
337	13-01308*	**$486.00**
320	13-01311*	**$473.00**
350/400	13-06044*	**$566.00**
400	13-01312*	**$459.00**
400 Monorail with visors	13-14937	**$841.00**
412B	13-05180*	**$473.00**
Citation 500/501 Monorail with Visors SN>213/	13-14938	**$1,162.00**
Citation 500/501 Monorail with Visors SN<213/	13-14938	**$1,162.00**
Citation 3rd Axis Visor Assy.	13-14940*	**$410.00**
Citation III Monorail with visors	13-14941	**$1,373.00**
Mustang Monorail System	13-14942	**$1,273.00**
Mustang w/ 3rd Axis Visor Assy.	13-15008	**$410.00**
GRUMMAN - Cheetah	13-01313*	**$481.00**
RV-10 - Rosen Sun Visor Set - RV-10	13-05695*	**$439.00**
Rosen Sun Visor - Pilot Side	13-05696	**$208.95**
Rosen Sun Visor Set - Copilot Side	13-05697	**$208.95**
MAULE	13-02471*	**$439.00**
Rockwell Commander 114	13-03328	**$444.00**
OTHERS*		
Cirrus SR20 / SR22	13-03258*	**$445.00**
Lancair IV	13-01934*	**$445.00**
Aero Commander Monorail System w/ Visors	13-14850	**$1,108.00**
Aero Commander Replacement Lens Only	13-14928*	**$77.75**
Aero Commander Visor Assy. Only	13-14930*	**$347.00**
Bell 206 Jet Ranger Monorail w/ Visors	13-14931	**$1,274.00**
Bell 206 Long Ranger Monorail w/ Visors	13-14932	**$1,274.00**
Bell 206 Jet Ranger with AC Monorail System	13-14933	**$1,274.00**
Bell 222 Monorail System w/ Visors	13-14934	**$1,273.00**
BK117 Monorail System w/ Visors	13-14935	**$1,949.00**
BAC1/11 Monorail System w/ Visors	13-14936	**$2,189.00**
Challenger 600,601, 604 Monorail System w/ Visors	13-15009	**$2,019.00**
Challenger 600, 601, 604 Replacement Lens	13-15010	**$122.75**
Challenger 600, 601, 604 Visor Assy Only	13-15011	**$417.00**
Falcon 20 Monorail System w/ Visors	13-15012	**$1,634.00**
Falcon 50 200 Monorail System w/ Visors	13-15016	**$1,634.00**
Gulfstream I, II Monorail System w/ Visors	13-15017	**$1,622.00**
Gulfstream III Monorail System w/ Visors	13-15018	**$2,150.00**
Gulfstream iV Long Beach Monorail System w/ Visors	13-15019	**$2,150.00**
Gulfstream IV Savannah Monorail System w/ Visors	13-15020	**$2,150.00**
Gulfstream IV Kansas City Monorail System w/ Visors	13-15021	**$2,150.00**
Gulfstream 200 Galaxy Monorail System w/ Visors	13-15022	**$2,249.00**
Hawker 700 Monorail System w/ Visors	13-15023	**$1,490.00**
Hawker 750, 800, 850, 800XP, 850XP, 900XP, 1000 Monorail	13-15024	**$1,489.00**
Lear 45 Monorail System w/ Visors Standard Size Lens	13-15025	**$1,393.00**
Lear 45 Monorail System w/ Visors Small Size Lens	13-15026	**$1,393.00**
Homebuilders Universal surface mount	13-03175*	**$431.00**
Homebuilders Universal tube mount	13-03176*	**$415.00**

Homebuilders Universal systems are specific order & built to your specs

ROSEN THIRD AXIS UPDATE KIT: This update kit will fit any Rosen system that does not come standard with third axis option (Piper systems, for examples, come with third axis stanard).... P/N 13-04014 ..... **$77.75**



DIM-IT MOVEABLE VISOR

You can keep moving your head to stay in the shade of your visor, or you can get a DIM-IT visor and move it to where you want it. It's a 6"x12" sheet of tinted Lexan that can be positioned on any window in the cockpit by means of the attached vinyl suction cup. (An optional self-adhesive adapter plate lets you attach it to porous surfaces as well.) Completely transparent and distortion-free.

DIM-IT Moveable Visor .....P/N 7172 ..... **$7.95**
Adapter (for porous surfaces) .....P/N 7113 ..... **$4.65**



MINI DIM-IT

Diminishes the intensity of direct sunlight, glare, and reflections. This little visor is made of high strength tinted Lexan and is distortion-free. Place the suction cup on window/windshield and press. P/N 13-01758.....**$6.95**



ADJUSTAVISOR

The Adjustavisor, a clip-on unit that virtually doubles the effective range of stock visors, adds contrast, and reduces glare and fatigue. Available with smoke polycarbonate lens with UV protection. There's also a suction cup model for aircraft with canopies. The cups are strong enough and the visor assemblies light enough that they stay attached to any window through most any maneuver. Size:3.5"x 12".

Clip-on (smoke) ... P/N 13-03263 ... **$134.75**
Suction (smoke)... P/N 13-03261 ... **$119.75**



ROSEN VANS RV 6-7-9 ARC SUNVISOR

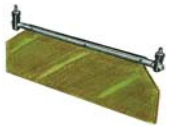
The Van's RV 6-7-9 Sliding Canopy ARC Sunvisor System design provides Van's RV 6-7-9 aircraft owners flexible, multi-axis sun attenuation, glare reduction and pilot comfort during standard cockpit flight operations.

Description	Part No.	Price
Rosen Vans Rv 6-7-9 ARC Sunvisor Assembly	13-16034	**$414.00**
Rosen Vans Rv 6-7-9 ARC Pilot Replacement Lens	13-16035	**$69.75**
Rosen Vans Rv 6-7-9 Co-pilot ARC Replacement Lens	13-16036	**$69.75**



RV-10 SUN VISOR

Blue Sky Sun Visors were specifically designed for the RV-10. The RV-10 visors retain all of the features of those that have been produced for certified aircraft since 2001. The visors provide improved visibility in hazy or cloudy conditions while still being out of the pilot's view when not in use. In addition to retaining the superior functionality, durability, and strength of the original Blue Sky Sun Visor, they provide sun and heat screening, whether coming from the front or side for both pilot and co-pilot. Installation is quick and requires only basic tools and mechanical ability. P/N 13-07444 .....**$198.00**



UNIVERSAL SUNVISOR FOR HOMEBUILT AIRCRAFT

Universal Swivel Mounts - simplify installation into most homebuilt aircraft! Lightweight hardware and optical quality bronze acrylic visor. Designed, and visor tint specified, by eye doctor/pilot Dr. Steven DeGroff, to reduce, high-altitude and ocular media small-particle scatter and enhance vision at dusk, after sunset, when scotopic vision is used. Hundreds of same class visors are field-approved and in use in the Comanche fleet. P/N 13-07443 .....**$285.95**



ROSEN CREW SUNSHADES

CrewShade is easily fixed to the side windows with (2) attached suction cups. Folds and stores in the included 6" diameter carrying pouch when not in use. Shade dimensions: 14 ½" x 17 ½"

P/N 13-06271..... **$18.95**



ROSEN MONORAIL IPAD / IPAD MINI UNIVERSAL MOUNTS

Designed to attach to any Rosen Monorail, the Rosen Universal iPad mount system provides a convenient and adjustable deployment. The large version will accommodate iPads in OtterBox or similar sized cases, while the standard model is delivered with two hook choices to fit all regular-sized cases as well as bare iPads. Note: it will accommodate all of size iPads except the new iPad Pro 12.9. Currently it wont open up far enough for the larger Pros. The Mini and Standard models, however, are no problem. Designed to attach to any Rosen monorail. Convenient and fully adjustable. Quick and easy stowage against the headliner.

Lage Cases ..... P/N 13-20666..... **$207.95**
Standard Cases/Bare ..... P/N 13-20667..... **$210.95**

PS

SUN SHIELDS – CANOPY COVERS

KENNON SUPER SUN SHIELDS



The most durable sun shield on the market has a clear polyester coating to protect the plexiglass windows. Heat can permanently damage the interior and avionics in your aircraft. The secret is a material with two surfaces of aluminum separated by trapped air. This combination reflects 97% of radiant heat, an insulation value of R-9 equivalent to two inches of fiberglass. Kennon Extra Firm shields fit snugly, and maintain their shape for a tight fit. They install in no time, and roll up for storage in compact, water-repellent bags. Weight is 1Lb. Available for most aircraft, specify year, make and model. For custom shields, specify exact size of windshield & windows. Also available for cars. Fabric edging insures snug fit & durability.

General Aviation ..... P/N 7672 ..... **$207.95**
Business Class ..... P/N 13-01071 .... **$248.95**

PIPER SUNVISOR CATCHES





Many Piper aircraft have the same problem. The sun visor catches lose to stability, because the UV effect allows the plastic to become porous. These Piper Sunvisor Catches are made from a blended poly-plastic with a UV additive that will prevent UV corrosion. A set contains two pieces with the required plastic rivets. They are available in white and black (used in Piper PA-38 Tomahawk). The set for the Piper Tomahawk contains two extra rivets.

White..... P/N 13-04187..... **$33.85**
Black..... P/N 13-04188..... **$33.85**

KENNON COWL PLUGS



Kennon cowl plugs are constructed from red Aqualon over 2" thick foam and feature a binding around the outer edge of each plug so there is a tight seal which fits snugly in the cowl. This lip prevents the plugs from slipping inside the opening. A safety strap goes around the prop so if by chance you forget to remove the plugs, the prop will remove them for you. These cowl plugs install easily and comes with their own storage bag. Specify aircraft make, model & year when ordering. Include aircraft registration number to be printed on plugs at no extra charge.

Single engine plugs..... P/N 13-14111.... **$150.00**
Twin engines plugs ..... P/N 13-06212.... **$249.95**

CUSTOM FIT COWL PLUGS



Cowl plugs are tailored to fit popular Cessna single engine aircraft. High visibility yellow closed cell foam will not retain moisture. Printed on one side is "Remove Before Starting Engine", and the other is blank for the N number. They are joined by a nylon strap with a fluorescent orange "Remove Before Flight" flag.

C-150 (2 Hole Only).... P/N 13-02620 ..... **$36.95**
C-172 (1965+) ..... P/N 13-02625 .... **$34.95**
C-182 (1972.5 - 1989) ..... P/N 13-02630 .... **$36.95**

Universal kit w/square inlets (Sqr blocks you cut to fit)
P/N 13-02645 .... **$38.80/pr**

KENNON WIND SPOILERS



Kennon Wind Spoilers are a strip of soft fiber filled tubes that attach to the wing to slow airflow over the top and to prevent lift. An airplane was built to fly, given a strong wind, the plane will fly without you and no tie down will restrain a flying airplane for long. During the stormy winter of 1998, over 200 airplanes were picked up and destroyed by strong winds. Kennon Wind Spoilers could have saved many of these aircraft. The wind spoilers cover the leading edge of the wings but not the tips, and most are about 14.5 ft long (per wing). Specify aircraft make, model, year when ordering. P/N 13-14180..... **$198.75/pr**

KENNON COWL CAP COVERS



This small cover goes over the inlets and back onto the cowl about 12 inches. It closes under the spinner with Velcro. There are bungees with hooks on the two rear corners that keep the cover pulled back in place. The material used is Red Sunbrella: UV resistant, water resistant and yet breathable. This is a great alternative to plugs that often slide out of the opening or do not wedge straight in the opening due to the inside shape. Covers are available with Tail Number identification through a sewn on embroidered patch. Please specify aircraft year, make and model.

Single Engine ..... P/N 13-09884..... **$250.00**
Single Engine with small embroidery ..... P/N 13-11958..... **$250.00**
Single Engine with large embroidery..... P/N 13-11959..... **$250.00**
Twin Engine..... P/N 13-09884-2 ..... **$500.00**

KENNON CABIN COVER - LOW WING



Kennon's Low Wing Cabin Cover covers the top of the cabin, the antennae and the entire window area. Made from Sunbrella which is designed to withstand the sun's ultra violet rays. Sunbrella is the award winning UV resistant outdoor fabric. It is very soft and breathable so it is safe to use as a year round cover on any aircraft. Each cover is custom built for the specific year, make and model of aircraft. You will be asked for aircraft year,make, model, and registration number when ordering this item. There is an additional cost for the microfiber lining, and the cost varies based on aircraft.

P/N 13-04047 ..... **$617.00**

KENNON SUN BLOCKER AIRCRAFT COVERS



Kennon's Canopy Cover is constructed from silver WeatherMax. Provide Kennon with antenna measurements and we will tailor the cover so it fits neatly around antenna, OAT boot and ADF wires at no additional charge. Kennon's deluxe canopy cover is constructed with polyester WeatherMax and lined with anti-grit to prevent sand and dirt from adhering to the fabric and later scratching your windows.

Weathermax is an engineered polymer material uniquely designed specifically for constant outdoor use. It is extremely UV resistant and extremely resistant to fading and color loss. This fabric is breathable, abrasion resistant and eliminates sagging. Static charged acrylic windows attract dust and dust scratches. Kennon's new Anti-Grit lining helps reduce static and further helps prevent scratching.

Choice of Trim Color.

See www.aircraftspruce.com for Kennon Color Chart.

HIGH WING WRAP-AROUND COVER – Cessna120-210, Cessna 337; L-19; PA10, PA22 including Pacer, Tripacer, Cub, Super Cub, Colt, Luscombe, Stinson 108, Aeronca, Citabria, Maule, Rockwell 685/690/980, Aviat, Christian Husky, Lake Renegade

Deluxe ..... P/N 13-04450-D..... **$650.00**

LOW WING WITH 2 SIDE WINDOWS- This is for a 4 seat plane

Deluxe ..... P/N 13-04451-D..... **$650.00**
Deluxe ..... P/N 13-14149-A..... **$425.95**

LOW WING WITH 3 SIDE WINDOWS – Earlier than 1971 Piper Cherokee VI,Piper, PA28 181, 200, 235 incl. Arrow, Archer & Warrior, Dakota, Aerospatiale, Trinidad, Tobbago, Piper Commanche (Some but not all...ASK), Aztec, Apache, Cessna 310 (exception to 2 window rule)

Deluxe ..... P/N 13-14148-D..... **$650.00**

LOW WING WITH 4 SIDE WINDOWS – Piper Cherokee VI, Lance, Saratoga, Malibu, Seneca, Aerostar, Beech Baron 58, Beech 33, 36, Beech King , Air (Cockpit), Lear 2500, 3500 (Cockpit)

Deluxe ..... P/N 13-14149-D..... **$650.00**

LOW WING WITH 4 TO 5 SIDE WINDOWS – Piper Navajo Chiefton, Cheyenne, Cessna 340, 402, 414, 425, 441, Citation, Beech Duke

Deluxe ..... P/N 13-14150-D..... **$800.00**

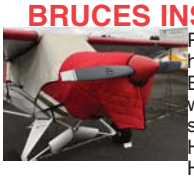
LANCAIR & ZENAIR CANOPY COVERS



These custom designed covers for the Lancair 235/320 & the Zenair Zodiac canopy are made of acrylic Sunbrella fabric and are available in blue, grey, or white. The 100% acrylic fabric wont shrink, fade, or rot. Nylon webbed straps assure secure fit while snap together buckles permit fast adjustment, fastening, and release. Side adjustments provide tight fit. These covers will protect your avionics and interior from sunlight and heat damage. Color: Blue

Lancair Blue Canopy Cover.....P/N 13-14110 ..... **$650.00**
Kennon ZenairBlue Canopy Cover .....P/N 13-14140 ..... **$650.00**

BRUCES INSULATED HANGAR BLANKET



Protect your airplane's engine inside a cold winter hangar with reasonably priced Insulated Hangar Blankets. Excellent protection against the cold when used indoors with an engine warming heat source. Color red.

High Wing, 2 Place P/N 13-21100..... **$245.00**
High Wing, 4 Place P/N 13-21103..... **$290.00**
Low Wing, 2 Place ..... P/N 13-21102..... **$245.00**
Low Wing, 4 Place ..... P/N 13-21104..... **$290.00**

PS

Prices Subject to Change Without Notice

BRUCE'S CUSTOM COVERS

BRUCES CUSTOM CANOPY COVERS



Canopy Covers help reduce damage to your airplane's upholstery and avionics caused by excessive heat, and they can eliminate problems caused by leaking door and window seals. They keep the windshield and window surfaces clean and help prevent vandalism and theft When requested, it is also sometimes possible to design Canopy covers that can attach to the aircraft fuselage using pop-riveted snap-heads at the rear and snap-head screws on the engine cowl. The Canopy Cover is custom sewn and the corners are trimmed to match the colors of the airplane. The airplane's registration number can be imprinted onto both sides of the cover for an additional charge. A duffle bag is included with all Canopy Covers. Made from Silver Acrylic Sunbrella or Silver Solution-Dyed Polyester and is lined 100% with a soft and smooth microfiber. The outer material is medium-weight and treated for water resistance, UV resistance and anti-static buildup. The inner lining is a very soft and smooth microfiber to prevent scratching. Does not contain hydrocarbon compounds that can harm Plexiglas windshields and acrylic finishes. Other colors are available. Please contact us for availability and price. Light weight material available.

Description	Part No.	Price
C350 & C400 Corvalis, Corvalis Tt	13-15233	$555.00
Cessna 150 & 152 Wrap-around Style	13-15126	$385.00
Cessna 170 Wrap-around Style	13-15141	$425.00
Cessna 172 & 175 (t-41, T-41a/c) Wrap-around Style	13-15157	$425.00
Cessna 177 Cardinal Wrap-around Style	13-15172	$425.00
Cessna 180/185 Skywagon Wrap-around Style	13-15185	$425.00
Cessna 182 Skylane Wrap-around Style	13-15210	$435.00
Cessna 206 Stationair Wrap-around Style	13-15217	$435.00
Cessna 210 Centurion Wrap-around Style	13-15226	$435.00
Travel Canopy Cover C350 & C400	13-15234	$347.00
Travel Canopy Cover Cessna 150 & 152 Wrap-around Style	13-15127	$305.00
Travel Canopy Cover Cessna 170 Wrap-around Style	13-15142	$340.00
Travel Canopy Cover Cessna 172 & 175 Wrap-around Style	13-15159	$339.00
Travel Canopy Cover Cessna 177 Cardinal Wrap-around Style	13-15173	$340.00
Travel Canopy Cover Cessna 180/185 Skywagon Wrap-around Style	13-15186	$365.00
Travel Canopy Cover Cessna 182 Skylane Wrap-around Style	13-15211	$345.00
Travel Canopy Cover Cessna 206 Stationair Wrap-around Style	13-15218	$348.00
Travel Canopy Cover Cessna 210 Centurion Wrap-around Style	13-15227	$345.00
Beech Bonanza/Debonair	13-15089	$520.00
Beech Bonanza 36 Models	13-15099	$550.00
Beech Baron 58	13-15111	$682.00
Travel Canopy Cover Beech Bonanza/debonair	13-15090	$415.00
Travel Canopy Cover Beech Bonanza 36 Models	13-15101	$440.00
Travel Canopy Cover Beech Baron 58	13-15112	$347.00
Diamond Da20, Katana, Eclipse	13-15263	$400.00
Diamond Da40	13-15270	$496.00
Travel Canopy Cover Diamond Da20, Katana, Eclipse	13-15264	$347.00
Travel Canopy Cover Diamond Da40	13-15271	$396.00
Grumman Aa1	13-15277	$400.00
Grumman Aa5	13-15286	$496.00
Travel Canopy Cover Grumman Aa1	13-15278	$347.00
Travel Canopy Cover Grumman Aa5	13-15287	$396.00
Lancair Columbia 300,350,400	13-15296	$555.00
Lancair Models 320,360	13-15307	$400.00
Lancair Iv	13-15317	$496.00
Travel Canopy Cover Lancair Columbia 300,350,400	13-15297	$347.00
Travel Canopy Cover Lancair Models 320,360	13-15308	$293.95
Travel Canopy Cover Lancair IV	13-15318	$347.00
Mooney Early M20 Series	13-15327	$520.00
Mooney 201,205,231,252 & Mse	13-15337	$520.00
Mooney Ovation	13-15347	$555.00
Mooney Tls, Bravo, Acclaim Tn, Type S, & Porsche Powered Models	13-15367	$555.00
Travel Canopy Cover Mooney Early M20 Series	13-15328	$415.00
Travel Canopy Cover Mooney 201,205,231,252 & Mse	13-15338	$415.00
Travel Canopy Cover Mooney Ovation	13-15357	$347.00
Travel Canopy Cover Mooney Tls, Bravo, Acclaim Tn, Type S, & Porsche Powered Models	13-15368	$415.00
Piper Pa-24 Comanche	13-15377	$465.00
Piper Pa-28	13-15388	$465.00
Piper Pa32	13-15399	$587.00
Travel Canopy Cover Piper Pa-24 Comanche	13-15378	$365.00
Travel Canopy Cover Pa-28	13-15389	$370.00
Travel Canopy Cover Piper Pa32	13-15401	$471.00
Vans Aircraft Rv-10	13-15409	$465.00
Vans Aircraft Rv-12	13-15420	$375.00
Vans Aircraft Rv-6/6a	13-15429	$375.00
Vans Aircraft Rv-7/7a	13-15436	$375.00
Vans Aircraft Rv-8/8a	13-15443	$375.00
Vans Aircraft Rv-9/9a	13-15451	$375.00
Travel Canopy Cover Vans Aircraft Rv-10	13-15410	$370.00
Travel Canopy Cover Vans Aircraft Rv-12	13-15421	$300.95
Travel Canopy Cover Vans Aircraft Rv-6/6a	13-15430	$325.00
Travel Canopy Cover Vans Aircraft Rv-7/7a	13-15437	$300.95
Travel Canopy Cover Vans Aircraft Rv-7/7a	13-15444	$300.95
Travel Canopy Cover Vans Aircraft Rv-9/9a	13-15452	$315.00

BRUCES CUSTOM WING COVERS



The Wing Covers are a perfect solution to protect your paint from sun damage and prevent winter frost, snow, ice buildup, and corrosion. They are made from Solution-Dyed Polyester or Acrylic Sunbrella and form-fit to slip around each wing tip, cover the entire upper surface of the wing and wrap around the leading and trailing edges. The covers secure under the wing with adjustable straps from the trailing edge to the leading edge. The wing covers can also attach to each other with adjustable straps at the leading and trailing edges of the wing under the belly of the plane. We have the ability to also accommodate wing tip modifications, such as STOL kits, droop tips, and vortex generators. Labeled LEFT and RIGHT for your convenience. Hail Protection version can be made. Set of 2.

Description	Part No.	Price
Cessna 150 & 152	13-15134	$422.00
Cessna 170	13-15147	$454.00
Cessna 172 & 175	13-15164	$454.00
Cessna 177 Cardinal	13-15178	$454.00
Cessna 180/185 Skywagon	13-15192	$454.00
Cessna 182 Skyland	13-15193	$454.00
Cessna 206 Stationair	13-15194	$454.00
Cessna 210 Centurion	13-15196	$454.00
C350 & 400 Corvalis, Corv Tt	13-15198	$454.00
Beech Bonanza/Debonair	13-15094	$454.00
Beech Bonanza 36 Models	13-15105	$454.00
Beech Baron 58	13-15117	$1,195.00
Cirrus SR20	13-15199	$454.00
Cirrus SR22	13-15201	$454.00
Diamond DA-20, Katana, Eclipse	13-15202	$422.00
Diamond DA-40	13-15203	$454.00
Grumman AA5:tiger,cheetah,traveler	13-15291	$454.00
Horizontal Stabilizer Covers Grumman AA	13-15292	$256.95
Grumman AA1	13-15205	$422.00
Lancair Columbia 300,350,400	13-15302	$454.00
Lancair Models 320,360	13-15312	$422.00
Lancair Iv	13-15322	$454.00
Mooney Early M20 Series	13-15332	$454.00
Mooney 201,205,231,252 & Mse	13-15342	$454.00
Mooney Ovation	13-15362	$454.00
Mooney Tls, Bravo, Acclaim Tn, Type S, & Porsche Powered Models	13-15372	$454.00
Piper PA-24 Comanche	13-15383	$454.00
Piper PA-28	13-15393	$454.00
Piper PA	13-15405	$454.00
Vans Aircraft RV-4-WCW	13-16013	$325.00
Vans Aircraft RV-10	13-15414	$454.00
Vans Aircraft RV-12	13-15425	$422.00
Vans Aircraft RV-6/6a	13-15434	$422.00
Vans Aircraft RV-7/7a	13-15441	$395.00
Vans Aircraft RV-8/8a	13-15448	$422.00
Vans Aircraft RV-9/9a	13-15456	$551.00

BRUCES CUSTOM HORIZONTAL STABILIZER COVERS



Horizontal Stabilizer Covers are a perfect solution to protect your paint from sun damage and prevent frost, snow, ice buildup, and corrosion. They are made from Solution-Dyed Polyester or Acrylic Sunbrella. They cover the entire upper surface of the stabilizers and overlap around the leading and trailing edges as well as the wing tip. The covers secure under each stabilizer with adjustable straps. In some instances, cut-outs are made in the trailing edge of the wing covers to accommodate for static wicks. Horizontal Stabilizer Covers for winter use or long-term all year use are usually available, and are normally made from Solution-Dyed Polyester or Acrylic Sunbrella. A Hail Protection version can be made. Although these covers are bulky, they do help protect your wing and control surfaces against small to medium-size hail. **Set of 2 - Winter Use**

Description	Part No.	Price
C150 & 152	13-15136	$133.75
C170	13-15148	$240.95
C172 & 175	13-15166	$256.95
C177 Cardinal	13-15179	$256.95
Cessna 180/185 Skywagon	13-15206	$256.95
Cessna 182 Skylane	13-15214	$256.95
C206 Stationair	13-15222	$256.95
C210 Centurion	13-15230	$240.95
C350 & C400	13-15238	$256.95
Beech Bon/deb	13-15095	$256.95
Beech Bon 36	13-15106	$256.95
Beech Baron 58	13-15118	$342.00
Cirrus SR20	13-15247	$256.95
Cirrus SR22	13-15256	$256.95
DA20,Katana,Eclipse	13-15268	$133.75
Diamond DA40	13-15275	$256.95
Grumman AA1	13-15282	$133.75
Grumman AA5	13-15292	$256.95
Lan C300,350,400	13-15303	$256.95
Lancair Models 320,360	13-15313	$133.75
Lancair IV	13-15323	$256.95
Mooney Early M20 Series	13-15333	$256.95
M201,205,231,252 & Mse	13-15343	$256.95
Mooney Ovation	13-15363	$256.95
Mooney TLS, Bravo, Acclaim TN, Type S, & Porsche Powered Models	13-15373	$256.95
Piper PA-24 Comanche	13-15384	$256.95
Piper PA-28	13-15394	$348.00
Vans Aircraft RV-10	13-15415	$256.95
Vans Aircraft RV-12	13-15426	$133.75
Vans Aircraft RV-6/6a	13-15435	$133.75
Vans Aircraft RV-7/7a	13-15442	$214.95
Vans Aircraft RV-8/8a	13-15449	$133.75
Vans Aircraft RV-9/9a	13-15457	$133.75

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BRUCE'S CUSTOM COVERS



BRUCES CUSTOM ENGINE COVERS

Once the material for each order is cut into its appropriate parts, highly trained sewing machine operators meticulously assemble the products with durable thread, rivets, and canvas trim.

Description	Part No.	Price
Cessna 150 & 152	13-15132	$315.00
Cessna 170	13-15144	$293.95
Cessna 172 & 175	13-15162	$399.95
Cessna 177 Cardinal	13-15176	$347.00
Cessna 180/185 Sky Wagon	13-15189	$370.00
Cessna 182 Skylane	13-15212	$400.00
Cessna 206 Stationair	13-15220	$347.00
Cessna 210 Centurion	13-15228	$347.00
C350 & C400 Corvalis, Corvalis Tt	13-15236	$293.95
Beech Bonanza/debonair	13-15092	$293.95
Beech Bonanza 36 Models	13-15103	$347.00
Beech Baron 58	13-15114	$816.00
Cirrus SR20	13-15245	$347.00
Cirrus SR22	13-15254	$347.00
Diamond DA20, Katana, Eclipse	13-15266	$293.95
Diamond DA40	13-15273	$347.00
Grumman AA1	13-15280	$293.95
Grumman AA5	13-15289	$347.00
Lancair Columbia 300,350,400	13-15299	$293.95
Lancair Models 320,360	13-15310	$293.95
Lancair IV	13-15320	$347.00
Mooney Early M20 Series	13-15330	$293.95
Mooney 201,205,231,252 & MSE	13-15340	$293.95
Mooney Ovation	13-15360	$293.95
Mooney TLS, Bravo, Acclaim TN, Type S, & Porsche Powered Models	13-15370	$293.95
Piper PA-24 Comanche	13-15381	$347.00
Piper PA-28	13-15391	$347.00
Piper PA-32	13-15403	$347.00
Vans Aircraft RV-10	13-15412	$347.00
Vans Aircraft RV-12	13-15423	$293.95
Vans Aircraft RV-6/6a	13-15432	$293.95
Vans Aircraft RV-7/7a	13-15439	$349.00
Vans Aircraft RV-8/8a	13-15446	$293.95
Vans Aircraft RV-9/9a	13-15454	$293.95

Description	Part No.	Price
Insulated/cold Weather Engine Cover Beech Bon/deb	13-15093	$481.00
Insulated/cold Weather Engine Cover Beech Bonanza 36	13-15104	$454.00
Insulated/cold Weather Engine Cover Beech Baron 58	13-15116	$1,110.00
Insulated/cold Weather Engine Cover Cessna 150 & 152	13-15133	$422.00
Insulated/cold Weather Engine Cover Cessna 170	13-15146	$454.00
Insulated/cold Weather Engine Cover Cessna 172 & 175	13-15163	$486.00
Insulated/cold Weather Engine Cover 177 Card	13-15177	$486.00
Insulated/cold Weather Engine Cover Cessna 180/185	13-15190	$349.00
Insulated Cold Weather Engine Cover C182 Skylane	13-15213	$486.00
Insulated Cold Weather Engine Cover C206 Stationair	13-15221	$486.00
Insulated Cold Weather Engine Cover C210 Centurion	13-15229	$486.00
Insulated Cold Weather Engine Cover C350 & C400	13-15237	$454.00
Insulated Cold Weather Engine Cover Cirrus SR20	13-15246	$486.00
Insulated Cold Weather Engine Cover Cirrus SR22	13-15255	$486.00
Insulated Cold Weather Engine Cover DA20	13-15267	$400.00
Insulated Cold Weather Engine Cover DA40	13-15274	$454.00
Insulated Cold Weather Engine Cover Grumman AA1	13-15281	$400.00
Insulated Cold Weather Engine Cover Grumman AA5	13-15290	$454.00
Insulated Cold Weather Engine Cover Lan C300,350,400	13-15301	$454.00
Insulated Cold Weather Engine Cover L320 & L360	13-15311	$401.00
Insulated Cold Weather Engine Cover Lancair IV	13-15321	$454.00
Insulated Cold Weather Engine Cover M20	13-15331	$454.00
Insulated Cold Weather Engine Cover M201,205,231,252	13-15341	$454.00
Insulated Cold Weather Engine Cover Mooney Ovation	13-15361	$454.00
Insulated Cold Weather Engine Cover Mooney Tls, Bravo, Acclaim, Tn, Type S & Porche Powered Models	13-15371	$454.00
Insulated Cold Weather Engine Cover Piper PA-24 Comanche	13-15382	$454.00
Insulated Cold Weather Engine Cover Piper PA-28	13-15392	$486.00
Insulated Cold Weather Engine Cover Piper PA-32	13-15404	$486.00
Insulated Cold Weather Engine Cover Vans A/C Rv-10	13-15413	$454.00
Insulated Cold Weather Engine Cover Vans A/C Rv-12	13-15424	$400.00
Insulated Cold Weather Engine Cover Vans RV-6	13-15433	$400.00
Insulated Cold Weather Engine Cover Vans A/C RV-7	13-15440	$400.00
Insulated Cold Weather Engine Cover Vans A/C RV-8	13-15447	$400.00
Insulated Cold Weather Engine Cover Vans A/C RV-9	13-15455	$400.00



BRUCES CUSTOM HEATSHIELDS

Heatshield Interior Reflectors are made of a special laminate of metallized polyester film and closed cell foam. Less than 1/8" thick, the Reflector can roll up and store in a sleeve, yet is stiff enough when flat to stand up against the windshield using the sun visors and window framing only. On some designs no Velcro or suction cups are necessary. Heatshields are an excellent short-term remedy for cockpit overheating, but use the Canopy Cover for more effective and practical long term protection. Heatshields should not be used on polarized windows.

Description	Part No.	Price
Heatshield Set Cessna 150 & 152	13-15138	$240.95
Heatshield Set Cessna 170	13-15151	$215.95
Heatshield Set Cessna 172 & 175	13-15168	$230.95
Heatshield Set Cessna 177 Cardinal	13-15182	$235.95
Heatshield Set Cessna 180/185 Skywagon	13-15208	$235.95
Heatshield Set Cessna 182 Skylane	13-15216	$235.95
Heatshield Set Cessna 206 Stationair	13-15224	$235.95
Heatshield Set Cessna 210 Centurion	13-15232	$235.95
Heatshield Set C350 & C400 Corvalis, Corvalis TT	13-15240	$250.95
Windshield Heatshield Cessna 150 & 152	13-15137	$90.00
Windshield Heatshield Cessna 170	13-15149	$90.00
Windshield Heatshield Cessna 172 & 175	13-15167	$90.00
Windshield Heatshield Cessna 177 Cardinal	13-15181	$90.00
Windshield Heatshield Cessna 180/185 Skywagon	13-15207	$90.00
Windshield Heatshield Cessna 182 Skylane	13-15215	$90.00
Windshield Heatshield Cessna 206 Stationair	13-15223	$90.00
Windshield Heatshield Cessna 210 Centurion	13-15231	$90.00
Windshield Heatshield C300 & C450	13-15239	$96.00
Heatshield Set Beech Bonanza/Debonair	13-15097	$235.95
Heatshield Set Beech Bonanza 36 Models	13-15108	$235.95
Heatshield Set Beech Baron 58	13-15122	$250.95
Windshield Heatshield Beech Bonanza/debonair	13-15096	$90.00
Windshield Heatshield Beech Bonanza 36 Models	13-15107	$90.00
Windshield Heatshield Beech Baron 58	13-15119	$96.00
Heatshield Set Cirrus SR20	13-15249	$235.95
Heatshield Set Cirrus SR22	13-15258	$235.95
Windshield Heatshield Cirrus SR20	13-15248	$90.00
Windshield Heatshield Cirrus SR22	13-15257	$90.00

Description	Part No.	Price
Heatshield Set Grumman AA1	13-15284	$224.95
Heatshield Set Grumman AA: tiger,cheetah,traveler	13-15294	$240.95
Windshield Heatshield Grumman AA1	13-15283	$96.00
Windshield Heatshield Grumman AA5	13-15293	$96.00
Heatshield Set Lancair Columbia 300,350,400	13-15305	$240.95
Heatshield Set Lancair IV	13-15325	$240.95
Windshield Heatshield Lancair Columbia 300,350,400	13-15304	$96.00
Windshield Heatshield Lancair Models 320,360	13-15314	$117.75
Windshield Heatshield Lancair IV	13-15324	$96.00
Heatshield Set Mooney Early M20 Series	13-15335	$235.95
Heatshield Set Mooney 201,205,231,252 & MSE	13-15345	$235.95
Heatshield Set Mooney Ovation	13-15365	$250.95
Heatshield Mooney TLS, Bravo, Acclaim TN, Type S, & Porsche Powered Models	13-15375	$250.95
Windshield Heatshield Mooney Early M20 Series	13-15334	$90.00
Windshield Heatshield Mooney 201,205,231,252 & MSE	13-15344	$90.00
Windshiled Heatshield Mooney Ovation	13-15364	$96.00
Windshield Heatshield Mooney TLS, Bravo, Acclaim TN, Type S, & Porsche Powered Models	13-15374	$96.00
Heatshield Set Piper PA-24 Comanche	13-15386	$225.95
Heatshield Set Piper PA-28	13-15397	$225.95
Heatshield Set Piper PA-32	13-15407	$250.95
Windshield Heatshield Piper PA-24 Comanche	13-15385	$90.00
Windshield Heatshield Piper PA-28	13-15395	$90.00
Windshield Heatshield Piper PA-32	13-15406	$96.00
Heatshield Set Vans Aircraft RV-10	13-15418	$225.95
Windshield Heatshield Vans Aircraft RV-10	13-15416	$90.00



BRUCES CUSTOM ENGINE INLET PLUGS

Engine Inlet Plugs are custom fit for your intakes, made with heavy-duty vinyl material, and stuffed with a single block of sculpted urethane foam. Each plug has a zipper that allows the foam to be removed and dried if necessary. Engine plugs have warning flags that are visible from the cockpit or 'remove before flight' streamers sewn onto the face of the plugs.

Description	Part No.	Price
Cessna 150 & 152	13-15131	$122.75
Cessna 170	13-15143	$138.75
Cessna 172 & 175	13-15161	$128.00
Cessna 177 Cardinal	13-15174	$128.00
Cessna 180/185 Skywagon	13-15187	$128.00
Bruces Engine Inlet Plug Cessna 182 Skylane	13-15070	$135.00
Bruces Engine Inlet Plug Cessna 206 Stationair	13-15072	$130.00
C350 & C400 Corvalis, Corvalis Tt	13-15235	$128.00
Beech Bonanza/debonair	13-15091	$138.75
Beech Bonanza 36 Models	13-15102	$144.00
Beech Baron 58	13-15113	$235.95
Cirrus Sr20	13-15244	$128.00
Cirrus Sr22	13-15253	$128.00
Diamond Da20, Katana, Eclipse	13-15265	$122.75
Diamond Da40	13-15272	$138.75
Grumman Aa1	13-15279	$128.00
Grumman Aa5	13-15288	$138.75

Description	Part No.	Price
Lancair Columbia 300,350,400	13-15298	$128.00
Lancair Models 320,360	13-15309	$122.75
Lancair Iv	13-15319	$128.00
Mooney Early M20 Series	13-15329	$128.00
Mooney 201,205,231,252 & Mse	13-15339	$128.00
Mooney Ovation	13-15359	$138.75
Mooney Tls, Bravo, Acclaim Tn, Type S, & Porsche Powered Models	13-15369	$144.00
Piper Pa-24 Comanche	13-15379	$138.75
Pa-28	13-15390	$128.00
Piper Pa32	13-15402	$128.00
Vans Aircraft Rv-10	13-15411	$133.75
Vans Aircraft Rv-12	13-15422	$133.75
Vans Aircraft Rv-6/6a	13-15431	$128.00
Vans Aircraft Rv-7/7a	13-15438	$133.75
Vans Aircraft Rv-8/8a	13-15445	$128.00
Vans Aircraft Rv-9/9a	13-15453	$133.75

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Prices Subject to Change Without Notice

FUEL MATS – FUEL INDICATORS

POLYURETHANE WING FUEL MAT



This polyurethane wing fuel mat can be easily cleaned with soap and water. Avoid spraying product with silicone or wd-40 type products because this material will cause dust and dirt to attach to pad possibly scratching wing surface. Color fading will not affect the integrity of the polyurethane material. Color options available at point of purchase. Dimensions: 18" x 24" x 0.30 Length and width dimensions are subject to +/- 1/8 toleranceService range: -20F - 200F. Fuel port: 5" diameter. Durable impact absorbing polyurethane. Non-Marking and Non-Abrasive, UV stable. Exposure to direct sunlight will cause color fading. Fuel Resistant and chemical resistant with the exception of MEK.

Blue ..... P/N 01-01284 ..... **$66.75**
Orange..... P/N 01-01285 ..... **$66.75**
Black..... P/N 01-01286 ..... **$66.75**
Red..... P/N 01-01287 ..... **$65.95**

FUEL STIKS



Extremely light, high impact plastic tubing with aluminum rings resist damage. Available "Aircraft Specific Scales" Can be downloaded and printed from the website. Can easily be calibrated to any tank using the "Universal" scale. A worksheet, written instructions and even an instructional video are available at the website. We will generate an "Aircraft Specific Scale" from your calibration It's shipping tube doubles as a "Vented Storage Tube". This allows any remaining fuel to evaporate between uses, provides a protection for the life of the unit and reduces manufacturing waste. It's design gives consistent readings even when the fuel in the tank is sloshing around. It's upper and lower rings aide in handling. Large Easy-to-Read numbers observed outside the tank. Quantities given in both Gallons and Pounds! Color coded sections represent approx. 1/3 cruise consumption. It's not limited to your aircraft. Works in tractors, small motors, etc. Will not fall into fuel tank on most aircraft. 100% Made in the USA

Description	Usable Fuel Tank Size	Part No.	Price
Cessna 150-152	12.5 Gal.	05-12341	$29.50
Cessna 172-A	18.5 Gal.	05-12343	$29.50
Cessna 172	19 Gal.	05-12344	$29.50
Cessna 172	21.5 Gal.	05-12345	$29.50
Cessna 172 N-Q (Long Range)	25 Gal.	05-12346	$29.50
Cessna 172 R-S	26.5 Gal.	05-12348	$29.50
Cessna 177	25 Gal.	05-13076	$29.50
Cessna 177 Cardinal A-B (Including RG	30.5 Gal.	05-12350	$26.95
Cessna 182 A-D	27.5 Gal.	05-12351	$29.50
Cessna 182 P	30 Gal	05-13078	$29.50
Cessna 182 Q	37 Gal.	05-12352	$29.50
Cessna 210 G-N (Including Turbo)	44.5 Gal.	05-12353	$26.95
Cessna 182 T	43.5 Gal.	05-12355	$29.50
Grumman-American General AA (AG)-5A-5B	26.3 Gal.	05-12356	$29.50
Piper PA 12	19 Gal.	05-13081	$29.50
Piper PA 22 160	18 Gal.	05-13082	$29.50
Piper PA 28 151-181	24 Gal.	05-12357	$29.50
Piper PA 28 150-180	24 Gal.	05-12358	$29.50
Piper PA 28 200-235B	24 Gal.	05-12359	$29.50
Piper 34 200 Seneca II	61.5 Gal.	05-13083	$29.50
RV RV6A	19 Gal.	05-12360	$26.95
RV RV7	20 Gal.	05-13084	$29.50
RV RV8	21 Gal.	05-13085	$29.50
RV RV10	31 Gal.	05-13086	$29.50
Master (10.75") Includes: Ship/Storage Tube, Use and Calibration Instructions, Universal Scale Installed in Float Tube	10.75"	05-12361	$29.50
Master (10.75") Includes: Ship/Storage Tube, Use Instructions, Aircraft Specific Scale, Installed in Float Tube.	10.75"	05-12362	$26.95

CESSNA HIGH-WING FUEL VENT SCREEN



Fuel flow to your aircraft's engine can be compromised by insects or debris entering fuel tank vents. This remove-before-flight Fuel Vent Screen prevents contaminants from obstructing or contaminating the fuel system. The attached foot-long, florescent, and weather-resistant reflective streamer stands out equally well in daylight or darkness under all weather conditions, so it won't be forgotten during your pre-flight. Fits Cessna piston engine aircraft. Inside diameter of PVC sleeve is 0.365"

3/8 Inch..... P/N 13-10437 ..... **$16.75**
1/2 Inch..... P/N 13-12390 ..... **$13.70**

FUELING / ENGINE ACCESS WING MATS





Please specify color when ordering: Red, Light Blue, Royal Blue, Black, Green, Yellow and Safety Orange. Features: • Protective and durable impact absorbing Urethane-polymer • UV · Fuel · Chemical resistant • Non-marking · Non-abrasive • Exceeds FAA and military standards • -20º F to 200º F service integrity • Standard 5-inch diameter service port • Special design and private labeling available • Approved by all major oil companies, airlines, military and fuel service operations • 3 year warranty

Part No.	Color	Size	Price
13-11206	Red	18" x 24"	$99.90
13-11207	Royal Blue		$99.90
13-11208	Orange		$99.90
13-11209	Yellow		$99.90
13-11210	Black		$99.90
13-11211	Green		$99.90
13-11212	Red	18" x 36"	$134.75
13-11213	Royal Blue		$134.75
13-11214	Orange		$134.75
13-11215	Yellow		$134.75
13-11216	Black		$134.75
13-11217	Green		$134.75

WING MAT



This navy blue carpet can be placed on the wing prior to boarding which will protect both the wing and the aircraft interior. This mat rolls up easily for storage in the aircraft and an attached elastic band keeps it rolled up. The rubber backing is perfect for use on low wing aircraft. Two sizes available.

Small Wing 10.5" x 36" ..... P/N 13-07195 ..... **$19.70**
Large Wing 21" x 48"..... P/N 13-07196 ..... **$48.65**

DIRECT FUEL LEVEL INDICATORS



These Direct Fuel Level Indicators are quality made of acrylic PVC tube with an aluminum scale. They are available calibrated to individual tanks or uncalibrated for custom calibration to home built tanks. These Indicators allow an accurate check of on board fuel level indicators and eliminate the guess work.

Description	Part No.	Price
Fuel Level Indicator C-150/C-152 +	12-21200	$16.95
Fuel Level Indicator C-150 LONG 19	12-21205	$17.95
Fuel Level Indicator C-170 / C-172	12-21210	$16.95
Fuel Level Indicator C-172 34G	12-21215	$17.95
Fuel Level Indicator C-182 42G	12-21230	$16.95
Fuel Level Indicator C-210 45G	12-21240	$16.95
Fuel Level Indicator PA-24 30G	12-21245	$18.50
Fuel Level Indicator 7KCAB	12-21250	$18.50
Fuel Level Indicator PA-28	12-21255	$16.95
Home Built Universal Fuel Level Indicator CK Rod	12-21260	$18.50

FUEL HAWK FUEL GAUGES



The Fuelhawk is just 11" long, clear lightweight and unbreakable. It's easy to use and gives an instant readout in gallons usable. No more guessing. These handy devices offer the answers to these very important questions: 1.How many gallons of usable fuel are remaining in the tank? 2.How much fuel can be added without going over gross weight? 3. Are the aircraft fuel gauges working & accurate?

Part No.	Application	Price
13-00443	Cessna 152 (standard 12 gal. tanks)	$12.95
13-00442	Cessna 172 (standard 19 gal. tanks)	$12.95
13-01468	New Cessna 172 Skyhawk (26.5 gal.)	$12.95
13-01469	New Cessna 182 Skylane (43.5 gal.)	$12.95
13-00441	Cessna 182LR (42 gal. Long range tanks)	$12.95
13-00439	Universal for any aircraft, w/graph & calibration chart	$12.95
13-00949	Universal XL Fuel Gauge (16" long)	$17.95
13-11189	Universal Gauge 26"	$19.95

THE ORIGINAL FUEL STOP



The Fuel Stop is a simple tool that snaps onto a standard straw fuel gauge and prevents the gauge from ever slipping into the tank. Works with FuelHawk, or any other 1/2" diameter fuel gauge tube. . It also becomes extremely handy when it's necessary to set the gauge on the wing, as it will stay put and not roll off to disappear into the grass or onto the pavement. Shaped like a set of red pilot wings which makes finding the gauge a snap. P/N 13-17631 ..... **$7.95**



GOCHECK PREFLIGHT 6 IN 1 MULTI-TOOL

Fuel Tester with Strainer, Stall Horn Tester, Dipstick Wiper, Red/White Flashlight, Phillips/flathead Screwdriver, and Checklist Reminder Card.

P/N 05-15254 ..... **$71.75**

PS

COWL PLUGS - AIRCRAFT COVERS



COWL PLUGS

Cowl Plugs with attached "remove before flight" streamer for general aviation aircraft. Prevents bird and foreign objects from entering through the cowl. Comes complete with a linking lanyard and remove before flight streamer. Heavy duty cross linked construction and durable nylon hand sewn stitching complete the set. Please specify aircraft make, model, & serial number when ordering. Plugs are furnished with free embroidery and pitot tube cover.....

Single engine .....P/N 13-01742 .....**$75.95**
Twin engine .....P/N 13-01743 .....**$148.95**

PROPELLER SLINGS EXHAUST COVERS



Propeller Slings & Exhaust Covers keep your propeller secure and in place, eliminating any bearing damage caused by a free-spinning propeller with no lubrication. The integral exhaust covers protect the costly turbine wheel from debris & birds. Simple, quick one man operation. Please specify aircraft make, model, serial no. when ordering. P/N 13-01744 ..... **$106.90**

INLET PLUGS



These protect your engine form foreign object damage, blowing dust and sand, birds and debris. Complete with remove before flight flag and easy pull handle for insertion and removal. Please specify aircraft make, model, & serial no. when ordering. P/N 13-01745..... **$92.95/eng**

JET ENGINE COVERS



Made of extremely durable, water-proof and fire resistant Herculite, our covers are guaranteed for 10 yrs. Each set is hand crafted and sewn to order. Complete with storage bag and remove before flight flags. Please specify aircraft make, model, & serial no. when ordering.

P/N 05-04077 .....**CALL FOR QUOTE**

FOAM JET ENGINE COVERS



Custom fit for the intake and exhaust openings, made with heavy-duty vinyl material, and stuffed with a single block of sculpted urethane foam. Engine plugs have the "Remove Before Flight" streamers attached to the face of the plugs.

BeechJet .....P/N 13-18445 .....**$584.00**
Phenom 300.....P/N 13-18443 .....**$584.00**

ENGINE INTAKE COVER



Protect your engine from natural hazards which could cause serious in-flight problems. This economical design fits practically every single or twin, even homebuilts. The lightweight, fire-retardant mesh fabric will not blister or melt. After simple one-time installation of mounting hardware, cover snaps into place and secured with Velcro. Folds for easy storage. Complete with mounting hardware & "Remove Before Starting Engine" streamers. Also available: Bib that allows you to cover additional intakes.

Engine Intake Cover ..... P/N 7148.....**$64.85**

KUVR**IT WHEEL COVERS



A vinyl-coated polyester that is fade resistant and California State Fire Marshall approved (#F-2310). The weave breathes and yet provides 85% shade factor from the suns damaging ultra violet rays. It is easy to care for. Simply machine wash and just hang it to dry. The KUVR*IT II Wheel Cover is easy to use. Simply place the cover over your tires and adjust the strap to the desired tightness and lock into place. There are 2 sizes for your convenience:

Small fits tire size: 5.00 – 5/15 x 00-6.....P/N 13-03158 .....**$39.85**
Medium fits tire size: 6.00 - 6/7.00-6.....P/N 13-03159 .....**$43.50**

REDWING TRAILING EDGE PROTECTIVE FOAM



RedWing helps prevent aircraft damage and head injuries. Just slide the foam onto the trailling edges of ailerons, elevators, rudders or flaps to protect these surfaces while tied down or in the hangar.. RedWing is also ideal for proecting landing gear doors, aviionics antennas, and winglets. The bright red color reminds the pilot to remove RedWing before flight, and RedWing is reuseable and unaffected by UV, water, or oils. Furnished in 3ft. sections which can by easily cut to smaller sections. P/N 13-02566.....**$25.90**

WICKSHIELD



Warning type cover for aircraft, wire/rod & "whisker" type, Static Wicks. These are very simple to use, economical, and conveniently packaged in 8 packs. They offer practical protection for the wicks, charter/corporate passengers, crew, and maintenance staff! They have been well received by corporate fleets. Features: One size fits all static wicks. Lightweight- will not stress static wicks - will not scratch airplane finish. Quick "Attach - Release" Clasp - will not stick to wicks - will not freeze in place. P/N 13-11708 .....**$34.50**

STEARMAN COCKPIT DUST AND RAIN COVER



One of the problems with traveling in your Stearman is the lack of space to haul necessities. This Cockpit Cover weighs about 1 pound in it's storage bag, which is the size of a quart carton.

The cover is made from back-packing tent material which is rain proof and light weight. Installs with two Velcro straps and four elastic cords using plastic fasteners. There is no metal to scratch your finish. Available in Federal Yellow. .....P/N 13-11616 .....**$219.95**

KOGER SUNSHADES



The Koger Sunshade was developed to provide protection from the sun while flying an airplane that has a large bubble plastic canopy like the RV-6, RV-7, RV-8, RV-9 and many other types of aircraft.

Key Benefits:
- Retractable to front or rear.
- Lightweight (9oz. for side by side RV models)
- Install in 1/2 to 1-1/2 hours depending on the model.
- Makes instruments more visible, and the cockpit more comfortable.

Fits	Description	Part No.	Price
RV-8	Special 15" W x 46" L	13-05657	**$249.95**
RV-6, 6A, 7, 7A, 9, 9A	Standard RV TIP-UP 30" W x 25" L	13-05658	**$183.75**
RV-6, 6A, 7, 7A, 9, 9A	Standard RV Slider30" W x 25" L	13-05659	**$183.75**
RV-6, 7, 9	Super RV Slider -34" W x 35" L	13-09609	**$229.00**
RV-6, RV-6A, RV-7, RV-7A, RV-9, RV-9A, RV-14, Lancair 320, 360, Pulsar - Plusar III, Sonex, Swift	Designed for the RV-14. 35"Wx 25"L	13-20710	**$195.00**
Arion Aircraft – Lighting, Breezer, Cirrus, Classic Sport - S-18 & S-18T, Europa Evektor – Eurostar, Glasair- 320 and 360 Lancair – Legacy, Mustang II Sequoia Falco - F9L, Skylark Sting Sport, Texan, Zenith - Zodiac	Large Universal for larger clear bubble canopies with no center structural members 34" W x 35" L	13-05660	**$229.00**
Air Tourer AESL T-6, Alisport LLC Sailplane, American Champ 8GGGBC, Apis INC Sailplane, Citabria, Cozy III & IV, Dynamic WTP, Evektor Sportstar, Fasanation D4, Glasair, Nuventure Questair, Rans Coyote II, Rans S-7S & S-6, T-18, Team Rocket F-1, Vans RV 4	Custom made to order shades	13-05661	**$257.95**

TRISOFT WINGTIP BUMPER



Trisoft Bumpers provide protection for the trailing edge of the wing, delta fins and ventral fins. Each Trisoft Bumper is made of chemical resistant EVA foam and provides ultimate aircraft protection. The Trisoft Bumpers also work great as wing edge indentifiers. This helps protect your employees while they are working or walking under the wing.

P/N 13-08263.....**$29.50**

TRISOFT WINGTIP/PROP TIP COVERS



* Avoid Accidents * Protect Employees and Aircraft * Reduce Insurance Claims * Remain In Compliance Trisoft Aircraft Covers * Can Be Used As a Safety and Warning Device on Prop Tips. Trisoft is a simple foam triangular cover that slips onto the corners of the prop tips, gear doors, wing flaps (in the lowered position), wing tips, and dorsal antennas. Trisoft can be used on personal aircraft, corporate aircraft, commercial aircraft, military aircraft and helicopters. P/N 13-06003.....**$17.95**

PS

Prices Subject to Change Without Notice

PLANE SIGHTS REMOVE BEFORE FLIGHT

PLANE SIGHTS PITOT TUBE COVERS

Extremely obvious, very durable, and weather resistant pitot tube covers for every aircraft.



ANGLED PITOT TUBE COVER - Aircraft Type: Piston Powered Plane This durable, weather-resistant orange and yellow reflective cover fits virtually any size pitot tube. It stands out in daylight or darkness under all weather conditions, so it can't be missed. Large sewn-on Velcro tabs keep it securely in place under all conditions. Weight: 0.14 kg If length of the tube exceeds 6.75" and the diameter exceeds 7/8", then the Universal Pitot tube cover would be a better choice. As seen on the 2009 AOPA 'Let's Go Flying' Cirrus SR22 P/N 13-05611 .....**$16.95**



UNIVERSAL PITOT TUBE COVER - Aircraft Type: Piston Powered Plane. This durable, weather-resistant orange and yellow reflective cover fits virtually any size pitot tube. It stands out in daylight or darkness under all weather conditions, so it can't be missed. Universal covers fit any length of tube from the smallest home built ¼" tubes up to 7/8" jet probes. The versatile hook/loop Velcro strap with sewn-in rubberized trim allows the cover to be quickly and securely fastened to the pitot tube. Weight: 0.00 kg The inside diameter of the cover is 7/8". Works with a variety of aircraft including: Cessna, Beechcraft, Cirrus, Diamond, Grumman or Mooney aircraft, as well as most Pipers and many light sport aircraft.

P/N 13-05610.....**$16.95**



BLADE PITOT COVER - Aircraft Type: Piston Powered Plane Forgetting to remove a faded, dull and worn-out pitot tube cover can jeopardize the safety of you and your passengers. And when cold weather prevents you from installing your pinch-and-insert style blade pitot cover, ice and snow can contaminate your pitot system. Some blade pitot covers also cause damage to paint when the sleve is being forced on and off. The highly conspicuous and very durable Plane Sights Blade Pitot Cover is a perfect fit for any aircraft with a blade-type pitot tube or piper gear extension mast.. Properly installed, it's guaranteed not to blow off, fade in the sun or wear out for at least two years. Fits Piper, Katana, some Rockwell, late Grumman, Lake 250, and all other aircraft with a blade-type pitot tube. (As seen on the 2008 AOPA "Get Your Glass" sweepstakes aircraft) Weight: 0.15 kg Fits Piper, Katana, some Rockwell, late Grumman, Lake 250, and most other aircraft with a blade type of pitot tube. P/N 13-06016.....**$17.95**



PITOT TUBE PLUG (5/8") - Aircraft Type: Piston Powered Plane 5/8" inside diameter vented pitot plug with its unmistakably conspicuous Remove-before-Flight Streamer. ANSI-compliant and weather-resistant reflective streamer stands out equally well in daylight or darkness under all weather conditions. The plug is attached to the streamer's rugged black oxide coated zinc grommet with a galvanized steel ring, and is vented to prevent pressurization damage. This 5/8" Plug Fits Aero Commander, Twin Beach, Bonanza, Cessna 300/400/500, Conquest Series, Grumman, Lear, Mooney, Piper Cheyenne and Navajo aircraft. Weight: 0.04 kg 5/8"/ 0.625" (15.875mm) ID x 1.85" (38.10mm) P/N 13-06019.....**$14.95**



PITOT TUBE PLUG (3/4") - Aircraft Type: Piston Powered Plane. 3/4" inside diameter vented plug with its unmistakable Remove-before-Flight Streamer provides a perfect easy-on, easy-off solution. ANSI-compliant and weather-resistant reflective streamer stands out equally well in daylight or darkness under all weather conditions. The poly plug is attached to the streamer's rugged black oxide coated zinc eyelet with a stainless steel ring. This ¾"plug Fits Cessna 150, 152, 172, 177, 182, 200 series, and 337 models. Weight: 0.04 kg 3/4"/0.75" (19.05mm) ID x 2" (50.80mm) useable length P/N 13-06018.....**$14.95**



LIGHT SPORT PITOT PLUG KIT - Aircraft Type: Piston Powered Plane. Light Sport/Homebuilt Pitot Plug Kit provides a perfect fit for many homebuilt pitot tubes, light sport pitot tubes, and aircraft fuel vents. The kit includes several vented plugs so it even works with double-tube systems and is guaranteed not to pressurize your pitot static system. ANSI-compliant and weather-resistant reflective remove-before-flight streamer stands out equally well in daylight or darkness under all weather conditions. The kit comes complete with three different-sized pitot tube plugs, a unique streamer, and two rust-resistant coated triangle rings. WARNING: CHECK WITH YOUR AME AND CONSULT YOUR OWNER'S MANUAL BEFORE USING A FUEL VENT PLUG. P/N 13-06020.....**$14.95**

PLANE SIGHTS AIRCRAFT MARKERS & STATIC WICK COVERS

Prevent hangar rash and broken static wicks



STATIC WICK COVER SET (TUBE STYLE 7") - Aircraft Type: Jet. A lower priced alternative to Static Wick Markers. They protect static wicks from damage on the ground and make wing/elevator tips more obvious, preventing hangar rash. Slide these round style covers on for a tight weather resistant fit on Citations and other jets. Weight: 0.04 kg Round, tubular poly cover, 0.310" x 0.450" x 7.000"Long. *Shock cord lanyard not included P/N 13-06888.....**$39.75**



STATIC WICK COVERS (SMALL ID X7") - Aircraft Type: Jet. Installed and removed in seconds, Static Wick Covers help prevent delays and inconvenience due to hangar rash. Extremely obvious and very durable Static Wick Covers make these vulnerable parts highly visible by day or night. Slide these round style covers on for a tight weather resistant fit on your Bombardier (Challenger & Global Express) or Hawker/Beechcraft and many other jets. If necessary cut with scissors to desired length. Weight: 0.20 kg Fit's over static wick part #'s: Chelton 2-17SC-1,Chelton 2-11SC-1, MIL-9129D, DG17770. Fits Bombardier, Hawker/Beachcraft and others

P/N 13-06777.....**$59.95**



STATIC WICK COVER (SQUARE STYLE) - Aircraft Type: Jet These Square Style Static Wick Covers protect, usually yellow pronged static wicks from damage on the ground and make wing/elevator tips more obvious, thereby preventing hangar/ramp rash. Slide these rectangle covers on for a tight weather resistant fit on Falcon, Hawker, Beechjet, older Lear Jet and many other static wicks. Weight: 0.21 kg Includes three (3) Static Wick Covers per package Square Poly, 0.75"x0.25"ID x 3.50" Long, (in stock) (also available by special request, 5.25" length sleves) Standard two year warranty applies. *Shock cord lanyard not included

P/N 13-06776.....**$44.95**



UNIVERSAL AIRCRAFT MARKER - Aircraft Type: Piston Powered Plane. Highly reflective markers make vulnerable wing and elevator tips clearly visible under all conditions, and their projecting "proximity fuses" warn that something is too close before damage occurs. Fit all aircraft from Airliners to light sport aircraft, including models with static wicks and strobe lights. For aircraft with tip tanks, the wing marker opening fits over one end of the tank. A full set stows easily under most aircraft seats. Once initial fitting is done, the markers can be installed and removed in seconds during routine pre- and post-flight walk-arounds. Weight: 0.08 kg Package Contents: Two (2) corner marker pieces, two (2) harness pieces, two (2) marker fuses, four (4) 54" lengths of shock cord with cord hook ends, and four shock cord hook ends for assembly.

P/N 13-05603.....**$159.95**



REMOVE BEFORE FLIGHT STREAMER - Blazing yellow color stands out equally well in daylight or darkness under all weather conditions. A cord can be attached to the streamer to the rugged black oxide coated zinc eyelet. Ideal for any remove-before-flight application. Weight: 0.03 kg. Streamer - 12.25" long x 2" wide, two metal rings included.

P/N 13-05612.....**$13.95**



DIAMOND STALL WARNING PLUG - Aircraft Type: Piston Powered Plane Diamond recommends that operators of their DA40 and DA20 aircraft plug the stall warning air inlet holes on these aircraft while they're parked on the ground. Fits any Diamond DA40 or DA20, one way or the other. ANSI-compliant and weather-resistant reflective remove-before-flight streamer stands out equally well in daylight or darkness under all weather conditions.

P/N 13-06830.....**$39.95**

HI VISIBILITY BOOTIE PITOT COVER



Long Life Clip - Hook and loop closure. Bright Yellow Sock - More visible against aircraft finishes. Softer Vinyl Banner - Less abrasive to paint and aluminum. Bright White Letters - High visibility lettering, Fuel resistant (won't chip off), Non-abrasive. **Applications**: Specially designed for yse with pylon mounted Pitot Probes, fits Nose, Fuselage, or under wing locations, VL jets, and regional service airline aircraft (Boeing, Beechcraft, Bombadier, Cessna Jets, Cirrus, CRJ, Piper, Grob, Grumman, Gulfstream, Lear, Embraer, Hawker, Honda, Saberliner, Swearinger, and others)
Warbirds with "arrow head" type Pitot Tubes (North American, most AT-6, SNJ, Vultee BT-13, Grumman F4F Wildcat, F6F Hellcat, B-25 Mitchell, P-47 Thunderbolt, and many others) TAT Probes, Dynon Angel of Attack - Pitot Proves, Pylon mount, Rosemount Pitot Probes

P/N 13-12349.....**$10.95**

PS

BANNERS – PITOT TUBE COVERS

AIRCRAFT FOR SALE BANNERS



Designed specifically for aircraft use, these banners slip right over your prop blades, moving in the breeze to attract attention-but will not rub against painted surfaces. Each banner is 9" x 23", made of heavyweight rubberized Nylon that is weather-repellent and resists tearing. Sold as a set of 2. P/N 5412.....**$27.60**

PROPELLER MOUNTED BANNERS



Two 28" x 8", white printing on red reinforced vinyl. Yellow, blue and white pennants, slides over prop, fastens with velcro.

For Sale .....P/N 13-06402 .....**$34.75**
For Rent.....P/N 13-06635 .....**$32.75**

FOR SALE PROP BANNER



Consists of three pieces. Each prop banner is 11" high X 22" long when mounted. Made of RED vinylized polyester with BOLD WHITE lettering. Unlike prop banners that are a sleeve which must be slipped over the prop blade only, these banners are split at the bottom and are held together with velcro. This allows the banner to be opened up and then wrapped around virtually ANY structural member of the aircraft

P/N 13-06014.....**$38.50**

AIRCRAFT SPRUCE PROPELLER CARD



These prop cards are great when displaying your aircraft at a fly-in or event. There's room to fill in your personal information as well as large notes instructing onlookers to enjoy the views of your beautiful aircraft, but keep their hands off. They easily slide on and off the blades of your propeller. If you are organizing an event, these are affordable enough to pick up in bulk and pass them out to all who attend. 8-1/2"x 11". Semi-Gloss. P/N 13-12320.....**$1.35**

PITOT TUBE COVERS



Feature an authentic, soft, bright red vinyl - will not fade, mildew resistant, made to Mil-C-20696. "Remove before Flight" streamer. Attaches simply with a velcro strap to 5/8" or 11/16" diameter L-shaped pitot tubes..... P/N 15210..**$5.95**

SLIP ON PITOT COVER - Slip fit over 1/4"or 1/2" dia. pitot. Red Remove Before Flight streamer attached. Made of flameproof/weather-resist. National Aerospace material.



P/N 15220.....**$6.95**

ROUND CESSNA PITOT COVER - This red pitot cover fits round, high-wing Cessna pitot tubes. Grooved fitting releases air pressure as the barometer changes.



P/N 5139.....**$9.50**

PIPER PITOT COVER - This pitot cover is designed to fit the blade style pitot commonly found on piper aircraft. Small vent hole prevents pressurizing system. ..... P/N 5740.....**$15.85**



REMOVE BEFORE FLIGHT RIBBON

This 3"x24" bright orange streamer with black letters features a grommet for a C ring to attach to anywhere on the aircraft. High visibility, fire resistant material. P/N15200 .....**$11.95**

DO NOT TOW STREAMER



17" Streamer, attach with Velcro, Color international orange. P/N 13-02004.....**$12.85**

ASA REMOVE BEFORE FLIGHT BANNER



A bright red heavy nylon banner that can be fastened to anything that needs removing before flight. Comes with a grommet and wire ring that can be attached to everything from gear pins to gust locks and pitot covers. Heavy duty vinyl is tear resistant.

P/N 13-02380.....**$6.75**

ASA PITOT TUBE COVERS



Fit snugly over standard aircraft pitot tubes, and are vented to avoid pressurizing the pitot static system. Critical to safe operations, the cover keeps dirt, contamination, and insects from entering the pitot tube. A "remove before flight" streamer hangs off the cover as a prominent preflight reminder to pilots. Molded in the United States, the cover uses a heavy duty plastic material. Pitot Tube Cover 5/8" (small) ..... P/N 13-02378.....**$12.95**
(Fits: Cessna 300/400 series, Citation & Conquest, Beech singles & twins, Piper Navajo & Cheyenne, Mooneys, Mitsubishi, Lear Jets & Cirrus)
Pitot Tube Cover 3/4" (large)..... P/N 13-02377.....**$13.85**
(Fits: Cessna 150,152,172,177,182, 200 series, Skymaster & the Falcon Jet)

FUEL CAP COVER



The STAY SEALED cap is a patented fuel cap cover that locks onto the existing factory cap and seals to the surface of the wing. Designed and tested against heavy rains, strong winds, high temperatures, and extreme cold. It sealed out melring snow and ice, blowing rain and water from aircraft washing. *To be used anytime the aircraft is stored outside. The device MUST be REMOVED BEFORE FLIGHT.

Model SSCC fits the following: Cessna Series: 152, 172, 182, 206, 207, 210. Fitted with the raised metal fuel cap.....P/N 05-03662 ..... **$48.85**
Model SSCP fits the following: Cessna 120,140,150,172 with recessed fuel filler opening .....P/N 05-03668 ..... **$48.85**
Model SSPC fits the following: Piper Series: PA-28-140,PA-28-160,PA-28-180, PA-28-200, PA-32-260, PA-32-300 fitted with the raised metal fuel cap. .....P/N 05-03669 ..... **$48.85**

"REMOVE BEFORE FLIGHT" PITOT COVERS



Universal cover.....P/N 13-04396 .**$12.75**
Piper blade cover .....P/N 13-02946 .**$12.75**
3/4 pitot cover.....P/N 13-04395 .**$12.75**
5/8 pitot cover.....P/N 13-04394 .**$12.75**
Sm RBF streamer.....P/N 13-02818 ...**$3.95**
Lrg RBF streamer.....P/N 13-02819 ...**$6.50**
Nelson RBF Streamer
P/N 13-04397 ...**$8.50**



FUEL VENT COVER

The fuel vent cover is designed to fit most fuel vents, and will not pressurize the fuel system. The ribbon is nylon with a vinyl coating and silkscreened letters. P/N 13-02817 .....**$11.95**

REMOVE BEFORE FLIGHT STREAMERS



Red "REMOVE BEFORE FLIGHT" Streamer with white lettering. Measures 2" wide and 17-1/2" long
2" X 17" .....P/N 13-06238 .....**$5.75**
3" X 31".....P/N 13-11731 .....**$8.50**
3" X 21" White on Orange P/N 13-16572 .....**$6.95**
3: X 21" Black on Yellow .....P/N 13-16573 .....**$7.50**
3" x 21" White on Pink.....P/N 13-19013 .....**$6.50**

BLADE PITOT COVER



Fits Piper, Katana, some Rockwell, and late Grumman aircraft.
P/N 13-02379 .....**$13.85**

KEY CHAINS



Remove before flight key chain with white letter REMOVE BEFORE FLIGHT on red banner
P/N 13-02836 ..... **$3.95**



Key ring with a white printed "I'D RATHER BE FLYING" on blue banner.
P/N 13-02949 ..... **$2.95**



Key ring with blue writing "I LOVE FLYING" on off-white banner
P/N 13-02950 ..... **$2.95**

REMOVE BEFORE FLIGHT KEYCHAIN

Red, "REMOVE BEFORE FLIGHT" is 11-1/2" in length. Great for your keys, ID, or badge. The "REMOVE BEFORE FLIGHT" is silk screened in white on red nylon. .. P/N 13-03822 .....**$2.95**



PROFLIGHT AIRCRAFT KEY CHAINS



ProFlight aircraft personal streamer with attached ring and slogan "I'D RATHER BE FLYING". P/N 13-10450 ..... **$3.70**



ProFlight aircraft personal streamer with attached ring and slogan "I LOVE FLYING".
P/N 13-10448 ..... **$1.95**



ProFlight aircraft personal streamer with attached ring and slogan "REMOVE BEFORE FLIGHT". P/N 13-10447 ..... **$1.95**



ProFlight aircraft personal streamer with attached ring and slogan "HAVE YOU CLOSED YOUR FLIGHT PLAN".
P/N 13-10449 ..... **$1.99**

PS

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

PITOT TUBE COVERS – EZ FLAP

REMOVE BEFORE FLIGHT STREAMER



2-1/4" wide, 17" long red polyester fabric with white writing: "Remove Before Flight"
P/N 13-01458.....**$5.35**

UNIVERSAL STATIC PORT COVERS



SPC-101



SPC-102

An inexpensive, yet very effective alternative to other covers and plugs. The SPC-101 is designed to fit an aircraft with one static port on each side of the aircraft and the SPC-102 is designed to fit an aircraft with two static port on each side of the aircraft.
Features: • Universal design to fit most aircraft • Lightweight entire assembly weighs less than 1/2 pound • Attaches with heavy duty lever cups designed to lift up to 40 pounds each • No fuselage modification required • Prevents the possibility of any damage to static ports by being and externally mounted cover • Malleable lightgauge red anodized aluminum easily conforms to virtually any surface contour • Adjustable to allow for attaching lever cups on or around decals and pin striping • Installed at temperatures from -20°F to 110°F
SPC-101.....P/N 13-06723.....**$185.75**
SPC-102.....P/N 13-06724.....**$199.75**

PITOT COVERS

Avoid costly damage to your pitot-static system. Protects from dust, insects, wind and other foreign matter. Will not pressurize pitot-static system.



MODEL 4602 - Fits Piper, Katana, some Rockwell, and late Grumman aircraft..... P/N 13-06395.....**$9.75**

MODEL 4935 - Bootie Type, all Naugahyde, white boot, red with white printing, 2" x 16". ..... P/N 13-06397.....**$9.95**

STREAMERS



5811 "OUT OF SERVICE" - 3" x 24", yellow printing on red reinforced vinyl with grommet and ring. 2" securing strap with grommet and velcro.
P/N 13-06399.....**$9.95**



5813 "DO NOT TOW" - 3" x 16", yellow printing on red reinforced vinyl with grommet and ring. 2" securing strap with grommet and velcro.
P/N 13-06401.....**$9.50**



4604 "REMOVE BEFORE FLIGHT" - 2" x 16", white printing on red reinforced vinyl with grommet and ring.
P/N 13-06396.....**$5.35**

EZ FLAP HANDLE EXTENSION



Because EZ Flap puts the flap control at the correct location close to the yoke (instead of down on the floor under the panel), pilots can finally remain upright while using the flaps, and stay focused on takeoff/landing, obstacles, terrain, traffic, and instrument scan. No more bending over - no more loss of visibility. EZ Flap improves the performance of the pilot! EZ Flap mounts to the existing aircraft flap handle with no disassembly and no de-rigging in 20-40 minutes, with only two small screw holes. The original aircraft flap control remains fully functional. 100% made in the USA. Full FAA STC-PMA approval on 95% of all US manual flap aircraft.
CESSNA/PIPER FLAP HANDLE EXTENSION APPLICATIONS: Cessna: 170 / 172 / 175 / 180 / 182 / 185. Piper: PA-28 / PA-32 Cherokee Family. Piper: PA-34 / PA-44 Seneca / Seminole. Beech: 19/23/24 Musketeer Family P/N 13-06946.....**$499.00**
SUPERCUB HANDLE EXTENSION APPLICATIONS: Piper: PA-18 Super Cub. Piper: PA-20 / PA-22 Pacer / Tri-Pacer. Maule: M-5 thru M-9 Family. Stinson: 108 Family P/N 13-07438.....**$499.00**

BRUCES UNIVERSAL CUSTOM PITOT TUBE COVERS



The Original and World's Finest Aircraft Covers for Airplanes, Jets, Helicopters, Gliders and QEC Off-link Jet Engines.
Once the material for each order is cut into its appropriate parts, highly trained sewing machine operators meticulously assemble the products with durable thread, rivets, and canvas trim.
Pitot Tube Covers, made of Naughahyde vinyl, are designed to cover the entire pitot assembly. Slipping on over the tube, the cover tightens around the base with a special Velcro strap detail. A "remove before flight" streamer is attached to the cover. Non-burning Pitot Covers are designed to withstand more than 500° Fahrenheit, and will prevent the pitot cover from melting onto the tube if the pitot heat is accidentally turned on with the pitot cover attached
Pitot Tube Cover for the following applications: • Beech: Bonanza B35, Bonanza B36, Baron B58 • Cessna: Cardinal 177, Centurion 210, Corvallis 350 • Cirrus: SR20, SR22 • Grumman: American AA5 • Piper: Comanche PA24, Cherokee Six PA32 • Lancair: IV, Columbia 300, Columbia 350, Columbia 400, Lancair 320, Lancair 360 • Mooney: Ovation, M20, 201, 205, 231, 252 & MJ20 MSE
P/N 13-15994.....**$28.75**

Pitot Tube Cover for the following applications: • Cessna: 150, 152, 172, 175, 180/185 Skywagon, 182 Skylane, and 206 Stationair. • Grumman AA1. P/N 13-15995.....**$28.75**

PS

PITOT TUBE COVERS



REMOVE BEFORE FLIGHT STREAMER

Red Streamer with white print. Aid as a reminder of preflight for pilots. Ideal for landing gear pins.

P/N 13-18382 .....**$11.75**



ROSEMONT TEMPERATURE PROBE COVER

High Quality Cover for Temperature Probe.. Applications:

Cessna Citation Bravo: 650
Learjet: 31, 35, 40, 45, 70, 75
Hawker: 4000
Bombardier Challenger: 601, 604, 300

P/N 13-18383.....**$19.95**

PITOT COVER FOR PIPER AIRCRAFT



High Quality Cover for Pitot Tube. Protects and prevents contamination of the Pitot Tube providing safety to the aircraft systems. Applications: Piper aircraft, and small general aviation.

P/N 13-18385.....**$19.95**



UNIVERSAL PITOT COVER

High Quality Cover for Pitot Tube. Protects and prevents contamination of the Pitot Tube providing safety to the aircraft systems. Applications: Small general aviation aircrafts. Cessna Citation, Beechcraft King Air, Cirrus, Diamond, Grumman Mooney, Cessna, Piper.

Left ..... P/N 13-18384.....**$19.95**
Right..... P/N 13-18384-R.....**$19.95**



LEARJET PITOT COVERS

High Quality Cover for Pitot Tube. Protects and prevents contamination of the Pitot Tube providing safety to the aircraft systems.

Learjet 25,31,35,36 series

Left..... P/N 13-18386.....**$29.95**
Right ..... P/N 13-18386-R.....**$29.95**

Learjet: 40, 45, 60, 70, 75
Bombardier Challenger: 300, 601, 604

Left..... P/N 13-18387.....**$28.95**
Right ..... P/N 13-18387-R.....**$28.95**



CIRCULAR STATIC WICK COVER

Circular Tube Static Wick Covers with streamer remover before flight. Protects aircraft static wicks and personnel from injuries on ground and makes wings elevator more obvious preventing hangar rash. Applications: • Embraer Phenom 100 • Phenom 300 • Learjet series • Citation series and more.

P/N 13-18388 .....**$47.50**



SQUARE STATIC WICK COVERS

Rectangular Tube Static Wick Covers with streamer remover before flight. Protects aircraft static wicks and personnel from injuries on ground and makes wings elevator more obvious preventing hangar rash. Applications: • Falcon 20, 50, 900, 2000 • Hawker 125-400, 125-700, 125-800 • Beechjet 400A, Learjet series and more.

P/N 13-18389.....**$50.00**



PILATUS PC-12 COVERS

High Quality Cover for Pitot Tube. Protects and prevents contamination of the Pitot Tube providing safety to the aircraft systems.

Pitot Covers

Left..... P/N 13-18393.....**$26.95**
Right ..... P/N 13-18393-R.....**$26.95**

Angle of Attach Covers

Left..... P/N 13-18392.....**$19.95**
Right ..... P/N 13-18392-R.....**$19.95**

REMOVE BEFORE FLIGHT PITOT TUBE COVERS



Before Flight Pitot Tube Covers. 5/8" or 3/4" ID Vinyl Cover.

5/8" .....P/N 05-12646 .....**$8.95**
3/4" .....P/N 05-12645 .....**$8.95**

UNIVERSAL REMOVE BEFORE FLIGHT PC-100U PITOT COVER



Before Flight Pitot Cover. Universal size, All Vinyl. - Fits All Tube Type Pitots.....P/N 05-12660 .....**$9.95**

REMOVE BEFORE FLIGHT



Before Flight 10" Flag with Ring. .....P/N 05-12661 .....**$7.95**

REMOVE BEFORE FLIGHT PITOT COVER



Before Flight Pitot Tube Cover. 6" Red Vinyl Sleeve Fits D.G. # 16920. 16" Flag. Wick-Tector (3/Pack).....P/N 05-12655 .....**$29.50**

PS

CONTROL LOCKS

UNIVERSAL CONTROL LOCK



Stainless steel construction with silicone rubber to protect aircraft interior and folds into small package for easy storage. Installs in seconds from the pilot seat and fits most aircraft with a control column. Other control locks are not required like the one Cessna provides. Cannot get your feet on the Pedals to taxi aircraft and keep the elevator in the nose down position.

P/N 13-13075.....**$279.00**

AMC AIRPLANE CONTROL LOCK



Rather than tying your seat belt to your controls, try AMC's new Airplane Control Lock. This lightweight control lock will stop your control surfaces from moving with the winds and will also prevent damage to your controls such as bending. This new Control Lock is lightweight and easily stored.

Airplane control lock cessna or any aircraft with control spacing of 14"-19" ..... P/N 13-02851..... **$78.75**
Mooney..... P/N 13-03164..... **$77.95**
Cessna 210 ..... P/N 13-03165..... **$81.95**
Cessna 206 ..... P/N 13-03166..... **$81.95**
Skymaster..... P/N 13-03167..... **$77.95**

KENNON GUST LOCKS



Soft Gust Lock secures flaps, ailerons, the elevator or the rudder. It is made from special weather resistant, high density, closed cell foam with a nylon eyebolt. It is adjustable and will not scratch the plane's surface, and includes a "Remove Before Flight" streamer & storage bag.

Disgned for use with control surfaces up to 6-1/2" thick. Locks O.D: 3.9" P/N 07-01329.....**$27.75**

PAD-LOK CONTROL SURFACE LOCK



Like it says, a padded lock. Effectively locks control surfaces while the padding compresses to the proper configuration and protects the surface finish. Padding won't absorb water. Hard-to-miss Dayglo color, plus yarn streamers. Wt. 10 oz.

P/N 13-22700.....**$17.95**

THE CONTROL SAVER



The Control Saver control lock was designed for Piper and Mooney aircraft to protect aircraft controls in high wind gusts. It holds the ailerons in the neutral position and stabilizer in the down position. This control lock is light weight, easy to use and fits in an area as small as your shirt pocket. Sold to thousands of Piper and Mooney owners worldwide. P/N 13-15505.....**$39.95**

SAF-T-STOP



Saf-T-Stop is an auxiliary seat stop mechanism approved by the FAA for use with Cessna seat track A.D. #87-20-03. Installs easily, sliding over seat track. Approved for: Cessna 150, 152, 170, 170B, 172, R172, 175, 180, 182, 185, 190, 205, 206, 207, 210, 303, 337. Not a seat lock, Saf-T-Stop is designed to restrict rearward motion if the seat lock fails.

P/N 13-18510..**$44.85/pr**

AILERON & RUDDER SOFT LOCK



The Aileron & Rudder Soft Lock is made out of a durable foam that will not scratch your paint. Slides in gap between rudder and vertical stab. Keeps rudder from moving while plane is on the ground. Comes with "Remove Before Takeoff" flag. Patent Pending.

P/N 13-11615.....**$38.75**

LIGHT SPORT CONTROL LOCKS



These control lock is easy to install and positively locks the ailerons and elevator of the aircraft models listed below. Gust lock is manufactured using 6061T3 aluminum. The control stick clamping portion has a protective sleeve to prevent damage to special control handles. The latching mechanism is tow locking buttons that cannot come loose until released by the pilot which insures the owners that their ailerons and elevators are safe from wind damage. The control lock is red anodized with a "Remove Before Flight" decal, and each unit comes complete with instructions in a 4" x 4" x 12" box. Only weighs 3 1/2 ounces.

PIPERSPORT / SPORTCRUISER CONTROL LOCK CL200 LONG - Eligible Aircraft Models: Pipersport and SportCruiser only. P/N 13-11304.....**$85.75**

VANS RV12 CONTROL LOCK CL230 LONG - Eligible Aircraft Models: Vans RV12 only. P/N 13-11319.....**$83.50**

VANS RV LSA CONTROL LOCK CL100 SHORT - Eligible Aircraft Models: most Van's RV's and many other LSA aircraft, as well as the Stearman PT17. P/N 13-11269.....**$83.95**

CITABRIA / DECATHLON CONTROL LOCK CL210 LONG- Eligible Aircraft Models: Aerotrek A220 & A240,AirCam,Alto 100,Breezer ELSA, Bristel, Champion Scout, Citabria, Decathlon,Diamond DA20 & TC100,Evector Harmony & Sportstar, KitFox Super Sport 7, Lightning LS1, Luscombe,Peregrine FK-9, Phoenix, Ran's SL-19, Coyote 2, S-7LS, Remos LSA, SeaRay, Spirit, Sting S4, Tecnam P2002 P/N 13-11318.....**$85.75**

HUSKY CONTROL LOCK CL110 SHORT - Eligible Aircraft Models: Husky only. P/N 13-21226.....**$83.50**

ULTIMATE GUST LOCKS FOR RVS



This revolutionary product "The Ultimate Gust Lock" is a solution to this rather troublesome and sometimes challenging task. This product will definitely calm the fears of many RV owners and builders of these wonderful aircraft. After watching, reading, analyzing, researching and waiting for someone to offer up a solution we decided to go to work on this problem.

Aircraft	Part Number	Price
RV-6, 6A, 7, 7A, 9, 9A	05-12368	$189.00
RV-8, 8A	05-12483	$189.90
RV-10, 10A	05-12484	$209.95

REMOVE BEFORE FLIGHT AIRPLANE CONTROL LOCK



Piper and Mooney aircraft do not have control locks. That's why there is now a Control Saver control lock to meet the needs of pilots who fly these planes.

PA-28 1968-97 ..... P/N 13-12726..... **$39.95**
PA28 1997-Current ..... P/N 13-12727..... **$39.95**
PA32 1968-97 ..... P/N 13-12728..... **$39.95**
PA32 1997-Current ..... P/N 13-12729..... **$39.95**
PA-28-61 Bowtie ..... P/N 13-15505..... **$39.95**
Mooney..... P/N 13-20663..... **$39.95**

RANS CONTROL LOCK



RANS has developed a control lock that attaches to most models. The lock consists of a bungee cord, a couple of hooks and cap that slips over the top of the control stick. Allows for bungee tension to be set for a particular model. Not hard bolted so if an outside force against the control surfaces occur, the bungees will absorb the load.

P/N 13-10434.....**$31.90**

PS

AIRCRAFT LOCKS

PROP LOCK CHAIN



The THEX50 is a "T-HEX" maximum security chain 5 ft in length with hardened 10mm hexagon shaped links. Hexagon shaped case hardened trip heat treated super chain. This heavy duty Prop Lock Chain is the perfect way to insure the security of your aircraft, particularly at remote or foreign airports. The hexagon shaped, heat treated heavy duty chain can endure over 10 tons of cutting force, insuring your aircraft against theft. A black nylon cover over the chain protects your aircraft from the chain when in place. The Prop Lock Chain is 5 feet long and weighs 12lbs. P/N 13-05182 ..... **$49.85**

WHEEL CHOCK LOCK



This innovative aircraft security device clamps to the wheel which prevents theft of the aircraft, while the built-in chock prevents the wheel from rolling forward when parked. The lock and chock are yellow, while the red rubber coated arms protect the finish of the wheel. Fits any type of wheel up to 12" wide. Lifetime warranty. P/N 13-06141 ..... **$80.75**

YORK GUST-LOK™



The York Gust Loks the ultimate protection for your plane from wind and theft. It locks the control surfaces in a neutral position and prevents damage to control surfaces and tail caused by wind gust loads. It is welded steel, fully adjustable, is lightweight, and features a powder coat finish. The York Gust Lok is compact for easy storage and is quick and easy to use. Wt: 2.2 lbs.

CONTROL WHEEL AIRCRAFT

Aircraft	Part No.	Price
PA-28, PA-32, PA-24, PA-30 & PA-39, PA-32R, PA-34 & PA-44	13-00855	**$246.95**
Commander 112 / 114	13-32730	**$234.95**
Mooney, Grumman Goose, Maule (Tricycle gear & Seaplane) PA-23, & Grumman American, Myers 200 & Commander200	13-00863	**$259.95**
Cessna Single engine 150'&172's, Helio Courier, 295/395	13-00864	**$254.95**
Cessna Single engine 180, 206 & 210's fixed & retract gear & Cessna 337	13-00865	**$269.95**
Cessna Twins except 337 & 310	09-00329	**$233.95**
Aerostar, Commander 500, Beech Baron, Bonanza, Duke & 18/C-45, Lake L-A-4 (except Renegade)	13-32790	**$249.95**
Cessna Tailwheel, Stinson, Beech Staggerwing	13-32800	**$234.95**
Lake Amphibian	13-32820	**$228.95**
Beech King Air	13-32830	**$266.95**
Cessna 310's	13-32840	**$266.95**
Aeronca Chief 508, Taylorcraft BC 12-D, Stinson 108 & 108-1	13-32850	**$234.95**
PA-38	13-32860	**$234.95**
Maule (Tailwheel)	13-32871	**$234.95**
Piper PA-31, Chieftain, Navajo, Chyenne	13-32880	**$266.95**
Socata (Trinidad), Grumman Widgeon	13-32890	**$241.95**
Seawind	13-32885	**$234.95**
Dehaviland Beaver	13-00866	**$299.95**
Cessna Twins (except 337 & 310)	13-00867	**$233.95**
Piper Malibu	13-00868	**$299.95**

STICK CONTROL AIRCRAFT

Aircraft	Part No.	Price
J3 w/Shin Knocker Tubes	13-00871	**$266.95**
J-4	13-11870	**$266.95**
Piper PA-12	13-00872	**$266.95**
Piper PA-16	13-00873	**$266.95**
Piper PA-14	13-00875	**$266.95**
Piper PA-15/17	13-00876	**$266.95**
Piper PA-18 & J3 Shin knockers	13-00877	**$266.95**
Piper PA-20	13-00878	**$224.95**
Champ & Citabria	13-00879	**$299.95**
Husky, Pitts	13-00880	**$299.95**
Micco	13-00881	**$299.95**
Nanchang CJ-6	13-11872	**$266.95**
Swift	13-00883	**$299.95**
RV-6	13-00884	**$266.95**
RV-8	13-11868	**$266.95**
Kit Fox	13-00886	**$266.95**
Waco	13-00887	**$266.95**
Lancair IV	13-00888	**$266.95**
Luscombe	13-11869	**$266.95**
Bellanca	13-06114	**$266.95**
YAK 52	13-11871	**$266.95**

YORK ACCESSORIES

Do not throw away warning flag (included with each Gust-Lok™, but also sold separately) .....P/N 13-00869 ..... **$21.50**

PROPLOCK



PropLock is a simple, yet effective anti-theft device that can be easily installed on any single or twin engine aircraft.
Made of high quality steel wire rope coated with bright red PVC, PropLock provides effective protection against unauthorized use of your aircraft.
Included: • 1 PropLock • 1 Remove Before Flight Carrying Pouch. Features: • Hardened Steel Components • Red PVC Coating • Rust proof • High Visibility • Easily Installed • Nickel Plated Lock Assembly • Effective. P/N 13-20147 ..... **$279.00**

THE ALPHA WHEEL LOCK 2000



The Alpha Lock 2000 adjusts to virtually any wheel size in seconds and completely immobilizes the aircraft or vehicle wheel from rotating or turning. The lock is pick and drill resistant and cannot be frozen with freon. Soft, coated arms will not mar or scratch wheels and rims. Furnished in bright red color to warn thieves, weather resistant, and carries a 2-year warranty. Excellent for locking aircraft, autos, trucks, trailers, boat trailers, motorcycles, RV's, etc. Locks anything on wheels! Wt: 8 lbs. P/N 13-00436 ..... **$151.75**

THE PLANE LOCK



For Cessna C-172-210s, except for the C-177. Prevents the wind from popping your doors open and provides an added measure of security against break-ins. No tools or STC required. From outside the aircraft, the pilots door is locked by reaching through the window (prior to closing it) and pushing down the door safety handle. Then, slip the Plane Lock over the window sill and lock the window shut. P/N 13-03386 ..... **$151.75**

NELSON AILER-LOCKS

• 13" RBF streamer
• Locks flaps, ailerons, elevators, or rudder. Ailer-Lock Large (10")
P/N 13-22705 ..... **$32.75**



SKYLOK



Skylock is an inexpensive throttle lock for aircraft with Cessna type push-pull throttles. The device will accept shafts up to .375" diameter, and is made of heavy-gauge cadmium plated steel. Skylock affords great peace of mind to aircraft owners at very little cost. Just put in place after every flight, secure with your own favorite padlock, and your throttle cannot be moved! Simple, but it works.
P/N 13-18500 ..... **$13.95**

ANTI-THEFT LOCK FOR BONANZAS



Built for those incomparable Beechcraft. All have FAA STC/PMA as applicable. The rugged, locksmith quality key lock combines forces with hardened steel pins embedded in the lock body that roll to defeat cutting. Bright red color, easy to use, installs in just seconds. Patent Pending.
P/N 05-03435 ..... **$309.00**

AIRGIZMO UNIVERSAL GUST LOCK



The AirGizmos Gust Locks are designed to quickly lock virtually any control surface securely. Its bright color and integrated flag reminds you to remove before flight. The rubber cushions ensure that your finish will be protected. They are lightweight and portable. Perfect for carrying in the plane wherever you go.
Single ..... P/N 13-06139 ..... **$31.75**
3 Pack ..... P/N 13-18457 ..... **$89.95**

PS

Prices Subject to Change Without Notice

H3R AVIATION FIRE EXTINGUISHERS



The FAA recommends and/or requires Halon fire extinguishers on aircraft. H3Rs Halon fire extinguishers are the extinguishers of choice in the aviation industry. They cause no mess or damage, and do not require taking a plane out of service for clean-up; a costly process for both the aircraft owner and insurance carrier. The heat-seeking quality of the Halon gas makes it a superior fire fighting agent.

DISPOSABLE, LOW-MAINTENANCE HALON 1211-1301 BLEND - Contain a proprietary blend of the "liquid streaming agent," Halon 1211, and the gaseous "total flooding agent," Halon 1301. The blend's power lies in the Halon 1301, which is both a firefighting agent and a propellant. Low maintenance and non-rechargeable. Lightweight aluminum canister Disposable. Tested to ANSI/UL 711 and UL 1093. Meets DOT requirements Meets the requirements in Advisory Circular 20-42C , "Hand Held Extinguishers for Aircraft" and/or NFPA 408, "Standard for Aircraft Hand Portable Fire Extinguishers" 12-year shelf life. Fire extinguishers include a mounting bracket.

RECHARGEABLE, STURDY INDUSTRY-STANDARD HALON 1211 - Required on commercial transport aircraft. Although classified a "liquid streaming agent," Halon 1211 also performs remarkably well as a "total flooding agent," seeking out and extinguishing fires in inaccessible places. A 6-year maintenance and 12-year hydrostatic test are required.Rugged steel cylinder. Pressure gauge enables easy confirmation of charge. Tested to ANSI/UL 711 and UL 1093. Meets DOT requirements. Meets the requirements in Advisory Circular 20-42C , "Hand Held Extinguishers for Aircraft" and/or NFPA 408, "Standard for Aircraft Hand Portable Fire Extinguishers". Fire extinguishers include a mounting bracket or a wall hook.

Protection RT Extinguishers			
Protection R.T. Extinguishers	**Part No.**	**Range**	**Price**
RT A400 - 14 oz. (UL Rating 2B:C)	13-07650	4-6 ft	**$161.75**
RT A600 - 1.2 lb. (UL Rating 2B:C)	13-07655	6-8 ft	**$198.75**
RT A1200 - 2.5 lb. (UL Rating 5B:C)	13-07660	7-9 ft	**$376.00**
A1600 - 3.5 lb. (UL Rating 1A:5B:C)	13-07665	8-10 ft	**$447.00**

H3R Extinguishers			
HALON 1211 UNITS	**Part No.**	**Range**	**Price**
A344T - 1.3 lb. (UL Rating 2B:C)	13-01993	9-12 ft	**$139.75**
A344TC - 1.3 lb. (UL Rating 2B:C)	13-02546	9-12 ft	**$175.75**
C352TS - 2.5 lb. (UL Rating 5B:C)	13-01966	9-15 ft	**$218.95**
C352TSL - 2.5 lb. (UL Rating 5B:C)	13-02547	9-15 ft	**$248.95**
C354TS - 3.0 lb. (UL Rating 5B:C)	13-02548	9-15 ft	**$252.95**
B355T - 5.0 lb. (UL Rating 10B:C)	13-02545	9-15 ft	**$299.95**
B369 - 15.7 lb.(UL rating 1A:10B:C)	13-02557	12-18 ft.	**$517.95**
B371 - 19.9 lb. (UL rating 2A:40B:C)	13-02558	12-18 ft.	**$649.00**

FIRE EXTINGUISHER BRACKETS



BKT400 - Brackett for the RT-A400 Fire Extinguisher
P/N 13-06166.....**$16.50**

BKT600 - Brackett for the RT-A600 Fire Extinguisher
P/N 13-06167.....**$16.50**

BKT1200 - Brafkett for the RT-A1200 fire Extinguisher
P/N 13-06168.....**$16.50**

845 - Brackett for the A344T Fire Extinguisher
P/N 13-06170.....**$10.50**

845 - Brackett for the A344TC Fire Extinguisher
P/N 13-06171.....**$10.50**

817S - Brackett for the C352TS, C352TSC, C354TS Fire Extinguisher
P/N 13-06172.....**$15.85**

BKT1600 - Brackett for the A1600 Fire Extinguisher
P/N 13-06169.....**$16.50**



H3R BILLET MOUNTS

H3R Performance hand held 1 lb. and 2.5 lb. fire extinguishers come standard with aviation style mounting brackets. Stylish and versatile billet mounting accessories are also available. Band clamps fit 2.6" or 3.0" diameter fire extinguishers, and can be combined with the flat surface mount or either of the two roll bar mounts. Available in polished and brushed finishes. One year limited warranty.

Brushed - Band clamp for 1.0/1.4 lb. fire extinguishers
P/N 13-06065.....**$59.75**

Brushed - Band clamp for 2.5 lb. fire extinguishers
P/N 13-06067.....**$59.90**

Brushed -Flat surface mount ..... P/N 13-06069.....**$42.85**

SAFECRAFT FIRE EXTINGUISHERS



A feature not found on other extinguishers is the "swivel" head design. The discharge head can be rotated to align the pull cable, which provides more installation flexibility. The aluminum cylinder is U.S. DOT approved and is capable of being refilled by Safecraft Inc. The extinguisher will accept two separate discharge lines, which allows installation flexibility currently not found in competing fire extinguishers. White powder coated cylinder with red aluminum anodized head. Designed to be mounted in the "head down" attitude.

3 lb. ..... P/N 13-01634.....**$385.00**
5 lb. ..... P/N 13-01633.....**$385.00**

RESCUE LASER FLARE MAGNUM™



Ahand-held nighttime laser signaling device that provides a convenient, effective way to signal a rescue party up to 20 miles (32 km) away, depending on atmospheric conditions. It's ease of operation, long life and waterproof design makes it the perfect survival signaling device. Unlike conventional pyrotechnic flares, the Rescue Laser Flare™ is non-flammable, non-hazardous and can operate continuously for 72 hours on two replaceable AA batteries.

72 Hour..... P/N 13-01924.....**$83.75**
15 Hour..... P/N 13-01923.....**$89.95**



EMERGENCY STROBE

• Waterproof • USCG approved • Operates up to 60 hours • Uses D battery • Red lens available

Strobe .....P/N 13-02811 ..... **$24.75**

OCEAN SIGNAL SAFESEA GMDSS HANDHELD VHF RADIO



The Ocean Signal range of survival craft VHF hand portable radiotelephones exceed the requirements of IMO, SOLAS and GMDSS. Lithium Polymer rechargeable battery option available with rapid charger, for everyday normal use. Fully waterproof, even 40C thermal shock. High efficiency transmitter for maximum battery life. Rugged design exceeds GMDSS environmental requirements. Lithium primary battery for emergency use. Novel battery protection tab protects from inadvertent use. Battery classified as non-hazardous for shipment. Battery provides in excess of 16 hours typical operation, even at -20°C. (10% Tx, 10% Rx, 80% Squelched) . Laser etched key legends for durability. High contrast, backlit LCD and keypad. Rugged accessory socket option; waterproof to IP68 for use with headsets, helmets, fist mikes, etc.. 4 scanning modes, D/W, T/W, scan and memory scan. 21 simplex channels according to IMO SOLAs requirements.

Unit Only.....P/N 13-20261 ..... **$500.00**
Kit .....P/N 13-20262 ..... **$620.00**

ACTIVE EXTINGUISHING LINE



Active Extinguishing Line is totally independent, 1kg, fire extinguishing system from any power source. Its main secret lies in the heat detector in a form of a line made out of special laser predriller polymer, shich will react instantly to any source of heat or fire. This line (heat detector) is connected to reservoir containing fire-extinguishing agent: hexafluoropropane FE-36. Inside of the protected device (equipment) a loop made out of the heat detector breaks, creating a mini sprinkler, directly over source of fire or heat, extinguishing it instantly. In a moment of activation the system closed circuit switch collapsses sending a signal informing of fire. For experimental aircraft only. Ask for status of pending STCs.....P/N 13-03266 ..... **$698.00**

H3R QUICK RELEASE FIRE EXTIGUISHER BRACKET



Fire extinguisher quickly releases from bracket. Fiberglass reinforced nylon construction and corrosion resistant hardware. Designed to meet MIL SPEC 810G (test in progress). Tested to withstand inertial loads in excess of 27G in all directions. Fire extinguisher cannot be accidently disengaged from bracket. Fits H3R Performance fire extinguishers with 4.25" diameter cylinders (B355T). "Pull to Release" flag enhances visibility. Does not obscure fire extinguisher nameplate. Designed for use with H3R Performance vehicle seat mount. Weighs a scant 15 oz!

3" Bracket .....P/N 13-18452.....**$68.90**
4-1/4" Bracket .....P/N 13-18453.....**$58.75**
5" Bracket .....P/N 13-18454.....**$59.85**



RECHARGEABLE, DURABLE EPA-APPROVED HALOTRON 1™

While it is less powerful pound for pound than Halon 1211, Halotron 1 offers all of Halon 1211's clean agent benefits, and Halotron 1 is less damaging to the ozone layer. H3R Aviation offers two Halotron 1 fire extinguishers: one FAA-approved unit for aircraft use and one wheeled unit for the flight line/ramp. These rechargeable extinguishers have pressure gauges and require a 6-year maintenance and a 12-year hydrostatic test P/N 13-02562 ..... **$6,923.00**

PS

SMOKE HOODS - LIFE VESTS

PROVITA SMOKE HOOD



The Provita Smoke Hood provides 20 vital minutes of life-saving evacuation time. It is proven to protect from smoke and 98% of toxins created by fire, including: Chlorine, Ammonia, Acrolein, Hydrogen Chloride, and Hydrogen Sulfide. Lightweight and compact. One size fits all. Smoke hood easily comes out of its 8" x 6" x 1" vacuum sealed bag - ready for use in seconds. There is no front or back which allows the smoke hood to be put on quickly for panic situations. The rubber seal easily slips over your head and seals - not allowing any smoke through. The smoke hood provides 360 degree vision and 20 vital minutes to escape a smoke-filled room.

P/N 13-11343.....**$189.00**

POCKET SMOKE MASK



NASA graded high temperature resistance Polyamide Film resists heat up to 932 degrees The seven layer filter stops and blocks toxic gases made from non-woven and activated carbon fibers Filters more than 20 minutes of toxic smoke from fire. One size fits all: Adults, Children and Infants. Designed to protect user from smoke in the event of a fire. Simple to use, easy to store. Fits in brief case, purse, carry on luggage. Hood allows full 360 degree sight, talk and hearing capability. Heat Resistant – resists heat up to 932 degrees F. Provides 20 minutes of filtered breathable air. Five year shelf life. P/N 13-17891.....**$39.95**

IEVAC SMOKE MASK / FIRE HOOD



The iEvac Smoke Mask/Fire Escape Hood is the only smoke/fire hood certified to the American Standard ASTM E2952-14. It protects against fire-related gases including carbon monoxide, hydrogen cyanide, smoke, & hydrogen sulfide. The iEvac contains a HEPA filter that removes more than 99.97% of sub-micron particles such as ebola, anthrax, smallpox, and radioactive particles. One universal size can be put on in under 30 seconds. The hood features easy-to-breathe dual filters and is compact, lightweight, and vacuum sealed in a foil bag for a long shelf life. Its unobstructed field of view can be used with eyeglasses, beards, and long hair.

Mask .....P/N 13-18188 ..... **$189.95**
Belt Pouch .....P/N 13-18482 ..... **$17.99**

EAM AIC-35 UNIVERSAL LIFE PRESERVER



EAM's Universal Series Life Preserver is designed with an open area collar to be placed over the head and onto the neck and shoulder area, so that the vest rest on the chest of the wearer over 35 lbs. The vest is secured to the wearer using a harness strap. Inflation is accomplished by either CO2 or oral inflation. Each vest is equipped with a light system assembly. The AIC-35 life preserver is also designed for use on infants and small children weighing under 35 lbs.

10 Year ..... P/N 13-19006..... **$55.75**

EAM XF-35 LIFE VEST



Only 1.13 lbs. (513 grams). The XF-35 offers significant fuel savings to operators wishing to stay with the added security of a twin-cell vest. 5 year frequency of inspection standard. Inflated Buoyancy: 35 lbs. minnimum. Approvals: USA FAA TSO-C13f; German LBA Approval No. 40.321/33; United Kingdom CAA Approval No. AR01445. Storage Range: 0 to 120°F (-17.8 to 48.9°C) Humidity: Functional Range: Up to 95% Relative Humidity; Storage Range: Up to 70% Relative Humidity Altitude: -2000 to 45,000 feet above sea level

5 yr. Passenger Yellow ... P/N 13-12677..... **$49.85**
10 yr. Passenger Yellow . P/N 13-12685..... **$49.95**
5 yr. Crew Orange..... P/N 13-12678..... **$49.95**

EAM UXF-35 LIFE VEST



This single cell vest is the lightest weight aviation vest in the world, weighing only .9 lbs (410 grams). 5 year frequency of inspection comes standard, 10 year version available. TSO-C13f Approved. Inflated Buoyancy: 35 lbs. min. Temperature: Functional Range: -40 to 140°F (-40 to 60°C); Storage Range: 0 to 120°F (-17.8 to 48.9°C) Humidity: Functional Range: Up to 95% Relative Humidity; Storage Range: Up to 70% Relative Humidity Altitude: -2000 to 45,000 feet above sea level.

UXF-35 ..... P/N 13-12679.... **$46.95**
UXF-35 (10 year) ..... P/N 13-12684.... **$48.85**

EAM BRAVO LIFE VEST



This continuous wear, yoke style life vest is ideal for helicopter pilots or anyone flying long distances over open water. Includes a 2-inch, extra wide, waist strap for comfort and security. Equipped with water-activated light, retro-reflective tape and a whistle. Optional storage pouches attach to the waist strap to hold signal kit or EPIRB. Easy fold lines for repackaging. Functional Range: -40 to 140 oF (-40 to 60 oC);Storage Range: 0 to 120 oF (-17.8 to 48.9 oC) Humidity Functional Range: Up to 95% Relative Humidity Storage Range: Up to 70% Relative Humidity Altitude -2000 to 45,000 feet above sea level

P/N 13-12680..... **$232.95**

REVERE AQUA LIFE JACKET LIGHT



The AQ40S is a compact flashing life jacket light, automatically water activated by its integral sensors or manually. Its unique size and shape, makes the AQ40S ideal for a variety of life jackets.

Sensor Activated..... P/N 11-14272.... **$17.50**
Lead Activated..... P/N 11-14273.... **$19.50**

EAM INFANT LIFE VEST



This specially designed and affordable life vest is made exclusively for children less than 35 lbs. (16 kg). EAM infant vests come in USA and European versions, for the constantly changing safety markets of commercial carriers.

With Co2..... P/N 13-12681..... **$89.95**
Without Co2..... P/N 13-12778..... **$89.95**

SURVIVAL PRODUCTS LIFE RAFTS



Perfect for general aviation. Small and compact it fits in a lightweight valise 4" x 12" x 14" and weighs only 12 lbs. But don't be fooled by its size, price or weight. This raft will do the job for you under the most adverse condition. It provides a fresh water buoyancy of 190 lbs. per person and a deck area of 3.6' per person which exceeds all Govt. standards. Inflated, the raft is 46' inside and 68' outside and every square inch has been meticulously made from raw materials and components tested for their durability and life expectancy. Every raft is pressure tested and all seams and adhesive bonds rigorously checked prior to release. Raft includes sea anchor, bailing bucket, hand inflation pump, and CO inflation system. Optional survival equipment shown below. 6-13 person raft is 5' x 12' x 14' and weighs 18 lbs. Available in non-TSO'd and TSO'd versions.

Non-TSO'd 4-6 Person Life Raft..... P/N 13-31610. **$1,646.00**
Non-TSO'd 6-13 Person Life Raft..... P/N 13-31660. **$2,036.00**
Non-TSO'd 4-6 Person Basic Raft w/o canopy .. P/N 13-31670. **$2,059.00**
TSO'd 4-6 Person Raft w/canopy only ..... P/N 13-31680. **$2,292.00**
TSO'd 4-6 Person Raft w/91 equip..... P/N 13-31690. **$2,660.00**
TSO'd 4-6 Person Raft w/121 equip..... P/N 13-31700. **$2,899.00**
TSO'd 4-6 Person Raft w/135 equip..... P/N 13-31710. **$3,367.00**
Non-TSO'd 8-12 Person Basic Raft w/o canopy P/N 13-31715. **$2,742.00**
TSO'd 8-12 Person Raft w/canopy only ..... P/N 13-31725. **$3,075.00**
TSO'd 8-12 Person Raft w/91 equip..... P/N 13-31735. **$3,510.00**
TSO'd 8-12 Person Raft w/121 equip..... P/N 13-31745. **$3,674.00**
TSO'd 8-12 Person Raft w/135 equip..... P/N 13-31755. **$4,477.00**
TSO raft with FAR91 kit 6M..... P/N 13-05861. **$4,842.00**

SURVIVAL RAFT ACCESSORY EQUIPMENT KITS

Far 91 Kits includes: canopy with inflatable mast, equipment container, signal flag, 3 signal flares, two cell flashlight with alkaline batteries, first aid kit, raft repair kit, sea dye marker, signal mirror, food rations, water rations, and signal whistle. Far 121 Kits includes: All of above plus: utility knife, survival manual and sponge. Far 135 Kits included: all of above plus: magnetic compass, eight pint desalter, fishing kit, 75 ft. retaining line, two paddles and radar reflector.

Far 91 Emergency Kit..... P/N 13-31620.... **$528.00**
Far 121 Emergency Kit..... P/N 13-31630.... **$698.00**
Far 135 Emergency Kit..... P/N 13-31650. **$1,297.00**

REVERE COASTAL COMPACT RAFT



Double 200 lb. SuperRev™ ballast pockets, it enhances stability in rough sea conditions. Its light weight allows for easy deployment and the compact size makes stowage easy in the smallest of spaces. Operation is easy. Just open the red flap on the valise and extend the painterline. Give a hard pull and the raft inflates automatically in less than 30 seconds. Coastal Compact Raft is not recommended for offshore use.

Raft	Part No.	Price	With Canopy	Price
2	11-07471	**$949.00**	---	---
4	11-07472	**$1,195.00**	11-07473	**$1,295.00**
6	11-07474	**$1,395.00**	11-07475	**$1,487.00**

PS

Prices Subject to Change Without Notice

REVERE AERO COMPACT LIFE RAFTS



Ideal for general aircraft, the Aero Compact series offers an enhanced level of safety for over-water flights. With double 200 lb. ballast pockets, the Aero Compact enhances stability in the roughest of sea conditions. Equipment Pack Contains: 2 Red Hand Flares - USCG/SOLAS, Bailer, Signal Mirror, Paddles, Repair Kit, Seasick Tablets, Water Tight Flashlight, Extra Flashlight Batteries, Whistle, Sponges, Floating Knife. Specifications: Weight: 13 lbs • Dimensions - Packed (L"xW"xH"): 14 x 9 x 5. ***Neither Canopies or Equipment Packs are available for 2-Person Aero Compacts.**

2 Person ..... P/N 11-09399 ..... **$1,042.00**
4 Person ..... P/N 11-09401 ..... **$1,360.00**
4 Person Canopy ..... P/N 11-09402 ..... **$1,568.00**
4 Person Canopy and Standard Kit ..... P/N 11-09403 ..... **$1,874.00**
4 Person Canopy and Standard Kit Plus ..... P/N 11-09404 ..... **$1,780.00**
4 Person Canopy and Deluxe Kit ..... P/N 11-09405 ..... **$2,295.00**

REVERE AERO ELITE LIFE RAFTS



The Aero Elite offers both crew and passengers easy usage when facing the stress of a life threatening situation as opposed to other liferafts that can be difficult to lift and transport at the time of need. Vertical bulkheads inside divide the tube into two independent air-holding compartments. If one compartment is punctured, the other keeps you afloat. Offers a spacious 4 square feet per person. Inflatable floor, stowage pockets, zippered windows, flashing strobe, extra large ballast pockets, an extensive equipment pack including USCG/SOLAS flares plus much more. If serviced according to manufacturer's specs, the Aero Elite offers a 12 year warranty.

4 Person ..... P/N 11-09409 ..... **$2,759.00**
6 Person ..... P/N 11-09411 ..... **$2,935.00**
8 Person ..... P/N 11-09412 ..... **$2,990.00**

SWITLIK INFLATABLE LIFE RAFTS



The Switlik ISPLR brings advanced military design and mission-proven durability to a single place life raft available for mariners and pilots who are serious about their personal lifesaving equipment. Fully reversible. The unique U-shaped design allows the raft to be fully reversible, allowing quick, easy entry from the water - whichever side is up when it automatically inflates. The ISPLR's low slung floor design allows seating at a slight recline lowering the center of gravity well below the water-line, increasing stability in rough waters. Zip to the elements. Twin zippers, located on either side, allow you to partially close the canopy, keeping the elements out while providing great ventilation.

Brick Valise, Hermetically Sealed w/Floor ..... P/N 13-18417 ... **$1,199.00**
Brick Valise, Hermetically Sealed ..... P/N 13-18418 ..... **$999.00**
Soft Valise, Loose Pack ..... P/N 13-16033 ..... **$925.00**
Soft Valise, Loose Pack w/Floor ..... P/N 13-18419 ... **$1,099.00**
Belt Pack, Hermetically Sealed ..... P/N 13-18420 ... **$1,199.00**

REVERE COMFORTMAX™ INFLATABLE PFD - RED TYPE III



Features: •USCG approved for persons at least 16 years of age weighing 80 lbs. and above with a chest size between 30" and 52" •Dual waist belt stainless steel adjusters. Provides for easy adjustment with both hands and a more custom fit •Exterior inflation system access flap. Allows for clear, direct access to the CO2 cylinder for rearming. CO2 cylinder can be replaced without opening and unfolding the entire PFD •Waist strap and back strap attachment points fully connected and reinforced from inside for added strength •Heavy duty 420 denier nylon packcloth outer cover •Twin 2" wide back straps for comfort and security •Comfortable neck. The neck area has no Velcro or edge binding to cause chafing or abrasion for all-day comfort.

Red ..... P/N 13-04373 ..... **$94.75**
Navy Blue ..... P/N 13-04372 ..... **$94.80**

REVERE PFD RE-ARMING KIT



This manual PFD Rearming Kit for Comfortmax Inflatable PFDs is an instant CO2 manual inflation system. P/N 13-08831 ..... **$21.50**

REVERE COMFORT MAX MANUAL BELT PACK



Specifications: Model: 45-61098-101N. Sizing: Adult Universal. User Weight: More than 90 lbs (> 41kg) Chest Size: 30"-52". Buoyancy: 35 lbs (156 Newtons). Approx. Unit Dimension: 10"x4"x3". Appro. Weight: 2 lbs. Color: Navy.
P/N 13-08826 ..... **$77.95**



REVERE SPORT MAX MANUAL REARM KIT

Color: Red P/N 13-08829 ..... **$16.75**

EAM TITAN XF LIFE VEST



The TITAN XF is carefully designed to offer advanced protection for crew aboard an aircraft during over-water flight. Created with a heavy-duty front zipper and a fixed mesh back, the TITAN XF remains securely fastened throughout flight.

Blue With D Rings ..... P/N 13-12961 ..... **$342.00**
Blue Without D Rings ..... P/N 13-12959 ..... **$329.00**
Orange With D Rings ..... P/N 13-12961 ..... **$342.00**
Orange Without D Rings ..... P/N 13-12959 ..... **$329.00**

SWITLIK CPR LIFE RAFT WITH PART 91 KIT



SWITLIK's CPR is designed to be a high quality, light weight, best in class coastal life raft, with a convertible canopy system, large, fast deploying water ballast bags and heat sealed construction. The CPR provides 1,140 lbs of inflated buoyancy and 19.6 sq. ft of floor area and offers excellent ventilation as well as total protection from the elements. P/N 13-19317 ..... **$4,179.00**

SEE WWW.AIRCRAFTSPRUCE.COM FOR A COMPLETE SELECTION OF EAM SURVIVAL KITS

EAM SURVIVAL RAFTS



Each product is manufactured with the highest quality craftsmanship and are proudly FAA-TSO approved. In addition, EAM is proud to offer customizable raft packaging to meet any client's specifications. When deployed and in the water, the raft may be boarded on either side. Survival items are contained in a kit tied to the raft. Select raft models include a raft canopy, located inside the accessories case, which features two (2) roll-up doors and a rain water collector in the top of the roof panel. The VIP and SAM Series life rafts have auto self-erecting canopies, which have two (2) doors which can be sealed closed with Velcro. Also, the VIP and SAM series canopies are affixed to the life raft with Velcro so if needed the canopy can be removed and reinstalled.

USA: FAA TSO-C70a, Type II
Germany: LBA No. 40.320/12
Japan: JCAB No. 535

• For Air Taxi, Corporate and General Aviation• Single Tube• Compact, lightweight. Constructed of neoprene coated nylon.• High tech inflation system.• Competitively priced.

Part No.	Canopy	Survival Kit	Rated Capacity	Dimensions (LxWxH)/Wt.	Price
13-16560	Radar Reflective	FAR 121	4	15x13x7/36 lbs.	**$3,587.00**
13-16561	Radar Reflective	FAR135	4	15x13x8/39lbs.	**$4,238.00**
13-16562	Standard	FAR 121 Special	4	22x13x5/36lbs.	**$3,281.00**
13-16563	Radar Reflective	FAR 135 with water	4	15x13x8/39.5lbs.	**$4,507.00**
13-16565	N/A	N/A	5	15x13x5/20.5lbs.	**$2,576.00**
13-16558	Radar Reflective	FAR 121	2	27x8.5x8.5/45lbs.	**$3,065.00**
13-16564	Radar Reflective	FAR 121	6	33x16x7/57.5lbs.	**$3,955.00**
13-16567	Radar Reflective	FAR 135	9	26x14x8/55lbs.	**$5,244.00**
13-16559	Standard	FAR 121	9	26x14x8/55lbs	**$5,695.00**
13-16566	N/A	N/A	12	30x10x9/41.5lbs	**$6,324.00**

PS

SWITLIK TSO-C70A TYPE II OPR 8 PERSON LIFE RAFT



SWITLIK's OPR is designed to be a high quality, light weight, offshore life raft, with a convertible canopy system, 5-Year Service and heat sealed construction. The OPR provides 1,350 lbs. of inflated buoyancy and 24 sq. ft. of floor area and offers excellent ventilation as well as total protection from the elements. Quality materials, superior construction.

Part 91 ..... P/N 13-21122.....**$5,129.00**
Part 135 ..... P/N 13-21123.....**$5,319.00**

MUSTANG INFLATABLE LIFE PRESERVERS



INFLATABLE BELT PACK PFD - The Inflatable Belt Pack PFD from Mustang Survival fits around the waist like a belt, staying out of the way until you pull the inflation cord. Redesigned to fit and feel better with a great new look.

The ergonomic design conforms to the body to provide a secure and comfortable fit and is backed with Mustang's neoprene Comfort Lining(TM) to reduce chafing when worn against the skin. The PFD operates by manual inflation, meaning it won't inflate unless you pull the activation cord. Easy to wear and maintain, it inflates to provide 35lb buoyancy, more than twice the flotation of a traditional foam PFD.

A great option for those looking for minimal bulk and wanting to control when their PFD inflates. Recommended for paddlers, paddleboarders, river fishermen and general recreational boaters.

P/N 13-17886.....**$122.75**



MUSTANG INFLATABLE PFD REARMING KIT

Designed to rearm your Mustang inflatable after deployment. This is a 1F Automatic and 3F Manual Inflatable PFD Re-Arm Kit E.

P/N 13-20153 ..... **$36.50**

CLOSED CELL NEOPRENE HOOD



BREATHABLE CONSTANT WEAR AVIATION COVERALL

The MA7348 Closed Cell Neoprene Hood offers increased protection against the elements when worn with Mustang Survival anti-exposure gear. Designed for easy integration with the MSD900, MSD901, MSD585, MAC200 and MAC300, the hood provides exceptional head and neck insulation and includes a lanyard to tether hood to suit, an adjustable mouth guard for protection from spray and a velcro attachment point for an emergency light. Sizes: N/A or Universal Colors: RED

P/N 13-06380 ..... **$60.75**

NOMEX FLIGHT SUITS



This Nomex flight suit is built to military specification FNS/PD 96-17 (MIL-C-83141A) as worn by all U.S. flight crews. Constructed of 92% Meta Aramid, 5% Para Aramid and 3% conductive fiber fabrics, which makes this garment flame-resistant. Features a two-way zipper with pull, six primary pockets, adjustable waist belt with VELCRO® brand fasteners, knife pocket on the left inseam, pencil pocket on the left sleeve and a gusseted back.

Features: • Made with DuPont™ Nomex® N303 Fiber: Its thermal technology helps protect against hazards associated with electric arcs and flash fires including intense heat and flame. It is protection that's built into the fiber itself. So, it can never be washed out or worn away. • Sewn to Military Specification FNS/PD96-17(MIL-C-83141A) • As Worn By All US Flight Crews • Flame-Resistant Material • Two-Way Zipper with Pull • Six Primary Pockets • Adjustable Waist Belt with Velcro Fastener • Knife Pocket on Left Inseam • Pen/Pencil Pocket on Left Sleeve • Gusseted Back • Sage Green and Tan Flight Suits are Near Infrared (NIR) Compliant

Color	Part No.	Prices starting at
Sage	Call or visit our website for sizes and part numbers	**$184.99**
Black		**$184.99**
Tan		**$184.99**

EAM GENERAL SURVIVAL KIT



This kit contains equipment for survival and search/rescue aids for use by aircraft crew and passengers after an emergency landing in uninhabited terrain. Collection of equipment designed for survival and search & rescue situations in case of an emergency.

P/N 13-12823.....**$332.00**

INFLATABLE BELT



Features include reflective tape on the bladder for greater visibility, 2" deluxe web belt with buckle, and single point indicator window. Inflates in seconds to over 35 lbs. of buoyancy. One size fits adults over 80 lbs. with 30 - 52" chest size. Will not inhibit your range of motion while hunting or fishing. U S Coast Guard approved Type III. Rearm kit 38MRK.

Specifications:35 lbs. of buoyancy (over 150 newton) • Equipped with single point indication of arming status • Reflective tape on cover and bladder for greater visibility • Safety whistle attached to bladder • 2" deluxe web belt with buckle • USCG Approved Type III • One size fits adults over 80 lbs. .....P/N 14-00681 .....**$138.95**

SNUGPAK CHRYSALIS SLEEPING BAGS



Chrysalis is a sleeping bag that has evolved to the next level; putting you in control of temperature and comfort by transforming from a warm, snug sleeping bag, into a cool and spacious one, with a built in LED light to assist you. The bag boasts all the features of a quality Snugpak® mummy-style sleeping bag but the jumbo zip baffle can be opened out to give much more room within the sleeping bag by opening the expander panel. The extra space within the bag allows air to move around, keeping the bag cooler. And if the temperature drops, just zip the bag tighter and instantly boost the warmth around you. The Chrysalis is the ideal sleeping bag for unpredictable conditions. LED Light. Expander Panel System (EPS). Chisel Shaped Foot - For Extra Comfort. Zip Baffle. Anti-Snag Two-Way Zipper. Snugfit Hood. Hanging Dry Tabs.

EXPEDITION - Temperature rating: Comfort: -12°C, Extreme: -17°C. Compact pack size: 14 in. (36 x 36 cm.). Open Size: Length: 86 in. (218 cm.). Weight: 92 Oz. (2608 Grams). Width: 152 cm.

P/N 13-17697 ..... **$108.75**

MODEL 1 - Temperature Rating: 45°F to 36°F (7°C to 2°C). Legnth:: 87". Weight:: 35 oz. Width:: 30-24". Pack Size:: 6 x 8". Fill:: Softie®. Shell:: Paratex (micro) with Reflectatherm. Liner:: Paratex (light).

P/N 13-12457 ..... **$119.00**

MODEL 2 - Temperature Rating: 36°F to 27°F (2°C to -3°C). Legnth:: 87". Weight:: 46 oz. Width:: 30-34". Pack Size:: 7 x 9". Fill:: Softie®. Shell:: Paratex (micro) with Reflectatherm. Liner:: Paratex (light).

P/N 13-12458 ..... **$139.00**

MODEL 3 - Temperature Rating: 23°F to 14°F (-5°C to -10°C). Legnth:: 87". Weight:: 56 oz. Width:: 30-34". Pack Size:: 9 x 10".

P/N 13-12459 ..... **$159.00**

MODEL 4 - Temperature Rating: 14°F to 5°F (-10°C to -15°C). Legnth:: 87". Weight:: 69 oz. Width:: 30-34". Pack Size:: 9 x 11".

P/N 13-12460 ..... **$179.00**

MODEL 5 - Temperature Rating: 5°F to -4°F (-15°C to -20°C). Legnth:: 87". Weight:: 85 oz. Width:: 30-34". Pack Size:: 10 x 13".

P/N 13-12461 ..... **$199.00**

PS

Prices Subject to Change Without Notice

SURVIVAL GEAR

SWITLIK AVIATOR LIFE VEST



The Switlik Aviator Life Vest is supremely more comfortable to wear, and specifically designed for the seated position in your aircraft. It's the vest you'll forget you're wearing. The new interior cell folding technique combined with our open V-Neck design allows the Aviator to lay over your shoulders relieving the pressure on your neck during those long flights. We have located our new beaded handle in the center of the vest allowing for an easier approach for deployment. The breakaway safety feature eliminates the risk of snagging. The red handle also offers the best visibility in low light conditions. The Switlik Zipper closure keeps your inflatable vest secure at all times. The simple reliable dual breakaway design provides immediate inflation when activated. Backup oral inflation tubes are conveniently located on either side of the vest and easily reached through the side access flaps. .....

EV-35 Blue ..... P/N 13-12687 ..... **$229.00**
EV-35 Orange ..... P/N 13-16185 ..... **$229.00**

SWITLIK X BACK AIR CREW LIFE VEST



The aptly named X-Back is ergonomically fitted to your shoulder contour for a perfect fit. As accessories are added the weight is distributed over your shoulders and off your neck for vastly improved comfort. The adjustable X-Back straps provide enough range making it one size fits all. The MOLLE (Modular Lightweight Load-Carrying Equipment) system lets you customize your vest with the accessories you need. The contoured cut of the MOLLE side panels locates the accessories away from your midsection. The simple reliable dual breakaway design provides immediate inflation when activated. Backup oral inflation tubes are conveniently located on either side of the vest and easily reached through the side access flaps. High visibility red beaded handles are found on both sides of the vest making for simple activation. They incorporate a breakaway safety feature to prevent snagging.

X Back Blue ..... P/N 13-12688 ..... **$379.00**
X Back Orange ..... P/N 13-16186 ..... **$379.00**

SWITLIK AVIATION LIFE VEST AV-35H



AV-35H Double Cell Airline Passenger Vest. The AV-35H donning style features a single waist strap and adjusting buckle without a back panel. The AV-35H donning style features a single waist strap and adjusting buckle without a back panel.

Standard ..... P/N 13-16031 ..... **$69.99**
5 Year ..... P/N 13-18410 ..... **$76.99**
10 Year ..... P/N 13-18413 ..... **$76.99**

SWITLIK AVIATION LIFE VEST AV-200



The Switlik AV-200 is the latest advancement is airline life vests. Offering airlines a lightweight, compact and inexpensive vest while meeting all the safety features required by the FAA. The AV-200 donning style features a single waist strap with a single adjusting buckle. Meets FAA/TSO C-13f Approval: 2 Year TBO.

Standard ..... P/N 13-16032 ..... **$44.99**
5 Year ..... P/N 13-18411 ..... **$49.99**
10 Year ..... P/N 13-18414 ..... **$54.99**

SWITLIK INFANT LIFE



The ILV-20 is a dual chamber, 23-pound buoyancy Infant Life Vest, (FAA/TSO-CI3d defines "infant" as a wearer with a weight less than 35 pounds). The underarm configuration allows this vest to be used by wearers whose shorter necks prevent use of the standard "yoke-type" vest.

2 Year ..... P/N 13-18409 ..... **$89.99**
5 Year ..... P/N 13-18412 ..... **$92.99**
10 Year ..... P/N 13-18415 ..... **$97.99**

SWITLIK X BACK BOTTLE HOLSTER





The Switlik HEEDS/HABD Holsters are specifically designed to be mounted on an angle, readily accessible and unobstructed by safety restraints. This ideal location reduces fatigue by keeping weight off your neck

HEEDS ..... P/N 13-12689 ..... **$69.99**
HABD ..... P/N 13-12690 ..... **$48.99**

SWITLIK X-BACK BASIC LIFE VEST BLUE



The X-Back Basic incorporates the same fit, adjustment and overall comfort users have come to expect from the Switlik X-Back, with the addition of two permanently attached all-in-one pockets in lieu place of the MOLLE vest attachment loops. This new vest is intended to be a modern version of SWITLIK's previous HV-35 Helicopter Vest. This vest is for users who do not need the MOLLE system and all its accessories. The pockets attached to the vest are intended to fit your essentials "keys, phone, sunglasses & wallet" (and yes, the newest smart phones will fit!) Color: Blue P/N 13-18416 ..... **$329.00**

SWITLIK ALL PAX LIFE PRESERVER BLUE



Whether outfitting a personal aircraft, or a fleet of passengers, the SWITLIK ALL-PAX life preserver is a perfect solution. The ALL-PAX Life preserver has maximum adjustment capability to fit the largest range of size, and provides sufficient flotation for children and adults making it a great product solution for a variety of passengers. Designed for easy donning and constant wear, the ALL-PAX passenger life preserver is perfect for over-water flight protection. Color: Blue.

P/N 13-18741 ..... **$259.00**

SWITLIK X BACK LEG STRAPS



Quick donning adjustable leg straps are neatly stored using the Velcro™ ties making them a clean and simple accessory to have.

P/N 13-12691 ..... **$45.99/pr.**

SWITLIK X BACK MOBILE PHONE POCKET



Safe, secure and easily accessible cell phone holster fits all popular models. P/N 13-12692 ..... **$24.99**

SWITLIK X BACK BUDDY CLIP



When ditching your aircraft it's important for survivors to stay together. The Switlik Buddy Clip allows you to quickly tether yourselves together via a 6 foot (1.8 m) 550 lb (250 kg) test line with a CRES snap hook. When not in use it is neatly packed into a nylon pouch. The pouch is designed to be attached with snaps to the MOLLE system and by dead ending the buddy line loop directly to the MOLLE Loops as a back up. P/N 13-12693 ..... **$24.99**

SWITLIK X BACK ALL IN ONE POCKET



The new All-In-One pocket allows you to organize all your equipment into one area. Complete with two zipper pockets, interior MOLLE straps, interior compartments, and a conveniently located pen holder on the outside. Available in left and right.

Right Side ..... P/N 13-12694 ..... **$49.99**
Left Side ..... P/N 13-12695 ..... **$49.99**

ION FLASHLIGHT FIRESTARTER™



During outdoor adventures, flights over remote areas, or in any emergency survival situation, there are two pieces of equipment that you never want to be without, a flashlight and a firestarter. Solo Scientific combined the two into one lightweight, compact, powerhouse of a product called the ion Flashlight Firestarter™!

The ion Flashlight Firestarter™ is a flashlight, a firestarter, a magnetic tool, has a safety mechanism, is knurled for grip, water proof, shock resistant, and can even be used to cauterize wounds in the field (by qualified medical personnel only).

The energy efficient ion Flashlight Firestarter™ will work in any environment that will support life and uses a super bright (but energy efficient) white LED for illumination. P/N 13-11695 ..... **$118.75**

WATERPROOF NOTEBOOK



Durable waterproof, tear-proof notebook with handy survival essentials checklist on back cover. Great for keeping logs in wet environments and pocket-sized to fit anywhere. Pencil included.

Specifications: 50 page count, Dimensions: 3" x 5", Weight: 2.6 oz.

P/N 11-10522 ..... **$3.95**

PS

PROFORCE SURVIVAL PRODUCTS

SNUGPAK SOFTIE ELITE 2 SLEEPING BAG



An all round two season sleeping bag. Supplied with its own compression stuff sack. Temp. Rating: 36°F / 27°F (0°C / -5°C). Weight: 46oz. Length: 86". Chest: 65" + EPS. Color: Olive. Pack Size: 8" x 8" (fully compressed) .... P/N 13-08778 ..... **$152.15**

SNUGPAK SOFTIE ELITE 3 SLEEPING BAG



Equipped with the unique easy to deploy EPS Expanda Panel System and its own sturdy compression stuff sack. Temp. Rating: Comfort 23°F / Low 14°F (-5°C / -10°C). Weight: 56oz. Length: 86". Chest: 65" + EPS. Pack Size: 9" x 9" (fully compressed)

Black ..... P/N 13-08780 ..... **$194.65**
Olive ..... P/N 13-08779 ..... **$194.65**

SNUGPAK SOFTIE ELITE 4 SLEEPING BAG



Easy to deploy EPS Expanda Panel System. Supplied with its own compression stuff sack. Temp. Rating: Comfort 14°F / Low 5°F (-10°C / -15°C). Weight: 69oz. Length: 86". Chest: 65" + EPS. Color: Olive. Pack Size: 10" x 10" (fully compressed) P/N 13-08781 ..... **$211.65**

SNUGPAK SOFTIE 9 HAWK SLEEPING BAG



Temp. Rating: Comfort 23°F / Low 14°F (-5°C / -10°C). Weight: 53oz. Length: 86" Chest: 60". Color: Olive. Pack Size: 9" x 9" (fully compressed) P/N 13-08777 ..... **$319.00**

SNUGPAK JUNGLE BAG SLEEPING BAG



The Jungle Bag is an ideal sleeping bag for tropical conditions. Travelsoft Insulation was selected and chosen for its exceptional performance in hot and humid conditions. Concealed roll away mosquito netting which can be zipped over the face. Temp. Rating: Comfort 45°F / Low 36°F (7°C / 2C). Weight: 27oz. Length: 86". Chest: 60". Pack Size: 6" x 6" (fully compressed)

Black ..... P/N 13-08783 ..... **$75.65**
Olive ..... P/N 13-08782 ..... **$75.65**
Desert Tan ..... P/N 13-10258 ..... **$75.65**
Red ..... P/N 13-10259 ..... **$75.65**

PROFORCE DRI-SAK



Store your sleeping bag, clothing, and any other items you want to keep dry in a Dri-Sak™. They are seam taped, nylon with a TPU Film Lamination to ensure protection if your gear takes an unexpected dive into the water. They are a great addition that can be used in conjunction with any of the Snugpak® backpacks or any other backpacks. Not intended to be submerged for extended periods of time. Roll-top closure must be closed correctly (recommended rolling 3 times and buckled to keep contents dry). Contact with abrasive or sharp objects can damage and/or compromise the integrity and waterproofness of our Dri-Sak bags. D-Rings for securing if necessary.

Medium - Dimensions: 6.75" x 18.125" / 17 x 46 cm. Volume: 8 liters. Weight: 2.29 oz. / 60 g

Olive ..... P/N 13-08784 ..... **$20.00**
Black ..... P/N 13-08785 ..... **$20.00**
Coyote ..... P/N 13-08786 ..... **$20.00**

Large - Dimensions: 8.5" x 20.75" / 22 x 53 cm. Volume: 13 liters. Weight: 3.17 oz. / 90 g.

Olive ..... P/N 13-08787 ..... **$24.00**
Black ..... P/N 13-08788 ..... **$24.00**
Coyote ..... P/N 13-08789 ..... **$24.00**

PROFORCE PORTABLE WATER FILTRATION RADIOLOGICAL REPLACEMENT FILTER



Portable water filtration system replacement filter for the 28oz and 38oz protable water bottle and centeen.
P/N 13-12002 ..... **$47.85**

PROFORCE LENSATIC COMPASS



Lensatic Compass is great for anyone's survival bag to help one if the situation arises where they are separated from their group, lost their way on the trail or find yoruself in a dire drastic survival situation.
P/N 13-12003 ..... **$24.95**

PROFORCE MAP COMPASS



Map Compass features include: 3 scales, Liquid Filled, Map Symbol Drawing Holes, Lanyard included, Acrylic clear base w/ruler, Rotating Rings, Index lines, and Magnifier. 1.52oz. 5.51x2.36x.41. P/N 13-12004 .... **$9.95**

MULTIMAT SUPERLITE MAT



Offering the lightest and most compact options, using the very latest ultra light materials, meeting the highest standards for quality and reliability. Ultra-lightweight 20D rip-stop polyester top and base fabric. Quality ultra-lightweight, vertically drilled 14kg/m3 PU foam core for lasting performance and full inflation. TPU membrane for air-tight seal. Easy valve can be locked while adding air by mouth. Mats supplied with stuff sack matching upper fabric, retaining band and repair kit. Size: 72" x 20" x 1" (1830 x 510 x 25mm). Weight: 18 oz (530g). Temp Range: 5ºF to 130ºF (-15°C to +55°C). Color: Olive/Black (reversible). Compactness: 10.25" x 4.75" mid-folded (260 x 120mm) ..... P/N 13-10253 ..... **$84.15**

PROFORCE EMERGENCY SURVIVAL BAG



The NDûR Emergency Survival Bag comes in a small compact packable size but yet opens into a full sized sleeping bag that will fit a fully clothed adult. It is made of a strong insulating material which reflects back 90% of the user's body heat. It not only helps to provide protection in various weather conditions but also prevents and assists treatment of Hypothermia. P/N 13-08798 ..... **$8.50**

PROFORCE COMBAT CASUALTY BLANKET



The NDûR Emergency Survival Blanket is made of strong insulating materials that reflects 90% of radiant body heat, reversible olive to silver. This large survival blanket provides emergency protection in all weathers and prevents and assists treatment of Hypothermia. Blankets are used as first response for preventing hypothermia in trauma cases. Hypothermia in trauma cases occurs regardless of ambient temperature. Stopping heat loss should begin immediately. It can also be used as a signaling device for easy identification P/N 13-08797 ..... **$4.35**

PROFORCE BACKPACKER MOSQUITO NET



Supplied with hanging kit and stuff sack, very compact, single point net for occasional use when backpacking space is at a premium. Fits snugly over single bed. The double strength valance with tent peg loops makes it ideal for outside use with a sleeping bag and pad. Treated with Deltamethrin as recommended by the World Health Organization, for added protection against insect borne diseases such as Malaria, Dengue Fever and Encephalitis. Color is Olive. Weight: 8 oz
P/N 13-08791 ..... **$33.15**

SNUGPAK® IONOSPHERE



The Ionosphere 2™ by Snugpak® is an extremely small and compact 1 person tent. The Ionosphere™ has a very low profile and is great for those looking for a 1 person tent to keep out of the elements. Just like The Bunker™, the Scorpion 3™ and Scorpion2™ the Ionosphere™ also too has a 5000mm PU Coated Fly. The Ionosphere™ has a single entry point, No-See-Um-Mesh and all seams are seam taped. A very impressive small compact tent by anyones standard. 1 Door, All seams are taped sealed Alloy Stakes (14 + 2 Spare Stakes), Comes with a Repair Kit to allow for repairs while on the move if needed.
P/N 13-10260 ..... **$194.65**

SNUGNUT



The Snugnut is an insulated hat and earmuffs in one. Constructed from the same high performance fabrics and Softie insulation used in our high performance sleeping bags this UK made deerstalker style hat is the ultimate in both day and night cold weather protection for your nut (AKA, Head) and ears.

Black ..... P/N 13-10267 ..... **$44.25**
Olive ..... P/N 13-10266 ..... **$44.25**

PILE PANTS



Temperature:: 23°F / 14°F -5°C / -10°C. Team up these pile lined Paratex Light pants with either the Snugpak® Pile Smock or Pile Elite Smock for an exceptionally warm wicking base layer system. Designed to be worn next to the skin to maximize the moisture management properties. Weights: 23oz to 27oz (Depending on Size).

Size	Olive	Price	Black	Price
Small	13-10264	**$179.25**	13-10265	**$179.25**
Medium	13-10264-M	**$179.25**	13-10265-M	**$179.25**
Large	13-10264-L	**$179.25**	13-10265-L	**$179.25**
X-Large	13-10264-XL	**$179.25**	13-10265-XL	**$179.25**
XX-Large	13-10264-XXL	**$179.25**	13-10265-XXL	**$179.25**

PS

Prices Subject to Change Without Notice

PROFORCE SURVIVAL PRODUCTS



PROFORCE SURVIVAL MATCHES 2PK

Wind & Waterproof safety matches. These matches will burn in the strongest winds and rain for approximately 12 seconds. 25 Matches per sealed plastic tube with striker. Proudly made in England and has an assigned NATO Stock Number 9920-00-966-9432

P/N 13-08792 ..... **$8.75**



PROFORCE ARMY FIRE STEELS & STRIKER

Easy and safe to use – Used by Swedish Special Forces – Will light a fire or ignite the fuel in a camping stove in rain or snow – Generates a 3000 C spark – Approved, preferred and recommended by Survival Experts Worldwide. Approx. 12,000 Strikes

P/N 13-08794 ..... **$10.20**



PROFORCE COMMANDO WIRE SAW

The strongest (over 100 lbs breaking strain) and most effective wire saw available. Cuts through wood, plastic, bone and even soft metals. Constructed using 8 strands of interwoven stainless steel wire, will easily reach inaccessible places. Attach rope to split rings on each end to cut higher branches. 24" sawing edge. Can also be used as a snare. Many uses for the outdoor and house. Retail Packaged. P/N 13-08795 ..... **$6.95**



PROFORCE MARINE SAFETY WHISTLE

High pitched signaling whistle. NATO approved. One piece construction with lanyard hole. Bright Orange. Made in the UK. Ideal for Survival Kits.

P/N 13-08801 ..... **$1.35**



PROFORCE HEAVY DUTY BUNGEE CORDS

Ideal for securing cargo, packs and just about anything. Great for shelter building. Heavy duty 30" long x 5/16" in diameter with black plastic coated hooks. Sold in 4 packs. Color: Olive

P/N 13-08803 ..... **$6.80**



PROFORCE EMERGENCY SIGNAL MIRROR

Robust high impact plastic. Easy to use with one hand. Suns reflection can be seen for many miles. Floats if accidentally dropped in water. Retail Packaged. Measures 2" x 3"

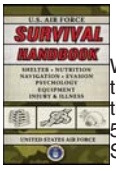
P/N 13-08796 ..... **$6.80**

PROFORCE COMBAT SURVIVAL TIN



Originally designed for the British SAS. Tightly packed in a useful metal tin. Contents include compass, whistle, candle, fishing kit, waterproof survival instructions, wind & waterproof matches, pencil, sewing kit, multi use flexible wire saw w/ split rings (can be used as a bow saw or snare wire), water tablets, safety pins, fire lighting flint and striker and multifunctional knife w / fold out scissors. Assembled in the US. Contents may vary.

P/N 13-08802 ..... **$29.75**



US AIR FORCE SURVIVAL HANDBOOK

Written for use in formal United States Air Force survival training courses, the U.S. Air Force Survival Handbook is the bible for pilots who want to stay alive—no matter what. 592 Pages.

Standard Size 8.5" x 11"..... P/N 13-08790 ..... **$15.50**



RESPONSE PACK

When travelling light, or when you may need to move out in a hurry, it pays to keep all your essential items together, with a place for everything this multifunctional carry case also doubles as a fanny pack, or as the British would call it, a bum bag. We use the same heavy duty materials in the Response Pak as we do in our series of backpacks. The Response Pak has a multitude of hidden internal storage pockets. The Response Pak has quickly become a favorite among military members as a great little med bag, perfect for those vital items each soldier needs. Supplies are NOT included

Olive ..... P/N 13-10261 ..... **$24.65**
Black ..... P/N 13-10262 ..... **$26.50**
Coyote..... P/N 13-10263 ..... **$24.65**

THE SNAPPER CANOPY ESCAPRE TOOL



The Snapper (Tool for canopy escape to break shards of plastic after flip-over for escape). This tool was developed specifically for the RVs. This little tool could really save the day in the event of a flip over in your RV. We learned that almost all flip overs result in the canopy being broken and cracked. At first glance one would say that is a good thing, and should help facilitate a speedy exit.

P/N 05-12378 ..... **$8.95**

BRITE STRIKE ULTIMATE PILOT LIGHTED SURVIVAL KNIFE



The hollow ground blade is hand finished to a razor sharp edge. Spring Assisted Opening is best in class. 45 lumen mini-aluminum LED white light. The light can be quickly removed from the body of the knife and operated independently. The rare earth magnetic base allows the light to be mounted on the blade for a 90 degree light. A second aluminum mini flashlight with red LED is included. Both LED mini flashlights are waterproof IXP-6. P/N 13-16428 ..... **$124.95**

FLIGHT OUTFITTERS PILOT SURVIVAL KNIFE



The Pilot Survival Knife is more than just a blade. This knife was designed to be the perfect side-kick accessory for pilots. In addition to the two-in-one blade design, there is a built-in LED flashlight on the top of the knife. The handle also features a seatbelt cutter, a glass breaker tool, and a clip to secure the knife on a belt or bag. All of these features are neatly contained within the rugged yet attractive grey and black handle. Two-in-one blade design, Integrated LED Flashlight, Seatbelt cutter, Glass breaker tool, and Belt Clip. P/N 13-20665 ..... **$29.95**

BRITE STRIKE SURVIVAL LIGHT PACK



Brite Strike Survival Pack. This pack lasts for 200 plus hours, can be seen up to 1 mile and has 3 different modes. These are waterproof, dustproof and shockproof. Comes with a heavy duty 3m® Adhesive Back. Six different colors. Includes: 2 Green, 2 Ir 2 Red 2 White, 1 Blue, and 1 Amber.

P/N 13-16429 ..... **$49.95**

BRITE STRIKE EXECUTIVE PRECISION LIGHTING INSTRUMENT



The EPLI™ is the perfect lighting instrument for any outdoor adventure. Super bright, waterproof and shockproof, it slips easily in a day pack or pocket. The EPLI™ has a strobe setting that can be used for SOS signaling and runs on easy to find low cost AAA batteries. Slim and sleek LED penlight made of high grade aircraft aluminum with a graphite anodized finish. The EPLI™ has the heart of a true rugged outdoor flashlight. P/N 13-16430 ..... **$69.99**

BRITE STRIKE BRITE-RESCUE SIGNALING SYSTEM



Brite-Rescue™ is an emergency lighted signaling system. Its ultra-compact size of 1.5" x 5" easily fits into the neoprene pouch and unrolls to 10' long. It has 6 international amber APALS-AIR® light strips, 2 photo-luminescent tape strips, 2 Solas radar reflective tape strips, and offers over 200 hours of signalling capabilities, or a total of 1200 hours if used individually. The APALS-AIR® has two strobe modes, a steady on and can be turned off and reused. The LED's can be seen for 2 horizontal miles and 3 miles by air. It can be used on land and floats on water, so don't take off on your outdoor adventure without one.

P/N 13-21092 ..... **$69.95**

PS

GLOVES – SURVIVAL KITS

GENERAL UTILITY PLUS GLOVES



All-purpose and abrasion-resistant. This is the ideal performance work glove. Heavy duty non-slip reinforcement on the palm, fingers and thumb ensures lasting durability and grip. The ergonomic design reduces hand fatigue while enhancing wrist support. Features a terry cloth brow wipe on the thumb. This glove is ideal for any number of rugged applications.

Large ..... P/N 13-09814 ..... **$22.50**
X-Large..... P/N 13-09815 ..... **$22.50**

TACKMASTER PLUS GLOVES



TackMaster Plus is designed to provide superior grip along with dexterity, comfort and durability. The palm is coated with an extra tacky silicone pattern for a secure grip on tools, boxes and windows. The index finger and thumb saddle is reinforced with non-slip in this critical wear area. The terry cloth thumb is made for comfortably wiping away sweat and debris.

Medium..... P/N 13-09816 ..... **$20.85**

PRO XT GLOVES



Pro XT is an extra heavy duty glove designed for rugged applications and total hand protection. The non-slip reinforced palm, fingers and thumb ensures lasting durability and grip. The unique 'one-piece saddle' reinforces this critical wear area. The top of hand features double knuckle protection and moisture wicking fabrics. It also features a terry cloth thumb wipe and supportive, velcro cuff and closure. If you are doing heavy duty work like logging, landscaping, demolition or farming - this is the glove for you.

Medium..... P/N 13-09819 ..... **$24.95**
Large ..... P/N 13-09820 ..... **$25.50**
X-Large..... P/N 13-09821 ..... **$25.50**

WATERPROOF WINTER PLUS GLOVES



Waterproof Winter Plus is the ultimate winter work glove. 100% Waterproof and windproof, this glove is designed to keep your hands warm and dry without sacrificing dexterity. Triple layer technology of micro-fleece liner, waterproof membrane, and form-fit outer shell. Durable, dexterous, comfortable and warm - if you work or live in cold, wet winters you need this glove.

Medium..... P/N 13-09822 ..... **$35.50**
Large ..... P/N 13-09823 ..... **$35.50**
X-Large..... P/N 13-09824 ..... **$35.50**

MAGID ROC GP110 GREY GLOVES



Made from an ultra-soft, grey, high-density, 13-gauge, seamless machine knit nylon blend, the ROC GP110 Work Gloves feature a full black micro foam coating offering exceptional comfort, flexibility, dexterity and added protection to the palm and back of the hand.

Micro foam nitrile coating improves upon the softness of standard nitrile while delivering a superior grip in dry or oily conditions. The nylon blended shell is ultra-soft and breathable. In addition to its comfort-enhancing properties, the ROC GP110 Gloves provide protection against cuts and abrasions, offering ANSI Cut Level 1 protection and ANSI Level 4 abrasion resistance. ROC GP110 Gloves have color coded knit wrists with matching color overcasts for easy sorting and dispensing and incorporate a rubber band edge finish to help prevent unraveling.

Size 10..... P/N 13-09637 ..... **$4.95**
Size 11..... P/N 13-09638 ..... **$4.95**

FLIGHT LEVEL 220 SURVIVAL KITS

Flight Level 220 is a brand built on the importance of having the proper equipment in an emergency situation. Safety and survival start with preparedness; we make this easier by providing high quality first aid and survival products incased in durable materials to survive the elements.

Our products are designed by pilots with many hours of experience, with the understanding of safety in the forefront of all operations. Our team also consists of emergency and medical professionals that are on the front lines for first responders. Together we designed FL220 family of products to meet or exceed all aviation regulations.

Quality and integrity in our products and service are the most important part of our business. We stand behind our products and support our customers around the world. Aviation safety is our passion and mission. We strive to make your next flight better prepared with more confidence in your safety.

STANDARD - Flagship kit from Flight Level 220. Combining a jungle kit, first aid and survival kit in to one practical unit. Over 100 item to assist you in any challenge, including rendering first aid, signaling, fire, shelter, and fluid, food replacement. All items in a water tight, dust proof, crush proof Pelican Case. Essential for over water or over jungle flights. Safety comes with preparation for any situation. Meets and exceeds INAC requirements. 10.62" L x 9.68" W x 4.87" D. 7 lbs (3.2 Kg Approx.)



P/N 13-15955 ..... **$350.00**

LITE - The FL220 Survival Kit Lite is the perfect fit for the pilot that invest in safety. General aviation can only be safe with the right safety equipment on board. FL220 has put together and array of essential and "what if" items in a small durable case to cover any situation. Pilots think safety first and Flight Level agrees . Meets and exceeds FAA Far 91 requirements. 9.12" L x 7.56" W x 4.37" D. 8.5 lbs (3.9 Kg Approx.).



P/N 13-15956 ..... **$193.75**

FAA - The FL220 First Aid Kit is built to ensure its integrity in any situation. The Pelican case gives its users confidence in the content when needed most. Design to meet and exceed FAA Far 91 • 121 • 135 requirements as well as other aviation authorities. Each Kit is inspected and secured with a numbered break-away tag. 11.64" L x 8.34" W x 3.78" D. 3.5 lbs (1.6 Kg Approx.).



P/N 13-15957 ..... **$138.95**

FAA DELUXE - The FL220 Expanded Survival Kit was design to exceed all expectations for safety and survival. Equipped for commercial or general aviation aircraft, it stands ready for any situation. FAA FAR 91, 121, 135 - INAC. 10.62" L x 9.68" W x 6.87" D. 8.5 lbs (3.9 Kg Approx.).



P/N 13-15958 ..... **$457.00**

PS

SURVIVAL KITS - FIRST AID KITS

TWO-MAN V.I.P. SURVIVAL PACK



It's staggering just how much useful equipment comes out of this 10"h x 11"w x 4"d backpack. Everything arranged logically and available the way you'd want it. Organized into 6 major divisions: medical/first aid, food & water, shelter & protection, fire & cooking, signals & lights, & "emergency devices," Wt; 20 lbs P/N 9217 ..... **$282.95**

NYLON CASE FIRST AID KITS



MODEL A FIRST AID KIT - International Orange Case Velcro Hold-Downs 10 FA Unit Kit Contents: • 1" X 3" Adhesive Bandages (16 Bandages) • First Aid Instruction Book • Adhesive Tape (2 Rolls) 1/2" x 2-1/2" yards each • 24" X 72" Gauze Compress • 4" Bandage Compress • Scissors • 2 Triangular Bandages 40" x 40" x 56" • Ammonia Inhalants (10 Capsules) • 6 Burn Gel Packets • Wire Splints 3-3/4" x 27" • PVP Iodine Wipes (10 Wipes) • Orange First Aid Case P/N 13-02944 ..... **$94.25**



MODEL B FIRST AID KIT - International Orange Case Velcro Kit Contents: • Burn Gel Packets • Aluminized Thermal Blanket • Sissors • Emergency Strobe • Hema-Flex 4" Bandage Compress • 36" X 48" Gauze Compress • 1" X 3" Adhesive Strips • 1/2" Adhesive Tape (2 Rolls) • 2 Triangular Bandages • Ammonia Inhalants • Wire Splints • PVP Iodine Wipes.

P/N 13-02945 .... **$115.95**

FIRST-AID SAFETY SCISSORS



Angle Kit Plastic Handle Scissors 4 1/2" can be used in all first aid kits.

P/N 13-12036 ..... **$1.95**

AIRCRAFT EMERGENCY SURVIVAL KIT



This is an ideal emergency support kit for plane, boat, home, office or school. This kit will sustain a person for 3 days. Includes: 2400 calories of ready-to-eat US Coast Guard approved food, sterile Coast Guard approved water, a lightweight (54' x 48") durable, waterproof blanket, & assorted first aid supplies, matches etc. P/N 9641 ..... **$29.95**

ODEO LED FLARE



Traditional flares will illuminate for around 30 seconds before extinguishing: the Odeo Flare™ illuminates for around 6 hours at full illumination. Because no pyrotechnics are used, the Odeo Flare™ is totally safe when switched off, and because it uses battery power (high power Lithium or Alkaline cells), it can even be safely posted or carried in baggage on flights.

P/N 13-18207 ..... **$137.75**

3M™ ULTRATHON INSECT REPELLANT



Unique, time-release technology allows you to enjoy the outdoors longer. Provides lasting protection — up to eight hours against mosquitoes, gnats, chiggers, biting flies and ticks. Helps reduce the risk of contracting West Nile Virus and Lyme Disease.

2 oz. Lotion..... P/N 09-01723..... **$6.90**

STAINLESS STEEL CARABINER



Stainless steel karabiner for the best flying performance guaranteed load 26kN extremely high tensile strength qualified for tandem flying each single piece is tested with 1700kg. Specifications: Weight: 138.0g

P/N 10-04494 ..... **$32.50**

FIXR 20 IN 1 POCKET UTILITY TOOL



The FIXR™ features an easy, portable solution for all of your everyday tools. Equipped with a quick release clip, this tool easily attaches to your key ring or belt loop. A gold plated revolving disc allows tools to be exposed while in use, so they are never in the way when you don't need them. P/N 13-18339..... **$12.95**

SMARTKNIFE 7 IN 1 UTILITY KNIFE

Much more than just a pocket knife…it's a bottle opener, screwdriver, belt cutter, glass breaker, multi-size spanner and a knife all wrapped up in a high-grade stainless steel body. Handy belt clip and lanyard attachment included. P/N 13-18552..... **$12.75**



QUEASE EASE MOTION SICKNESS RELIEF



QueaseEASE contains 100% pure and natural therapeutic grade essential oils formulated to relieve the queasiness associated with post-operative recovery, chemotherapy, morning sickness and motion sickness. (spearmint, peppermint, ginger and lavender) Works by simple olfaction: The molecules from the oils travel the olfactory track to the central nervous system where they interrupt the nausea cycle. Inhalation can be repeated as often as necessary. Immediately effective and safe for all ages. product will not interact with drugs

P/N 13-07194 ..... **$14.95**

UST BLASTMATCH FIRE STARTER



The patented BlastMatch™ generates a stream of super heated sparks literally three times the heat of a standard match. You can easily light any material (wood, paper, bark, cloth, or man-made fire starting tinder) that a match will ignite. Best of all, you can accurately aim the sparks to ignite a roaring fire in all weather conditions, and the BlastMatch™ will last up to a an amazing 4,000 STRIKES.

P/N 11-10894 ..... **$16.50**

SPACE EMERGENCY BLANKETS



This "two ounces of protection that fits in the palm of your hand" is about the size of a deck of cards when folded, but opens into a 56" (142cm) by 84" (214cm) tough and durable thermal reflective blanket. The Space Emergency Blanket has helped save countless lives, by providing needed personal protection from the harsh elements of Mother Nature. Available in orange on one side and silver on the other, a combination providing greater air-to-ground visibility, particularly against a snow or water background.

P/N 13-06933 ..... **$3.95**

TRAFFIC WAND



This lighted traffic directing wand comes with 6 colored lense discs that change the color glow of the white tapered top. Features: GSA compliant for US military use • Made in the USA of sturdy gray plastic • O-ring sealed for waterproof operation in rainy weather • Lenses (2-red, 1 ea. amber, white, blue, & green), as well as a spare light bulb are conveniently stored in the end cap. P/N 14-00902..... **$22.85**

LIGHTED LINEMAN WANDS



• Used by US Air force • Up to 400 hours operation • 17" long • Waterproof •Uses 2 D batteries (not incl.) • Fluorescent coated diffuser enhances red light output.

P/N 13-08959..... **$29.75**

LED AIRCRAFT PARKING WAND 22" RED LED



Mini LED Signal Lite with 6 LED's. 500+ Hours Runtime with 2 D Batteries. Great for Cars or for Security Uses. LED Bulb Signal/Traffic Lite. 6 Sets of LED Lites. Ultra High Visability. 21 Inches length. Tough ABS construction. 400 Hour battery life.

22" Red..... P/N 11-10803..... **$17.95**
22" White ..... P/N 11-10804..... **$32.85**

STROBEWAND LIGHT



The Strobewand is a hand held, battery powered warning light wand. Designed as a durable, quality-built, essential for traffic control. The Strobewand quickly attracts attention on the ramp. This Strobewand can be operated in the steady state or, with a flip of the switch, produce up to 120 flashes per minute. And readily tucked in a trunk or hung from the belt..... P/N 14-00833..... **$42.70**

PS

SURVIVAL KITS – FIRST AID KITS

CANADIAN-ALASKAN SURVIVOR PAK



Originally designed for pilots flying within Alaskan and Canadian airspace, the CA-20 offers protection against harsh climates in the event of an emergency. It contains over 150 medical and general supply items to help sustain two people for up to 14 days. The space saving design combined with its ample supply of food and water makes the CA-20 a popular choice on board fixed wing, rotor craft, and corporate jets. It's also used extensively by Search & Rescue units! P/N 13-03596.....**$462.00**

EMERGENCY SURVIVAL KIT



Specially designed by a focus group, the ESK-02 makes it easy to be prepared for life's little surprises. Each kit contains over 40 medical and general supply items including a guidebook that offers survival tips and basic information. Designed to support one person for up to three days, the ESK-02 carries a five-year shelf life on food and water. Its affordable price makes it a great choice as a premium/ incentive item, corporate gift, or employee award.

P/N 13-03606.....**$34.50**

THE TRAVELER KIT



The Traveler Kit - Personal Care Package is appreciated by everyone from busy executives to sports enthusiasts. It's the perfect addition to any car as the "other spare" to have on hand for life's unexpected moments. Designed to support one person for up to three days, it contains over 50 support items in a custom nylon carrying bag with reinforced straps. "The Traveler" is ready to go anywhere P/N 13-03607.....**$65.75**

2-PERSON EMERGENCY SURVIVAL KIT



This deluxe 2 PERSON EMERGENCY SURVIVOR KIT could mean the difference between disaster and survival in an emergency situation. It contains a complete 3-day supply of food, water, medical & other emergency supplies for 2 people.

Over 60 Emergency Items! • Emergency Drinking Water Metallic Sachets • 2400 Calorie Emergency Food Rations • Instant Cold Pack • Medical Kit • Disposable Flashlights • Thermal Blankets • AM/FM Portable Radio w/ Batteries • The Wallace Emergency Guidebook P/N 13-03608.....**$74.75**

EMERGENCY BLANKET



This Emergency Blanket (52" x 82.5", 1.5 oz.) provides personal protection from rain, wind, heat, and cold. It's manufactured from extremely lightweight, flexible, space-age material, and retains up to 90% body heat in cold weather. It even deflects heat in hot climates and can be used to offset hypothermic reactions. The Emergency Blanket is waterproof, reusable, and portable. It's perfect for camping trips and sporting events in addition to emergencies. Keep several on hand for the unexpected! P/N 13-03604.....**$2.95**

PRECISE FLIGHT RESCUE RUCK PRO - 2 PERSON 7 DAY SURVIVAL PACK



The Rescue Ruck includes: food rations, water rations, camping pan, camping stove, water tablets, waterproof matches, first aid kit, SAS Survival Guide , tissues, sunscreen, insect repellent, emergency blankets, emergency ponchos, camping tent, multi tool, flashlight/ radio, survival whistle, gloves, glow stick, rope, duct tape, backpack, anti-septic towelettes, biohazard bag, bandage scissors, protective gown, mosquito head net, 4" bandage compresses, mouth-to-mouth barrier with shield, adhesive tape, roller bandage, triangular bandage, 9 hour candles, storm proof matches, waterproof match case, axe, survival fishing kit, latex gloves. Must buy your own flares. Additional winter supplies might be required by some regulatory agencies from October through April. Check with your regulatory agency.

2 Person/7 Day Pack P/N 05-15070..... **$488.00**

PS

FIRST AID 'N TRAVEL KIT



Finally—a compact, complete travel unit for the person on the go! This kit fits perfectly in a purse, briefcase, or glove compartment, and is ready when you need it in first aid situations. This kit is very special because it's the only one of its kind to include a 4 oz. sterile water packet with a five-year shelf life. Ask us about using this kit for fundraisers or corporate promotions! We can customize the kit to include your company's logo.

P/N 13-03605.....**$11.50**

COCOON SLEEPING BAG



The All Weather Pocket Size Sleeping Bag The Cocoon Sleeping Bag (84" x 36") provides personal protection from rain, wind, heat, and cold. It's manufactured from extremely lightweight, flexible, space-age material, and retains up to 90% body heat in cold weather. It even deflects heat in hot climates and can be used to offset hypothermic reactions. The Cocoon is waterproof,reusable, and portable. Keep several on hand for the unexpected!. P/N 13-03603.....**$3.85**

EMERGENCY FOOD RATIONS



Individualized portions eliminate the messy breaking-up that occurs with other bars Allows for on-land emergency consumption in a high-stress active situation. Contains no cholesterol or tropical oils. Enriched with vitamins and minerals exceeding the RDA requirements. Pleasant lemon flavor which appeals to everyone. 5 year Shelf Life. Non-Thirst Provoking. Withstands Temperatures of -40° F to 300°F (-40°C to 149°C)

13-03602: Ready to Eat- Each package contains 3 pre-measured 400 calorie meals.
13-03601: Ready to Eat: Each package contains 6 pre-measured 400 calorie meals.
13-03599: Ready to Eat: Each package contains 9 pre-measured 400 calorie meals.

Mainstay™ 3600 ..... P/N 13-03599 .....**$7.50**
Mainstay™ 2400..... P/N 13-03601.....**$5.95**
Mainstay™ 1200..... P/N 13-03602.....**$3.95**

EMERGENCY WATER PACKETS



Mainstay™ Water Packets - All water is not created equal! Here at Survivor Industries we have spent years perfecting our Mainstay™ Water Packets. The final result is a portable product with a 5-year shelf life. Other Key Benefits: • U.S. Coast Guard approved • No Oxygen Transfer (In other words, no chance of bacterial contamination) • Pre-Measured Packets make the water easy to dispense, and potential for loss is minimized. If a packet is destroyed, only 4.224 ounces (125 ml) would be lost. • Easy to Transport - just 18 lbs. (8.17 kg) per case of 60 packets. • No special storage required - it can withstand temperatures from (-40°F to 210°F) (-40°C to 99°C) •Very Low Cost. • No Cups Needed!

P/N 13-03598.....**$16.75**

THE WALLACE GUIDEBOOK



For Emergency Care & Survival - When you're faced with a disaster, you can often face physical and psychological strain. It's often hard to remember what to do in an emergency situation, and this is exactly why we've written the Wallace Guidebook. This book is specifically designed to present the basics of survival in an extremely easy-to-understand manner. This book discusses the following topics, plus many more: Choking, Heart Attack, CPR, Shock, Burns, Emotional Trauma, Bleeding, Fainting, Wounds, Broken Bones, Fractured Bones, Back Injury, Childbirth, Auto Breakdown, Temperature Extremes, and the 1st and 2nd Rules of Survival. It's not fun to be in one of these situations, but having a book like this nearby gives you a better chance of a happy ending. P/N 13-03597.....**$5.95**

EGEAR 30 DAY LANTERN



The eGear™ Lantern is lightweight and can double as hanging light when globe is removed. Three 1.4W Nichia LEDs Up to 300 lumens on "high" setting 4-Mode electronic switch (press button) HIGH, MEDIUM, LOW & SOS-FLASHING. Amber LED Indicators show brightness levels. 30 days on 'low' mode, 3.5 days on "medium" mode, 32 hours on "high" mode, 15 days on SOS Flashing mode. Green LED indicator flashes on 'off' mode to show lantern location in darkness. Removable globe provides forward area light. Rubberized housing enhances impact resistance. Built-in recessed hook at lantern base for hanging as Downlight (see image below). Water and impact resistant. P/N 11-10940.....**$35.50**

Prices Subject to Change Without Notice

SURVIVAL KITS

Crashkit Personal and Professional Flight Line Series aviation survival kits are quickly becoming an industry leader in top quality aviation survival kits. Numerous kits are available to suit you piloting and survival needs.

CRASHKIT ALPHA SURVIVAL KIT



The "Alpha' personal aviation survival kit is designed for the pilot with general knowledge of survival techniques. This kit should only be purchased by experienced and skilled individuals. This kit includes 24 of the most essential items packed into the smallest kit practical. Weighing in at only 1.54lbs, the general kit is small enough to fit in any flight bag, purse, glove compartment, map pouch or cargo pocket.

Every item included in this kit has been thoroughly tested and approved to insure it performs flawlessly when needed (we've even sharpened the knife!) and meets or exceeds Transport Canada's Canadian Aviation Regulations to facilitate survival and rescue. Dimensions : 6.37" x 4.75" x 2.12"(16.9 x 12.06 x 5.4 cm) Weight : 1.54 lbs Contents : 24 items covering food, fire, water, shelter, and first aid Case : Pelican 1020 case - yellow - tough, watertight, polycarbonate case Optional Acc's : Parachute deployment system; Warranty : Lifetime

P/N 13-04684 .....**$169.95**

CRASHKIT BRAVO SURVIVAL KIT



The 'Bravo' Personal Aviation Kit is designed for you. The Bravo Crashkit is small and compact, and includes 76 of the most essential items needed to survive. Kit includes basic first aid, light, fire, signal, shelter and methods for providing clean water and food procurement.

The kit is slightly thicker than the Crashkit 'Alpha', but still small enough to be carried easily in small flight bags, jacket pocket, glove compartment, map pouch or cargo pants pocket. Crashkit 'Bravo' weighs in a 1.6 Kilos or 3.52lbs.

While water resistant, crushproof and relatively small, this kit still exceeds all Transport Canada requirements for aviation survival. And with every item tried and tested to ensure it will work flawlessly for you when you need it most, you can count on the tools you need, when you need them. P/N 13-04685 .....**$268.95**

CRASHKIT CHARLIE SURVIVAL KIT



Including 71 of the most essential items, this kit is extensive in its coverage of necessary tools and supplies. Packaged in a Pelican 1120 case, 'Charlie' is still compact and lightweight enough for easy transport and storage. Every item in this kit has been thoroughly tested and approved to ensure it performs flawlessly when needed, as well as to ensure the ease of use for each individual piece. This kit meets or exceeds Transport Canada's Canadian Aviation Regulations to facilitate survival and rescue. This kit now contains Aquatabs Water Purification and The Spark-Lite Flint and Tinder Kit. Each package of Mainstay Food Rations contains pre-measured 400 calorie individualized portions,non-thirst provoking lemon flavor daily meals, and suitable from -40F to 300F and ready to eat. The tasty bars contain no cholesterol or tropical oils. Meets all guidelines set by the Department of Defense(SOLAS 74/83). Exceeds the RDA requirements. In an emergency situation, ration to one portion per day or less. Dimensions : 20.6 x 16.7 x 9 cm (8.12" x 6.56" x 3.56") Weight : 1.85 kg (4.07 lbs) P/N 13-04686 .....**$344.95**

CRASHKIT 2-7 SURVIVAL KIT



As a pilot with a professional responsibility to others, we know you will want only the best survival options. The 'Crashkit 2:7' has been designed for use in a typical GA light aircraft and contains over 200 essential items needed to sustain two people for seven days. This Aviation kit contains multiple options for the provision of food, fire and water, including Aquatabs Water Purification Tablets and the Spark-Lite Flint and Tinder kit.The kit is packaged in a Pelican 1200 case and remains lightweight and compact for ease of storage. As with all Crashkits, all products have satisfied rigorous testing to ensure they surpass Transport Canada regulations for aviation. Crashkit 2:7 exceeds all Transport Canada and Federal Aviation Administration regulations for both survival and first aid, 1-6 person. Dimensions : 27 x 24.6 x 12.4 cm (10.62" x 9.68" x 4.87") Weight : 4.31 kg or 9.50 lbs

P/N 13-04690 .....**$529.95**

CRASHKIT 4-7 SURVIVAL KIT



The Crashkit 4-7, designed for use in typical GA light aircraft and commercial aircraft, contains the materials necessary to sustain four people for seven days in the event of a crash. The variation of items within the kit allows for multiple options for food, fire, water and shelter; for example, in addition to the Mainstay packaged food, a fishing kit and snare are also included. This kit contains 232 of the most essential items needed in a survival situation, packaged within an indestructible Pelican 1400 case.

Every item included in this kit has been thoroughly tested and approved to ensure it performs flawlessly when needed, and meets or exceeds Transport Canada's Canadian Aviation Regulations to facilitate survival and rescue. Dimensions :13.37" x 11.62" x 6.00 " (34 x 29.5 x 15.2 cm) Weight : 17.55lbs Contents : 232 items covering food, fire, water, shelter, and first aid Case : Pelican 1400 case - tough, watertight, polycarbonate case Kit Coverage : 4 people for 7 days (or longer dependent on situation) Optional Acc's : Parachute deployment system; Warranty : Lifetime.

P/N 13-04691 .....**$926.00**

CRASHKIT 6-7 SURVIVAL KIT



Intended for commercial aircrafts, our Crashkit 6-7 has enough materials to sustain six people for seven days in the event of a crash. Various means of food, fire, water and shelter allow for multiple options; for example, this kit includes not only Mainstay water, but the means for purification, as well as hot chocolate or tea. Within this indestructible, crushproof and waterproof Pelican 1450 case, 261 of the most essential items needed in a survival situation are packaged and ready for easy use. Every item included in this kit has been thoroughly tested and approved to ensure it performs flawlessly when needed, and meets or exceeds Transport Canada's Canadian Aviation Regulations to facilitate survival and rescue. Dimensions : 16" x 13" x 6.88 " (40.6 x 33 x 17.5 cm) Weight : 22.80lbs Contents : 261 items covering food, fire, water, shelter, and first aid Case : Pelican 1450 case - tough, watertight, polycarbonate case Kit Coverage : 6 people for 7 days (or longer dependent on situation) Optional Acc's : Parachute deployment system; Warranty : Lifetime.

P/N 13-04692 .....**$1,195.00**

MILITARY PILOT SURVIVAL KITS



SURVIVAL TOOL KIT - Total weight is 3 lbs. Custom designed, adjustable carrier pouch holds equipment. Can be worn around waist, used as tourniquet or with wooden dowels as splint. Dowels help with fire-starting. Blunt-tipped Meyerco Rescue One knife prevents injury, cuts seat belts and harnesses. Handle includes carbide glass breaker. Two emergency blankets. Emergency signaling mirror. Victorinox SwissTool includes: pliers, screwdrivers, wire cutter, cap lifter, blades, metal file and saw, wood saw, reamer and punch, chisel/scraper, crate opener, wire bender, stripper and scraper, can opener, ruler, electrical crimper. Two-sided screw bit holder with six bits and belt holder. Whistle. MINI MAG-LIGHT® flashlight. Knipex adjustable plier wrench. Magnesium fire-starting tool from Doan Machinery and Equipment. PN 13-05676 ..... **$299.95**



MILITARY PILOT SURVIVAL KIT - Designed by Oregon Aero for the U.S. Navy. The durable carrier pouch is hand sewn by Oregon Aero with pockets for each item. Knife, fire starter and flashlight lanyards attached to carrier. Special zipper permits access to folding knife without opening the carrier. 6.5" high, 5.5" wide, 2" thick. Kit includes: • Gerber® Multi-Tool created especially for this kit by Gerber and Oregon Aero • Gerber® Harsey Air Ranger II Folding Knife • Nexus™ 26DNL Compass • LED Task Light™ Flashlight • Sunscreen Packets • Vacuum sealed Balaclava • Strike Force™ Fire Starting System. Custom designed Multi-Tool includes pliers, wire cutter, file, awl, serrated sheep's foot blade, knife/fish hook sharpener, assorted screwdrivers.

PN 13-05675 ..... **$462.95**

PS



REVERE GLOW PARAHATCHET SURVIVAL CUTTING TOOL

Paracord handle unwraps to provide 8.2ft. (25m) of heavy duty cord for emergency use. Lanyard can be removed for additional 1.6 ft. (0.5m) of cord. 5mm black oxide-finished stainless steel blade. Indudes nylon sheath with belt loop. Multi-sized hex wrenches. Quick-action rope cutter on back of blade. Size: 10”x4”x0.5”. Weight: 11 oz.

P/N 13-15539 .....**$23.75**



REVERE PARAHATCHET SURVIVAL CUTTING TOOL

Paracord handle unwraps to provide 8.2ft. (25m) of heavy duty cord for emergency use. Lanyard can be removed for additional 1.6 ft. (0.5m) of cord. 5mm black oxide-finished stainless steel blade. Indudes nylon sheath with belt loop. Multi-sized hex wrenches. Quick-action rope cutter on back of blade. Built-in wrist lanyard included. Size: 10” x 4” x 0.5”. Weight: 11 oz.

P/N 13-15540 .....**$15.85**



REVERE PARAKNIFE 4.0 SURVIVAL KIT

Kit contents: ParaKnifeTM 4.0, PicoTM 1.0 LED Light, Liquid-filled Button Compass, Micro SparkWheel FireStarter, Light-MeTM Tinder, JetScreamTM Micro Signal Whistle, and StarFlash®Micro Signal Mirror. Size HxWxD: 8.7”xl.34x0.2” (220 x 34 x 4mm). Weight: 8.8 oz. (249g).

P/N 13-15541 .....**$23.95**



REVERE SABERCUT CHAIN SAW SURVIVAL CUTTING TOOL

Flexible 24” blade cuts in a wide variety of angles and with very little clearance. Sharpens with standard 1/8” saw blade sharpener. “Pro” version includes carry case with hook-and-loop closure. “Lite” version comes without the carry case. Can be extended by simply adding extra rope to each handle. Lasts indefinitely with minimal routine maintenance. Self-cleaning saw teeth. Weight: 4.2 ounces (119g) (saw and case).

P/N 13-15542 .....**$23.75**



REVERE SURVIVAL TOOL CARD

Thirteen tools protected by a hard plastic credit card-size case: Attachment loop, Mini Phillips screwdriver, Large flathead screwdriver, Magnifying gloss, 8-sided bolt head wrench, Position wrench (4 different sizes), Butterfly wrench, large flathead screwdriver, Bottle opener, File edge, Sharp knife edge, Can opener, 2 inch/5cm ruler, and Mini compass*. Size closed: 3.3”x2.2”x.5” Weighs 1.6 oz. *For optimum compass performance, separate compass portion from main unit

P/N 13-15544 .....**$4.95**

REVERE WETFIRE TINDER PACK OF FIVE



Works in all weather and at all altitudes. Safe, lightweight and easy to carry. Cube form, individually packaged to maintain freshness. Over 1,300 degree Fahrenheit flame. For use with any UST or other sparking device. 5-year shelf life. Approximate size per cube: 1”x.75”x5”. Approx. weight per cube: 0.16 oz.

P/N 13-15545 .....**$3.95**



REVERE WATER TIGHT CASES

This Watertight Case Keeps Valuables Secure and Dry. Holds keys, credit cards, and others mall essentials. Shatterproof polycarbonate case with o-ring seals for import and water-resistance. (NOTE: Not intended for submersion). Lanyard and biner included.

Dim.(in,.) HxWxD	Weight	Description	Part No.	Price
4.75”x3.75”x1.5”	2.2 oz. (62g)	Holds keys, cedit cards and other small items	13-15547	**$3.95**
6.25”x14”x1.5”	2.6 oz. (74g)	Holds iPhone® or Samsung Galaxy® (or both together)	13-15548	**$4.95**



REVERE COMPASS COMBO

Liquid-filled compass, fahrenheit thermometer and whistle. Break-away lanyard included. Size: 2.75”x1.75”x.125” Weight: .6oz.

P/N 13-15549 .....**$2.50**

REVERE DELUXE MAP COMPASS



Liquid-filled compass with swivel bezel. Extended clear base plate for improved map reading. Multiple measurements scales ror precise route planning. Adjustable marching line. Break-away lanyard included. Size: 4.25”x2.25”x.25”. Weight:.8 oz.

P/N 13-15550 .....**$8.75**

REVERE LENSATIC COMPASS



Liquid-filled compass keeps north arrow steady. Clear base plate with magnifier for easy map reading. Multiple measurement scales for precise route planning. Adjustable marching line. Neck lanyard. Size: 3”x2.3”x.25”. • Weight: .8 oz.

P/N 13-15551 .....**$4.75**

SEE-ME DUO LIGHT



Personal Locator Light with a flashlight on one end and a strobe on the other. Steady-on mode: Provides 37 lumens of light. Runs 14 hours continuously on. Strobe mode: Provides 45 lumens of light. Runs 24 hours continuously flashing. Strobe role = 60 flashes per minute (1Hz). Lifetime LED is unbreakable and never needs to be replaced. Easy twist on/off. Impact and water-resistant IPX8. Wrist lanyard and hook/loop attachment strap included.

P/N 13-15553 .....**$26.75**



NEBO POPPY LANTERN AND SPOT LIGHT

Poppy is a combination 300 lumen C•O•B (Chip on Board) LED lantern and bright LED spot light. Poppy is the perfect light for indoor or outdoor use when versatility and powerful lighting are critical. With a rubberized impact-resistant body, Poppy is both rugged and soft to the touch. Poppy easily changes from spot light to lantern with just a slide of its top, revealing a full 360º C•O•B lantern. The handle is designed to easily adjust to conveniently serve both light modes. 4 Assorted Colors (Yellow, Dark Grey, Red, Green). Lantern color is shipped randomly.

P/N 13-20219 .....**$15.95**

REVERE ENSPIRE LED HEADLAMP



This Revere Enspire LED headlamp has up to 230 Lumens. Runs 160 hours continuously on “Low”. Runs 9 hours continuously on “High”. Lifetime LED is unbreakable end never needs to be replaced. Rubberized housing enhances impact-resistance. Water-resistant IPX4. Focus control adjustment allows for broad or directed beam. Head ratchets to direct light as needed. Battery pack has independently operated red steady-on or red flashing light. Rear battery pack keeps weight comfortably balanced.

P/N 13-15554 .....**$29.95**

SNOW BROOM



The SNO BRuM offers pilots a way to quickly sweep snow off aircraft wings and away from the user. Great for high wing aircraft. The oversized head (6” x 17”) is the largest snow remover available. The aluminum telescoping handle has special cold resistant nylon threads and extends from 27” to 46”. Also great for cars, trucks, SUV’s, and awnings. P/N13-04055..... **$19.65**

UST DELTA SHOCK AND STORM PROOF LIGHTER



Catalyzer coil provides ultimate windproof flame. Withstands winds of 70-80 miles per hour. Burns with clean hot flame at 2,000 degrees Fahrenheit. Flame Indicator Window located on side of combustion chamber glows when lighter is ignited. Fuel Level Indicator visually reveals fuel level. Permits easy, one-handed operation good for over 30,000 ignitions.. Water Resistant O-Ring Seals keep water out when lighter cap is closed. Optimum performance in altitudes up to 8,000 feet.. Not intended for use in altitudes over 10,000 feet. P/N 11-10893.....**$48.95**

PS

Prices Subject to Change Without Notice

ACR FIREFLY PRO SOLAS EMERGENCY DISTRESS STROBE LIGHT



The Firefly PRO emergency strobe light boasts a light output power management system that produces over 41 candela of light per strobe for up to 56 hours of use with AA lithium batteries. Using wide light emission LEDs, it cuts through the foulest conditions creating a super-bright flash visible for over 3.5 miles.
Specifications: • Size: 4.4 x 2.2 x 1.2 inches / 11.7 x 5.7 x 2.8 cm • Weight: 2.39 oz (68 g) (without batteries) • Operation: Manual ON/OFF switch • Waterproof: Factory tested to 33 feet. (10 m) • Lamp: LED - cool white • Strobe Intensity: 41 Candela (Strobe) • Strobe Visibility: Over 3 miles • Strobe Flash Rate: 60 P/M +/- • Strobe Operation: 56 hours • Certification: SOLAS, USCG, MED, IMO LSA, CE. P/N 11-14786 ..... **$65.75**

REVERE SEE-ME LIGHT



Both automatic and manual modes. Fast activation in water Far exceeds USCG requirements for light output and duration. Waterproof/Weatherproof. For use with lithium (5 year) or alkaline (1 year) batteries (not included). Available with lifevest clip and lanyard. USCG Approved/SOLAS compliant. Typical Light Output is up to 1.6 cd (min. requirement by USCG is .75 cd). Typical Operation Time is 29 hrs (min. requirement by USCG is 8 hours)
P/N 10-04579 ..... **$7.90**

REVERE SEE-ME STROBE



Both automatic and manual modes. Fast activation in water. Far exceeds USCG requirements for light output and duration. Waterproof/Weatherproof. For use with lithium (5 year) or alkaline (1 year) batteries (not included). Available with lifevest clip and lanyard. USCG Approved/SOLAS compliant. Typical Light Output is up to 5 cd (min. requirement by USCG is .75 cd). Typical Operation Time is 120 hrs (min. requirement by USCG is 8 hrs)
P/N 10-04580 ..... **$24.50**

TINDER HOT BOX SOLAR FIRE STARTER SURVIVAL KIT



The Tinder HOT Box Solar Fire Starter™ is a tinder storage box that can start a fire using solar energy, and the inside top cover is also a signal mirror! The Tinder HOT Box Solar Fire Starter™ is used to store fire starting tinder in the air/water tight tinder box portion of the unit that is sealed from the elements using an o-ring seal. This keeps the damp air/water out so your tinder always stays dry! The Tinder HOT Box Solar Fire Starter™ is also a solar powered fire starter. It is designed to function in any environment that will support life; the Tinder HOT Box Solar Fire Starter™ will literally function for as long as our Sun will shine and there is tinder to be found! As a matter of fact our Tinder Hot Box Solar Fire Starter will even function on other planets. 2.625 inches in diameter. .725 inches thick. weighs only 4 oz. can easily fit in your pocket. P/N 13-13091 ..... **$39.95**

RESCUEME EDF1 OCEAN SIGNAL FLARE



The rescueME EDF1 electronic distress flare offers users a safe and long-lasting solution to visual signalling in an emergency. The light output is a beam of over 30° throughout the full 360° azimuth, providing in excess of 6 times more light coverage than other electronic flares*. Light is also distributed throughout the hemisphere above the unit to ensure visibility from the air. Unlike single use pyrotechnic flares the rescueME EDF1 can be used repeatedly in any of its four modes, ensuring continued visibility is maintained over a longer period. The unit is both safe to store and operate while also eliminating any worries associated with disposal. The compact size and rugged design means the rescueME EDF1 is the perfect safety product for a grab bag, life raft or hiker's backpack.
P/N 13-20241 ..... **$146.26**
Replacement Battery Pack ..... P/N 13-20243 ..... **$39.99**

AQUAMIRA FRONTIER EMERGENCY WATER FILTRATION SYSTEM



Emergency water filtration system for hiking, camping & emergency preparedness. Effective on protozoan cysts (Giardia & Cryptosporidium). Economical-filters up to 20 gallons. Ultra light & compact (only weighs 1 oz & is less than 5" long). Perfect for emergency kits, foreign travel & outdoor activities. Essential part of your 72 hour emergency kit. Use when drinking from a bottle, cup or directly from a water source. EPA EST.NO. 071766-UT-001. P/N 14-02699 ..... **$11.75**

PERSONAL SIGNALING REFLECTOR



The "Automatic Personal Signaling Reflector" works continuously and automatically 24-7, day and night. You can work on your shelter, gather food/water or rest if injured. Rescuers will not walk by you if you're asleep or if you are unable to respond. The highly reflective silver-coated plastic works with Sunligh, Search Lights and Flashlights. It's always working .
P/N 13-08662 ..... **$13.95**

FIND ME LIGHT STICK



The Find-Me Light Stick with its integrated hook and lanyard hole attaches easily to tents, boats--anywhere you need hours of soft, glowing light. Dimensions: 6" x .75" dia. Weight: .8 oz. (each. 2 Pack (1-Green / 1-Yellow).
P/N 11-11390 ..... **$2.75**

AURORA FIRE STARTER



Made in the U.S.A. Self contained fire starter. Made of knurled anodized aluminum. Includes a cylinder with built in stainless steel blade at the outside base which is struck by the 1/4" thick ferro-magnesium rod, creating a spark. The cylinder and rod screw together and meet at an o-ring creating a waterproof seal to protect the rod from corrosion.
P/N 14-02701 ..... **$19.75**

G.I. AVIATION SURVIVAL FIRE STARTER



Magnesium shaving edge and sparking insert. Government issue.
P/N 14-02700 ..... **$10.99**

AVIATION SAFETY HORN



The aviation safety horn is extremely helpful on the ramp to get someone's attention over the roar of a propeller. Completely electronic - it can run on a 9 volt battery for hours of use! Pumping out a huge 112 decibels of ear piercing pulsating tones!
P/N 11-12917 ..... **$29.00**

GOGIRL SINGLE TUBE



Includes re-usable tube, baggie and tissue. It's a kit in a tube ready to go! Made from Medical Grade Silicone. Lavender with Pink Tube
P/N 13-08566 ..... **$10.50**

FIREBOMB FRAGRANCE DEODORIZER



FIREBOMB is a water-based fragrance that provides lasting sensory enhancing aroma when you want it. It is safe and effective to use on interiors, carpets, upholstery, and everywhere else that can use deodorizing. Made in the U.S.A.
4 oz. ..... P/N 14-03332 ..... **$4.35**
16 oz. ..... P/N 14-03330 ..... **$10.85**
1 Gallon ..... P/N 14-03331 ..... **$20.85**

PS

COCKPIT COOLERS

THE MINI ICEBOX PORTABLE AIR CONDITIONER



The Mini IceBox is a portable air conditioning system, for your airplane cabin, car, or boat.

For Pilots: No more flying in a scorching hot cabin! Turn ON the IceBox during preflight and cool your cabin down. Jump in and start your engine for a comfortable taxi and departure to a cooler altitude. Enjoy hours of IceBox cooling power and control your comfort with the Wireless Remote (Pump and Fan controls) TIP: During cruise flight, Turn OFF the water pump at altitude with the included 2x button Wireless Remote to sustain the longest A/C possible. In Cruise Flight Mode -- Keep the fan running to push cooler air through the cabin.

For General Use: Use the IceBox portable air conditioner in any environment, with electrical power. Cool down the car or boat with the IceBox, and keep your engines off in the process.

Description	Part No.	Price
Icebox Mini 12V Wireless Unit	08-15634	**$395.00**
Icebox Mini 24V Wireless Unit	08-15633	**$439.00**
Icebox Mini 24V Wireless Full System	08-14863	**$774.00**

COOL MOVE TRAVEL COOLER



Soft sided electric travel cooler with cigarette lighter car plug in. Cools without ice which leaves you more room for food and drink. Quiet, long lasting motor powered by 12V vehicle outlet. 14 quart capacity that holds up to 20 cans plus snacks. Collapsible cooler takes up minimal space and allows for easy storage. Iceless cooling performance powered by thermoelectric technology that allows you to travel without the mess and inconvenience of ice. Digital Thermometer indicates ambient cooler temperature. Made with high quality materials for durability and toughness that's built to last. Plug in A/C adapter for use in the office, hotel room, camper, or dorm (not included)

P/N 08-14007 ..... **$59.75**

PS

B-KOOL PORTABLE COOLING SYSTEMS



Using a combination of ice and water, B-Kool™ provides up to an hour of 40º cool air using just 10 lbs of ice and a minimal amount of water. B-Kool™ is NOT an evaporative cooler and works well in high Humidity areas. Capacity is 20 lbs of ice giving you over 2 hours of cool air. Kool-Flex , a flexible and expandable air duct. Can be expanded to over 2 feet and positioned so air can be ducted where you want it. Because the B-Kool™ weighs less than 10 lbs empty, you can easily move it from your Camper, Airplane, Boat or any area where either 12 or 24v DC current is available.

12V Base Unit ..... P/N 13-16043 ..... **$299.00**
24V Base Unit..... P/N 13-16044 ..... **$329.00**
12V with Wireless Remote ..... P/N 13-16045 ..... **$399.00**
24V with Wireless Remote ..... P/N 13-16046 ..... **$429.00**



KEWLFLOW PORTABLE COOLER

The ice cooler or backpack that holds the ice and water can be easily refilled for continuous cooling over extended periods. Includes 12V Adapter. 4 quarts. 6429C includes 6429 Vest and Cooler. 100% Nylon Carrying Case with spill proof inner cooler. Unit includes water reservoir, pump, and power source. Insulated tubing and manifolds enable maximal cooling. Easy to use quick connectors allow for convenient operation. Can operate with variable power sources (battery, 12V, 110AC). Cooling Duration: Up to 3 hours. Typical users include surgeons, motorcyclists, and others needing personal cooling relief.

P/N 13-15509 ..... **$307.00**



KEWLFLOW PORTABLE BACKPACK

KewlFlow™ products use a combination of ice water and pumps to push cold water through special tubes built into vests. This allows for a continuous flow of cool water around the upper body, keeping the user cool and comfortable in any condition. The backpack that holds the ice and water can be easily refilled for continuous cooling over extended periods. Includes battery pack. 4 liters. 100% Nylon Back Pack with integrated water reservoir, pump, and power source. Padded shoulder straps with variable sizing adjustments. Insulated tubing and manifolds enable maximal cooling. Easy to use quick connectors allow for convenient operation. Can operate with variable power sources (battery, 12V, 110AC). Cooling Duration: Up to 3 hours. Typical users include motorcyclists, welders, painters, and others requiring a portable cooling solution.

P/N 13-15510 ..... **$561.00**



CIRCULATORY COOLING VEST WITH STATIC COOLER

Includes 12V Adapter. Includes Vest and Cooler. 100% Nylon Carrying Case with spill proof inner cooler. Unit includes water reservoir, pump, and power source. Insulated tubing and manifolds enable maximal cooling. Easy to use quick connectors allow for convenient operation. Can operate with variable power sources (battery, 12V, 110AC). Cooling Duration: Up to 3 hours. Color: Black, Size: 9 Quart Cooler. Typical users include surgeons, motorcyclists, and others needing personal cooling relief.

Size	Part No.	Price	Size	Part No.	Price
Small	13-15507	**$661.00**	X-Large	13-15507-XL	**$661.00**
Medium	13-15507-M	**$661.00**	XX-Large	13-15507-2XL	**$661.00**
Large	13-15507-L	**$661.00**			



CIRCULATORY COOLING VEST WITH PORTABLE BACKPACK

Includes Vest and Backpack. 100% Nylon Back Pack with integrated water reservoir, pump, and power source. Padded shoulder straps with variable sizing adjustments Insulated tubing and manifolds enable maximal cooling
Easy to use quick connectors allow for convenient operation. Can operate with variable power sources (battery, 12V, 110AC). Cooling Duration: Up to 3 hours. Typical users include motorcyclists, welders, painters, and others requiring a portable cooling solution.

Size	Part No.	Price	Size	Part No.	Price
Small	13-15508	**$799.00**	X-Large	13-15508-XL	**$801.00**
Medium	13-15508-M	**$677.00**	XX-Large	13-15508-2XL	**$775.00**
Large	13-15508-L	**$677.00**			

VISIT WWW.AIRCRAFTSPRUCE.COM FOR MORE KEWLFLOW HEATING AND COOLING VESTS.

COOLERS

YETI® TUNDRA® COOLERS



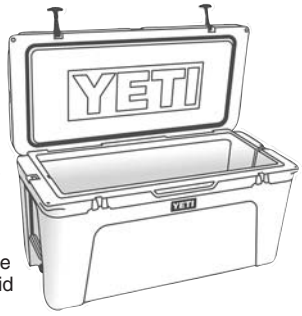
YETI makes the world's best coolers. Extreme design and construction assure you a lifetime of extreme performance. No other cooler is as durable. No other cooler keeps ice longer. No other cooler compares.

TUNDRA WARRANTY

FATWALL™ DESIGN
Extra-thick walls hold up to two inches of insulation for unmatched ice retention.

ROTOMOLDED CONSTRUCTION
Makes it armored to the core and virtually indestructible.

PERMAFROST™ INSULATION
Pressure-injected commercial grade polyurethane foam in the walls and lid makes sure your ice stays ice.



Cooler	Part No.	Price	Weight	Exterior		Interior	
				Height	Top	Height	Top
ROADIE 20							
White	13-19130	**$199.99**	15 lbs	14-3/8"	L 19" W 13-3/4"	10"	L 13-3/4" W 9-1/4"
Tan	13-19131	**$199.99**					
Blue	13-19132	**$199.99**					
Coral	13-21230	**$199.99**					
Charcoal	13-21317	**$199.99**					
Tundra 35							
White	13-19106	**$249.99**	20 lbs	15-1/2"	L 21" W 16"	10"	L 15" W 10-1/2"
Tan	13-19107	**$249.99**					
Blue	13-19108	**$249.99**					
Coral	13-21231	**$249.99**					
Charcoal	13-21318	**$249.99**					
Tundra 45							
White	13-19109	**$299.99**	23 lbs	15-1/2 "	L 25-1/2" W 16"	9-7/8 "	L 19 -1/2" W 10-1/2"
Tan	13-19111	**$299.99**					
Blue	13-19113	**$299.99**					
High Country	13-21050	**$349.99**					
Coral	13-21232	**$299.99**					
Charcoal	13-21319	**$299.99**					
Tundra 50							
White	13-19114	**$329.99**	26 lbs	18 -1/8"	L 24" W 17-3/8"	12-1/8"	L 18" W 12"
Tan	13-19115	**$329.99**					
Blue	13-19116	**$329.99**					
Tundra 65							
White	13-19117	**$349.99**	29 lbs	16"	L 30-1/2" W 17-1/2"	10-1/8 "	L 24-1/2" W 12"
Tan	13-19118	**$349.99**					
Blue	13-19119	**$349.99**					
Charcoal	13-21320	**$349.99**					
Tundra 75							
White	13-19120	**$449.99**	34 lbs	18 "	L 33-1/4" W 18"	12"	L 27-1/4" W 12-1/2"
Tan	13-19121	**$449.99**					
Blue	-	-					
Tundra 105							
White	13-19122	**$479.99**	36 lbs	20"	L 30-1/2" W 19-1/2"	14-1/4"	L 24-1/2" W 14"
Tan	13-19123	**$479.99**					
Blue	-	-					
Tundra 110							
White	13-19124	**$499.99**	39 lbs	20"	L 37" W 18 "	13-3/4"	L 31" W 12-1/2"
Tan	-	-					
Blue	-	-					
Tundra 125							
White	13-19125	**$549.99**	48 lbs	20"	L 40" W 19-1/2"	14-1/4"	L 34" W 14"
Tan	-	-					
Blue	-	-					
Tundra 160							
White	13-19126	**$679.99**	54 lbs	21-1/2"	L 45" W 19-1/2"	15-1/2"	L 39" W 14"
Tan	-	-					
Blue	-	-					
Tundra 210							
White	13-19127	**$799.99**	62 lbs	24"	L 39-3/8" W 25-1/2"	19-3/4"	L 33-3/8" W 19-5/8"
Tan	-	-					
Blue	-	-					
Tundra 250							
White	13-19128	**$899.99**	70 lbs	21-1/4"	L 55" W 22-5/8"	15-1/2"	L 49" W 17"
Tan	-	-					
Blue	-	-					
Tundra 350							
White	13-19129	**$1,299.99**	89 lbs	23-1/4"	L 63-1/4" W 24-1/2"	18-3/8"	L 57-1/4" W 18-1/2"
Tan	-	-					
Blue	-	-					

PS

COOLERS



YETI® HOPPER™ PORTABLE COOLERS

The Hopper was built for those adventures where you just want to grab your gear and go. It's the original 100% leakproof, ice-for-days portable cooler. And because we used materials found in things like survival suits, it's also tough as nails. The Hopper is made in sizes to fit any adventure, whether that's on a wild river in a kayak or a floatplane trip to a remote salmon stream. DRYHIDE™ SHELL - EThe Hopper's high-density fabric is waterproof and resistant to mildew, punctures, and UV rays. The liner is made from an FDA-approved food-grade material. COLDCELL™ INSULATION - Closed-cell rubber foam offers far superior cold-holding to ordinary soft coolers.

Hopper	Part No.		Price		Weight	Exterior		Interior	
	Gray	Tan	Gray	Tan		Height	Top	Height	Top
Hopper Flip 12	13-19141	-	**$249.99**	-	3.1 lbs	11-1/2"	L 12-5/8" W 10"	9 "	L 11" W 8"
Hopper 30	13-19144	13-19145	-	**$249.99**	5 lbs	16"	L 22-5/8"	14"	



YETI® TANK®

The best times in life seem to involve good friends, family, and a healthy supply of ice-cold drinks nearby. So we designed the YETI TANK to be the perfect centrepiece of all the fun. This nearly indestructible party machine is packed with our patented cold-holding insulation to keep your next backyard barbecue, tailgate, or beach side bonfire wilder, longer.
ROTOMOLDED CONSTRUCTION - Makes it armored to the core and virtually indestructible.
NO SWEAT™ DESIGN - Keeps it dry on the outside.

Cooler	Part No.	Price	Weight	Exterior		Interior	
				Height	Top	Height	Top
TANK 45							
White	13-19133	**$199.99**	13 lbs	**16-1/4"**	L 21" W 21"	13 7/8	**L 17-1/8"** W 17 -1/8"
tan	13-19134	**$199.99**					
blue	13-19135	**$199.99**					
TANK 85							
White	13-19137	**$249.99**	20 lbs	**19-1/2 "**	L 25-1/2" W 25-1/2"	16	**L 20-1/2"** W 20-1/2"
tan	13-19138	**$249.99**					
blue	13-19139	**$249.99**					





YETI® RAMBLER™ DRINKWARES

The Rambler series of drinkware is the first line of YETIs you can fit in your hand. And, yeah, they over-engineered them to be virtually indestructible and keep your drink as cold (or hot) as science allows. With 18/8 stainless steel construction, double-wall vacuum insulation, and No Sweat™ Design, they're perfect for the deer lease, cleaning table, or just the times in between your outdoor adventures.
18/8 STAINLESS STEEL - Made with kitchen-grade stainless steel, so they're puncture- and rust-resistant.
DOUBLE-WALL VACUUM INSULATION - Keeps cold drinks cold and hot drinks hot until the last sip. NO SWEAT™ DESIGN - Keeps fingers dry and unfrostbitten.

Rambler	Size	Outside	Stainless	White	Coral	Seafoam	Brick Red	Black	Thahoe Blue	Pink	Charcoal	Sky Blue	Price
Rambler 10 Lowball	10 oz.	4 1/8"-3 1/2"	13-19154	13-21233	13-21234	13-19828	13-21062	13-19830	--	--	--	--	**$19.99**
Rambler 20 Tumbler	20 oz.	6 7/8"-3 1/2"	13-19155	13-21236	13-21238	13-20682	13-20694	13-20684	13-20683	13-20692	13-21322	13-21237	**$24.99**
Rambler 30 Tumbler	30 oz.	7 7/8"-4"	13-20691	13-21239	13-21241	13-20687	13-20695	13-20689	--	--	13-21323	13-21240	**$29.99**
Rambler 18 Bottle	18 oz.	9 1/2"-3"	13-19157	13-21242	13-21244	13-19832	13-21065	13-19834	--	--	13-21324	13-21243	**$29.99**
Rambler 36 Bottle	36 oz.	10 3/4"-3 3/4"	13-19158	13-21246	--	13-19836	13-21067	13-19838	--	--	--	--	**$49.99**
Rambler 64 Bottle	64 oz.	11-1/2"-4 -3/4"	13-19159	--	--	--	--	--	--	--	--	--	**$69.99**
Rambler Colster	12 oz.	4-7/8" x 3-1/8"	13-19167	13-21247	--	13-19824	13-21063	13-19826	13-19825	--	13-21321	13-21248	**$29.99**

THE NOSE JOB 1 FOR RV NOSE GEAR



Anti-Splat-Aero is very proud to offer this revolutionary product (THE NOSE JOB 1) as a partial solution to the nose gear leg fears of many RV-A model builders, current owners and potential buyers of these wonderful aircraft. After watching, reading, analyzing, researching and waiting for someone to offer up a solution we decided to go to work on the problem. This product allows the Van's nose gear leg to function as designed without interfering with its dynamics or operation in any way.
The product only comes into play when the forces on the gear leg, if allowed to increase further, would become greater than the gear leg was designed to see or handle without permanent damage to itself or the aircraft. When operating your aircraft from an unimproved surface i.e. grass, dirt, poor runway surface or in an emergency off field landing this device could help prevent a costly repair, a propeller strike, engine disassembly for inspection or other damage may be avoided not to mention a dreaded possible flip over we have seen so many times.

P/N 05-12363.....**$379.00**

THE NOSE JOB 2 FOR RV NOSE GEAR

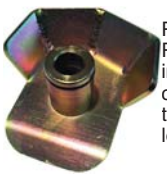


After many requests and making dozens of custom units, we are proud to offer this variation of our product " THE NOSE JOB TWO " as a partial solution to the nose gear leg fears of many RV-A model builders, current owners and potential buyers of these wonderful aircraft. Many of you requested a kit that would not require the fitting of a new fairing.

The preparation and fitting of the new fairing is a complex problem for a non-builder and most don't wish to deal with it. Also many finished airplanes have very expensive and elaborate paint jobs and this is a deterrent to many people as well. So in response to the demand here is a "NOSE JOB TWO" kit that will fit under the stock Vans fairing and provide the same protection as our original unit. We now feel our product is the most logical, simple and inexpensive device that can be manufactured and installed in an effort to address these gear leg concerns.

P/N 05-12364.....**$339.00**

THE LIP SKID



Prevents nose gear from digging into turf on dirt and grass runways. This device was created to help prevent flip-overs of the Vans RV-A Models on irregular surfaces. It installs in the bottom of the nose gear, providing surface area to keep the gear leg from digging in on contact. Installation only takes a few minutes and can possibly prevent a flip-over and serious damage to your aircraft. The center post is precision machined from 4130 grade aircraft steel as is the skid plate. Assembled and heat treated to a 45 rockwell, then zinc plated to provide a lifetime of protection for your aircraft. This comes with a vibration preventing O-ring for inside the gear leg and complete installation instructions to install inside the wheel pants out of sight. Total weight of this installed is 7 oz.

P/N 05-12365 .....**$89.00**

PS

Prices Subject to Change Without Notice

EAR PLUGS - PORTABLE RESTROOMS

PILOT RELIEF TUBES



HORN - Black molded plastic horn fits into horizontal or vertical brackets. Measures 2-3/8" diameter and weighs 1.3 oz .
P/N 13-04168 .....**$16.50**



HORIZONTAL BRACKET - Black molded plastic bracket for underseat installation.
P/N 13-04169 .....**$19.99**



VERTICAL BRACKET - Black molded plastic bracket for vertical installation.
P/N 13-04170 .....**$16.95**



VENTURI - Black molded plastic venturi mounts on fuselage bottom and produces required suction to horn and outlet tubes for fluid ejection.
P/N 13-04171 .....**$32.60**



HORN AND VALVE ASSEMBLY - Dimensions: Length: 8-31/64"; Top opening: 2-21/64"; Bottom opening: 3/16"; Weight: 4 ounces
P/N 13-04167 .....**$89.75**



TEE AN8019-1 - The material is RTP 152 black. 2-1/32" wide and 1" length.
P/N 13-04172 .....**$7.90**

ULTRAFIT™ UNCORDED EARPLUGS 340-4001 IN CARRYING CASE



• Patented, premolded, triple-flange design inserts easily. • No rolling or sizing needed to get a comfortable, protective fit. • Hypoallergenic polymer is washable and reusable. • Carrying case keeps plugs clean and accessible for re-use. • NRR 25dB. • ANSI S3.19-1974; CSA Z94.2; CSA Class AL.
P/N 13-02194..... **$1.56**

EZ FIT EAR PLUGS WITH CORD



The E-Z Fit line of EAR plugs was designed specifically for smaller ear canals, providing comfort and a secure fit. The self-adjusting foam and bell shape allow for easy insertion and help to keep the earplug from shifting or dislodging. P/N 14-00051 .....**$0.85**

CLASSIC™ UNCORDED EARPLUGS 312-1201 IN A POLY BAG



• Slow-recovery foam helps ensure comfort and minimize pressure. • Bright yellow color provides a quick visual compliance check. • Dermatologically safe foam is non-irritating, nonflammable, and moisture-resistant. • NRR 29dB. • ANSI S3.19-1974; CSA Class AL P/N 9134 ..... **$0.37/pair**

PRESSURE REGULATING EAR PLUGS FOR CHILDREN



EarPlanes are a patented pressure-regulating earplug inserted in the ear to help reduce discomfort often associated with air travel. They were developed by Cirrus Healthcare Products LLC in conjunction with the House Ear Institute in Los Angeles, and have been tested by US Navy aviators at the Miramar Naval Air Station in San Diego.
P/N 14-02837.....**$7.95**

PUMA METHOD FOR PREVENTION OF MOTION SICKNESS



A series of simple conditioning exercises, taught on VHS or interactive DVD, that effectively prevents the nausea, vomiting, lightheadedness and other unpleasant symptoms experienced by over 50% of the population while traveling. Sam C. Puma MD, president of Puma Applied Science and former Air Force Flight Surgeon at NASA, developed these revolutionary new exercises to totally eliminate carsickness, seasickness, airsickness, and even spacesickness. Takes only about 15 minutes a day to do.
DVD ..... P/N 13-03675.....**$42.50**
VHS..... P/N 13-03676.....**$42.95**

LITTLE JOHN



Positively the least expensive accessory you can buy to extend your range. One authenticated case reports a Piper Malibu's range extended by 500 miles. Durable plastic, won't crack under any normal handling and temperature conditions. A tight screw-on cap makes it spill proof. Standard issue in hospitals for years. P/N 9741 ..... **$10.95**

LADY J ADAPTER



The anatomically designed funnel snaps in and out of the little John. It can be used sitting or even standing. Clean white plastic. P/N 9745 ..... **$8.99**

G FUNNEL ADAPTER



The G-Funnel is a portable urinal adapter which simply screws on to any plastic pop or water bottle that will be used as a container for those situations where a washroom facility is not available. Can be attached and used together with any sized plastic pop or water bottle that most people have on hand. A very useful relief device for those emergency situations.
P/N 13-01974 ..... **$7.99**

RESTOP DISPOSABLE URINAL



The anatomically designed Restop is the disposable urine bag that combines a unique blend of polymers, enzymes, & deodorizer to turn urine into an odorless gel on contact. The funnel design prevents accidental spills. Restop is sanitary, non-toxic, spillproof & odorless, safe and convenient, trash container safe, and small enough to fit in pocket. Easy to use by men & women. 2 pack. P/N 13-00794 ..... **$3.45**

TRAVEL JOHN



Absorbent pouch turns urine into gel instantly while destroying bacteria and odor. Specially designed collar works for men women and children; spill guard prevents back guard during use. Convenient, sanitary and compact, TravelJohn is easy to use while sitting or standing. Will not leak or spill, even if punctured. Holds 28 fl. oz. Includes antiseptic hand wipe.
3-pack .....P/N 13-00894 ..... **$5.50**

CONVENIENCE BAG

Disposable urine & vomit bag.• Wide mouth.• No spill, cleanup, or odors• One-hand use
P/N13-02821..... **$2.09**



MOTION EAZE



Whether you want to prevent occasional motion sickness or relieve its symptoms, after the fact, Motion Eaze does the job. No matter, if it's sea sickness, car sickness, air sickness or any activity where motion sickness poses a problem, Motion Eaze really works. Contains no drugs, artificial additives, or stimulants of any kind. Only the freshest, highest quality, natural oils are used in its production. Motion Eaze is an oil that is applied to, and absorbed through, the skin, just behind the ear. P/N 13-02732 .....**$15.95**

SEABAND WRIST BAND



The Sea-Band has been clinically tested against nausea and vomiting in travel, pregnancy, anesthesia, chemotherapy and all conditions which induce nausea. The Sea-Band is a knitted elasticized wrist band, which operates by applying pressure on the Nei Kuan acupressure point on each wrist P/N 9411.....**$8.75/pr**

SIC-SAC™



Use these for air sickness emergencies. Moisture proof and tear resistant even under extreme temperature changes. 10 sacks, individually packaged, each with attached tie band. Pack of 10 ..... P/N 9296 .....**$5.95**
Pack of 100 ..... P/N 9296-100.....**$58.00**

OZIUM AIR SANITIZER / FRESHENER



Eliminates smoke and offensive malodors caused by airborne bacteria. OZIUM is a product that sanitizes the air you breathe. It is clinically proven to eliminate odors, unlike current products that just mask odors. OZIUM combats airborne contaminants and eliminates odors with glycol-ized action…dispensing micron sized particles that linger in the air, attach to airborne bacteria and malodors to drastically reduce air pollution, purify and sanitize the air. P/N 14-00061.....**$9.50**

THE BIFFY BAG



Personal disposable toilet system is a complete toilet that fits in the palm of your hand. Allows for a natural position. It has everything you need for a sanitary, discrete and comfortable experience.
3pk ..... P/N 13-12354 ..... **$13.50**
10pk ..... P/N 13-12355 ..... **$36.75**

PS

CO DETECTORS

CO GUARDIAN CARBON MONOXIDE DETECTORS



AERO 353-101/201 - The AERO 353 has a built-in state-of-the art CO sensor that immediately reacts to the presence of CO. It was designed for pilots who want the unit to be small, so it takes up a minimum of panel space, and provides pilots a peace of mind. Detector will go into alarm mode within five minutes if CO level is greater than 50 PPM. The unit has dual light LED alarm; Amber less than 99 PPM and Red 100 PPM and above. Very simple installation (2-4 hours). For experimental aircraft only.

Aero Model 353 ..... P/N 13-16423 ..... **$289.00**
Aero Model 353 w/ Pressure Sensor ..... P/N 13-16424 ..... **$389.00**
Aero Model 353 Display Only..... P/N 13-16427 ..... **$289.00**
CO2 Detecor for MVP and CGR ..... P/N 10-03188 ..... **$289.00**
353P-201 Remote Mount ..... P/N 13-06917 ..... **$459.00**



MODEL AERO 553 - Replaces the 2.25" clock and provides the latest CO protection that displays 30 to 999 ppm in the cockpit, as well as aircraft high and low voltage alarms, pressure density altitude readout for takeoff. Cabin altitude alerts to remind you to go on oxygen. CO level, cabin pressure and temperature to be displayed on the UPS AT CNX80..... P/N 13-02569 ..... **$689.00**
Aero 553 OAT Probe..... P/N 13-06165 ..... **$125.00**



MODEL AERO 451 - The CO Guardian 451-101 panel mounted Carbon Monoxide (CO) detector is designed especially for FAA certified Part 23 aircraft and Part 27 and 29 rotorcraft. A compact and lightweight unit meant to use as little panel space as possible, the 451-101 combines highly accurate CO detection for the cockpit in a small package. This CO detection unit is perfect for builders and pilots looking for basic protection from the dangers of carbon monoxide in their certified aircraft or helicopter.

Model 451-101 Panel Mount ..... P/N 13-21110 ..... **$478.00**
Model 451-201 Remote Mount..... P/N 13-21111 ..... **$399.00**



MODEL AERO-452 - Input Power-14 / 28 V DC. Power Usage-Less than 1 Watt, 10 Watts with heater ON. Temp Range - -20 deg C to 55 deg C. Inspection - Each Unit 100 % tested. Humidity - 5 % to 95 % RH (non-condensating). Circuit Breaker-2 Amp. Design-Meets TSO-C48A. Weight-3.5 Oz. Sensor-Tested to 25,000 Ft. Calibration-100 and 500 PPM. Ouput-Dual Relay Output for, Panel Warning light / Annunciator. WARRANTY :The Aero 452 comes with a 1 year limited warranty. The warranty will be void if the unit has been opened or tampered with. ..... P/N 13-07102 ..... **$479.00**



MODEL AERO 452-201-011 - Aero 452-201-011 is the first TSO certified remote-mountable Carbon Monoxide detector for use in General Aviation. This unit is a derivative of Aero 452 (Panel Mount). This unit comes standard with remote re-set switch and a remote light and can be installed behind a panel. This unit is pre-wired for connecting to an external annunciator warning lamp on your panel. Different light models can be purchased separately.

P/N 13-06918 ..... **$479.00**



MODEL AERO 454 - The AERO 454 can wirelessly transmit your GPS location up to three iOS devices; iPad, iPod, iPhone enabled tablet. The Model 454 device is also designed to detect, measure, and provide alerts to the crew of reciprocating engine type aircraft before the cockpit level of carbon monoxide (CO) reaches a critical level. In addition it also gives Cabin altitude warning at 10K, 12.5K and 14K. Input Power: 14/28 V DC. Weight: 4 Oz

Standard ..... P/N 11-10663 ..... **$495.00**
Remote Unit ..... P/N 13-16426 ..... **$999.00**



MODEL AERO 455- CO Guardian proudly announces aviation's first built-in pulse oximeter for airplane panels. This Life Guardian Aero-455 has been designed for all aircraft with limited panel space. This small pulse Oximeter with CO Detector mounts easily in most panels and transmits data to the MFD'S via RS232. Current MFD manufacturers include Electronics International, Advanced Flight Technologies, Grand Rapids Instruments and on upcoming releases of Avidyne Entegra Release 9.

P/N 11-07993 ..... **$999.00**



AERO-551 - Is fast responding to CO threat detector that is designed to standard 2 1/4 hole. This unit is our most sophisticated CO detector that has an extremly fast response when CO is present. The 551 unit shows continous CO Level from 10PPM to 999 PPM.

P/N 13-06919 ..... **$589.00**

DRAGER PAC SINGLE GAS MONITORS



Dräger Pac® 3500 - Workplace safety devices need to be fast and accurate. That is why the Dräger Pac 3500 is ideal for the personal monitoring of industrial carbon monoxide, hydrogen sulphide, along with being maintenance-free for up to two years. P/N 13-07016..... **$226.95**

Dräger Pac® 5500 - Long-lasting quality is key when it comes to workplace safety. The Dräger Pac 5500 has no lifetime limitation and is ideal for fast and accurate personal monitoring and detection of carbon monoxide, hydrogen sulphide or oxygen. P/N 13-07017..... **$319.00**

GASALERT CLIP EXTREME CARBON MONOXIDE MONITOR TWO YEAR BATTERY LIFE



Simply press the start/test button and the GasAlertClip Extreme is ready to use, providing continuous, reliable protection. This carbon monoxide detector requires no calibration, sensor replacement, battery replacement or battery charging. The simplicity of the GasAlertClip Extreme combined with minimal training requirements and negligible maintenance costs make the GasAlertClip Extreme one of the most cost-effective gas detection solutions for facility workers and onsite contractors. Standard Package Contents: Detector complete with specified sensor, stainless steel alligator clip and concussion-proof housing, Test cap and hose, Manual, Multi-language CD manual.

Gas Alert Clip Extreme II CO (2 Years)..... P/N 13-09667 ..... **$159.95**
Gas Alert Clip Extreme III CO (3 Years)..... P/N 13-09668 ..... **$288.95**
Gas Alert Clip Extreme CO 0-1000PPM..... P/N 13-09669 ..... **$314.00**

LONG LIFE CARBON MONOXIDE DETECTOR



No longer do you have to replace that Carbon Monoxide Detector every 28 days, the new Quantum Eye Carbon monoxide detector offers a minimum 18 months of sensor life. P/N 09-35601..... **$10.90**

STANDARD CARBON MONOXIDE DETECTOR



Toxic, odorless, tasteless gas produced by incomplete combustion or gasoline, kerosene, natural gas, butane, fuel oil, wood, coal or anywhere fossil fuels are burned. Dangerous levels of CO come from internal combustion engines such as cars, airplanes, and lawn mowers or from any poorly vented or improperly adjusted fuel burning appliance. P/N 09-35600 ..... **$3.85**
Discount on 5 ..... **$17.33**

ASA CARBON MONOXIDE DETECTOR



Carbon Monoxide (CO) is a toxic, odorless, and tasteless gas produced by the incomplete combustion of gasoline, kerosene, natural gas, butane, propane, fuel oil, wood, coal, and other fossil fuels. Dangerous levels of CO can be produced by internal combustion engines or from any poorly vented or improperly adjusted fuel-burning appliance. Exposure to CO may cause sickness, headaches, or even death. P/N 13-05755 ..... **$3.99**

DIGITAL CO2 DETECTOR



The extremely affordable DCO 1001 has a measuring range of 0-1000 ppm and comes complete with a soft case, a wrist strap, 3 "AAA" batteries and an instruction manual. Features: • Adjustable co warning level • LCD dual digital display • Bright backlight • self test • Low battery indication • °F/°C selectable • Auto power off • Auto zero • Co range: 0~999ppm • Resolution: 1ppm • Battery life is 250 hours when the backlight is off and 35 hours with the backlight on. P/N 12-01895 ..... **$144.85**

MODEL 300 POCKET CO



Pocket CO Model 300 is the world's smallest and most affordable carbon monoxide detector, alarm and dosimeter. About the size of a key fob weighs less than 1 oz. Range: 0 – 500ppm; first alarm at 50ppm, second at 125ppm, third at 400ppm. Also has an 8-hour TWA warning alarm at 25ppm. Self-checks upon start and carries a 2 year warranty.

P/N 13-06639 ..... **$131.95**

ACCESSORIES

Replacement/Spare Battery ..... P/N 13-06640 ..... **$4.50**



FLIGHT DATA SYSTEMS GD-40 CARBON MONOXIDE DETECTOR

Integrates with most EFIS Systems - Connect via RS232 or a Switched Input. Audio Voice Alerts. LED and Discrete Warning/Status Outputs - Two color LED included. Monitors Cabin Altitude - Aural Alerts to remind you to don your Oxygen Mask. Calibrated Using Precision Gas - Each unit is individually calibrated and tested before shipping. Built in Self Test Monitors Sensor Quality - Continuous self testing for reliability. Altitude and Temperature Compensated - Has an internal Altimeter and Thermometer. Remote Mounting Takes No Panel Space Dimensions: 4.7 X 3.1 X 1.0 inches. Weight:4.1 oz..... P/N 11-09843 ..... **$295.00**

PS

Prices Subject to Change Without Notice

MUTT MUFFS





- Over-the-Head Hearing Protector for animals.
- Specially Designed Wide Foam Filled Ear Seals for Maximum Comfort.
- Engineered specifically to properly meet the contour of a dog's head
- Comfortable and Lightweight
- Adjustable Straps for Optimum Fit.
- Inner sound-deadening foam is the same density found in pilot's high-end headsets
- Made entirely in the United States of America
- Patent Pending

Muff Size	Typical Dog Weight	Head Circum-ference	Maximum Inner Shell	
			Width	Height
X-Small	5-10 lbs	7-9"	1.5"	1.625"
Small	9-25 lbs	9-13"	1.75"	1.75"
Medium	20-50 lbs	13-18"	2.5"	2.5"
Large	50-95 lbs	18-23"	3.25"	3.25"
X-Large	95+ lbs	23+	4"	4"

Size	Weight	Part No.	Price
X-Small	1.5 oz	13-05536	**$55.75**
Small	1.7 oz	13-05537	**$55.75**
Med	3.0 oz	13-05538	**$57.65**

Size	Weight	Part No.	Price
Large	4.0 oz	13-05539	**$55.85**
XL	5.8 oz.	13-05540	**$69.75**

SIZE CHART - The overall circumference measurement of your dog's noggin at the largest point is the best determination of size, because if you choose a size too large, the muffs won't seal well against his head, and you lose all the sound-reducing properties you were shooting for. Your dog's weight is also a good indicator of which size to choose.

CUSTOM COLORS - Ever-classic "Mutt Muff® Black". But now, Mutt Muffs® are available in three additional colors! Red! Blue! and Pink!

P/N 13-05541 ..... **$62.75**

CO-PILOT - TRIANGLE BANDANA FOR DOGS



The proper uniform for the distinguished canine aviator. Sewn on all three sides. Finished Sizes: Large:21.5" x 21.5" x 29", Small: 14" x 14" x 20"

Large ..... P/N 13-05547 ..... **$6.65**
Small ..... P/N 13-05548 ..... **$6.65**

HYDRO-BOWL FOR DOGS



Next time your pooch is pantin' for a drink, pull out the convenient, collapsible Hydro Bowl. Waterproof and made of a high-tech, durable plastic canvas, the Hydro Bowl folds up and snaps closed into a compact triangle for storage. Attach it to a leash, backpack, bicycle, or a variety of other places for easy storage. Hold 5 cups

P/N 13-05546 ..... **$9.50**

DOG IS MY CO-PILOT - BUMPERSTICKER



"Dog Is My Co-Pilot" is the trademarked motto of Bark magazine - accept no substitute. As seen on dog-friendly cars from coast to coast!

P/N 13-05545 ..... **$2.85**



BARK BAGS

If you take passengers, sooner or later, you're going to need one. 9-3/4" x 4-1/4" to hold alot of chunks. Sold in a package of 3... There could be sympathy heaves. P/N 13-05543 ..... **$4.60**

4 PAWS K-9 EAR MUFFS



4 Paws Aviation has come out with hearing protection for your pet. Average of 15 dBHL greater sound reduction than what's on the market today. These Ear Muffs hearing protection is made of nylon, aircraft approved sound deadening foam, non-toxic "gel" cups, webbing, and a safety "break a way" clip.
They can be used with the only oxygen hood delivery system for your pet also offered by 4 Paws Aviation.
Small- 5 to 25 pounds 7" and 13" head size..... P/N 13-08288..**$59.95**
Medium- 20 to 85 pounds 9" and 19" head size... P/N 13-08289..**$63.95**
Large - Over 85 Pounds & 19" head size ..... P/N 13-12807..**$69.75**

4 PAWS K-9 OXYGEN HOODS



Fight the effects of Hypoxia on your four legged family members by using the only oxygen delivery hood for animals when flying at high altitudes. Keep your pets safe and healthy when flying high.
Hood comes with 7-foot long oxygen supply tubing with a common push on female end. Attaches to a stand-alone bottle or in place oxygen system.
Oxygen hoods are available in five sizes, measurements' include the collar (around the neck) and the length from the nap of the neck to the end of the nose, then add two more inches for clearance.

Size	Collar Size	Hood Depth	Part No.	Price
Small	7.5" To 9.5"	8.5"	13-08290	**$126.75**
Medium	9.5" To 13.25"	10"	13-08291	**$127.75**
Large	13.25" To 15.75"	12"	13-08292	**$127.75**
X-Large	15.75" To 20"	14"	13-08293	**$127.75**
XX-Large	20" To Over	17"	13-08294	**$127.75**

AEROX PET MASK



Take your pet with you at altitude thanks to AEROX and their line of Canine 02 Mask supplemental oxygen system certified to 25,000 feet. The Aerox® Canine 02 supplemental oxygen system is currently available in 5 sizes:
Small - (Poodles, Shelties, Yorkies, Cavalier, Bichon Frise)
Medium - (Beagles, Keeshounds, Jack Russels, Standard Poodle)
Large - (Cockers Spaniels, Springers, Beagles, Boston Terriers)
X-Large - (Huskies, Labradors, Retrievers, Dobermans)
Giant - (Great Danes, Newfies, St Bernards, 90-160 LBS)
The muzzle incorporates a medium concentration continuous flow oxygen mask and frontal mesh area for best ventilation and oxygen delivery to your pets mouth and nose.

Size	Part No.	Price
Small	13-07460	**$104.75**
Medium	13-07461	**$105.75**
Large	13-07462	**$107.75**
X-Large	13-07463	**$108.95**
Giant	13-07464	**$105.75**

PS

WINDMETERS

WINDSCRIBE HANDHELD WIND METER



A precise, handheld wind meter (anemometer). Also measures maximum headwind, maximum tailwind, a five-second average wind, and a running average wind. Speeds can be displayed in both U.S. and metric units, and the unit also records temperature and wind chill. The WindScribe weighs 3.5 ounces and comes with a lanyard. A velcro strap and mounting bracket are included. P/N 13-04019 .....**$179.99**

WIND WIZARD WIND SPEED INDICATOR



ECONOMY MODEL – ACCURATE & COMPACT

Conveniently calibrated in miles/hour, meters/ second and Beaufort. Expanded in the lower wind speed range of 0-20 MPH (0-8.9 meters/sec). Slips easily into a shirt or coat pocket. Safety wrist strap gives added security in stronger winds, and stores out of the way in the folding handle. Constructed of high impact plastic and corrosion resistant metals. It comes with leather-like carrying case. No Batteries needed. P/N 13-18520 .....**$49.99**

SKYWATCH GEOS 11 HANDHELD WEATHER STATION



Features: Electronic Compass: • analogical and digital Three Data Recording Modes: •manual recording by pressing two buttons •automatic recording at selected intervals, when unit is off or on •automatic recording at selected intervals, when unit is on only. Bright LED Light: • operates on separate battery. Replaceable Ball Impeller: • rotates to protect impeller blades. Exposed Sensors for instant reading

Kit includes: Geos Unit, USB Interface with software, Metallic Support, and Carrying Pouch..... P/N 13-04757.....**$759.95**
Unit Only ..... P/N 11-11297.....**$614.95**

SKYWATCH HANDHELD WIND METERS



Designed for consumer and professional use, the Xplorer does not include complicated and seldom-used features such as downloading and storing. Press one button, and instant readings are at your fingertips. Dimension: 3.5 x 1.5 x 0.75 in, 2 oz. (41 x 93 x 17 mm, 50 g) One button operation, EL Backlight Completely sealed; internal sensors, Weatherproof (can be submerged 6 feet), Replaceable Lithium battery (included and installed) , Stainless steel back, Auto-off after one minute (can be disabled to remain on), Included lanyard One year warranty.

Handheld Weather 4 ..... P/N 13-04762 .....**$139.95**

SM-19 SKYMATE PLUS WIND METER



* Current, maximum windspeed * Average windspeed over 5, 10, or 13 seconds * Current temp & windchill * Relative Humidity & Dewpoint * Choose any measurement unit * Reads in tenths * Replaceable 400 hour lithium battery * Data Hold to freeze most recent display * Replaceable plastic impeller won't corrode * Comes with lanyard * Threaded for tripod mounting * Unique pocket-knife design to protect unit when not in use * Auto shutoff 20 minutes after last key is pressed * Water resistant housing High visibility case Floats.

P/N 13-01960.....**$103.99**
Carrying Case ..... P/N 13-02202.....**$15.19**

XPLORER 2 WINDMETER BY SKYWATCH



Dimension: 3.5 x 1.5 x 0.75 in, 2 oz. (41 x 93 x 17 mm, 50 g). One button operation. EL Backlight. Completely sealed; internal sensors. Weatherproof (can be submerged 6 feet). Replaceable Lithium battery (included and installed). Stainless steel back Auto-off after one minute (can be disabled to remain on). Included lanyard. One year warranty. Designed in Switzerland

P/N 13-12440.....**$59.95**

XPLORER 3 WINDMETER BY SKYWATCH



Dimension: 3.5 x 1.5 x 0.75 in, 2 oz. (41 x 93 x 17 mm, 50 g). One button operation. EL Backlight. Completely sealed; internal sensors. Weatherproof (can be submerged 6 feet). Replaceable Lithium battery (included and installed). Stainless steel back. Auto-off after one minute (can be disabled to remain on). Included lanyard. One year warranty. Designed in Switzerland.

P/N 13-12441.....**$99.95**

SPEEDTECH INSTRUMENTS



SKYMASTER WEATHERMETER SM-28 - Pocket-size weather station features complete wind speed functions and includes a severe weather audio alarm. The relative humidity, barometer, and altimeter functions can be recalibrated, if required. Skymaster is water resistant, floats, threaded for tripod mounting and comes with a lanyard. One year warranty. Features:• Windspeed• Relative Humidity & Dew Point • Altitude •Current barometric Pressure • 16-HR Pressure Graph • Severe Weather Audio Alarm • Temperature/Windchill/Heat Index. P/N 13-02957 .....**$151.99**



SKYMATE WINDMETER - Convenient pocket-knife design, accuracy, features, and price make this the best value in handheld wind meters! It is water resistant, it floats, and it has a high visibility case. Average wind speed over 5, 10, or 13 seconds. Current temp & wind chill. Choose any measurement unit. Reads in tenths. Replaceable 400 hour lithium battery. Data lock feature. Replaceable plastic impeller won't corrode. Easy to read LCD. Threaded for tripod mounting. Unique pocket-knife design to protect unit when not in use. Water resistant to 3 ft. High visibility case. One year warranty. Features: • Windspeed • Temperature • Widchill • Water Resistant to 3 Feet. • Floats • Safety Yellow case

P/N 13-00086..... **$74.95**



WM-100 WINDMATE 100 - Current, Average (5,10,13 secs) Maximum wind speed all use a wind vane to ensure most accurate measurements. For long-range shooting, use the tripod fitting and add the optional wind tunnel accessory. All wind functions in user selected units * Reads in tenths * Backlight * Tripod fitting * Rugged water-resistant case * Comes with adjustable lanyard. Features: Current wind speed • Average wind speed(5, 10, 13 seconds) • Maximum wind speed Mph, Kt, Kp/h, BF, FPM, M/Sec. Wind vane assures you are on the wind's axis • Tripod fitting • Fits wind tunnel accessory • Rugged water-resistnat case meets U.S. military specifications • Auto shutoff • Comes with adjustable lanyard P/N 13-04292 ..... **$57.59**



WM-200 WINDMATE 200 - Offers the most popular features in a handheld device, wind speed and temperature, with wind chill calculation. Single button operation, easy measurements, and the display has a backlight; handy for lowlight conditions. Each unit is water resistant, and has a tripod fitting. ***Features***: * Digital wind direction in degree & compass points * Cross and head/tail wind readings * Temperature * Windchill * Backlight ***Specifications***: * Windspeed accuracy +/- 3% from .8-89Mph * Wind speed range to 135Mph * Digital compass/wind direction accuracy +/- 2° * Temp/Windchill accuracy +/- 1.8° F * Optional Units: Mph, km/h, kt, ft/min, m/s, BF (Beaufort) * F or C * Avg windspeed over 10 secs * Max windspeed 2 sec gust since power on * Auto shutdown * POWER: CR2032 replaceable Lithium battery (included) * Measures: 5.5" x 1.75" x .75" closed * Weighs 3.2oz with battery * 2-yr warranty

P/N 13-04293 .....**$103.99**



WM-300 WINDMATE 300 - Wind speed and digital wind direction, relative humidity, dewpoint, wet bulb & Delta T make this a comprehensive tool for forestry, agriculture and emergency management professionals. Humidity sensor does NOT require adjustment; it is self-calibrating. This unit is equipped with a backlight. Accuweather.com® patented Comfort Index™ gives the effect of temp, relative humidity, wind speed, & sun intensity on the human body. Unit can be tripod mounted. ***Features***: * Relative Humidity (self-calibrating sensor) * Dewpoint * Delta T * Accuweather.com patended * Jackknife case allows most accurate temp & RH readings * Wind speed range to 135Mph * Optional Units: Mph,km/h,ft/min,m/x,BF (Beaufort) * F or C * Avg wind speed over 10 secs * Max wind speed 2 sec gust since power on * Auto shutdown * POWER: CR2032 (400-Hr) replaceable Lithium battery (included) * Measures: 5.5" x 1.75" x .75" closed * Weighs 3.2 oz with battery * Comes with breakaway lanyard * 2-yr warranty. P/N 13-04294 .....**$198.00**



WM-350 WINDMATE 350 - • Time • Date • Alarm • 48-HR history for all functions Digital Hr-By-Hr & Bar Graph • Current, Avg., Max wind speed in Mph, Kt, Kp/h, FPM, M/Sec, Beaufort • Digital wind direction in degrees & compass points • Cross and head/tail wind readings • Wind vane improves accuracy • Relative humidity • Wet Bulb (°F/°C) • Dewpoint (°F/°C) • Delta T • Barometric pressure (inHg/hPa) • Density Altitude (Ft/m) • Weather forecast • Audio storm alarm • Temperature (°F/°C) • Windchill • Altimeter to 29,000 Ft/9000m • AccuWeather.com® patented Comfort IndexTM • Backlight • Tripod fitting • Fits wind tunnel accessory • Case meets military specifications • Comes with adjustable lanyard.Replaceable Lithium battery (included) MEASURES: 5.5) x 1.75) x .75) closed 9) x 1.75) x .75) open WEIGHS: 3.2 ounces with battery. P/N 13-05763 .....**$199.99**

SKYMATE ACCESSORIES

Adjustable nylon case (fits all models)..... P/N 13-02202 ....**$15.19**
Wind tunnel (maximize wind meter accuracy)..... P/N 13-02201 ....**$30.00**
Speedtech Rail Mount(AP-15)..... P/N 13-02204 ....**$12.50**
Speedtech Back Stay Mount (AP-16) ..... P/N 13-02203 ....**$16.75**
WM-350 Replacement Impeller..... P/N 13-07259 ....**$36.00**
SM-28 Replacement Impeller..... P/N 13-07260 ....**$21.00**

PS

WWW.AIRCRAFTSPRUCE.COM

Prices Subject to Change Without Notice

WIRELESS VANTAGE PRO2 WEATHER STATION



Uses frequency hopping spread spectrum radio technology to transmit data wirelessly up to 1000' (300 m). Console/receiver, integrated sensor suite, and mounting hardware. Integrated sensor suite includes rain collector, temperature and humidity sensors, anemometer, 40' (12 m) anemometer cable, and solar panel. Sensor suite is solar powered. AC-power adapter included for console, or use with three C batteries (not included). Wireless range is up to 1000' outdoors, line of sight. Typical range through walls 200' to 400' . Add wireless repeaters for distances up to 1.7 miles. Not available in EU (Europe).

Vantage Pro2 (U.S.) ..... P/N 13-05532 ... **$595.00**
Vantage Pro2 Plus with UV & Solar Radiation . P/N 13-05586 ... **$869.00**
Mounting Tripod ..... P/N 13-04569 ..... **$89.75**
Replacement Anemometer for Vantage Pro2 & Pro
P/N 13-13073 ... **$128.75**

SKYWATCH WINDOO 1 OMNI DIRECTIONAL WEATHER STATION



SKYWATCH® Windoo 1 is an anemometer-thermometer for your smartphone. It measures and indicates the following information. Windspeed. Temperature – Wind chill factor. Measured data can be stored and shared on facebook, twitter or windoo.ch Materials: Housing: anodised aluminium, Protective case: carbon. Wind: Units: km/h, mph, m/s, fps and knots, Resolution: 0.1 unit, Accuracy: ± 2%, Measuring range: from 0 to 150 km/h. Temperature: Units: °C and °F, Resolution: 0.1 unit, Accuracy: ± 0.3 °C, Measuring range: from -25 °C to +60 °C.

P/N 13-16357 ..... **$69.95**

SKYWATCH WINDOO 2 OMNI DIRECTIONAL WEATHER STATION



SKYWATCH® Windoo 2 is a measuring instrument for your smartphone. It indicates the following information. Windspeed. Temperature – Wind chill factor. Humidity – Dew point. Measured data can be stored and shared on facebook, twitter or windoo.ch. Materials: Housing: anodised aluminium, Protective case: carbon. Wind: Units: km/h, mph, m/s, fps and knots, Resolution: 0.1 unit, Accuracy: ± 2%, Measuring range: from 0 to 150 km/h. Temperature: Units: °C and °F, Resolution: 0.1 unit, Accuracy: ± 0.3 °C, Measuring range: from -25 °C to +60 °C. Humidity: Units: %RH, Resolution: 0.1 unit, Accuracy: ± 4.5 %RH, Measuring range: from 0 to 100 %RH.

P/N 13-16358 ..... **$94.95**

SKYWATCH WINDOO 3 OMNI DIRECTIONAL WEATHER STATION



SKYWATCH® Windoo 3 is a weather station for your smartphone. It measures and indicates the following information. Windspeed. Temperature – Wind chill factor. Humidity – Dew point. Pressure. Measured data can be stored and shared on facebook, twitter or windoo.ch. Materials: Housing: anodised aluminium, Protective case: carbon. Wind: Units: km/h, mph, m/s, fps and knots, Resolution: 0.1 unit, Accuracy: ± 2%, Measuring range: from 0 to 150 km/h. Temperature: Units: °C and °F, Resolution: 0.1 unit, Accuracy: ± 0.3 °C, Measuring range: from -25 °C to +60 °C. Humidity: Units: %RH, Resolution: 0.1 unit, Accuracy: ± 4.5 %RH, Measuring range: from 0 to 100 %RH. Pressure: Units: hPa, mbar, inHg, Resolution: 0.1 unit, Accuracy: ± 0.2 hPa, Measuring range: from 300 to 1100 hPa.

P/N 13-16359 ..... **$114.95**

WEATHER FLOW WIND METER



The WeatherFlow Wind Meter is an anemometer that fits in your pocket. It's the first hardware product we have created for the general wind- & weather-addicted community. It's compatible with iPhone, iPad, iPod, and all major Android (coming soon) devices. And you are going to love it. It's operating range extends from the smallest puff (2 mph) to well over hurricane force winds (125 mph).

P/N 13-14788 ..... **$34.95**

VAAVUD MJOLNIR SMARTPHONE WINDMETER



The Vaavud wind meter turns your smartphone into a high-tech meteorological tool. Takes accurate wind readings, at wind speeds from 2 – 20 m/s (Up to 24 m/s on iPhone 5S and up to 48 m/s on some Android phones), with a precision of +/- 4%. It comes with a practical neoprene bag so you can take it with you anywhere. Works with the following devices: iPhone 5S, 5C, 5, 4S, 4 – iPad 2, 3rd and 4th generation mini and Air – Samsung Galaxy S4, S3, HTC One, Google Nexus 5 and many more. Wind Speed: 2 – 20 m/s, +/- 4% precision. Wind Direction: No. Omnidirectional: Yes. Technology: Magnets (electronicless). Construction Quality: Super Rugged. Dimensions: 20x112x59 mm.

P/N 13-17540 ..... **$29.75**

WEATHERHAWK MYMET WIND METER



myMET is a handheld device that reacts almost instantly to changes in wind and air temperature. This instrument is a new concept in handheld wind meters in that it can display data on an integral LCD, and on a Smartphone or tablet.

iOS and Android Apps are available for free with purchase of the device. They display the measurements for wind speed, air temperature and wind chill, with the added display device supplied data for location, direction and altitude. Data can be connected to a site image, from the smart device, and transmitted by email or text. Requires iPhone 4S/iPad2 or newer: OR Android device with 4.3 OS or newer.

Features:

- Displays data on Smartphone or tablet.
- Apps are free.
- Handheld device.
- Reacts almost instantly to changes in the wind and air temperature.
- Displays wind speed, air temperature and wind chill measurements.
- Displays location, direction, and altitude.
- Transmits data by email or text.

Windmeter Kit w/ Wind Valve ..... P/N 13-15920 ..... **$155.99**
Windmeter ..... P/N 13-15917 ..... **$95.96**
Wind Valve Only ..... P/N 13-15918 ..... **$19.99**
Case Only ..... P/N 13-15919 ..... **$15.19**

WEATHERHAWK MYMET SPORT WIND METER



Compact & Convenient! Weather info in the Palm of Your Hand. Windspeed & Direction Altitude & Location Image with Embedded Data Easy to Use Free App.

P/N 13-18038 ..... **$34.99**

AVIATION WEATHERVANES



The weathervanes are made of 14 gauge steel and come with a one year warranty on the finish and a lifetime warranty on all workmanship. Dimension: 17-3/4" x 6-1/2" Weathervanes are shipped standard with a 60" garden stake. Weathervanes may also be ordered with a different stand as a special order only. No additional charge will apply. The different stands that are available are: 15" Roof Mount, 15" Deck Mount, or a 15" Post Mount.

Description	Part No.	Price
Lo Wing Garden Weathervane	13-07217	**$60.75**
Cessna Garden Weathervane	13-07215	**$60.75**
Helicopter Garden Weathervane	13-07220	**$60.75**
Hi Wing Garden Weathervane	13-07216	**$60.75**
Twin Garden Weathervane	13-07219	**$60.75**
Cessna Roof Weathervane	13-08142	**$60.75**
Cessna Deck Weathervane	13-08143	**$60.75**
P-51 Roof Weathervane	13-11256	**$60.75**
P-51 Garden Weathervane	13-11305	**$60.75**
B-17 Garden Weathervane	13-07213	**$60.75**
Bi Plane Garden Weathervane	13-07214	**$60.75**
Tri Motor Garden Weathervane	13-07218	**$60.75**
B-17 Roof Weathervane	13-08078	**$60.75**
Bi Plane Roof Weathervane	13-08139	**$60.75**
Bi Plane Deck Weathervane	13-08140	**$60.75**
Bi Plane Post Weathervane	13-08141	**$60.75**

SEE OUR WEBSITE FOR A COMPLETE LIST.

PS

FLASHLIGHTS



MAGLITE LED FLASHLIGHTS

MAG-LED™ Technology known for their obsession with precision engineering, craftsmanship and commitment to perfection, was not satisfied with the performance of a "regular" LED as a usable light source. They set their sights on producing a light source that would not only incorporate longer battery life, but would also have the kind of durability, reliability, and performance Maglite® flashlights are known for. With an emphasis on uncompromising performance, MAG-LED™ Technology is the result of that quest.

LED Mini Maglight 2-cell AA - Black ..... P/N 13-04722...**$19.95**
LED Mini Maglight 2-cell AA, w/Holster - Grey Pewter
P/N 13-04917...**$19.75**
LED Maglight 2 Cell D hang pack- Black..... P/N 13-04724...**$29.95**
LED Maglight 2 Cell D hang pack- Grey Pewter. P/N 13-04880...**$34.50**
LED Maglight 3 Cell D hang pack- Black..... P/N 13-04725...**$29.95**
LED Maglight 3 Cell D hang pack- Grey Pewter. P/N 13-04881...**$32.80**

ACCESSORIES PACK - Includes: Pocket clip, lanyard wrist strap with key ring, anti-roll device, red, clear, and blue lenses.
P/N 13-04727.....**$3.95**

MAGLITE XL 200 LED FLASHLIGHTS



This XL™ SERIES of COMPACT FLASHLIGHTS offers FIVE BASIC, EASY-TO-USE FUNCTIONS plus Advanced Features and the STUNNING BRIGHTNESS of a Next-Generation LED. By the simple "QuickClick" method introduced with our popular Maglite® XL50™ flashlight, the XL200™ lets the user select the desired function. Motion-controlled variable power level and strobe rate. Easy to use. Powerful Projecting LED Beam. Pushbutton tailcap switch. Compact, Pocket Size Design.

Color	Part No.	Price
Black	13-16539	**$43.50**
Red	13-16540	**$36.50**
Gray	13-16541	**$36.50**
Blue	13-16542	**$37.85**



MAGLITE D CELL ACCESSORY PACK

Mounting Brackets (Fit D-Cell Only) Mount your Mag-Lite® flashlight on a wall, in a vehicle, boat, airplane or home. Lens Holder / Anti-Roll Device This item both retains a colored lens and helps prevent the flashlight from rolling off irregular surfaces. Note: The Lens Holder and Lenses may also be used on "C" cell Mag-Lite® flashlights ..... P/N 13-04886.....**$8.50**



MAGLITE FLASHLIGHTS

Mini Maglight AA - Black. P/N 13-04913.....**$11.75**
Maglight 2 Cell D - Black P/N 13-04915.....**$22.50**
Replacement Bulb for 2D Cell
P/N 13-13594.....**$3.65**

MAGLITE XL50 LED FLASHLIGHT BLACK



Features: Compact, pocket sized design (every day carry). Adjustable LED Beam (Spot-to-Flood). Durable, rugged, machined aluminum case Anodized for corrosion resistance and durability. Intelligent energy source management - continuously monitors the balance between high brightness and efficient power usage allowing for prolonged battery life. Powered by three (3) AAA alkaline batteries (included). Individually serial numbered

Color	Part No.	Price
Black	13-08982	**$32.50**
Red	13-08989	**$31.95**
Gray	13-08990	**$32.50**
Silver	13-08991	**$32.50**
Blue	13-08992	**$32.50**



NEBO CHAMELEON TRI COLOR FLASHLIGHT

No color filters…no separate heads… and no extra attachments. The Chameleon™ by NEBO offers 3 vibrant colors all in one convenient, compact flashlight. One color changing LED switches from white to green to red with the touch of the glow-in-the-dark On/Off button. The Chameleon™ features a 4x adjustable zoom to change the beam from spot light to flood light with the simple twist of the head. P/N 13-17163 .....**$20.65**

VANTAGE VUE WIRELESS WEATHER STATION



Includes: - Integrated Sensor Suite: Wireless, Rain Collector, Anemometer, Weather Proof Cover, Radiation Shield, Wind Direction, Solar Panel, Bubble Level. - Console: Time & Date, Moon Phase, Forecast Icons, Temperature Icons, Temperature & Humidity, Retansmits, Barometer, Variable Display Options, Rain Totals, "Change in Weather" Feature, Weather Center, User-Friendly Keypad, Graphs, "This Time Yesterday" Feature, Alarms, Wind Speed - Mounting hardware (mounting pole sold separately).

Weather Station..... P/N 13-11572.....**$598.00**
Mount Pole Kit ..... P/N 13-11576.....**$32.50**
Mounting Tripod..... P/N 13-04569.....**$89.75**

See www.aircraft spruce for additional options.

BEND-A-LIGHT



Bend to any configuration and illuminate hard-to-reach areas where conventional lighting cannot go. The incredibly brilliant light beam penetrates anywhere! A must for electronics, automotive, maintenance, repairs, locksmiths, industrial, hobbies, around the house and more. The only complete line of professional quality high intensity flexible light tools. Available in 3 lengths and 3 different lamps to choose from. Made in USA and come with batteries installed.

Part No.	Description	Length Flex Shaft	Length Overall	Batt.	Bulb	Price
12-15005	Mini Pro	6"	11.5"	2-AAA	12100	**$19.95**
12-15150	Pro	15.75"	24"	3-AA	12110	**$39.95**
12-10250	Removable Shaft	9.5"	15.75"	2-AA	12100	**$22.65**

Part No.	Description	Dia	Bulb Life	Price
12-15020	12100 - Replacement Lamp	5/32"	4 Hours	**$7.50**
12-12110	12110- Krypton Lamp	5/32"	20 hours	**$9.50**



AVIATOR'S QUIQLITE

Extra Bright LED, available with Red, Green, White or Blue Light. Handy pocket clip and rotating arm. Rotating "light arm" allows you to place the light where you need it. Push-button On-Off switch with convenient 7 minute Auto-Off feature. Over 40 hours of light using replaceable lithium watch batteries (included). Fits easily into shirt or uniform pocket.

Blue LED QuiqLite .....P/N 13-02719 .....**$8.95**
Green LED QuiqLite.....P/N 13-02728 .....**$8.95**
Red LED QuiqLite .....P/N 13-02729 .....**$8.95**
White LED QuiqLite .....P/N 13-02730 .....**$8.95**



SURE CHECK FUEL LIGHT

Will assist in ensuring your safety every time you strain test your fuel prior to flight. At night, it's safe & easy to use. The Sure Check Fuel Light, when used with your fuel test tube, will light up all the water and debris that might be present. The case is made of durable aluminum, weighs only 2.2 ounces, is 3" long, and uses a 12 volt battery to power a high intensity white LED light build. The casing is sealed with a strong neoprene rubber seal to keep any fuel from leaking into the case. Color: Red. Made in USA. P/N 13-04207..... $17.95

FLIGHT OUTFITTERS DUAL COLOR LED PILOT FLASHLIGHT



The Pilot Flashlight is designed for one-handed use with two easily accessible push buttons – one for white LED light and one for red LED light. For those inevitable times when a pilot holds their flashlight with their mouth for "hands-free" use, the Pilot Flashlight also has an innovative soft "bite ring" in Flight Outfitters' signature orange color. Rounding out the Pilot Flashlight is a wrist-strap to keep the light close at hand.
P/N 13-20664 .....**$29.95**

PS

Prices Subject to Change Without Notice

PILOT FLASHLIGHTS

SUREFIRE G2X™ PRO



A polymer-body version of the 6PX Pro, uses a high-efficiency LED—virtually immune to failure since there's no filament to burn out or break—that provides two light output levels: a brilliant, penetrating, perfectly pre-focused 200-lumen beam, and a 15-lumen low-output setting that lets you greatly extend the runtime per set of batteries, an invaluable option when you find yourself miles from civilization. Press the tailcap switch for momentary-on low, press further to click constant-on low, return to off and press or click on again within two seconds for high. A polycarbonate micro-textured reflector delivers a comparatively wider beam with generous peripheral light. .....P/N 13-10290 .....**$69.95**

SUREFIRE G2Z-MV COMBATLIGHT® FLASHLIGHT



SureFire's single-output G2Z™ Combatlight® with Max Vision™ flashlight—designed and built specifically for tactical use—features a proprietary reflector that shapes the high-output LED's 650 lumens of light into a wide, useful MaxVision Beam™ optimized for your field of vision. With its designed 14 mm bezel, the compact G2Z is even shorter and lighter in weight than its predecessor, generates nearly twice the output, and has all of the same features for outstanding tactical performance.....P/N 13-20653 .....**$109.00**

SUREFIRE LITHIUM BATTERIES



Optimized for use in SureFire flashlights, SureFire lithium batteries pack a lot of power into a small package. And unlike some other batteries SureFire high-performance lithium batteries boast a ten-year shelf life, which means they will be ready when you need them, every time. For all SureFire Lithium battery powered lights.

12 Pack .....P/N 13-18714 .....**$34.50**
2 Pack .....P/N 13-18715 .....**$4.80**

SEE WWW.AIRCRAFTSPRUCE.COM FOR A COMPLETE SELECTION OF SUREFIRE FLASHLIGHTS.

AVEO THE AVIATOR FLASHLIGHT



World-Class AveoTM circuitry. Ni-MH rechargeable batteries. Fixed 25º Lens. Single color light (White). Steady, strobe and SOS function. Dimming – Stepless slide-switch 0-100%. Charge level indicator on the flashlight. DO-160G Environmentally qualified. Anodized aluminum construction. Black anodizing color. IP68 Waterproofness. DC Battery charger included. Charging/Mounting cradle option (not included). Low EMI, low self-discharge, overheat protected. Private logo/label available.....P/N 11-15181 .....**$429.00**

FLIGHTLIGHT™ - PILOT FLASHLIGHT



A flashlight is a must have for every pilot's flight bag. In or out of the cockpit, this conveniently sized, long lasting, and durable flashlight serves as a great pilot companion. This 3-in-one LED flashlight toggles between red, green, or white depending on your cockpit needs. With an LED life of 100,000 hours, the included alkaline batteries can keep this flashlight illuminated for up to 17 hours in "red" mode, and 14 hours in "white".

Flashlight: .....P/N 13-01067 .... **$17.95**

PELICAN AVIATION LIGHTS

VERSABRITE



This is the world's brightest swivel head pocket flashlight. The adjustable head swivels 180 degrees, enabling the pilot to direct the beam where he needs it. It is water resistant and mounts directly on the adhesive pad of yoke chart holders. Provides 6000 candlepower Xenon laser beam spot beam, and comes standard with clear, red, and blue-green lenses. Clips easily on shirts, belts, and caps for hands free use. Comes with multi-use velcro fasteners and 2 AA batteries.

P/N 13-00561 ..... **$25.50**

Versabrite mounting clips (1 top, 1 side mount)

WORKBRIGHT INSPECTION LIGHT



This shop light is perfect for places that a flashlight can't quite illuminate properly. It was originally designed as an inspection light, but has many other uses as well. It is powered through a USB connector, and can be used with a battery pack, wall adapter, computer, etc.....P/N 12-04780 .....**$119.95**

SUREFIRE E1B-MV BACKUP™ FLASHLIGHT



The sleek, ultra-compact E1B-MV was originally developed as backup lights for law enforcement pros. This outstanding everyday-carry light sets itself apart from the rest of the Backup family with its broad, useful MaxVision Beam™, created by a special faceted reflector that shapes the LED's light into a smooth, seamless wall of light that's perfect for closer-range applications and maintaining situational awareness. .....P/N 13-20652 .....**$199.00**

SUREFIRE AVIATOR® DUAL-OUTPUT LED FLASHLIGHT



The ultra-compact, dual-output Aviator reinvents a classic SureFire design to provide a primary white LED and secondary colored LED in one sealed head, both focused into a useful beam with ample reach and surround light by a proprietary Total Internal Reflection (TIR) lens. Pull and twist Aviator's self-locking selector ring to set it to white or colored light, no filter required.

Blue Light .....P/N 13-20654 .....**$269.00**
Red Light .....P/N 13-20655 .....**$269.00**

SUREFIRE P3X FURY® DUAL-OUTPUT LED FLASHLIGHT



The P3X Fury has a virtually failure-proof ultra-high-output LED that delivers your choice of either 1,000 blinding lumens of perfectly focused light or 15 lumens of useful light. The 1,000-lumen output — with peak beam level of 22,000 candela — is enough for searching, signaling, or to overpower the dark-adapted vision of a threat. The 15-lumen output level is perfect for general work at close-to-medium distances and lets you greatly extend the flashlight's runtime on a set of three lithium 123A batteries.

P/N 13-20656 .....**$199.00**

SUREFIRE P3X FURY® WITH INTELLIBEAM™ FLASHLIGHT



This innovative, automatically adjusting version of the original P3X Fury takes full advantage of the variable-output capability of one of SureFire's brightest and most popular LED flashlights. It features SureFire's proprietary IntelliBeam™ Technology—an intelligent sensor and microprocessor-based system—that continuously evaluates your environment and seamlessly adjusts light output, from 15 to up to 1,000 lumens, based on the scope of your surroundings. Just press or click its tailcap switch to access this auto-adjusting mode, which delivers just the right amount of light output. P/N 13-20657 .....**$229.00**

SUREFIRE SIDEKICK RECHARGEABLE KEY CHAIN FLASHLIGHT



This ultra-compact, powerful LED illuminator was created so it could be carried and used by everyone. The rechargeable Sidekick was designed to attach to keys so it's always available and, most importantly, ready for everyday use and emergencies. This polymer-bodied light features three levels of output that will provide security and peace of mind, no matter what. On high and operated just like a key FOB, its wide, smooth 300-lumen MaxVision Beam™ illuminates all dark areas at night.....P/N 13-20658 .....**$69.99**

SUREFIRE MINIMUS™ HEADLAMP



The model that launched SureFire headlamps into best-in-class status. Minimus provides the right amount of light—13 preset outputs up to a max of 300 lumens—precisely where you need it, thanks to its adjustable output knob and rotatable LED housing.

P/N 13-20659 .....**$179.00**

SUREFIRE MAXIMUS™ HEADLAMP



The SureFire Maximus™ rechargeable variable-output LED headlamp delivers an amazing 1,000 lumens of light—enough to illuminate your entire campsite. If that's too much light, you can dial it down to 1 lumen—or any level in between—for closer work, preserving your dark-adapted vision, or extending the runtime. A large knurled dial permits output control with one hand—even if it's gloved or numbed by cold. One hand can also aim the light right where you want it since the light assembly rotates up and down 90 degrees.

P/N 13-20660 .....**$249.00**

PS

FLASHLIGHTS

XEVISION PERSONAL LED FLASHLIGHTS



The compact LED flashlights are so small that they fit in the palm of a hand comfortably. They are so bright, even die-hard HID Xenon lighting technology purists can not resist.

Super-bright white light from one small but powerful LED Our LED flashlights feature the latest commercial Cree LED 7090 XR-E, which delivers unprecedented levels of bright white light. The legendary 7090 XR-E is tested to the highest standards in the LED industry. The white light generated is as cool as HID with around 4000ºK to 5000ºK. The current draw is quite small while the LED is very efficient with a luminous flux of up to 100 lm min. @ 350 mA, and a luminous efficacy up to 75 lumens/watt.

XeVision personal LED flashlight models - The compact LED flashlights are so small that they fit in the palm of a hand comfortably. They are so bright, even die-hard HID Xenon lighting technology purists can not resist.

XV-C1C - Is their most compact LED flashlight using one long-lasting 3 VDC Lithium CR123A battery. The XV-C1C features six settings, 4 of them being output levels. This flexibility not only allows the user to select the best compromise between brightness and runtime for any given task but also has the ability to aid in an emergency. The XV-C1C offers a remarkably compact size and is extremely solid and reliable with its digitally regulated brightness. One 3 VDC CR123A Lithium battery

XV-C1C (Black) ..... PN 13-05144 .... **$124.80**
XV-C1C (Iridium) ..... PN 13-05147 .... **$124.75**

XV-C2C- Features six settings, 4 of them being output levels. This flexibility not only allows the user to select the best compromise between brightness and runtime for any given task but also has the ability to aid in an emergency. The XV-C2C offers a remarkably compact size and is extremely solid and reliable with its digitally regulated brightness. Two 3 VDC CR123A batteries (Lithium), not rechargeable.

XV-C2C (Black) ..... PN 13-05145 ..... **$89.95**
XV-C2C (Iridium) ..... PN 13-05148 .... **$125.95**

XV-C2A - Features six settings, 4 of them being output levels. This flexibility not only allows the user to select the best compromise between brightness and runtime for any given task but also has the ability to aid in an emergency. The XV-C2A offers a compact size and is extremely solid and reliable with its digitally regulated brightness. Two 1.5 VDC AA (Alkaline, Lithium) or 1.2 V NiMH batteries.

XV-C2A (Black) ..... PN 13-05146 .... **$121.75**

ACCESSORIES

Model	Description	Part No.	Price
WF-138C Charger for XeVision XV-C2C	Charger for a single or pair of over-discharge protected R-CR123A rechargeable Li-Ion cells. Comes with 2 R-CR123A cells.	13-05141	**$59.90**
WF-138 Charger only	Just the charger - for the WF-123 combo package	13-05140	**$27.50**
ICR123 Rechargeable Lithium Batteries	These ICR123 rechargeable 3 V batteries used for the XV-C2V LED flashlight. Note that the standard CR123A batteries must not be recharged!	13-05139	**$32.90**
CR123A Single Cell Lithium Technology	1 Titanium 3 V CR123A battery. For the XV-C1C LED flashlight. Prevents excessive discharge that can damage lithium cells and may lead to catastrophic incidents.	13-05142	**$1.95**
CR123AX2 Twin Cell Lithium Batteries	2 Titanium CR123A batteries are carefully matched and form one single sealed unit, 3 V but double capacity). Used for the XV-C2C LED flashlight. Prevent excessive discharge that can damage lithium cells and may lead to catastrophic incidents.	13-05143	**$3.95**

AIRCRAFT SPRUCE LED PILOT'S FLASHLIGHT



The Aircraft Spruce LED pilots flashlight comes with a lifetime guarantee. Ultra-Bright light is provided with 12 energy saving LED bulbs. Made of aircraft aluminum, the flashlight casing is tough and durable. Attractive presentation box included. Size: 4-5/8" Long. Water and Shock Resistant. Push Button Sealed Rubber Switch. Battery Included

P/N 13-06922 ..... **$7.95**

LARRY POWER LED WORK LIGHT



The Larry™ is BRIGHTER THAN EVER! Now, equipped with C•O•B LED technology, the Larry™C outputs 170 lumens of intense light. The rotating magnetic clip gives you convenient hands-free lighting by attaching to virtually anything. The reinforced plastic body design is water and impact-resistant, making this light basically indestructible. Powered by 3 AAA batteries (included). Size: (H) 6.375" x (W) 0.55" x (D) 1.25". 0.1870 lbs.

P/N 13-18551 ..... **$8.50**

COAST PX20 DUAL LED FLASHLIGHT



The PX20 Dual Color LED Flashlight combines five super bright white LEDs with one red LED. Each LED is controlled by a separate switch, allowing you to turn on the desired color with one click; no cycling through switch modes to find your color. The white light is for general flashlight use, while the red LED is perfect when you only need minimal light, such as when reading a map. A lightweight aluminum casing offers great durability and will hold up to heavy daily use.

P/N 13-12049 ..... **$27.95**

LIGHT BUDDY



Light Buddy its a swivel magnetic mount fits Maglite XL 50 XL 100 or any 1" light. Flashlight not included.

P/N 13-12076 ..... **$19.95**

SUPERBRIGHT 9-LED FLASHLIGHT



Nine LEDs provide extremely bright illumination, with a much more natural hue than incandescent bulbs. LEDs are also very miserly on power - one set of batteries can last for days of continuous use. A unique cannister holds three AAA batteries (included), yet allows a very short length.

P/N 12-03744 ..... **$11.95**

CSI QUATRO FOUR COLOR UV LED FLASHLIGHT



The CSI QUATRO™, appropriately named, incorporates 4 distinct light colors for many different uses. Featuring a high-power 75 lumen White LED, 5 Green LED's, 5 UV LED's, and a red laser pointer, this sleek flashlight is water and impact-resistant. Powered by 3 AAA batteries (included).

P/N 13-18174..... **$22.50**

PILOT'S HANDY LANYARD LIGHT



This emergency light with a break-away neck lanyard is great for use around any aircraft. Ideal for pre-flight inspections after dark, providing you with a small, powerful flashlight which you can simply hang around your neck as you preflight the aircraft. Also makes the perfect cockpit light in an emergency. Furnished with blue-green and red lenses for night flying as well as a standard clear lens. Includes lanyard & 1 AAA battery.

P/N 13-00571 ..... **$19.95**

MINI LED FLASHLIGHTS



Only 3.5 inches long. NOT water resistant. DUAL Ultra-bright LEDs with lifetimes of 100,000+ hours, never break, and provide smoooth illumination. •Thumbwheel Brightness Control • Energy Efficient -- Up to 320+ hours at the dimmest setting, 12+ hours at the brightest, from one 9V Alkaline. •Exclusive brightness regulation circuitry -- keeps the LEDs shining bright as batteries age, • 9 Volt Battery & 20 inch neck strap included

White & Red.....P/N 13-04696 ..... **$32.80**
Red & Green.....P/N 13-04697 ..... **$32.80**

PS

Prices Subject to Change Without Notice

FLASHLIGHTS



FLITELITE A1 TACTICAL AVIATOR SERIES FLASHLIGHT

Specially designed for the aviator and tactical operations to avoid being blinded by a flashlight that is too bright in the cockpit. The light starts in a programmable memory mode, which is user programmable to any brightness level desired. P/N 13-11259..... **$46.90**

FLITELITE L1 TACTICAL AVIATOR SERIES LED FLASHLIGHT



Specially designed for the tactical aviator that requires a rugged, easy to control light that delivers CREE LED light through a MOON (the exact spot desired) lens.

Green..... P/N 13-11260.... **$19.95** White .....P/N 13-11261 ...**$19.95**

NEBO POWER AND LIGHT / RECHARGEABLE FLASHLIGHT



This portable, rechargeable flashlight serves as a backup power source for mobile phones and other rechargeable USB electronic devices. Ideal for travel, the PaL conveniently fits in your pocket, purse or briefcase. High-power 50 lumen LED. Fully rechargeable. Power bank for your USB powered devices. Anodized aircraft-grade aluminum;impact-resistant. USB & Micro USB charging ports. Apple® & Android™ compatible. Charging indicator tells charging status of flashlight and your USB powered devices.

Crimson .....P/N 13-18707 ..... **$16.95**
Onyx .....P/N 13-18709 ..... **$16.95**
Platinum .....P/N 13-18708 ..... **$16.95**



DETACHABLE BULB LIGHTS

This flexible light is available for the Pilots lap desk or the Fly informed kneeboard & calculator.

Clear..P/N 13-00811 ..... **$22.30**



FLIGHT OUTFITTERS DUAL COLOR HEADLAMP

Flying at night can be a daunting task. Having both hands free to handle the workload during these tense situations is extremely important. This dual color headlamp puts the right type of light right where you need it without tying up your hands. Dual switwches allow you to turn on just the white light, or just the red light. This means you don''t have to scroll htrough different lights and ruin your night vision. Each color of light has a high and low setting to maximize battery life. Uses 3AAA batteries (included)..... P/N 13-18183..... **$29.95**

MITYLITE FLASHLIGHT BLACK



MityLite® is made of unbreakable space age polycarbonate resin and is 4-3/4" (11.3 cm) in length. Its Laser Spot Xenon® lamp module can cut through water, smoke, fog, and rain making it a perfect light source for all applications. Rotary on/off switch. The MityLite® is ATEX, FM, CSA and AUS approved and water resistant (not for diving applications). Color: Black.

P/N 13-02238 ..... **$15.60**

SMITH & WESSON GALAXY 12 LED FLASHLIGHT



The Galaxy 12 LED Flashlight showcases our latest developments in flashlight versatility. This dual switch flashlight utilizes two buttons, one giving its user 6 White LEDs and the second provides a choice of 2 Blue/2 Red/2 Green LED modes. The shatterproof LED diodes last over 110,000 hours, are visible for over one mile, and will NEVER need replacing. Coupled with a limited lifetime warranty, these flashlights will protect you for a lifetime. Black Matte Aluminum. Includes 3 (AAA) batteries and deluxe nylon holster with extra battery storage.

P/N 14-02199..... **$26.75**

SMITH & WESSON GALAXY 28 LED FLASHLIGHT



The Galaxy™ Series 2800RBW LED Flashlight is Constructed from Anodized Aircraft Aluminum in Matte Black; Shatterproof, Scratch-Resistant Polymer Lens with Anti-Reflective Coating; 20 White LEDs; 4 Red LEDs; 4 Blue LEDs; Double "O" Ring Sealed for Waterproofing and Extreme Weather and Corrosion Resistance; Nylon Holster with Duty-Belt Sized Opening and Velcro Loop Attachment with Spare Battery Compartment.

P/N 14-03267..... **$36.55**

SEE OUR WEBSITE FOR MORE SMITH AND WESSON AVIATION FLASHLIGHTS.

BITE-A-LITE FLASHLIGHT MOUTHPIECE



A clever mouthpiece for comfortably holding a flashlight with your teeth. Fits most "AA" or "AAA" size quality aluminum flashlights. Note: flashlight not included. This is the mouth piece only.

AA.....P/N 14-00020 ..... **$3.95**
AAA .....P/N 14-03292 ..... **$3.95**

PETZL TACTIKKA CONSTANT HANDSFREE LIGHTING + RED / GREEN / BLUE



The Tactikka +RGB is a compact, 250-lumen headlamp designed for activities where stealth is key. This hybrid headlamp is powered by the included 3xAAA/LR03 batteries or by the optional CORE rechargeable battery. It features a long burn time, proximity or focused lighting for movement, and red/green/blue lighting which is easier on night vision and remains stealth. Red/green/blue lighting is easier on the user's night vision while remaining stealth. Powerful 250-lumen light has a long burn time. Provides three lighting modes: max autonomy, standard and max power. Single button operation is easy to use, even when wearing gloves while the headband is easy to slip on and off. Tactikka +RGB hybrid headlamps include three standard batteries, and are also compatible with the CORE rechargeable battery P/N 11-05096 ..... **$54.99**

DUO 5 HEADLAMP PETZL LIGHTS E69



The DUO lamps are ideal for use in wet environments, but are not designed for prolonged submersion (i.e. diving). Features: • Waterproof with dual light source: focusable halogen bulb and an LED module. • Switching on & off, brightness selection, zooming • The DUO lamps allow the light to be optimized (distance, duration) according to your needs. • Simultaneous use of both bulbs is not possible. • Unlocking/locking the bezel P/N 11-04996 ..... **$99.95**



FLITELITE FINGER LIGHT

A simple light that attaches to the finger. An integrated, battery saving 10-minute auto-off. Simple touch the button and light will shine wherever the pilot points.

Green ..... P/N 13-07275..... **$8.50**
White ..... P/N 13-07276..... **$7.95**
Red..... P/N 13-07277..... **$8.50**

PS

FLASHLIGHT HOLDERS - ARM RESTS



MERCURY CLAMP FLASHLIGHT HOLDER

Astro Arm is the perfect device when you need your flashlight directed precisely while having both hands available to perform a task. These holders are great for aviation, marine, automative, racing, and emergency lifesaving applications. Available in Mercury models for smaller flashlights and Gemini models for largers flashlights. P/N 13-04005 .....**$19.75**



MERCURY-MAGNETIC FLASHLIGHT HOLDER

Astro Arm is the perfect device when you need your flashlight directed precisely while having both hands available to perform a task. These holders are great for aviation, marine, automative, racing, and emergency lifesaving applications. P/N 13-04006 ..... **$19.75**



GEMINI CLAMP FLASHLIGHT HOLDER

Astro Arm is the perfect device when you need your flashlight directed precisely while having both hands available to perform a task. These holders are great for aviation, marine, automative, racing, and emergency lifesaving applications. Available in Mercury models for smaller flashlights and Gemini models for largers flashlights. P/N 13-04007 ..... **$29.95**



GEMINI MAGNETIC FLASHLIGHT HOLDER

Astro Arm is the perfect device when you need your flashlight directed precisely while having both hands available to perform a task. These holders are great for aviation, marine, automative, racing, and emergency lifesaving applications. Available in Mercury models for smaller flashlights and Gemini models for largers flashlights.

P/N 13-04008.....**$29.95**

GUPPIE MULTI-TOOL



The adjustable wrench jaw opens to 1/2" so you can use it for all kinds of light repair and assembly jobs. Thanks to the carabiner gate, the Guppie is easy to carry on a belt loop, D-ring, pack or rope. (But it is not a weight-bearing carabiner.) The high-carbon stainless steel blade with a Razor-Sharp edge can be opened and closed with one hand using the blade slot. The removable bit carrier is also a high-intensity LED light. It has two strong magnets to hold it securely to the Guppie's left side. The stainless steel clip will hold the Guppie in your pocket or on gear, which gives a lot of versatility. One more trick: The Guppie carabiner detent will open bottle caps and metal jar lids. Specifications: Blade Length: 2.0" (5.1 cm) Blade Steel: 3Cr13, 52-55 HRC Handle Length: 3.5" (8.9 cm) Tool Weight: 4.1 oz. (116 g) Bit Carrier Weight: 1.2 oz. (34 g) Batteries: Two CR327 3V Lithium

P/N 13-07358.....**$38.95**

SIDESTICK CONTROL ARM RESTS



The side stick control arm rests will steady the hand, wich improves flying and reduces wrist and arm fatigue. The arm rests were designed by an orthopedic specialist to reduce wrist and hand carpel tunnel syndrome. They can also be used for throttle rests. Color: Black. ABS plastic. Furnished as right/left set. P/N 13-03265 ..... **$25.85**

CIGPEN



Old Ashtray CigPen



CIGPEN HOLDER - CigPen installation is as easy as 123. Pull the nasty ashtray out, peel the double stick tape, insert and press in CigPen. CigPen was designed to hold two standard pencils or pens along with a Mini Mag Lite AAA. For a very low cost, you can easily turn your existing ashtray into a useful device. Fits C-150, 172, 182 Cardinal. DOOR LOCK HANDLE - When you order the CigPen, you will also receive the Cessna 150 door lock. The door lock is made from ABS Plastic. It is engraved with lock, un-lock, and indicating arrows. Fits C-150 airplanes.

P/N 13-06913 .....**$18.75**

MAP, CHECKLIST & LOG BOOK HOLDERS



These holders come in three sizes to store your maps, checklists and log books. They are thermo-formed from ABS plastic, and come in either black or gray.

Description	Size	Color	Part No.	Price
Aircraft Log	4-1/2"x7"x1/4"	Black	13-03086	**$19.50**
Engine Log	6-1/2"x7"x1/2"	Black	13-03087	**$17.95**
Map/Checklist	9"x10"x 5/8"	Gray	13-03088	**$31.50**
Aircraft Log	4-1/2"x7"x1/4"	Gray	13-03089	**$21.50**
Engine Log	6-1/2"x7"	Gray	13-03090	**$15.95**



PLANE POCKETS

Nine pockets protect and organize your cockpit and keep your equipment like new. Three large pockets with drawstrings hold POH Charts, Approach Plates, Sectionals. An additional three more pockets are designed to hold your hand-held radio, cameras, manuals, batteries, oxygen mask, and many other items. Top pockets will hold paper, sunglasses, water, flashlights and cables. Lightweight, rip-stop nylon, easy to install. Your headrest must be able to be removed to install pockets. Must supply number of inches between the centers of headrest post.

With Headrest..... P/N 13-04160....**$72.75**

PS

Prices Subject to Change Without Notice

LEATHERMAN POCKET TOOLS

LEATHERMAN SQUIRT PS4



The Leatherman Squirt PS4 is the first miniature pliers multi-tool tough enough to be a Leatherman. Now the Squirt also sports a scissors, making it even more useful than before. The key ring attachment offers the flexibility to place it on your key chain, backpack or even a zipper. Just two ounces, it's light enough to take anywhere. Fits nicely on a key ring. Color: Blue. Weight: 1.9 oz Length (Closed): 2.25 inches / 5.72 cm (Closed) Material: Stainless Steel with anodized aluminum scales

Features: • Needlenose Pliers • Regular Pliers • Scissors • 420HC Knife • Wire Cutters • Wood/Metal File • Medium Screwdriver • Flat/ Phillips Screwdriver • Bottle Opener • Key Ring Attachment.

P/N 13-11706.....**$34.95**

LEATHERMAN SQUIRT ES4



The E4 sets you up with 20GA, 18GA, 16GA, 14GA and 12GA wire strippers and electrical wire cutters. The gripping edges on the ES4's spring-action pliers help you get a firm grasp on fuses, small cables, and many hard-to-reach items. P/N 13-09289.....**$34.95**

JUICE® S2



Features: • Needlenose Pliers • Straight Knife • Wire Cutters • Hard-Wire Cutters • Extra-Small Screwdriver • Small Screwdriver • Med/ Lrg Screwdriver • Phillips Screwdriver • Lanyard Attachment • Can/Bottle Opener. Length: 3.25"/ 8.25cm closed, Weight: 4.3 ounces / 122 grams, Materials: Stainless steel with anodized aluminum scales. Color: Orange

PN 13-05559.....**$69.95**

JUICE® C2



Features: • Needlenose Pliers • Straight Knife • Wire Cutters • Hard-Wire Cutters • Extra-Small Screwdriver • Small Screwdriver • Med/ Lrg Screwdriver • Phillips Screwdriver • Lanyard Attachment • Can/Bottle Opener • Scissors. Length: 3.25"/ 8.5cm closed, Weight: 4.3 ounces / 122 grams, Materials: Stainless steel with anodized aluminum scales. Color: Red PN 13-05560.....**$45.95**

JUICE® XE6



The Leatherman Juice XE6 has it all. Our beefiest in the Juice line, it's still great for small hands and spaces and even features a corkscrew. So saw away some branches to set up the perfect picnic spot, tighten up those picnic chair bolts, bring out the vino and slice up some cheese and crackers. The all new Juice XE6, now with textured anodized aluminum scales in Granite or Moss - is there anything it can't do? Closed Length: 3.25 In. 8.26 Cm. Weight: 6.9 Oz. 195 G. Primary Blade Length: 2.27 In. 5.77 Cm.

P/N 13-16396.....**$99.85**

LEATHERMAN SKELETOOL, CX



Needlenose Pliers. Regular Pliers. Wire Cutters. Hard-wire Cutters. Bit Storage in Handle. 420HC Stainless Steel Blade. Universal Bit Driver. Carabiner/Bottle Opener. Removable Pocket Clip. Included Bits: Phillips #1 and #2. Screwdriver 3/16" and 1/4". Length: 4 in. / 10 cm closed. Weight: 5 ounces / 142 grams. Materials: 420HC Stainless Steel, Hard-Anodized Aluminum Handle Insert

Skeletool Cx with sheath.....P/N 13-07071 .....**$79.95**

LEATHERMAN SKELETOOL



420HC Stainless Steel Clip Point Combo Straight/Serrated Knife. Needlenose Pliers. Regular Pliers. Wire Cutters. Hard-wire Cutters. Large Bit Driver. Bottle Opener. Carabiner Clip. INCLUDED BITS: Phillips #1 and #2 Bit, Screwdriver 3/16" and 1/4" Bit. Stainless Steel with 6061-T6 Aluminum Handle Insert. Stainless Steel body. Outside-accessible Blade for One-handed Opening. All Locking Blades and Tools. Removable Pocket Clip. Nylon Sheath Sold Separately. 25-year Warranty. 4 in | 10 cm (closed). 5.0 oz | 142 g. 2.6 in | 6.60 cm (blade length)

Skeletool.....P/N 13-07068 .....**$59.95**

Skeletool with sheath.....P/N 13-07069 .....**$59.95**

CRUNCH TOOL



Locking Pliers, Wire Cutters, Hard-Wire Cutters, Serrated Knife, Metal/Wood File, Ruler (Inch/Metric), Bottle Opener, Small Screwdriver, Medium Screwdriver, Large Screwdriver, Phillips Screwdriver (#1/#2), Hex Bit Driver, Wire Stripper, Lanyard Attachmen

P/N 13-02727 .....**$109.95**

WAVE TOOL



Needlenose Pliers, Regular Pliers, Wire Cutters, Hard-Wire Cutters, Clip-Point Knife, Serrated Knife, Saw, Scissors, Wood/Metal File, Diamond-Coated File, Large Bit Driver, Small Bit Driver, Large Screwdriver, Ruler (8 inch/19 cm), Bottle/Can Opener, Wire Stripper, Lanyard Attachment, Two Double-Ended Bit P/N 13-03289 .....**$89.95**

SIDEKICK



Stainless Steel Body, Leather Sleeve, Spring-action Needlenose Pliers, Spring-action Regular Pliers, Spring-action Wire Cutters, 420HC Combo Knife, 420HC Serrated Knife, Saw, Wood/Metal File, Small Screwdriver, Medium Screwdriver, Phillips Screwdriver, Ruler (1 in / 2.54 cm), Bottle Opener, Can Opener, Wire Stripper, Removable Pocket Clip, Lanyard Ring, Carabiner Bottle Opener Accessory

P/N 13-11703 .....**$49.95**

SUPER TOOL 300



Stainless Steel 420HC Handles, All locking blades and tools, Comfort-sculpted Handles w/ Cutouts for Access with Gloves On, 420HC Clip Point Knife with Straight Edge, 420HC Sheepsfoot Serrated Knife, Needlenose Pliers, Regular Pliers, 154CM Removable Wire Cutters, 154CM Removable Hard-wire Cutters, Stranded-wire Cutters, Wire Stripper, Electrical Crimper, 5/16" Screwdriver, 7/32" Screwdriver, 1/8" Screwdriver, Phillips Screwdriver, Wood/Metal File, Saw, Bottle Opener, Can Opener, Ruler (9 inch/22 cm), Awl with Thread Loop P/N 13-11704 .....**$79.95**

CHARGE TTI



The Charge TTi features a cutting hook, scissors, outside-accessible blades, bit drivers, crimpers and more. But we had to give the TTi its own claim to fame. That's where the comfort-sculpted titanium handles and the S30V® stainless steel clip-point knife come in. Grab a hold of one today and you'll quickly see why the Charge models are the pinnacle of our multi-tool collection. PN 13-04514 .....**$169.85**

REBAR



Optimized for strength and features: Needlenose Pliers, Regular Pliers, 154CM Replaceable Wire Cutters,154CM Replaceable Hard-wire Cutters,Electrical Crimper,420HC Knife,420HC Serrated Knife,Wood/Metal File, Saw, Small Screwdriver, Large Screwdriver,Phillips Screwdriver,Awl w/Thread Loop,Ruler (8 inches/20 cm),Bottle Opener, Can Opener, Wire Stripper. P/N 13-12777.....**$59.95**

LEATHERMAN CHARGE + TTI



Lightweight and made of premium materials, this upgraded version of the original includes replaceable wire cutters. One of the more popular tools, the Charge Plus TTi is ready for jobs big and small. This practical multi-tool combines some of our most requested features with premium materials and upgraded, replaceable wire cutters. Titanium handles make the tool lightweight and strong and an ultra-sharp S30V steel knife blade resists corrosion.

P/N 13-21325.....**$169.85**

LEATHERMAN MICRA



Spring-action scissors and personal care features that fit on your key chain are just part of what makes the Micra truly unique. Features: Scissors, Clip-Point Knife, Tweezers, Nail File / Cleaner, Flat Phillips, Screwdriver, Extra Small Screwdriver, Medium Screwdriver, Bottle Opener, Ruler (Inch / Metric), Lanyard Attachment, Length: 2.5 in. / 6.35 cm closed, Weight: 1.75 ounces / 50 grams, Materials: 100% stainless steel (Optimum grade hardness for each tool/ blade). Color: Blue P/N 13-07079.....**$29.95**

PS

VISIT OUR WEBSITE TO VIEW OUR COMPLETE LISTING FOR LEATHERMAN TOOLS.

WWW.AIRCRAFTSPRUCE.COM

WIRE MARKERS – SAFETY STEPS

TANA WIRE MARKERS



Tana Wire Markers are large fiberglass balls which can be attached to power lines to warn aircraft of the location of the wires. They meet FAA specifications, feature easy installation and universal attachment, withstand the elements for over 10 years, require no maintenance, do not slip, chafe, oscillate, or cause electrolysis or vibration. Stocked in 9", 12", and 24" sizes. Larger sizes available on request. Color: international orange. Stocked in Tana marker style JX.
Styles SD, KJ, AR, XL, and BN are available by special order. Please Request a Quote.

- 9" diameter with Tape ..... P/N 13-18710 ..... **$79.95**
- 9" diameter w/o Tape ..... P/N 13-18711 ..... **$99.85**
- 12" diameter with Tape ..... P/N 13-00057 ..... **$122.75**
- 20" diameter with Tape ..... P/N 13-00058 ..... **$183.75**
- 24" diameter with Tape ..... P/N 13-00059 ..... **$268.00**
- 12" diameter w/o Tape ..... P/N 13-00054 ..... **$99.85**
- 20" diameter w/o Tape ..... P/N 13-00055 ..... **$137.75**
- 24" diameter w/o Tape ..... P/N 13-00056 ..... **$224.95**

WIRE MARKERS



CPS-S STANDARD MOUNTING MARKER - The Standard power line Marker is made of ABS plastic & fits wires up to 1" using two neoprene bushings



CSP-EZS RECESSED MOUNTING AREA & CSP-EZC RECESSED MOUNTING AREA W/ CLAMP - The EZ line of Markers is made of ABS plastic & is new & improved with a larger recessed area around the four bolts making it easier to install with linemen gloves. The EZ-S still uses two neoprene bushings & fits wires up to 1". The CSP-EZC comes with an aluminum clamp with stainless steel bolts & fits wires up to 1". Both of these styles use 1" nuts.



CSP-SAR STANDARD MARKER WITH ARMOR ROD - This marker is equipped with two sets of armor rod set into a bracket & can be bolted to the inside or outside of the marker All Markers can be made to fit larger diameter wires.

Diam.	CSP-EZS		CSP-EZC		CSP-SAR	
	Part No.	Price	Part No.	Price	Part No.	Price
9 inch	-	-	13-06741	**$91.95**	13-06748	**$103.95**
12 inch	-	-	13-06742	**$103.95**	13-06749	**$125.95**
20 inch	-	-	13-06743	**$140.95**	13-06750	**$166.95**
24 inch	13-06729	**$188.95**	13-06744	**$218.95**	13-06751	**$240.95**
30 inch	-	-	13-06745	**$266.95**	13-06752	**$294.95**
36 inch	-	-	13-06746	**$421.95**	13-06753	**$443.95**

BIRD DETERRENT - BIRDXPELLER PRO



The BirdXPeller PRO is a sonic bird repeller that broadcasts a variety of naturally recorded bird distress signals and predator calls that frighten, confuse and disorient pest birds within the effective range. Pest birds cause damage, liability and health hazards. Sonic bird control is a safe, humane, eco-friendly way to get rid of birds from outdoor areas. Sonic repellers use high-definition digital recordings. Customizable settings allow for easy, DIY pest control. Real sounds – digital playback of naturally recorded threats. Covers up to 1 acre. Repels: pigeons, starlings, sparrows and gulls. P/N 13-00091 ..... **$222.95**

LARGE AIRPORT CONE MARKERS



Avlite's range of airfield cone markers is rotationally-molded using UV-stabilised polyethylene, providing exceptionally long-life without the need for painting.

Large Cone Marker Yellow ..... P/N 11-14012 ..... **$72.85**
Large Cone Marker Orange ..... P/N 11-14013 ..... **$65.00**
Mini Cone Marker Blue ..... P/N 11-14014 ..... **$37.85**

UNIVERSAL SAFETY STEP



Unique Self-Leveling Anti-Tip design. Tubular Aluminum 11" x 14" platform, 8" high. Custom designed non-slip Safety Strips on Platform. Powder coat finish. Rugged All Aluminum Welded Construction – will not corrode. Heat Treated for Maximum Strength. Weight – 4 lbs. Lab Tested to 1000 lbs. Weight: 7 lbs. Dimensions: 19 x 16 x 8 in
P/N 13-18575 ..... **$58.75**

LO-COMMERCIAL 6 INCH SAFETY STEP



Unique Self Leveling Anti-Tip Design. Tubular Aluminum 12" x 19" Platform, 6" High Non-Slip Safety Strips on Platform. Powder Coat Finish. All-Aluminum Welded Construction. Heat Treated for Maximum Strength. Weight – 4 1/2 lbs.. Lab Tested to 1000 lbs. Weight: 8 lbs. Dimensions: 27 x 21 x 7 in.
P/N 13-18576 ..... **$57.75**

COMMERCIAL 8 INCH SAFETY STEP



Tubular Aluminum 15"x19" platform, 8" high. Custom Designed Non- Slip Safety Strips on Platform. Powder coat finish. Rugged All Aluminum Welded Construction, will not corrode. Heat Treated for Maximum Strength. Weight – 6 1/2 lbs. Lab Tested to 1000 lbs. Weight: 11 lbs. Dimensions: 27 x 21 x 8 in.
P/N 13-18577 ..... **$74.75**

FOLDING SAFETY STEPS



Unique Self-Leveling Anti-Tip design. Unique Double-Locking Safety Legs. Custom Designed Non-Slip Safety Strips on platform. Powder coat finish. Rugged All Aluminum Welded Construction – Will not corrode. Heat Treated for Maximum Strength. Unique Self-Leveling Anti-Tip design. Unique Double-Locking Safety Legs. Custom Designed Non-Slip Safety Strips on platform. Rugged All Aluminum Welded Construction – Will not Corrode. Heat Treated for Maximum Strength.

- Small ..... P/N 13-18578 ..... **$64.75**
- Large ..... P/N 13-18579 ..... **$76.75**
- Extra Large ..... P/N 13-18580 ..... **$105.75**

HANDLE SAFETY STEP



Unique Self Leveling Anti-Tip Design. Lab Tested to Hold 1000 lbs.. Weighs Only 10 1/2 lbs. Heavy Duty Tubular Aluminum 15" x 19" Platform With An 8" Step Height. 34" Steel Handle. Safety Strips and Angled Leg Tips to Prevent Slippage. Durable, Textured Powder Coat Finish Will Not Rust. Weight: 18 lbs. Dimensions: 26 x 19 x 16 in. Steel Handle: 34"
P/N 13-18581 ..... **$124.99**

INDUSTRIAL SAFETY STEPS



Unique Self Leveling Anti-Tip Design. Lab Tested to Hold 1000 lbs.. Weighs Only 10 1/2 lbs.. Heavy Duty Tubular Aluminum 15" x 19" Platform With An 8" Step Height. 34" Steel Handle. Safety Strips and Angled Leg Tips to Prevent Slippage. Durable, Textured Powder Coat Finish Will Not Rust. Unique self-leveling Anti-Tip design. Tubular Aluminum 15"x19" platform, 8" high - 15" high. Brackets for increased durability. Custom Designed Non- Slip Safety Strips on Platform. Available Safety Yellow powder coat finish. Rugged All Aluminum Welded Construction, will not corrode. Heat Treated for Maximum Strength. Weight: 8" - 7 1/2 lbs / 10" - 8 lbs / 12" - 8 1/2 lbs / 15" - 9 1/2 lbs. Lab Tested to 1000 lbs.

- 8 Inches ..... P/N 13-18582 ..... **$74.95**
- 10 Inches ..... P/N 13-18583 ..... **$79.85**
- 12 Inches ..... P/N 13-18584 ..... **$85.75**
- 15 Inches ..... P/N 13-18585 ..... **$89.95**

SAFETY STEP ACCESSORIES

Description	Part No.	Price
Safety Step Replacement Strips Set for 15x19 Deck Fits Models: 13-18577, 13-18579, 13-18582,13-18583, 13-18584 & 13-18585	13-18589	**$14.95**
Safety Step Replacement Strips Set for 12x19 Deck Fits Models: 13-18576	13-18589-1	**$14.95**
Safety Step Replacement Strips Set for 11x14 Deck Fits Models: 13-18578 & 13-18575	13-18589-2	**$14.95**
Saftey Step Glow Strips	13-18587	**$6.55**

PS

PILOT WATCHES



CITIZEN ECO-DRIVE STRAP 180 MENS WATCH

For a rugged look with a comfortable fit, this military-inspired timepiece fits the bill. with a day-date indicator, luminous hands, 37mm screw-back case, and 100M WR. The black dial provides a backdrop for simple Arabic numerals, housed in a stainless steel case along with a woven green strap with patterned stitching and a buckle clasp.

P/N 13-19311 ..... **$175.00**



CITIZEN ECO-DRIVE CHRONOGRAPH STAINLESS STEEL

The perfect mix of dress and sporty make up this Drive from Citizen HTM timepiece. Featured in stainless steel with a bright white dial, 1/5-second chronograph measuring up to 60 minutes, 12/24-hour time, date and water resistant up to 100 meters.

P/N 13-19312 ..... **$295.00**



CITIZEN ECO-DRIVE PERPETUAL CALENDAR MENS WATCH

This perpetual calendar chronographis loaded with features including a 1/20 second chronograph measuring up to 60 minutes, 12/24 hour time, dual time, date, alarm, and luminous hands. The 44mm stainless steel case is complemented by a brown leather strap with white contrast stitching. Also includes a screw-back case and 100M WR.

P/N 13-19309 ..... **$395.00**



CITIZEN ECO-DRIVE NIGHTHAWK MENS MESH STRAP

Soar to new heights with Citizen Nighthawk, a flight watch for both novice and professional pilots. Nighthawk features a pilot's slide rule dial ring operated by a crown at the 8 o'clock position, dual time, date and large luminous markers and hands for easy readability. Featured here in stainless steel with a mesh bracelet, black dial and red accents.

P/N 13-19307 ..... **$395.00**



CITIZEN ECO-DRIVE CHRONOGRAPH MENS WATCH

Take things up a notch with this perpetual calendar chronograph. Includes a 1/20 second chronograph up to 60 minutes, 12/24 hour time, dual time, tachymeter, date, alarm and non-reflective crystal. The 43mm titanium case sports a one-way rotating elasped time bezel & screw-back case with a brown leather strap with contrast stitching and 200M WR.

P/N 13-19308 ..... **$415.00**



CITIZEN ATOMIC SKYHAWK A-T ECO-DRIVE CHRONOGRAPH WATCH

Redefining atomic timekeeping with a turbine inspired bold and powerful watch. The newest edition of the Citizen Skyhawk A-T collection is remarkably dynamic and visually appealing. With atomic timekeeping is 43 cities, this chronograph watch features a perpetual calendar, dual time, alarms, countdown timer, digital backlight and UTC displays, power reserve and pilot's rotating slide rule bezel. This model appears with a honed stainless steel case, black polyurethane strap, black dial and black bezel with unique case and dial motifs.

P/N 13-19314 ..... **$695.00**



CITIZEN PERPETUAL CAL CHRONOGRAPH WATCH

Boldly daring, this sporty watch conveys maximum info at a glance. This 1/20 second chrono measures up to 60 minutes, with perpetual calendar, 12/24 hour time, dual time, alarm, and rotating inner ring. Features include a silver dial and oversized 48mm stainless steel screw-back case, and is 100M WR. Stainless Steel Bracelet, Fold Over Clasp with Hidden Double Push Button and Features include a silver dial and oversized 48mm stainless steel screw-back case, and is 100M WR. Case Material is Stainless Steel with a Silver Tone Dial. (Note): Shipping within the USA only.

Stainless .....P/N 13-16305 ..... **$356.25**

VISIT OUR WEBSITE FOR OUR COMPLETE CITIZEN PRODUCT LISTING.



Jackie



Amelia



Elise



Katherine

ABINGDON WATCHES

In this collection, the function of a rotating bezel slide rule comes together with the classic analog face to present a timeless purity of curves and lines. An elegant chronograph.

Description	Part No.	Price
Jackie Dreamy White Watch	13-11392	**$413.00**
Jackie Sunset Pink Watch	13-11394	**$395.00**
Jackie Seaplane Green Watch	13-11393	**$413.00**
Amelia Cloud White Watch	13-11396	**$268.95**
Amelia Runway Black Watch	13-11395	**$268.95**
Elise Anthenian Silver Watch	13-11398	**$335.00**
Elise Egyptian Gold Watch	13-11399	**$425.00**
Elise Tahitian Two Tone Watch	13-11397	**$347.00**
Katherine Sky Blue	13-18054	**$549.00**
Katherine Royale	13-18055	**$549.00**
Katherine Storm	13-18056	**$549.00**
Katherine Rose Sun	13-18057	**$549.00**
Katherine Frequent	13-18058	**$549.00**

VISIT OUR WEBSITE FOR OUR COMPLETE ABINGDON PRODUCT LISTING.

PS

PILOT WATCHES – SUNGLASSES

ZULU-03 ALTIMETER VINTAGE WATCH 9060VW



Aircraft Spruce is proud to introduce the new Zulu-03 Vintage Series of Cockpit Inspired Aviator Watches by Trintec. Due to numerous advances in the watch making industry Trintec is now able to offer unprecedented value and quality in this new line of watches. This watch features an Instrument Styled Casing and Dial which simulate the instruments found in an aircraft cockpit. **Features**: • Solid 316 Stainless Steel and Black PVD case • 8215 Miyota Japanese Automatic Movement • Scratch Resistant Mineral Crystal • Screw Down Crown • Luminescent Hand & Numerals • Water Resistant to 5 ATMS • Quality Silicone Rubber Strap **Specs**: Case: 42mm x 42mm • Lug: 22 mm • Thickness: 13mm. ..... P/N 13-11545 ..... **$555.00**

ZULU-03 DIRECTIONAL GYRO VINTAGE WATCH 9062VW



Aircraft Spruce is proud to introduce the new Zulu-03 Vintage Series of Cockpit Inspired Aviator Watches by Trintec. Due to numerous advances in the watch making industry Trintec is now able to offer unprecedented value and quality in this new line of watches. This watch features an Instrument Styled Casing and Dial which simulate the instruments found in an aircraft cockpit. **Features**: • Solid 316 Stainless Steel and Black PVD case • 8215 Miyota Japanese Automatic Movement • Scratch Resistant Mineral Crystal • Screw Down Crown • Luminescent Hand & Numerals • Water Resistant to 5 ATMS • Quality Silicone Rubber Strap. **Specs**: • Case: 42mm x 42mm • Lug: 22 mm • Thickness: 13mm. ..... P/N 13-11546 ..... **$475.00**

ZULU-03 CLOCKSTYLE VINTAGE WATCH 9067VW



Aircraft Spruce is proud to introduce the new Zulu-03 Vintage Series of Cockpit Inspired Aviator Watches by Trintec. Due to numerous advances in the watch making industry Trintec is now able to offer unprecedented value and quality in this new line of watches. This watch features an Instrument Styled Casing and Dial which simulate the instruments found in an aircraft cockpit. **Features**: • Solid 316 Stainless Steel and Black PVD case • 8215 Miyota Japanese Automatic Movement • Scratch Resistant Mineral Crystal • Screw Down Crown • Luminescent Hand & Numerals • Water Resistant to 5 ATMS • Quality Silicone Rubber Strap. Specs: • Case: 42mm x 42mm • Lug: 22 mm • Thickness: 13mm. ..... P/N 13-11547 ..... **$475.00**

SCHEYDEN TRUE AVIATOR STEAM GAUGE WATCHES



True Aviator Series Steam Gauge, precision watches designed by pilots for pilots - engineered to last a lifetime. Features 3 Stand Alone Instruments. Removable Liquid filled Magnetic Compass. Swiss ISA Movement Watch with matte black dial. Removable Digital IFR Timer, includes two SS band links when one or both instruments are removed. Water Resistant to 66 Feet (3 ATM).

Natural Stainless Steel ..... P/N 13-14796 ..... **$2,992.00**
Black Stainless Steel ..... P/N 13-14809 ..... **$2,992.00**
Gold Stainless Steel ..... P/N 13-14810 ..... **$2,992.00**

VIBRALITE MINI BLACK



The smallest, high quality, user friendly Vibration Alarm Watch available. Vibration, Audible or Both Set easily in Option Mode. Text on display prompts you. Button Alert feature will confirm your setting quickly. 12 Daily Alarm Settings Preset for variable reminders. 20 second duration alarm with auto off or can be turned off by pushing any button. Countdown Timer with Auto Repeat.

Black With Nylon Band
P/N 11-11135 ..... **$51.75**
Purple Flower Band ... P/N 11-11136 ..... **$51.75**
Blue W/ Hook And Loop Band
P/N 11-11137 ..... **$51.75**

FLYING EYES GOLDEN EAGLE SPORT SUNGLASSES



Flying Eyes Golden Eagle sunglasses are designed to be amazingly comfortable under a helmet or aviation-style headset. These ComfortStyle sunglasses are made of Resilamide™ frames and temples, a material that is primarily used in aerospace. This very costly polymer material makes these glasses virtually unbreakable and yet super light and flexible. Their 1mm thin temples and their flexibility mean that you will not feel them while wearing a helmet or aviation-style headset. And no more noise leaks while wearing a headset either!

Frame	Lens	Part No.	Price
Glossy Black	Black Gradient	13-21141	**$169.00**
Glossy Black	Black Bifocal 1.5	13-21143	**$189.00**
Glossy Black	Black Bifocal 2.0	13-21144	**$189.00**
Glossy Black	Copper Gradient	13-21142	**$169.00**
Matte Black	Black Bifocal 1.5	13-21147	**$189.00**
Matte Black	Black Bifocal 2.0	13-21148	**$189.00**
Matte Black	Gray Gradient	13-21145	**$169.00**
Matte Black	Copper Gradient	13-21146	**$169.00**
Satin Tortoise Shell	Black Bifocal 1.5	13-21149	**$189.00**
Satin Tortoise Shell	Black Bifocal 2.0	13-21150	**$189.00**
Satin Tortoise Shell	Gray Gradient	13-21151	**$169.00**
Satin Tortoise Shell	Copper Gradient	13-21152	**$169.00**

FLYING EYES KINGFSHER SUNGLASSES



Flying Eyes Kingfisher sunglasses are designed to be amazingly comfortable under a helmet or aviation-style headset. These ComfortStyle sunglasses are made of Resilamide™ frames and temples, a material that is primarily used in aerospace. This very costly polymer material makes these glasses virtually unbreakable and yet super light and flexible. Their 1mm thin temples and their flexibility mean that you will not feel them while wearing a helmet or aviation-style headset. And no more noise leaks while wearing a headset either!

Frame	Lens	Part No.	Price
Glossy Black	Gray Gradient	13-21153	**$169.00**
Glossy Black	Copper Gradient	13-21154	**$169.00**
Tortoise	Gray Gradient	13-21155	**$169.00**
Tortoise	Copper Gradient	13-21156	**$169.00**
White	Gray Gradient	13-21157	**$169.00**
White	Copper Gradient	13-21158	**$169.00**
Blue	Gray Gradient	13-21159	**$169.00**
Blue	Copper Gradient	13-21160	**$169.00**

PS

SUNGLASSES

RAY-BAN AVIATION SUNGLASSES

Ray-Ban is the leading brand in the high quality sunwear market segment and by far the best-selling sunwear brand in the world. It is an all American Brand created 1937 with the Aviator style, developed fpr use by the pilots of the U.S Air Force.



Style	Frame	Lens Color	PN	Price
RB 3025	ARISTA	G-15 XLT 62mm	13-04984	**$153.00**
RB 3025	ARISTA	G-15 XLT 58mm	13-04990	**$153.00**
RB 3025	BLACK	G-15 XLT 58mm	13-04991	**$153.00**
RB 3025	BLACK	Polarized Natural Green 58mm	13-04987	**$203.00**
RB 3025	GUNMETAL	Polarized Natural Green 58mm	13-04989	**$203.00**
RB 3025	ARISTA	Polarized Natural Green 58mm	13-04985	**$203.00**

G-15XLT is a Grey Color



Style	Frame	Lens Color	PN	Price
RB 3026	BLACK	G-15 XLT	13-04992	**$153.00**
RB 3026	ARISTA	G-15 XLT	13-04993	**$153.00**



13-04994
Arista/Green

G-15XLT is a Grey Color

Style	Frame	Lens Color	PN	Price
RB 3030	ARISTA	G-15 XLT	13-04994	**$153.00**
RB 3030	BLACK	G-15 XLT	13-04995	**$153.00**

G-15XLT is a Grey Color

SCHEYDEN FIXED HYBRID COMPOSITE SUNGLASSES



Stylish composite frames have been combined with HiNiHg (High Nickel Silver) temples enabling full wrap frames that fit comfortably under a headset without disturbing the ANR seal. The frames will easily slide down the wearers nose and back up again to adapt to changing light conditions with the push of a finger. Scheyden Deluxe Case Pack is included.

Part No.	Description	Price
13-06989	Jet-A Bronze Havana	**$259.00**
13-06990	Jet-A Gray Havana	**$259.00**
13-06987	Jet-A Bronze CR39	**$259.00**
13-06988	Jet-A Gray CR39	**$259.00**
13-06984	Panorama Bronze Havana	**$259.00**
13-06986	Panorama Gray Havana	**$259.00**
13-06980	Panorama Bronze CR39	**$259.00**
13-06983	Panorama Gray CR39	**$259.00**
13-06993	RevelStroke Bronze Havana	**$259.00**
13-06994	RevelStroke Gray Havana	**$259.00**
13-06991	RevelStroke Bronze CR39	**$259.00**
13-06992	RevelStroke Gray CR39	**$259.00**

SCHEYDEN CLASSIC FLIP-UP SUNGLASSES



El Capitan



Avalon



Avalon Small



Sonoma

Scheyden patented FlipUp & locking mechanism, allows you to instantly adapt to constantly changing cockpit light conditions with the flip of a finger. Fabricated in titanium i tweighs mere ounces. Offers 100% UVA & UVB protection. , and crystal clear, distortion free vision. Backside Triple Anti-Reflective coating acts to diffuse ambient light from behind. Includes a Deluxe Case Pack with a luxurious microfiber cleaning cloth and glasses bag along with an aluminum hard case and leather flip sport case. Lifetime warranty on all titanium frames and the best lens replacement warranty in the eyewear industry.

Model	Lens	Frame	Part No.	Price
El Capitan	High Contrast Bronze CR39	Natural Titanium	13-06947	**$449.00**
El Capitan	Neutral Grey CR39	Natural Titanium	13-06948	**$399.00**
Avalon	High Contrast Bronze CR39	Natural Titanium	13-06949	**$449.00**
Avalon	Neutral Grey CR39	Natural Titanium	13-06951	**$449.00**
Sonoma	High Contrast Bronze CR39	Natural Titanium	13-06952	**$449.00**
Sonoma	Neutral Grey CR39	Natural Titanium	13-06953	**$449.00**
Avalon Small	High Contrast Bronze CR39	Natural Titanium	13-06957	**$449.00**
Avalon Small	Neutral Grey CR39	Natural Titanium	13-06961	**$449.00**

Lenses are non-polarized as standard. This ensures that there is no distortion or "blacking-out" of glass cockpit instruments or LCD screens. Polarized lenses are available.

SCHEYDEN DUAL RX SUNGLASSES



El Capitan



Mustang



Albatross

The ability to instantly & effortlessly adapt to changing light conditions while keeping your prescription lenses in place. Supplied with a lens template which is all your local optician needs to fabricate your prescription lenses. See photos above for frame styles.

Model	Lens	Part No.	Price
El Capitan	High Contrast Bronze CR39	13-06962	**$449.00**
El Capitan	Neutral Grey CR39	13-06965	**$449.00**
Avalon	High Contrast Bronze CR39	13-06966	**$449.00**
Avalon	Neutral Grey CR39	13-06968	**$449.00**
Avalon Small	Neutral Grey CR39	13-06977	**$449.00**

SCHEYDEN FIXED GEAR SUNGLASSES

The thin titanium ear-pieces fit comfortably under a headset and are small enough that they won't interfere with the ANR seal. Fixed Gear Mavericks are the choice of the US Air Force Thunderbirds. High Contrast Light Bronze lens offers 100% UVA & UVB protection and is recommended for low light conditions.

Model	Frame	Lens	Part No.	Price
Mustang	Natural Titanium	Bronze Polarized	13-11479	**$349.00**
Mustang	Natural Titanium	Bronze Non-Polarized	13-11478	**$309.00**
Mustang	Natural Titanium	Gray Polarized	13-11481	**$349.00**
Mustang	Natural Titanium	Gray Non-Polarized	13-11480	**$309.00**
Albatross	Natural Titanium	Bronze Polarized	13-11483	**$349.00**
Albatross	Natural Titanium	Bronze Non-Polarized	13-11482	**$309.00**
Albatross	Natural Titanium	Gray Polarized	13-11476	**$349.00**
Albatross	Natural Titanium	Gray Non-Polarized	13-11477	**$309.00**
C-130	Titanium	Gray Polarized	13-16269	**$349.00**
C-130	Titanium	Gray Non-Polarized	13-16270	**$309.00**
C-130	Stealth Black	Gray Polarized	13-16271	**$349.00**
C-130	Stealth Black	Gray Non-Polarized	13-16272	**$309.00**
C-130	Swiss Gold	Gray Polarized	13-16273	**$289.00**
C-130	Swiss Gold	Gray Non-Polarized	13-16274	**$309.00**
C-130	Titanium	Bronze Polarized	13-16275	**$349.00**
C-130	Titanium	Bronze Non-Polarized	13-16276	**$309.00**
C-130	Stealth Black	Bronze Polarized	13-16277	**$289.00**
C-130	Stealth Black	Bronze Non-Polarized	13-16278	**$309.00**
C-130	Swiss Gold	Bronze Polarized	13-16279	**$349.00**
C-130	Swiss Gold	Bronze Non-Polarized	13-16280	**$309.00**

Model	Frame	Lens	Part No.	Price
Panorama	Gloss Black	High Contrast Bronze CR39	13-06980	**$259.00**
Panorama	Gloss Black	Neutral Grey CR39	13-06983	**$259.00**
Panorama	Havana Tortoise	High Contrast Bronze CR39	13-06984	**$259.00**
Panorama	Havana Tortoise	Neutral Grey CR39	13-06986	**$259.00**
Jet-A	Gloss Black	High Contrast Bronze CR39	13-06987	**$259.00**
Jet-A	Gloss Black	Neutral Grey CR39	13-06988	**$259.00**
Jet-A	Havana Tortoise	High Contrast Bronze CR39	13-06989	**$259.00**
Jet-A	Havana Tortoise	Neutral Grey CR39	13-06990	**$259.00**
Revelstoke	Gloss Black	High Contrast Bronze CR39	13-06991	**$259.00**
Revelstoke	Gloss Black	Neutral Grey CR39	13-06992	**$259.00**
Revelstoke	Havana Tortoise	High Contrast Bronze CR39	13-06993	**$259.00**
Revelstoke	Havana Tortoise	Neutral Grey CR39	13-06994	**$259.00**

PS

SUNGLASSES

VEDALOHD™ PERFORMANCE SUNGLASSES



High-Definition Lens Technology (HDL-3C™), built into new sunglasses offer improved sight definition for pilots, using color, clarity and comfort. These lenses filter the visible spectrum to improve color contrasts; decentered lenses increase visibility and eliminate distortion; visual health is improved and eye fatigue is reduced thanks to lightweight frames. Visibility is said to be increased through tri-stimulus color contrast enhancing techniques; other color tinting techniques improve color simulation but only improves one basic color type in the color spectrum.

These non-polarized (important for pilots!) lenses come in two lens types: rose (for low light conditions), and smoke (for bright light conditions). The sunglasses are very lightweight and comfortable. We offer a 30-day money back guarantee if you're not satisfied. Several choices for frames are available.

FRAME STYLES



ROSSO2 (HINGED)
Astonishing light Weight



AZZURRO2
Fashion Rectangle



ARGENTO2
Ultra Light Aviator



CARBONE
Teardrop Aviator



VERONA
Ultra Light



ROMA
Contemporary Aviator

Description	Part No.	Price
Rosso2 Ultra Lite Frames Rose	13-06102	**$189.00**
Azzurro2 Ultra Lite Frames Smoke	13-04026	**$189.00**
Azzurro2 Ultra Lite Frames Rose	13-04027	**$189.00**
Argento2 Ultra Lite Frames Rose	13-04028	**$186.75**
Argento2 Ultra Lite Frames Smoke	13-04029	**$257.95**
Carbone Rose	14-00993	**$189.00**
Carbone Smoke	14-00994	**$179.00**
Verona Ultra Lite Frames Rose	14-01005	**$139.00**
Roma Ultra Lite Frames Rose	14-01002	**$139.00**

ROTHCO G.I. TYPE PILOT SUNGLASSES



P/N 14-02118

Carries CE certified symbol on package. Metal-lens: hard coating acrylic. 58mm lenses. Frame: nickel silver finish: tempering, grounded, gold plating, clear plastic tip. Made to mil-std 105. Impact resistant. UV 400 protection. Bayonet temples. With black case. Available in: smoke lens with gold frame, smoke lens with chrome frame, smoke lens with black frame, mirror lens with gold frame, mirror lens with chrome frame and brown lens with gold frame

Color	Part No.	Price	Color	Part No.	Price
Chrome/Smoke	14-02123	**$11.99**	Black/Smoke	14-02120	**$11.99**
Gold/Brown	14-02118	**$11.99**	Gold/Smoke	14-02119	**$11.99**
			Gold/Mirror	14-02121	**$11.99**

FLYING EYES HAWK SUNGLASSES



Matte frame finish, standard gray lenses, micro-thin temples

Lightweight, unbreakable Resilamide frames. Soft nose-pad keeps glasses properly positioned and balanced for optimal fit The included strap and cinch is unnoticeable under headsets. Standard Temples for everyday use. The included micro-thin Temples for use under a helmet or headset Wraparound style gives a wider viewing angle than most frames. Optically correct, shatterproof polycarbonate lenses with 100% UV400 protection.

Glossy Black Frame/Solid Grey Lens.....P/N 13-16455 ..... **$169.00**
Glossy Black Frame/Gradient Lens.....P/N 13-16453 ..... **$179.00**
Matte Black Frame/Solid Grey Lens.....P/N 13-16456 ..... **$169.75**
Matte Black Frame/Gradient Lens.....P/N 13-16454 ..... **$179.00**

SERENGETI AVIATOR SUNGLASSES

Serengeti Aviators protect your vision while eliminating glare and sharpening details better than other sunglasses. Cloud boundaries are more easily delineated and oncoming traffic is more visible. Unique photochromic spectral controls improve your ability to see in marginal VFR and IFR conditions. In bright sunlight, you'll see the instruments better and ghost images will be eliminated from the cockpit. Wear them late in the day or at sunset to preserve your night vision.

LARGE AVIATOR SUNGLASSES- Base Curve: 6; Temple Length: 140mm. Lens Size: 61.75 x 55.5 x 68mm, Dbl 10.5mm Black



P/N 2121.....**$99.95**

DANTE SUNGLASSES - Uniquely fashioned temples distinguish Dante from the crowd. Wire-flex technology automatically adapts for an impeccable fit. All Serengeti lenses offer the latest in photochromic technology, which constantly lightens and darkens throughout the day to ensure you see every detail.



Frame	Lens	Part No.	Price
Shiny Gunmetal	Drivers Gradient	13-15083	**$225.00**

NORCIA SUNGLASSES - Designed to keep you comfortable anywhere, the Norcia integrates the best style cues with the best comfort innovations. Double injected stainless steel and elastomer temples and adjustable nose pads provide an ideal fit for a broad range of faces.



P/N 13-15088 ..**$239.00**

RANDOLPH ENGINEERING

Randolph Engineering has been a leading supplier of military sunglasses to the U.S.Armed Forces since 1982. These sunglasses are the choice of America's Top Gun pilots and NASA astronauts. They meet demanding U.S. military specifications, provide superior glare protection and UV absorption and can be converted to prescription lenses. All of the sunglasses below feature 23K gold plated, hand polished frames and come with a crush resistant case.

AVIATOR – Standard issue for military pilots worldwide. (MIL.SPEC. 25948). These lenses sharpen detail and show colors evenly, making them ideal for flying. Bayonet temples provide optimum fit for use with a headset or helmet.



Size	Lens	Part No.	Price
52mm	Gray	13-00679	**$169.00**
52mm	Grey/Green	13-00680	**$169.00**
55mm	Gray	13-00681	**$169.00**
55mm	Tan	13-00682	**$169.00**
55mm	Gray/Green	13-00683	**$169.00**
58mm	Gray	13-00684	**$169.00**
58mm	Tan	13-00685	**$169.00**

CONCORDE – The Concorde features the world famous tear drop aviator lens design, monoblock hinge design, skull temple bars, and non-slip silicone nose pads. A very popular sunglass style with lenses that are convertible for prescription lenses.



Size	Lens	Part No.	Price
57mm	Gray	13-00687	**$179.00**
57mm	Tan	13-00688	**$179.00**
57mm	Gray/Green	13-00689	**$179.00**
61mm	Gray	13-00690	**$179.00**
61mm	Gray/Green	13-00691	**$179.00**

PS

RA VISION HIGH PERFORMANCE SUNGLASSES



These high performance sunglasses are specifically designed for use with helmets and headsets. The Frame: The frames are made of lightweight and flexible titanium metal that easily slide thru the ear pad of the helmet or headset. The frames contour the head and allows for the seal of noise canceling earpieces to be maintained. The "wrap" or curvature of the frames and lens allows sun protection for the wearer's peripheral vision as well as forward facing. The Lens: The lens is made of a revolutionary Trivex® material that features optical qualities similar to glass and surpasses the light weight and scratch resistance of polycarbonate lenses while providing 100% protection against UVA and UVB rays.

Gray Lens ..... P/N 13-11671 ..... **$99.00**

BELT LOOP EYE GLASS CASE



Safe and secure way to make sure your glasses, cell phones and other items are always available. The case has a pen pocket and accessory strap to attach a pager, a small flashlight or clip item. 1000 dernier cordura exterior, soft padded durable lining. Black color.

P/N 13-00699 ..... **$12.95**

AMERICAN OPTICAL SUNGLASSES

Performance-tested sunglasses with classic aviator styling. The Original Pilot Sunglass® has been a favorite of US military pilots for more than 40 years.
Engineered to rigid military specifications and issued to millions of US soldiers, sailors, marines and airmen since 1958.
The rugged and sturdy structure and high quality finishing of the steel alloy frame coupled with distortion free, toughened and polished True Color® glass lens have made the AO Flight Gear® Collection the standard bearer of all fine military sunglasses.

ORIGINAL PILOT (SQUARED)



52MM..... P/N 13-03212 ..... **$82.75**

GENERAL (OVAL)



52MM..... P/N 13-03214 ... **$85.75**
58MM..... P/N 13-03215 ... **$86.75**

AV-SUN SUNGLASSES

Sunglasses for pilots with excellent vision. Feature gradient tint with UV protection, the same tint as used by U.S. fighter pilots! Allow you to see air traffic under bright conditions outside and maps and instruments under low light conditions inside.

AV-SUN 180



P/N 13-12763 . **$139.95**

AV-SUN GOLD AVIATOR



P/N 13-12755 .... **$59.95**

AV-SUN GOLD PILOT



P/N 13-12756 ... **$59.95**

AV-SUN TITANIUM CLASSIC



P/N 13-12758 ... **$79.95**

AV-SUN TITANIUM FLYER



P/N 13-12759 .... **$79.95**

AV-SUN TITANIUM AVIATOR



P/N 13-12760 ... **$79.95**

XBIRD ELECTRIC SCOOTERS



A pilots best friend! Having trouble getting around, waiting for taxi service or the bus after you arrive at your destination? Wait around no more! This patent technology makes folding and unfolding the scooter fast and convenient. In less than one second, the X-Bird is ready to ride or to comfortably fit into your closet or trunk. The X-Bird was built to fit in a small airplane, car trunk, bus.
X-Bird scooters are made from high-quality aerospace aluminum alloy. This makes the scooter incredible strong, lightweight, and anti-corrosive. The X-Bird is the most economically and environmentally efficient means of transportation. Cut the time of your commute while having a blast doing it!
Speed: 13 miles per hour
Distance: 20-30 miles
Charging Time: 4 hours
Weight: 34 pounds
Weight Capacity: 250 pounds

Black ..... P/N 13-19799 ..... **$999.00**
White ..... P/N 13-19801 ..... **$999.00**

XCAPE ELECTRIC SCOOTERS



A pilots best friend! Having trouble getting around, waiting for taxi service or the bus after you arrive at your destination? Wait around no more! This patent technology makes folding and unfolding the scooter fast and convenient. In less than one second, the X-Cape is ready to ride or to comfortably fit into your closet or trunk. The X-Cape was built to fit in a small airplane, car trunk, bus.
X-Cape scooters are made from high-quality aerospace aluminum alloy. This makes the scooter incredible strong, lightweight, and anti-corrosive. The X-Cape is the most economically and environmentally efficient means of transportation. Cut the time of your commute while having a blast doing it!
Top Range: 25-30 Miles
Top Speed: 15 Miles
Charging Time: 4-5 Hours
Weight: 42lbs
Carrying Capacity: 330lbs
Normal Dimension Folded Dimension: 37" x 21.5" x 35.8" / 939*547*910 mm 18.5" x 12" x 39.8" / 470*295*1010 mm
Battery: LG 18650 lithium battery 10 AH36 V
Hub Motor: 300W Brushless toothless motor Maximum torque 8N.M
Gradability: Static 8° Dynamic 15°
Braking Distance: 15mph Dry 10 ft / 3 m / 15mph Wet 17 ft / 5 m
Front Wheel: 10"
Rear Wheel: 8"

Black ..... P/N 13-19796 ..... **$1,299.00**
Green ..... P/N 13-19802 ..... **$1,299.00**
White ..... P/N 13-19803 ..... **$1,299.00**
Grey ..... P/N 13-19804 ..... **$1,299.00**

FLIGHT JACKETS

Classic. Authentic. Quality. Established in 1959 as a defense contractor for the US Government, Alpha Industries remains one of the largest manufacturers of cold weather outerwear. For over 35 years, Alpha Industries has continuously supplied the US Government and military forces throughout the world. Alpha is now recognized as the original and leading manufacturer of authentic military-inspired outerwear. Some jackets are made in the USA and some are imported.

TO ORDER FLIGHT JACKETS: Choose jacket style and color desired and order by basic part number shown. Complete the part number with size by adding -1 (Small), -2 (Medium), -3(Large), -4 (X Large), or -5 (XX Large).

MA-1 INTERMEDIATE FLIGHT JACKET



The most popular flying jacket in the world, supplied by Alpha Industries to the U.S. Military for over 40 years. 100% nylon flight satin outer shell with nylon flight lining and polyester batting interlining for warmth. Front closure storm flap. Knit collar, waistband and cuffs. Combination utility pocket on sleeve. Pilot's MA-1 reverses to high visibility Indian Orange for use in emergencies. Colors: Black, Navy, Sage Replica Gray, Titanium, Stratos.

Black ..... P/N 13-00544 ..... **$137.75**
Navy ..... P/N 13-00546 ..... **$137.75**
Sage ..... P/N 13-00547 ..... **$137.75**

CWU - 45/P FLIGHT JACKET

A nylon version of the U.S. Air Force current issue flight jacket. 100% nylon flight satin outer shell. Fully lined with quilted flight nylon and polyester fill. Water repellent. Knit cuffs and wristband. Storm flap. Two fully-lined cargo pockets and combination utility pocket on sleeve. Removable Velcro logo patch.



Black ..... P/N 13-00559 ..... **$139.95**
Gun Metal Grey ..... P/N 13-09482 ..... **$137.75**
Replica Blue ..... P/N 13-05585 ..... **$137.75**
Airforce Green ..... P/N 13-00572 ..... **$139.95**

CHILDREN'S JACKETS



CHILDRENS MA-1 JACKETS WITH PATCHES - This is a well made reproduction of the famous MA-1 green nylon quilted. Same patches as our childrens bomber jacket.

Description	Size	Part No.	Price	Description	Size	Part No.	Price	Description	Size	Part No.	Price
MA1 Toddler	Small	13-06443	**$42.85**	MA1 Youth	Small	13-06437	**$45.50**	MA1 Boys	Small	13-06439	**$43.50**
MA1 Toddler	Medium	13-06442	**$42.85**	MA1 Youth	Medium	13-06436	**$46.50**	MA1 Boys	Medium	13-06438	**$41.50**
MA1 Toddler	Large	13-06444	**$44.85**	MA1 Youth	Large	13-06440	**$41.50**	MA1 Boys	Large	13-06441	**$44.50**

VISIT WWW.AIRCRAFTSPRUCE.COM FOR PINK MA-1 JACKETS.



YOUTH BOMBER JACKETS - These are a Flightline original. They're a reproduction of a classic bomber, complete with simulated fleece collar. They are sturdily made with many special touches that make it unique, such as an airplane zipper pull, authentic aviation patches & colorful graphic map liner.

Description	Size	Part No.	Price	Description	Size	Part No.	Price	Description	Size	Part No.	Price
Bomber Toddler	Small	13-06432	**$42.95**	Bomber Boys	Small	13-06429	**$42.85**	Bomber Youth	Small	13-06427	**$43.95**
Bomber Toddler	Medium	13-06428	**$41.75**	Bomber Boys	Medium	13-06430	**$42.85**	Bomber Youth	Medium	13-06431	**$43.95**
Bomber Toddler	Large	13-06433	**$41.95**	Bomber Boys	Large	13-06435	**$42.85**	Bomber Youth	Large	13-06434	**$43.95**



CHILDRENS MA-1 JACKETS WITH PATCHES AND A HOOD - This is a well made reproduction of the famous MA-1 green nylon quilted childrens jackets with patches and a hood. Same as our childrens bomber jacket but with faux fur trimmed hood and a velcro closure at top.

Description	Size	Part No.	Price	Description	Size	Part No.	Price	Description	Size	Part No.	Price
MA1 Toddler	Small	13-06447	**$36.50**	MA1 Youth	Small	13-06448	**$45.50**	MA1 Boy	Small	13-06454	**$40.80**
MA1 Toddler	Medium	13-06446	**$39.95**	MA1 Youth	Medium	13-06453	**$44.50**	MA1 Boy	Medium	13-06451	**$39.60**
MA1 Toddler	Large	13-06445	**$41.90**	MA1 Youth	Large	13-06452	**$48.95**	MA1 Boy	Large	13-06449	**$39.60**

PS

FLIGHT JACKETS

ULTRA FORCE BLACK MA-1 FLIGHT JACKET



This Black MA-1 Flight Jacket features a fully reversible Orange lining, ribbed collar, 100% Nylon water repellent outer shell, Poly fiberfill lining and 4 front slash pockets. Rothco's Flight Jacket has an extra full cut. Sizes and colors do vary.

X-Small	P/N 14-03239	**$41.99**
Small	P/N 14-03240	**$41.99**
Medium	P/N 14-03241	**$36.99**
Large	P/N 14-03242	**$41.99**
X-Large	P/N 14-03243	**$36.99**
XX-Large	P/N 14-03244	**$43.99**
XXX-Large	P/N 14-03245	**$45.99**

G-1 LEATHER FLIGHT JACKET



Reproduction of the coveted naval leather flying jacket featuring a genuine mouton fur collar. Premium goatskin leather. Bi-swing back for free range of movement. Underarm gussets. Knit waistband and cuffs. Legendary Pilot Jacket.

Black Small	P/N 13-14998-S	**$349.00**
Black Medium	P/N 13-14988-M	**$349.00**
Black Large	P/N 13-14988-L	**$349.00**
Black X-Large	P/N 13-14988-XL	**$359.00**
Brown Small	P/N 13-15004-S	**$349.00**
Brown Medium	P/N 13-15004-M	**$349.00**
Brown Large	P/N 13-15004-L	**$349.00**
Brown X-Large	P/N 13-15004-XL	**$359.00**

NOMEX 45/P-36/P MIL-SPEC FLIGHT JACKET



Made in USA, this true Mil-Spec flight jacket currently issued to U.S. Air Force pilots. Made from fire-resistant Nomex material, this jacket is engineered to exceed incredibly tight tolerances and military requirements. Color: Sage. NOMEX fire resistant fabric, zipper tape, knit cuffs and waistband. Tonal Velcro patch. Front zipper closure with storm flap. Fully lined double-stitched cargo pockets with Velcro closure. Made to military specification.

Small	P/N 13-15007-S	**$729.00**
Medium	P/N 13-15007-M	**$729.00**
Large	P/N 13-15007-L	**$729.00**
X-Large	P/N 13-15007-XL	**$729.00**

MA-1 BLOOD CHIT FLIGHT JACKET



The MA-1 BLOOD CHIT jacket is one of a kind to be worn with pride. Alpha's MA-1 flight jacket with "Blood Chit" sewn on the inside lining was a type of flag that contained a message in several languages identifying an airman as a U.S. Aviator if they were shot down, to aid the airman in avoiding capture and in being returned safely to U.S. Forces. A reward was offered for this assistance.
This is a classic flight jacket made for the military for over 40 years and features nylon flight satin outer shell with reversible orange nylon lining with the Blood Chit sewn into it, front closure storm flap, knitted collar, cuffs, and waistband and Alpha signature zippered utility/pencil pocket. If you are looking for a quality jacket that isn't just like the one everyone else has, then this is certainly worthy of your consideration. Just think of all the conversations you can have with this jacket. Color: Sage.

Small	P/N 13-15005-S	**$139.95**
Medium	P/N 13-15005-M	**$139.95**
Large	P/N 13-15005-L	**$139.99**
X-Large	P/N 13-15005-XL	**$139.95**

B-15 FLIGHT JACKET



The B-15 is a classic flight jacket made tough to battle the harsh elements. Features a nylon shell and removable synthetic mouton fur collar. The Alpha B-15 features button tabs once used by pilots to connect oxygen masks and headset wires. Water repellent 100% nylon flight satin outer shell and polyester filled lining. Front zipper closure with storm flap. Knit cuffs and waistband. Alpha signature utility/pencil pocket Color: Black.

Small	P/N 13-15006-S	**$139.95**
Medium	P/N 13-15006-M	**$139.95**
Large	P/N 13-15006-L	**$139.95**
X-Large	P/N 13-15006-XL	**$139.95**

AERO SQUADRON LEATHER FLIGHT JACKET



Color: Brown Antique Lamb

Small	P/N 13-07208	**$459.50**
Medium	P/N 13-07209	**$459.50**
Large	P/N 13-07210	**$448.00**
XL	P/N 13-07211	**$448.00**
XXL	P/N 13-07212	**$459.50**

PS

AIRCRAFT SPRUCE APPAREL

AIRCRAFT SPRUCE T-SHIRTS





Top quality 100% cotton shirt available in white or navy blue. These shirts feature Aircraft Spruce logo on the back and a small Aircraft Spruce Logo on the front left chest. A great looking shirt that will last for years. Order size by part no.:

Size	White	Price	Navy	Price
Small	13-02810	**$8.95**	13-02047	**$8.95**
Med.	13-02910	**$8.95**	13-02048	**$8.95**
Large	13-03010	**$8.95**	13-02049	**$8.95**
XL	13-03110	**$8.95**	13-02050	**$8.95**
XXL	13-03120	**$8.95**	13-02051	**$8.95**

SPRUCE POLO SHIRTS



SPRUCE POLO SHIRT - These are the same high quality polo shirts worn by the Aircraft Spruce Staff at Oshkosh, Sun 'N Fun and other airshows. Made from Dry-Excel™ close-hole Micromesh, polyester knit, with a fine gauge rib-trim collar. Three button front, open hem sleeves, and split side welts make these polos great for everyone. These polos feature the Aircraft Spruce logo on the left chest. Machine washable.

MEN'S BLACK		
Size	**Part No.**	**Price**
Small	13-04729	**$43.50**
Med.	13-04731	**$43.95**
Large.	13-04732	**$43.95**
X-LRG	13-04733	**$43.95**
2XLG	13-04734	**$45.50**

MEN'S WHITE		
Size	**PN**	**Price**
Small	13-04730	**$43.95**
Med.	13-01985	**$43.95**
Large.	13-01982	**$43.95**
XLRG	13-01979	**$34.65**
2XLG	13-01976	**$38.50**

MEN'S LIGHT BLUE		
Size	**PN**	**Price**
Small	13-04728	**$43.95**
Med.	13-01986	**$43.95**
Large.	13-01983	**$43.95**
XLRG	13-01980	**$43.95**
2XLG	13-01977	**$43.95**

MEN'S NAVY BLUE		
Size	**PN**	**Price**
Med.	13-01984	**$43.95**
Large.	13-01981	**$43.95**
XLRG	13-01978	**$43.95**
2XLG	13-01975	**$29.95**

AIRCRAFT SPRUCE PATCH



This is an embroidered patch, oval in shape, and approximately 3-1/2", colors are Red/White/Blue.

P/N 13-02709 .....**$19.00**



AIRCRAFT SPRUCE WINDBREAKERS

These high quality, golf style pullover windbreakers are perfect for those chilly days on the course or at the airport. Color: Navy blue w/khaki trim and "Aircraft Spruce & Specialty Co" on left chest.

Small ..... P/N 13-12018 .....**$39.95**
Medium ..... P/N 13-01987 .....**$39.95**
Large ..... P/N 13-01988 .....**$39.95**
X-Large ..... P/N 13-01989 .....**$39.95**
2XL..... P/N 13-01990 .....**$29.95**



AIRCRAFT SPRUCE CAPS

Our heavyweight 100% brushed cotton hat is perfect for aviators. Unlike other caps, ours features a no-button construction for comfort while wearing your headset. Low profile cap has aircraft design on front panel and Aircraft Spruce logo on back. A great looking top quality cap Stretch fit, one size fits all.

Black ... P/N 13-03895.....**$17.95**
Navy .... P/N 13-11715.....**$17.95**



AIRCRAFT SPRUCE WATER BOTTLE

BPA free 20 oz. reusable aluminum Aircraft Spruce water Bottle. Features a leak proof lid and a clip to conveniently attach the bottle to a backpack or belt loop. Size: 8 1/2" x 2 3/4 diameter

P/N 13-11326.....**$4.95**

CUSTOM AIRCRAFT MODELS



Recreate your airplane into a beautifully detailed desktop replica. Our Premium Custom Made Models are built to your exact specifications – no detail will be spared. You can have ANY aircraft recreated into a museum quality desktop model with your paint scheme, logos, registration number or any other details and markings.

Complete your model with a fully customized stand including your choice of logo and a personalized inscription plaque. We offer over 3,000 different models – both military and civilian. Our desktop models are a maximum of 17" in either wingspan or length. Please allow approximately 6-8 weeks for delivery. 100% satisfaction guaranteed.

The Premium Plus Custom Models Include : Full Cockpit and Cabin detail – Instrument panel, yoke, seats, seatbelts and other fine details. Fully Customized Paint Scheme. 17" Maximum Wingspan or Length (whichever is greater). Antennas and Other VERY Fine Details. Premium Plus High Gloss Black Pedestal. Raised Brass Logo on Stand. Personalized Inscription Plaque. Military or Civilian. Your Paint Scheme. Your Registration Number. Your Airplane Recreated into a Beautiful Desktop Model. Built to Exact Specifications.

IMPORTANT INFORMATION : Please fill out the information form online in order to customize your model. Please send the form to contact information listed on the form. Along with information form filled out, we will need 5 photos of the top, front, back, and both sides of your aircraft emailed to us.

Custom Aircraft Models.....P/N 13-05837 ..... **$549.00**
Premium Plus Custom Models.....P/N 13-08050 ..... **$699.00**

PS

Prices Subject to Change Without Notice



NOMEX AVIATOR'S SUMMER FLYING GLOVES

GLOVE SIZING

Hold your hand out with your fingers together and thumb extended out. Start measuring palm from between the index finger and thumb, continue around the outside of the palm and back around on the inside of the palm making a complete circle with the measuring tape. Total inches around entire palm determines the size glove you will need.

- 6 inches or less, order Size 7
- 6 to 6 1/2 inches, order Size 8
- 6 1/2 to 7 inches, order Size 9
- 7 to 7 1/2 inches, order Size 10
- 7 1/2 to 8 inches, order Size 11
- 8 inches or more, order Size 12

Size	Part No.	Price	Size	Part No.	Price
Sage Green			*Desert Tan*		
			7	13-03621	**$17.95**
			8	13-03622	**$17.95**
9	13-02056	**$17.95**	9	13-03623	**$17.95**
10	13-02057*	**$17.95**	10	13-03624	**$17.95**
11	13-02058	**$17.95**	11	13-03625	**$17.95**
Black			*Olive Drab*		
			5	13-17937	**$17.95**
			6	13-17938	**$17.95**
7	13-03615	**$17.95**	7	13-17939	**$17.95**
8	13-03616	**$17.95**	8	13-02055	**$17.95**
9	13-03617	**$17.95**	9	13-03629	**$17.95**
10	13-03618	**$17.95**	10	13-03630	**$17.95**
11	13-03619	**$23.75**	11	13-03631	**$17.95**
12	13-03620	**$17.95**	12	13-17940	**$17.95**

* Grey leather palms and sage green suade topside.

BARMITTS FOR YOUR TRIKE



Extend your flying season and enjoy it more with these barmitts. The sides zip open to fit around the bar. The cozy insulation and wind-proof exterior keep your hands comfortable in the coldest wind. Sized to fit over your gloves.

BatMitts - Red.....P/N 13-07304 ..... **$118.50**
BatMitts - White.....P/N 13-07305 ..... **$118.50**
BatMitts - Reflective Green .....P/N 13-07306 ..... **$118.50**
BatMitts - Blue with Map window .....P/N 13-07339 ..... **$118.50**



MARK 4 SILVER CROSS GOGGLES

All leather face mask, colour matched head bands, Split lenses, bright polished and chrome plated frames, Sliding Nose Bridge Adjustment.
P/N 13-06000 ..... **$99.85**

Replacement Lenses for Silver Cross Goggles

Clear, set of 2 ..... P/N 13-06100 ..... **$34.80**
Smoke, Set of 2 ..... P/N 13-06200 ..... **$39.75**



WORLD WAR II RAF FLYING GOGGLES

A faithful Replica incorporating dark brown soft leather face mask stitched to the RAF blue painted solid brass frames. The traditional Split Lenses P/N 13-05860 ..... **$89.95**
Replacement Split Lenses - Clear..... P/N 13-06100 ..... **$34.80**
Replacement Split Lenses - Tinted..... P/N 13-06200 ..... **$39.75**

VINTAGE AVIATOR GOGGLES



Soft Brown or Black Leather face Mask, Hand Stitched to silver or black painted solid brass frames. Screw adjustment on nose bridge. ..
P/N 13-06310..... **$89.95**
Replacement Split Lenses - Clear
P/N 13-06100 ..... **$34.80**
Replacement Split Lenses - Tinted
P/N 13-06200 ..... **$39.75**

NOMEX TOUCH SCREEN COMPATIBLE FLYING GLOVES



These are the same as the regular Flying Gloves which have been worn by American military aviators since the 1960's, except these have a conductive fabric sewn into the tips (of both the left and right glove) of the middle finger, index finger, and thumb to allow for use with touch screen devices. The palms are made from soft capeskin (hair sheep) that gives you the fine sense of touch you need for flying. The back is made from soft knit of fire-resistant aramid fiber that stretches so the gloves fit snugly. They remain soft and pliable when they get wet. You can even wash them in warm water and hand soap. Measure in inches around the fullest part of your palm. Order the size closest to your hand measurement. Gloves stretch a little, so the fit should be snug.

Color/Size	Part No.	Price	Color/Size	Part No.	Price
Black/5	13-21297	**$48.50**	Black/9	13-21303	**$42.00**
Black/6	13-21298	**$42.00**	Black/10	13-21304	**$48.50**
Black/7	13-21299	**$42.00**	Black/11	13-21305	**$42.00**
Black/8	13-21301	**$42.00**	Black/12	13-21306	**$42.00**

VISIT OUR WEBSITE FOR PART NUMBERS FOR NAVY & DESERT TAN GLOVES

GENERAL UTILITY PLUS GLOVES



All-purpose and abrasion-resistant. This is the ideal performance work glove. Heavy duty non-slip reinforcement on the palm, fingers and thumb ensures lasting durability and grip. The ergonomic design reduces hand fatigue while enhancing wrist support. Features a terry cloth brow wipe on the thumb. This glove is ideal for any number of rugged applications.

Medium.....P/N 13-09813 ..... **$22.50**
Large .....P/N 13-09814 ..... **$22.50**
X-Large.....P/N 13-09815 ..... **$22.50**

PROPELLER LETTER OPENER



Put a new spin on opening the bills with this propeller letter opener. With its streamlined design of heavy zinc alloy and brushed-metal finish, it makes a beautiful object d'art for the desktop. Twirl it on its spinning metal base for a bit of fun. .....P/N 13-16039..... **$11.85**

PS



PILOT SHIRTS / TIES / EPAULETS

Aircraft Spruce stocks a full line of authentic airline pilot shirts in Aviator, Pilot, and Commander styles. Aviator style is available in short and long sleeve, in white or blue. Pilot and Commander are available in short and long sleeve, in white. Available in a complete selection of sizes for men and women pilots.

VISIT WWW.AIRCRAFTSPRUCE.COM FOR A COMPLETE LISTING OF SIZES AND COLORS OF SHIRTS, PLUS TIES AND EPAULETS



MECHANICS DOLLIES – STEP STOOLS



BONE MECHANICS CREEPER

The Bone™ features a uniquely shaped body which cradles the user between the wheels only an inch or so above the ground. The big, easy rolling wheels are positioned outboard to provide a strong, stable working platform that can't tip or flip the user. The rib-reinforced body is molded of a state-of-the-art, engineering grade co-polymer that resists the effects of common solvents, so cleaning is quick and easy at the end of the job. The smooth, comfortable one-piece design has no cracks, corners or other pinch points, and the outboard wheel pods prevent tipping and flipping. The Bone™ body is a patented design which allows the use of large diameter wheels with specially formulated tires that roll easily over all sorts of obstacles, including rough floors, drop cords and air lines, loose parts and even tools and floor grates. The wheels are fastened to the creeper body with four 5/16" diameter through bolts so they can't pull tear out or break off in any common use situation. One of the most important features of the Bone™ is its wheels. Ordinary creeper wheels are a conventional creeper's weakest point. They're too small, so they get hung up or stopped by even the tiniest obstacles, and they have a real knack for tearing out or breaking off at the worst moment. To add insult to injury, the replacement wheels can cost almost as much as a new creeper. P/N 13-12331 .....**$167.00**



TAIL BONE ROUGH RIDER MECHANICS SEAT

The Tail Bone Rough Rider is a totally new approach to creeper seats, designed from scratch to be easier to use, more comfortable, more durable and a better value than any other mechanic's stool on the market! The base is a uniquely designed tripod, so it's a naturally stable working platform even on uneven floors and surfaces. And because it turns with the user, the legs always stay out of the way and let you tuck your feet under you for comfort or convenience. The tripod design also means fewer wheels to have to roll over obstacles! The Tail Bone Rough Rider uses the casters from the Bone Rough Rider Creeper, which are 5 3/8" diameter and 1 3/8" wide, perfect for using outdoors in less than perfect circumstances. It also has an extra inch of ground clearance over the standard Tail Bone! The bucket seat works just like the ones in high performance vehicles, it lets you use your natural body movements and trunk strength to position yourself and the stool exactly where you can do the job at hand comfortably and easily. Work without fear! The Tail Bone just rolls over obstacles that trip and tip ordinary little wheel stools. P/N 13-12330.....**$179.95**

RED VIPER AIRPLANE POSITIONER



Own a small airplane? Having trouble positioning it around in your hangar,garage,etc.? Try RED VIPER Positioners™ they really work! Will hold up to 6000 lbs on a 3 tire airplane. Extremely LOW to the ground (only 1/2 inches ground to dolly) so wheel assembly clearance & tire fenders are never an issue. The side panels are only 3 1/2 inches height. Supports tire thicknesses up to 9 inch & wheel diameter up to 26 inches. Just roll your airplane onto dollies & glide 360 degrees effortlessly.

P/N 13-17910 .....**$215.00**

AEROCREEPER - ADJUSTABLE CREEPER



Caster options include:

- •Standard 3" x 13/16" Hard Rubber
  - •recommended for most uses on smooth cement floors
  - •120 lb dynamic load per caster
  - •keeps the creeper low for low working positions
  - •smooth operation
- •Heavy Duty casters
- •Thermoplastic Urethane (TPU) more resistant to embedding chips and rivets
  - •250 lb dynamic load per caster
  - •1-3/16" wide tread helps rolling on rough surfaces
  - •Available in 3 diameters (3" - raises creeper 5/8", 4" raises creeper 1-5/8", 5" raises creeper 2-5/8") larger diameters help rolling on rough surfaces
- •Locking Casters
  - •prevents rolling
  - •installed on front two casters

Description	Part No.	Price
Aerocreeper - Standard - 3" Hard Rubber Casters	13-21329	**$395.00**
Aerocreeper - Heavy Duty - 3" TPU Casters	13-21330	**$430.00**
Aerocreeper - Heavy Duty - 4" TPU Casters	13-21331	**$435.00**
Aerocreeper - Heavy Duty - 5" TPU Casters	13-21332	**$440.00**
Aerocreeper - Standard - 3" Front Locking Casters	13-21333	**$405.00**
Aerocreeper - Heavy Duty - 3" Front Locking Casters	13-21334	**$445.00**
Aerocreeper - Heavy Duty - 4" Front Locking Casters	13-21335	**$449.00**
Aerocreeper - Heavy Duty - 5" Front Locking Casters	13-21336	**$454.00**



SHURE-STEP® II

The Shure-Step II is a 10 inch high step stool that will not tip or slip during use for aircraft maintenance. This step stool is rated for 500 pounds yet only weighs 10 pounds. Rubber pads on bottom prevent the step from scratching the paint on an aircraft. Color: Yellow. Features: • 6 large rubber pads on bottom • Very rough top surface to keep mechanics safe • Ice cleats keep the step from sliding during icy winter conditions • The Shure-Step II is a stackable step stool • Weight: 10 pounds

P/N 13-11219.....**$98.50**



SHURE-STEP® 2-STEP STOOL

The 2-Step stool is 10 inches high, half is 6 inches high. Features: • Durable, lightweight, and stackable • Shure-Step® will float • All Shure-Step® products are rated at holding 500 lbs.

P/N 13-11585 .....**$119.50**

SHURE-STEP® SENIOR STEP



The Senior Step is 6 inches tall, weighs 9 lbs., rated at 500 lbs. and measures 24" x 14". Step has a large, 10" x 20" black non-slip sandpaper surface on top of it. Features: • Durable and lightweight • Senior Step can be stacked on top of the Shure-StepII® • Shure-Step® will float • All Shure-Step® products are rated at holding 500 lbs.

P/N 13-11584.....**$106.77**



LOCK N CLIMB LADDERS

The next generation ladder for maintenance and repair. The LockNClimb MRO ladder meets the needs and requirements for any industry. The ergonomic design drastically reduces the risk of back injuries and allows a safer and more productive working environment. Extends and folds easily. Designed for one person use. Work secure in tight spaces. Available in 4', 5', 6', 8', 10' and 12' heights. Available in aluminum and fiberglass. Removable tool tray available. Meets or exceeds ANSI/OSHA safety standards. Meets or exceeds ANSI A14.5 and A14.2 standards. Made from durable grade 6061 aluminum. ANSI/OSHA 300lb rated 1A special duty.

Size	Part No.	Price
4 Foot Aluminum	13-15926	**$633.00**
5 Foot Aluminum	13-15927	**$656.00**
6 Foot Aluminum	13-15928	**$659.00**
8 Foot Aluminum	13-15929	**$697.00**
4 Foot Fiberglass	13-15932	**$734.00**

SEE WWW.AIRCRAFTSPRUCE.COM FOR MORE LOCK N CLIMB LADDERS



ALUMINUM AIRCRAFT FUELING LADDER

Heavy duty aluminum fueling ladder perfect for aircraft fueling applications. Just the right height to put you in perfect position for low-wing or high-wing aircraft. Made of high quality aluminum and will stand the test of time. Features: • Step Ladder • Ladder Height 5 ft. • Number of Steps 3 • Platform Width (In.) 13-1/2 • Height to Platform (Ft.) 3 • Bottom Width (In.) 20 • Base Spread (In.) 34 • Step Width (In.) 3 • Shipping Weight: 5.8 lbs • Anti-Slip Tread • Load Capacity (Lb.) 300 • Aluminum, ANSI Type 1A • Includes Heavy Duty Standing Platform.

P/N 13-12017 .....**$134.95**

PS

FLIGHT SOUND X - AVIATION HEADSET/USB ADAPTER



Just plug and play ... and you're ready to go! Flight Sound X is designed to be as easy to use as possible - no additional software, no batteries, no external power sources - just one standard USB cable. Just 'plug and play'! When users have finished with the device, simply unplug it, and the computer will revert to its original audio settings. The Flight Sound X adapter is a great accessory for any pilot! Features: USB 1.1 and 2.0 compatible. Plug and Play with Windows 7/Vista/XP and Mac OS X. Uses standard General Aviation headset connectors (PJ-068 and PJ-055B). Supports headset impedances of 100 to 600 Ohms. Supports Mono and Stereo Headsets. Compatible with standard microphone types (electret, dynamic and powered dynamic) Specifications: Powers microphone bias (+9V) from USB port (no external power needed). Zero delay voice feedback/sidetone feature (PC/Mac only). Output frequency response (20Hz-20KHz). Weight: 100g. Size: 65mm(L), 55mm(W), 25mm(D). Compact, robust, anodised aluminium enclosure.
Pilots Headset USB Adapter .....P/N 13-09050 ..... **$99.95**
Chopper / Military Pilots UCB adapter .....P/N 13-09051 ..... **$115.75**

MICROSOFT FLIGHT SIMULATOR X STEAM EDITION



Takeoff from anywhere in the world, flying some of the most iconic aircraft to any one of 24,000 destinations. Plan your own flight in Free Flight mode or test your flying prowess in missions including Search and Rescue, Test Pilot, Carrier Operations, and more! Microsoft Flight Simulator X: Steam Edition delivers an authentically accurate aerial experience for simulation enthusiasts and those with a passion for all things flight. Whether you're flying solo offline or competing against online rivals in thrilling multiplayer air races, FSX: Steam Edition will immerse you in a dynamic, living world that brings a realistic flying experience into your home.
P/N 13-18407 ..... **$24.95**



MICROSOFT FLIGHT SIM DISCOVER ADD ON

Three of the most popular of the Discover franchise in one package. Includes: Discover Great Britain, Discover Europe, and Arabia.
P/N 13-19703 ..... **$16.95**



X-PLANE 11 FLIGHT SIMULATOR - DVD SET

Welcome to the world of props, jets, single- and multi-engine airplanes, as well as gliders, helicopters and VTOLs. X-Plane contains subsonic and supersonic flight dynamics, allowing users to predict the flight characteristics of the slowest aircraft or the fastest. X-Plane includes more than 15 aircraft in the default installation, spanning the aviation industry and its history. Aircraft included range from the Sikorsky S–76 and Cessna 172 to the Space Shuttle and the B–52 Bomber. Additionally, some 2,000 additional aircraft models can be downloaded from the Internet, many of which are completely free. If those aren't enough, users can design their own airplanes and test-fly them!
P/N 17-00348 ..... **$86.75**



THE NAVIGATION CD-ROM

The Navigation CD-ROM is an interactive CD-ROM that teaches how to navigate with VOR, NDB, GPS, HSI, RMI, and Airspace! You'll be prepared for action in the cockpit! Animation, sounds, quizzes and interactivity allow you to visualize navigation concepts while using simulations of actual aircraft equipment. To make learning easy, each tutorial features an easy-to-use point-and-click environment. During each tutorial, you're prompted where to click, when to proceed and what information to provide during quizzes. If you need more time learning a concept, it is easy to review the section at hand. This CD-ROM features a logical progression, clearly written lessons, quizzes, interactive equipment simulation, colorful graphics and animation. System Requirements: Windows Vista, Windows XP, Windows 98, or Windows 95. 4MB RAM (8MB recommended). CD-ROM drive. 2MB hard drive space. Video supporting 256-color mode (minimum). Sound card (not required, but recommended).
P/N 13-00892 ..... **$99.00**
Download Version .....P/N 13-11401 ..... **$95.00**



VOR/NDB SIMULATOR V2.0

On-screen instructions are fully-voice-narrated. There's only one Simulator Module—you can choose any array of instruments to use, from the Instrument Manager. Instruments are draggable, allowing you to arrange them as they exist on your aircraft's instrument panel. VOR and NDB navigation can be performed simultaneously on the same screen. "Random" buttons generate random aircraft heading, navaid positions, aircraft position, and wind speed and direction Hide and show the aircraft, course lines, path flown, and heading vectors. The instruments and map area can be printed by the default printer configured on your computer. Grid lines on the map area represent square miles. ADF instrument allows fixed-card and rotatable-card methods of use. Precision movement of the course needle on the Course Deviation Indicators and Horizontal Situation Indicator allows greater navigation accuracy. Compass rose symbol on VOR navaids now remains stationary when the course is changed P/N 13-01437 ..... **$69.00**
Download Version .....P/N 13.-11402 ..... **$64.95**

GETTING AROUND ON THE GROUND



The only interactive, multimedia tool available that teaches the types of airport markings, signage, and lighting. It also goes beyond simple technical knowledge by outlining hazards, safety tips, and procedures that will help keep you aware, knowledgeable, and safe on the ground. A real-time, 3-D, virtual airport taxi simulator. Get the ATIS, exchange communications with Air Traffic Control, and follow taxi instructions including hold short and runway crossing tasks. Two airports and forty challenging taxi scenarios are included. And, there's no need for special hardware such as rudder pedals, because you control your aircraft with just a few keys on your keyboard. It's easy! By completing all the content and taking the Final Exam, you can qualify to obtain credit for the FAA WINGS program. The WINGS program is a continuing education program for pilots, sponsored by the FAA. You'll not only learn to be a safer pilot on the airport surface—you'll also be able to prove your commitment to flight safety with your WINGS account.
P/N 13-01438 ..... **$99.00**
Download Version .....P/N 13-11403 ..... **$99.00**

AIRBORNE RADAR ONLINE TRAINING



Airborne-Radar.Com is an online course that teaches how to use airborne weather radar. But, it goes beyond the use of airborne radar, teaching thunderstorm theory, hazards of thunderstorms, airborne radar theory, and airborne radar techniques. A Final Exam concludes the course, enabling the user to test their knowledge. Airborne-Radar.Com is available to PC and Mac users. Most seasoned professional pilots will admit that there has always been a lack of adequate weather radar training. The mantra has always been, "fly the airplane, and figure it out as you go." But there's no reason to continue with that mindset. Now Airborne-Radar.Com provides the only source of thorough, interactive online training for airborne weather radar. .....P/N 13-10296 ..... **$199.00**
Download Version .....P/N 13-11405 ..... **$199.00**

FLIGHT OF VOYAGER CD (DICK RUTAN)

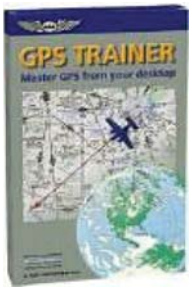


This is a recount of the horrific, horrendous, heroic & humorous moments of the Voyager project through the eyes of the pilot Dick Rutan. On Dec. 14, 1986 Voyager took off from Edwards AFB in California and 9 days later landed at the Edwards, completing the first ever non-stop, unrefueled world flight. This 3-CD set (3.5 hrs) includes a mini journal map of the flight, historic photos, fun facts, & more. P/N 13-01163 ..... **$34.95**

PS

AVIATION SOFTWARE

GPS TRAINING SOFTWARE FROM ASA



GPS Trainer Version 2 is a tutorial to help pilots master GPS from their desktop. For the renter confronted with one brand of GPS one day and another the next; for the instructor who teaches in multiple aircraft; for the aircraft owner who is trying to master the nuances of a favorite navigational tool; for the consumer wanting to search the options before making the buying decision; for fleet and Part 135 & 121 of operators who are required to provide GPS instruction to their pilots. GPS Trainer makes time spent in the Aircraft more effective by providing the appropriate tools to learn the GPS receiver on the ground.• The most popular GPS units are included, pilot scan learn the Bendix/King KLN 89B by AlliedSignal, Garmin GNS530, GPSMap 430, 295 or Apollo GX50/60 all on a single CD • Manufacturers' simulators and operating manuals included • FAA GPS reference materials included •Tutorial runs on both PC & Macintosh systems.

P/N 13-01074 ..... **$52.95**

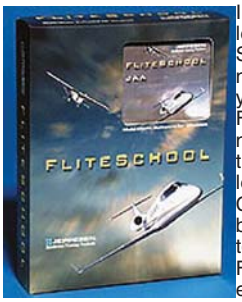
GARMIN G1000 TRAINING: IFR PROCEDURES



Advanced, extensive computer-based training program developed with input from Garmin that teaches the skills required to master the operation and confidently fly the G1000 in IFR conditions. Learn how to pull up and fly instrument procedures, load and activate approaches including RNAV and GPS approaches, new WAAS-enabled approaches such as LNAV, LNAV/VNAV, and LPV approaches, departures and arrivals, as well as performing course reversals, holding patterns, and executing missed approaches. Complete and comprehensive training allowing the pilot to become proficient in all advanced functions and tasks required for IFR flight and greatly facilitates the transition to flying the Technically Advance Aircraft and the Garmin glass cockpit.

Garmin G1000 Training IFR Procedures..... P/N 13-06279 .....**$192.95**
Garmin G1000 PDF & MFD Basics..... P/N 13-05787 .....**$144.75**
Garmin G1000 PFD & MFD Advanced..... P/N 13-05788 .....**$149.75**

MULTIMEDIA SOFTWARE FLITESCHOOL



In terms of speed, graphics, clarity, and learning value, FliteSchool from Jeppesen Software is unequaled in its class. Much more than a series of "flash cards" that help you memorize the answers to FAA exams, FliteSchool provides programmed learning modules and Hypertext referencing that leads through a series of associated references to learn more, faster! Flite School's Dynamic Cybernetic Learning enhances your training by analyzing your responses and leading you to new subject areas. You'll find studying with FliteSchool to be more interesting and more effective than other software programs and many video tapes. Material is organized into 20 categories and monitored by topic. The software takes you step-by step through each subject area and returns to areas where you need more work. When you've mastered enough material to pass the FAA exam, you receive a graduation certificate for your instructor to sign off.

Private Pilot.....P/N 13-100507 .....**$69.50**
Instrument.....P/N 13-100519 .....**$79.95**

VTS MULTIMEDIA TRAINING SOFTWARE



VTS training tools are priced affordably to allow each student to own a personal copy of the software.Each aircrafts systems are covered in detail far surpassing th general information provided in Pilots Information Manual. For example, the electrical schematic is presented on-screen just as it appears in the information manual. But instead of just sitting there looking mysterilous and intimidating, this virtual schematic comes to life with a click of the mouse. Controls and indicators from the cockpit are also available on-screen, creating an animated simulation of the entire system.

Aircraft Systems - Warrior
P/N 13-03388 .....**$148.95**

KITLOG PRO SOFTWARE



KitLog Pro is an organizational tool that allows the builder of any type of aircraft to create, archive, maintain, and display the entire building process. Whether your experimental aircraft is a plans-built EAA biplane, a Van's RV, a Glastar, or even a Lancair IV-P, KitLog Pro is the most efficient way to ensure that you meet the requirements of a builder's log for the certification of your homebuilt aircraft.

Features: • Complete Builder's log to satisfy FAA requirements Detailed Expense Log •Test Flight Log • Maintenance Log • Weight & Balance Calculator P/N 13-03705 .....**$49.95**

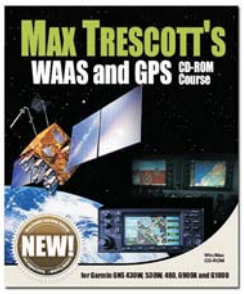
MAX TRESCOTTS G1000™ GLASS COCKPIT HANDBOOK



This edition includes dozens of tips and features for G1000 and Perspective glass cockpits, including Cirrus SR20 and SR22 Aircraft. Chapter 11 on Instrument Flying was completely rewritten to make it easier for pilots to understand the many nuances of using the G1000 and Perspective for instrument flight. There is a revolution sweeping through general aviation. In less than two years, the industry has converted to ship all new aircraft with glass cockpits, rather than traditional instrument panels. The most popular and comprehensive guide to operating these airplanes continues to be Max Trescott's G1000 and Perspective Glass Cockpit Handbook. This book makes it easy for you to quickly become an expert on operating and programming the G1000 and Perspective systems in any aircraft. Instructors agree that the cockpit is not an ideal learning environment. Reading this book, written by a Master Flight Instructor, is one of the most efficient and cost effective ways to learn the G1000 or Perspective before stepping into the cockpit for your first transition lesson.

PN 13-05533 .....**$36.95**

MAX TRESCOTT CD-ROM COURSE



Makes it easy to learn all of the details of flying with WAAS. Designed for the Garmin 430W, 530W, 480, G900X and G1000, the course leads you step-by-step through flying these approaches. Videos demonstrate the flying of actual approaches, and software simulators let you practice loading and flying these approaches.The course is taught by Master CFIs Max Trescott and Susan Parson, who say it covers the "gotchas" that can trick even experienced GPS pilots.

P/N 13-05067 .....**$99.95**

IFLIGHTPLANNER SUBSCRIPTION



This is a subscription only*** Email address required for purchase.

iFlightPlanner is general aviation's most comprehensive suite of easy-to-use flight planning tools for private and corporate pilots. Featuring iFlightPlanner.com, mobile.iFlightPlanner.com and iFlightPlanner for iPad, iFlightPlanner allows pilots to intuitively plan routes, retrieve certified weather briefs, calculate weight & balance and file flight plans from any computer or their iPad. Note iFlightPlanner currently supports flight planning within the United States, however iFlightPlanner for iPad does support worldwide GPS tracking and color-coded METARs and TAFs.

Annual .....P/N 13-16354 .....**$89.99**
Plus Annual .....P/N 13-16422 .....**$139.99**
Quarterly.....P/N 13-16355 .....**$24.99**
Plus Quarterly .....P/N 13-16421 .....**$39.99**

PS

Prices Subject to Change Without Notice

VOLAIR SIM COCKPIT CHASSIS



Note: This product is drop shipped direct from the manufacturer. If shipping international, inbound freight from manufacturer to our warehouse will apply in addition to outbound freight from our warehouse to destination.

This modern design is intended to take the flight simulator instruments off our desks and put them in a more realistic simulator environment. Although the pre-drilled installation holes are universal in nature they are also specific for the Saitek brand of instruments.

The Volair Sim flight chassis' name was derived as a play on the Spanish /Italian word volare, which means 'to fly'. This futuristic looking layout is the near perfect setup for most of our flight simulations. You can adapt any piece or combination of pieces of flight sim gear to the basic chassis and go even further with a little imagination, a drill and a screwdriver.

The Volair Sim is a quality product that enhances the flight simulation environment to near real-world expectations. The high quality powdered tubular steel chassis built around the adjustable real world car racing seat is a true joy to experience. The pre-drilled mounting holes and innovative design features along with the universal adjustable mounts adds to the flexibility of the unit. The ability to mount up to a single 42 IN VESA spec monitor or three 19 – 30 IN widescreen monitors makes it an instant hit with all flight simmers. P/N 13-14948 .....**$595.00**

ELITE SIMULATORS



PI 135 - Now use the PI-135 to perform the approaches, holding procedures, and intercepting / tracking required under section 61.57(c)(1) for recent instrument experience (instrument currency)! (PC and monitor not included.) Includes: ELITE Basic ATD v8.5 software, ELITE SEL and MEL Piston Aircraft, ELITE AP-3000 Avionics Panel, ELITE MEL and SEL Throttle Quadrants, ELITE Pro Panel II Console, ELITE Pedals (not shown), AOPA ASF Integrated Course Outline and Training Syllabus

P/N 13-07344 .....**$9,485.00**

RC-1 - A complete full-featured ATD with life-size, high-resolution instruments, cockpit enclosure, instructor station, and external visual system with large-screen display as standard equipment. It's three trainers in one with included simple, complex, and twin-engine aircraft capability.

P/N 13-07345 .....**$34,995.00**

AP-4000 - Enables you to build your own avionics stack. note: Requires Elite Version 8.5 software. GNS430 software has fixed database dated Nov. 2007 and is not upgradable! GPS based on Garmin GNS430

P/N 13-07343 .....**$578.00**

ELITE V8.5 FLIGHT TRAINING SOFTWARE



or years, professional pilots had no choice other than to maintain IFR proficiency in an expensive full flight simulator. By introducing the world's first professional PC-based airliner-class simulator, ELITE offers a completely new way to practice IFR procedures to keep skills sharp.

ELITE Pilot Premium version 8.6 allows pilots of all levels of experience to exercise their flying skills using the power of the personal computer for over two decades. Complete startup and shutdown procedures, fly different patterns or approaches, practice with normal or abnormal situations, or maintain proficiency, in a completely controllable virtual environment with new 2011 navigational data. P/N 13-07341.....**$199.00**

JEPPESEN FLITESTAR FLIGHT PLANNING



FliteStar VFR includes the functionality to satisfy even the most discriminating VFR flyer with features that include: • Graphical TFR Depiction • GPS upload capability • Point-and-click as well as automatic routing • Routing between VORs, NDBs, airports and user-defined waypoints • Direct and great circle paths • Routing around special use airspace • Color-coded elevation information in the planview and profile views • Terrain avoidance flight planning option • Connection to GTE or DTC DUATS via the Internet • Graphic weather overlays • Printed nav logs, flight plan forms, and more • Weight and balance, plus CG location calculations • Dozens of aircraft models and the ability to build your own • Fully compatible with Jeppesen digital RasterPlus VFR and nautical charts • Sunrise and sunset calendar • Color-coded elevation information that can be viewed in both the planview and profile views • Internet or modem connection to CSC or DTC DUATS for current weather and flight plan filing • Auto load function makes installation and NavData updates incredibly easy. • All FliteStar products can be easily upgraded. If you buy FliteStar VFR to get started, you can upgrade to the expanded features and capabilities of FliteStar IFR simply by paying the price difference between the two.

FliteStar IFR v9.0 includes all of the features of FliteStar VFR and Jeppesen's exclusive VectorPlus mapping technology and vector chart themes. FliteStar's chart filtering features allow you to select which chart items are depicted. Intelligent chart de-clutter automatically minimizes label overwrite, making charts easier to read. FliteStar's GPS-direct router avoids airspace vertically as well as laterally, when asked to do so. Integrated terrain data makes your planning easier and more complete by displaying the color-coded elevation information in both the planview and profile views. Weather animation capabilities allow Jeppesen weather images, including satellite and radar images, to be shown in moving sequence, thus depicting weather trend information. And, with release v9.0, cloud bases are automatically shown in the profile view when your weather briefing is complete.

Description	Part No.	Price
North America IFR	6120	**$283.75**
North America VFR	68273	**$142.75**
Europe IFR	6006	**$371.00**
Europe VFR	69383	**$149.00**
WorldWide IFR	65703	**$879.95**
Americas IFR	13-20172	**$1,254.00**
North America VFR & 3 CD Updates	13-20216	**$307.00**
North America VFR & 3 Web Updates	13-20217	**$257.95**
North America VFR One Time Update	13-20215	**$64.75**
Americas IFR Onetime Update	13-20169	**$167.85**
Worldwide IFR Onetime Update	13-20195	**$186.75**

SEE OUR WEBSITE FOR MORE JEPPSEN FLIGHTSTAR PRODUCTS

RACOON RADIO COMMUNICATIONS TRAINER



The ultimate radio communications trainer. Listen to actual class B airspace radio calls. A complete ATC curriculum. From the Main Menu you have access to video introductions, actual arrival and departure procedures, a comprehensive radio communication ground school and knowledge quizzes. Features: • Photo routes guide you through the arrival and departure procedures for airports in various airspaces. • Hear and read actual ATC radio recordings from multiple pilots. • The ground school course covers communication procedures, air traffic control systems, related equipment. • Challenge yourself using the practical cockpit perspective quiz.

P/N 13-12739 .....**$99.00**

HELICOPTER MANEUVERS GUIDE



The Maneuvers Guide provides step-by-step guidance with over 2 hours of video and animated media. Each maneuver is introduced by designated pilot examiner Ben Fouts. A detailed graphical animation follows, explaining the maneuvers step by step. Then there is also a cockpit view available showing the flown maneuver from pilot's perspective! Additionally you can profit from the "Examiner's Perspective" videos. Here you will get important information about common errors and see what an FAA examiner is looking for during the check ride. The software is a great learning tool for students and CFIs alike. System Requirements: • High Definition image quality • 1280x720pix resolution • Runs on MAC and PC (Mac OSX 10 / Windows Vista, 7)(requires Adobe Flash 11 and Adobe AIR - free downloads) • Note: This Software does not run on iPad or iPhone min. 1 GB RAM recommended P/N 13-12737 .....**$199.00**

PS

VINTAGE SIGNS



HOMEBUILDERS HEADQUARTERS SINCE 1965 WITH PROP LOGO - This Homebuilders Headquarters since 1965 prop logo vintage metal sign is made in the United States using 24 gauge American steel and a process known as sublimation, where the image is baked into a powder coating for a durable and long lasting finish. A vintaging process is then preformed by hand to give this sign an aged look and feel. The edges of this sign are rounded for extra rigidity and the corners are drilled and riveted for easy hanging. 11.5" x 17.5"

P/N 13-17902 ..... **$18.95**



I'D RATHER BE SHOPPING AT AIRCRAFT SPRUCE TREE LOGO - This I'd rather be shopping at Aircraft Spruce tree logo vintage metal sign is made in the United States using 24 gauge American steel and a process known as sublimation, where the image is baked into a powder coating for a durable and long lasting finish. A vintaging process is then preformed by hand to give this sign an aged look and feel. The edges of this sign are rounded for extra rigidity and the corners are drilled and riveted for easy hanging. 11.5" x 17.5" P/N 13-17908 ..... **$18.50**

PREMIUM EPAULETS



The board for these epaulets are made of 100% Polyester and the finest braided bars available. Epaulets are available with a Black or Navy base and a Metallic Gold, Metallic Silver, Nylon Gold, or Nylon Silver stripe. Price per pair.

Part No.	Description	Price
14-00421	1 Stripe - Gold Metallic Navy	$11.50
14-00422	1 Stripe - Gold Nylon Black	$11.75
14-00423	1 Stripe - Gold Nylon Navy	$11.50
14-00424	1 Stripe - Silver Metallic Black	$11.75
14-00425	1 Stripe -Silver Metallic Navy	$11.50
14-00426	1 Stripe - Silver Nylon Black	$11.75
14-00427	1 Stripe -Silver Nylon Navy	$11.25
14-00420	1 Stripe - Gold Metallic Black	$11.95
14-00412	2 Stripe - Gold Metallic Black	$11.50
14-00413	2 Stripe -Gold Metallic Navy	$11.50
14-00414	2 Stripe -Gold Nylon Black	$11.75
14-00415	2 Stripe -Gold Nylon Navy	$11.50
14-00416	2 Stripe -Silver Metallic Black	$11.75
14-00417	2 Stripe - Silver Metallic Navy	$11.50
14-00418	2 Stripe - Silver Nylon Black	$11.50
14-00419	2 Stripe - Silver Nylon Navy	$8.50
14-00241	3 Stripe - Gold Metallic Black	$12.75
14-00405	3 Stripe - Gold Metallic Navy	$12.95
14-00406	3 Stripe -Gold Nylon Black	$11.95
14-00407	3 Stripe -Gold Nylon Navy	$11.50
14-00408	3 Stripe -Silver Metallic Black	$12.95
14-00409	3 Stripe -Silver Metallic Navy	$11.50
14-00410	3 Stripe -Silver Nylon Black	$11.50
14-00411	3 Stripe -Silver Nylon Navy	$11.50
14-00397	4 Stripe - Gold Metallic Black	$13.75
14-00399	4 Stripe - Gold Metallic Navy	$12.50
14-00401	4 Stripe -Gold Nylon Black	$11.75
14-00402	4 Stripe -Gold Nylon Navy	$11.50
14-00398	4 Stripe -Silver Metallic Black	$13.50
14-00400	4 Stripe -Silver Metallic Navy	$12.25
14-00403	4 Stripe -Silver Nylon Black	$11.75
14-00404	4 Stripe -Silver Nylon Navy	$12.75
14-00397	4 Stripe - Gold Metalic on Black	$13.75
14-00398	4 Stripe - Silver Metalic on Black	$13.50
14-03296	4 Stripe - White Nylon on Black	$11.50
14-00399	4 Stripe - Gold Metalic on Navy	$12.50

HARDWARE OPTIONS FOR ON TOP AND IP TRAINER



FLIGHT SIM YOKE USB - Put yourself behind a set of real controls with the CH Flight Sim Yoke, complete with an authentic 3 lever throttle quadrant and numerous cockpit functions at your fingertips. Now you can control your aircraft like a real pilot would with left hand on the yoke and right hand controlling your throttle, prop and mixture and managing the rest of your cockpit. P/N 13-00737 ..... **$126.75**



CH ECLIPSE YOKE - Fully programmable fingertip paddles, ideal for flight and racing sims. Programmable trim / scroll wheels with center push function. Two backlit push buttons and a third traditional push button. Two 8-way hat with rocker switch and trigger on both sides of handle. Configurable POV hat for either left or right hand use. Colored handles for throttle / prop / fuel mixture. Three color LED selector dial giving you a total of 240 programmable functions with CH Control Manager software. Six analog 10 bit axes for aileron, elevator, throttle, propeller pitch, fuel and rudder. New and improved industrial grade material / components; indestructible robust plastic, free floating shaft and clamp extenders for the thinnest of desks P/N 13-06127 ..... **$189.75**



CH PRO RUDDER PEDALS USB - Features forward/backward slide motion for real simulation flying. Also works well as gas and brake controls for racing simulators. These 3 axes pedals are ideal with the 5 axes USB Flight Sim yoke. P/N 13-00738 ..... **$125.90**

Kit #1 - Yoke and Rudder Pedals .....P/N 13-06766 ..... **$226.95**

CH THROTTLE QUADRANT USB - TWIN ENGINE. Fully programmable and featuring six physical dent axis' and up to 350 buttons. Throttle Quandrant USB takes you from the computer to the cockpit. Features: 6 Axis 12 Buttons (24 Button functions w/Control Manager Software (included), 6 Physical Detents, Fully Programmable with CH Control manager, Compatible with Windows 98, Windows ME, Windows 2000 & Windows XP. Compatible with all Windows based Games.

P/N 13-03377 ..... **$128.90**



VRTR400 CONSOLE SIMULATOR

The VR Aircraft VRTR400 Console Simulator offers the ultimate in realism, flexibility, mobility, reliability, and cost effective flight training! This high quality instrument panel simulation system represents what you would find in a real single engine aircraft. The VRTR700 is as real as it gets! With today's rapidly escalating operating costs, you can keep flying without burning a drop of fuel, or worrying about the weather. With a small 42" x 18" footprint, the VRTR400 Console simulator will fit in very compact areas, on a desk or small table. Built to rugged specifications, VR simulators will give years of trouble free service. VR simulators are built tough enough to let big kids and non-pilots fly it HARD! Not supplied: PC Computer system capable of operating Microsoft flight simulator 2004 or FSX. Suggest 2.2ghz or higher 2Mb ram Video card(s) capable of having three video outputs. Microsoft flight simulator program Rudder pedals (USB) VRTR400 Standard Radios ..... P/N 13-06760..... **$8,750.00**

VRTR400-G Dual Screen Glass(G1000)... P/N 13-06761..... **$9,150.00**



MICROSOFT FLIGHT SIMULATOR AS A TRAINING AID

2nd Edition Microsoft® Flight Simulator has inspired many thousands of young "gamers" to pursue flight training in real life and has provided certificated pilots with countless hours of entertainment. And even though there is an awareness that PC-based simulations—and Microsoft Flight Simulator in particular—are helpful as aids in flight training and pilot proficiency, for many it is still unclear how best to benefit from the experience of virtual flying.

P/N 13-04937..... **$19.95**



WEATHER STATEMENT GROUNDSCHOOL

A CD-ROM-based course on METAR's and TAF's. Nearly 2 hours of stunning, interactive training is provided. Promotes learning through human interaction—not just rote memorization. A remarkable feature is the interactive weather controls, which enable the user to "control the weather." Since weather codes are confusing to interpret, the user can click the "Speak-It" button to hear a verbal translation. This allows the user to correlate codes with a true, visual picture and understanding of the weather. This tutorial CD is perfect for all pilots, from students to rated pilots who wish to remain sharp and proficient. It's also ideal for airport personnel, dispatchers, and anyone else who needs to view aviation weather information.

Software ..... P/N 13-05575..... **$59.00**

Download Version ..... P/N 13-11404..... **$55.00**

PS

Prices Subject to Change Without Notice

CH VIDEO GAME JOYSTICKS

Your pulse quickens, your muscles tighten, adrenaline surges through your veins as you engage enemy aircraft in gut wrenching aerial combat. With CH Products simulation controllers, the realism of your next combat mission ascends to new heights.



FLIGHTSTICK PRO - • Windows 98, ME, 2000, XP, XP 64bit, Vista • 3 axes and 12 buttons – X, Y, and Z axes for Aileron, Elevator, and Throttle control – 4 traditional push buttons – 1 eight direction POV HAT switch • Total of 80 programmable functions with Control Manager software (included) • Simple ambidextrous handle • Dual rotary trim wheels for precise adjustment of ailerons and elevators • Side Throttle wheel • Large sturdy base with 7 foot USB cable • Plug and Play driverless USB installation • Quality industrial components and construction • Two year limited warranty
P/N 13-05613 .....**$83.75**



FLIGHTSTICK - • Windows 98, ME, 2000, XP, XP 64bit, Vista • 3 axes and 24 buttons – X, Y, and Z axes for Aileron, Elevator, and Throttle control – 3 traditional push buttons – 1 mode switch button – 3 four direction HAT switches – 1 eight direction POV HAT switch • Total of 176 programmable functions with Control Manager software (included) • Three color mode indicator LEDs on base • Realistic F-16 handle • Dual rotary trim wheels for precise adjustment of ailerons and elevators • Side Throttle wheel • Large sturdy base with 7 foot USB cable • Plug and Play driverless USB installation • Quality industrial components and construction • Two year limited warranty.
P/N 13-05615.....**$129.75**



PRO THROTTLE - • Windows 98, ME, 2000, XP, XP 64bit, Vista • 3 axes and 24 buttons – X and Y axes on miniature joystick – Z axis on accurate throttle sliding motion – 3 traditional push buttons – 1 mode switch button – 3 four direction HAT switches – 1 eight direction POV HAT switch • Total of 176 programmable functions with Control Manager software (included) • Three color mode indicator LEDs on base • Ergonomic left hand HOTAS design • Large sturdy base with 7 foot USB cable • Plug and Play driverless USB installation • Quality industrial components and construction • Two year limited warranty P/N 13-05616.....**$130.85**

PANEL PLANNER

INSTRUMENT PANEL DESIGN SOFTWARE



Panel Planner software gives you the power to design and build instrument panels in record time. Simply drag full-color, photo-realistic instruments, avionics, and cockpit controls into place on an aircraft panel template or photograph. Panel Planner tracks total cost, total weight, and peak current, generates and equipment list, and even prints actual-size hole-cutting templates and color mock-ups. Panel Planner is easy to install and use with its continuous context-sensitive help to guide you every step of the way. The updatable database includes equipment from King, Narco, Sigma-Tek, David Clark, P.S. Engineering, Insight, Garmin, IFR, II Morrow, UMA, Mitchell, Trimble, Arnav, S-Tek, Century, Vision Microsystems, Avidyne, Digifly, Skyforce, and many more; PLUS switches, lights, control cables, vents, circuit breakers, trim indicators, etc. Create labels, color-coded annunciators, or placards.

PANEL PLANNER PRO (2.9 VERSION)

The PPJ 3.4 update has 100's of new panels and instruments. Please download the Excel spreadsheets. Hundreds of hours were spent reworking older panels to bring out more detail. Instrument manufacturers added like Lonestar that represent new, important auxiliary avionics and more smaller aircraft manufacturers' panel added. View 1600 instruments on 600 aircraft panels. Outputs DXF files for CNC, laser/water jet. Updates over the internet. Full-size cutting template printouts Measurement and alignment tools. Edit existing or create new panel templates. Multiple zoom and magnification levels. Actual-size color prints from desktop printers.

Panel Planner Pro for Windows.....P/N 13-44415... **$249.95**
Panel Planner Pro for Macintosh.....P/N 13-06210... **$249.95**

LOGTEN PRO PILOT LOGBOOK APP

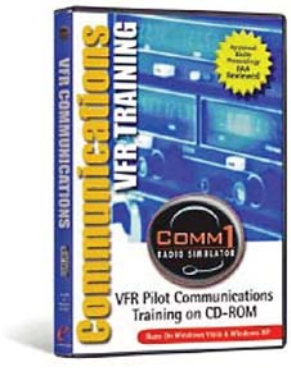


The leading international pilot logbook built for the Apple platform. LogTen Pro is the electronic logbook of choice for tens of thousands of Mac pilots in nearly 200 countries, and in every major airline. Designed to be completely customizable for your type of flying, country, region, company so you can track exactly what you need.

Features:

- Syncs seamlessly with iPad and iPhone versions (but not required - whether you purchase the Mac version or Universal iPad/iPhone version, your whole logbook travels with you!)
- Data entry is quick and intuitive
- Easily imports existing data and you can customize to your needs
- Automatically tracks currency and duty limits
- Harnesses all the power of Apple Smart Groups so you can slice and dice your data instantly to provide answers to any question about your flight time (great for insurance, flying clubs, interviews, etc.)
- Tracks certificates, ratings, endorsements, medicals, expenses and flight reviews
- Prints stunning reports and official logbooks, over 80 reports available out of the box or you can create your own!
- Automatically calculates night time
- Exports flights and trips right to your calendar
- Automatically processes airline schedules
- Visual limits lets you see at a glance if there's any issures with your schedule
- Customer service second to none...And a lot more

Apple/MAC .....P/N 13-11975....**$99.99**
iPhone/iPad .....P/N 13-11976....**$79.99**



COMM 1 VFR/IFR RADIO SIMULATOR

Learning to fly? Not flown for a few years? Talking on the radio is one of the most important, but least emphasized, skills you need to fly safely in today's busy airspace. COMM1 VFR Radio Simulator is a proven tool for getting you up to speed on communicating professionally with ATC, Flight Services, Flight Watch, and other ground personnel. 6+ hours of training, comprehensive audio-visual tutorials, realistic flight scenarios, Interactive practice exercises w/ ATC, playback your exchange w/ATC, and compare yourself to an expert. Works with MAC and Windows 8. 486/66 MHz PC processor. 16 MB RAM. 6 MB hard drive space. Windows 95. 4x speed CD-ROM drive. Sound Blaster-compatible sound card. Microphone and speakers (or headset). 800 x 600 resolution display with 256 colors. Works with MAC and Windows 8.

Comm1 - VFR Radio Simulator ..... P/N 13-32221..... **$93.95**
Comm1 - IFR Radio Simulator..... P/N 13-00093..... **$112.95**
Headset with Boom M/C ..... P/N 13-33331..... **$22.95**
Plug & Play Combo VFR (Includes: COMM1 Multimedia headset / Mic & COMM1 VFR Radio Simulator)
P/N 13-34441..... **$111.95**

REDBIRD FLIGHT SIMULATORS

THE JAY BY REDBIRD



Start Up-procedure: 1.Put it on a table. 2.Turn it on. 3. Fly.

Practicing at home is a great idea for pilots. You can keep your skills sharp and your mind in the cockpit even when you can't make it to the airport. In reality, however, two obstacles deny a majority of pilots effective home flight simulation: purchasing and assembling the right hardware requires a PhD in computer know-how, and after flying around the virtual world for a bit, most pilots get bored. Redbird Flight Simulations, the world leader in FAA-approved flight simulators for general aviation, has addressed both these issues with the Jay. The Jay contains the monitor, speakers, computer and flight controls—all-in-one unit that is ready to fly right out of the box. It boots up directly to a launch screen where you can select your airplane, airport and weather conditions. Push the green button and you're on a runway and ready to go. **Scenario-based training? It's built in.** The Jay is more than a simulator—it's a flight experience device supporting training, proficiency, and just plain fun! In addition to the free flight mode where you select the aircraft and conditions, the Jay has a scenario mode where you can load a preset scenario and fly it. A scenario could range from a simple flight challenge to a complex flight with multiple potential outcomes. For example, a magazine article on an aircraft accident could be linked to a mission where the Jay owner flies that scenario. Redbird Media, a company specializing in curriculum for simulation, will create many of these scenarios in partnership with AOPA Pilot and other training outlets and magazines. The scenario exchange will be open to any company wishing to create scenarios for the Jay. A one-button update on the Jay will load the latest scenarios available for free or that the owner has purchased. The Jay home screen also has a built-in web browser to access scenario add-ons, such as video, or download simulator extensions such as additional aircraft or scenery. The Jay chassis is metal, not plastic. Control smoothness is paramount. The parts should last indefinitely. In addition, there are pilot-centric touches. For example, the yoke travel is equivalent to a typical Cessna or Piper single—about three times as far as most plastic flight sim yokes move. The software powering the Jay is Lockheed Prepar3D (pronounced "prepared"). Prepar3D is an evolution of Microsoft's FSX, enhanced and expanded for professional-level simulation, including Redbird's full-motion simulators. This means most of the many plug-ins, aircraft and communities designed for FSX will work flawlessly on the Jay. P/N 13-15906.....**$2,595.00**

OPTIONS

Description	Part No.	Price
Redbird Wireless Adapter For The Jay	13-15874	**$58.95**
Redbird RD1 Rudder Pedals	13-15866	**$549.00**

THE JAY VELOCITY EDITION BY REDBIRD



The Jay Velocity Edition contains all of the standard Jay features, while adding upgraded computing power and robust components to allow it to be used in demanding environments like middle and high schools, museums, and public access kiosks. The clean-sheet design prioritizes one thing for the classroom: Get the student learning with a minimum of fuss. There are no peripherals to configure, no systems to install. Take it out of the box, plug it in, and turn it on. Now say, "preflight complete." The Jay contains the monitor, speakers, computer and flight controls—all-in-one unit that is ready to fly right out of the box. It boots up directly to a launch screen where you can select your airplane, airport and weather conditions. Push the green button and you're on a runway and ready to go.

P/N 13-20712.....**$4,041.00**

REDBIRD TD BY REDBIRD



Table not included
FAA Approved BATD Simulator

The Redbird TD and TD2 are table-mounted flight training devices that are designed with the ergonomics of flight in mind at a price that everyone can afford. Plus, they're fully packaged and easy to set up and operate, making it the most realistic and effective trainer on the market. Traditional "desktop" flight training devices sit on top of a table or desk, causing the pilot to reach up for the yoke and to look unrealistically high for the gauges. The TD and TD2's unique mounting system allows it to be hung under the table, placing the yoke, switches, gauges and visuals in the correct and most realistic position for the pilot. The Redbird TD and TD2 are perfect for flight schools looking to enhance training with simulation, and for individual pilots looking to hone their skills and stay current from the comfort of their home or office.
The newly redesigned Redbird TD & TD2 give you the freedom to fly with interchangeable glass and steam gauges on one device. They represent generic,single engine piston training aircraft. With the TD2, you can fly with or without retractable gear, constant speed prop and or a high performance engine.

Features:
- 90-day warranty with optional 1 or 2-year extended warranty
- Interchangeable instrument panel - traditional or glass configurations
- Complete terrain and airport database
- Equipped with computer, monitor, instrument panel, keyboard and speakers
- Ergonomically correct design which easily slides onto a sturdy, solid table
- FAA Approved BATD with optional rudder pedals
- Failure Hotkeys

Room Requirements:
You will need a sturdy, solid table with a maximum tabletop thickness of 2.25" including any rails and the underlying structure. There should be at least 29" between the legs of the table to allow the TD to slide on to the table smoothly. Please note that you must install the adjustable supporting leg for added stability, if you are not using a Redbird TD table or platform.

Redbird TD .....P/N 13-15905 .....**$6,995.00**
Redbird TD2 .....P/N 13-15904 .....**$7,995.00**

OPTIONS

Description	Part No.	Price
TD & TD2 Sims. Come with a single screen. This kit adds 2 side screens for a panoramic view.	13-15870	**$1,695.00**
Redbird Table For TD And TD2	13-15860	**$629.00**

PS

OTHER REDBIRD SIMULATORS

Part No.	Model No.	Description	Starting Price
13-15889	Redbird LD	Wrap around visuals without cockpit enclosure	**$32,800.00**
13-15890	Redbird SD	Enclosed similar to FMX, but no motion	**$42,800.00**
13-15891	Redbird FMX	Full motion, enclosed cockpit, flagship model	**$64,800.00**
13-15892	Redbird MX2	Full motion, compact for limited space	**$58,800.00**
13-15893	Redbird MCX	Full motion, ideal for CFI, CFII, CRM Training	**$89,800.00**
13-15902	Redbird XWIND	Full motion, teaches cross wing techniques	**$31,900.00**
13-15903	Redbird XWIND SE	Full motion, with more LCD exterior visuals	**$34,900.00**

REDBIRD ALLOY SIMULATOR CONTROLS

Part No.	Description	Price
13-19645	Redbird Control Yoke	**$799.00**
13-19642	Redbird Single Engine Vernier Throttle Quadrant	**$569.00**
13-19643	Redbird Twin Engine Lever Throttle Quadrant	**$599.00**
13-19644	Redbird Single Engine Lever Throttle Quadrant	**$569.00**

Prices Subject to Change Without Notice

SAITEK FLIGHT SIMULATION



SAITEK X52 FLIGHT CONTROL SYSTEM

Enhanced game play through intuitive Multi-Function display (MFD). Illuminated buttons and MFD - ideal for low light environments. Rubber grips and ergonomic design for increased comfort and fatigue-free gaming. Includes Roger Wilco Chat software - the ideal accompaniment for on-line multiplayer gaming.

P/N 14-02845 .....**$149.99**

SAITEK X52 PRO FLIGHT SYSTEM



The MFD screen is now interactive. Now you can display important in-game information such as the Radio Stack and interact with your games directly. Shipping with support for Microsoft's Flight Simulator X, there's also a Software Development Kit (SDK) included which allows budding programmers to create interactions with their own favorite games.

P/N 14-00649 .....**$199.99**

SAITEK PRO FLIGHT YOKE SYSTEM



Meets the exacting needs of the true flight simulation enthusiast. Stainless steel shaft, ergonomic controls, integrated chronograph and separate throttle quadrant. Use the integrated USB Hub to easily connect other parts of the Saitek Pro Flight range of products, such as additional Pro Flight Throttle Quadrant or Pro Flight Instrument Panel (sold separately).

P/N 14-00598 .....**$169.99**

SAITEK PRO FLIGHT INSTRUMENT PANEL 6 PACK



Featuring a stunning 3.5" colour LCD screen, the Instrument Panel can display 6 of the main cockpit instrument panels from Microsoft's Flight Simulator X. Choose between 6 different flight instruments at the touch of a button: Altimeter, Attitude Indicator, Airspeed Indicator, Compass, Turn and Slip indicator, and Vertical Speed.

P/N 14-03010 .....**$859.00**



FLIGHT TRAINING COCKPIT ADVANCED PANEL

Advanced Panel offers a cockpit-realistic way to mount Saitek Pro Flight Simulation Instruments and Controls. The Advanced Panel twist-and-remove pre-cut tabs allow you to add Saitek hardware to your Advanced Panel over time and trade simulation devices between slots. Small tabs accommodate up to 10 Pro Flight Instruments. Each Saitek Flight Instrument Panel allows you to digitally switch between simulating eleven flight instruments. Alternatively, mount a Hannspree HL161ABB 16" Screen LED-Lit Monitor in one of several possible Panel face mounting configurations.

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SAITEK PRO FLIGHT THROTTLE QUADRANT



Upgrade your flight simulation experience with the Saitek Pro Flight Throttle Quadrant. This makes an ideal addition to the Saitek Pro Flight Yoke System to expand the number of controls for your flight simulation setup.

Set the levers to control aircraft throttles, adjust elevator trim, fuel mixture or even to engage reverse thrust during landing. The Pro Flight Throttle Quadrant will work in any major flight simulation to give you all the control you need.

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Complete your virtual pilot's controller setup and take flight simulation reality to the next level with the Pro Flight Rudder Pedals. Control the rudder and toe brakes of your aircraft with your feet - just like real pilots. Adjustable, smooth action gives you optimum control and realism, and brings you even closer to the experience of flying a real aircraft.

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Upgrade your flight simulation experience for Microsoft Flight Simulator X with the Saitek Pro Flight Switch Panel. Whether attached to the Saitek Pro Flight Yoke System, free standing on a desk or mounted into your own cockpit setup, the Pro Flight Switch Panel is an ideal way to expand the number of controls for your flight simulation setup.

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Upgrade your flight simulation experience for Microsoft Flight Simulator X with the Saitek Pro Flight Radio Panel. LED displays work fully in real time with Flight Simulator X and 2004, removing the need to bring the radio stack up on screen. A set of switches and LED displays for use in controlling various aspects of flight simulation. COM1 / COM2 / NAV1 / NAV2 function. DME / ADF / XPDR functions.

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PS

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	All 48 Continuous States		
East	USB05	**$911.00**	4
AL, CT, DE, DC, FL, GA, IL, IN, KY, MA, MD, ME, MI, MS, NC, NH, NJ, NY, OH, PA, RI, SC, TN, VT, WI, WV			
East & Central	USC05	**$1,370.00**	6
AL, AR, CT, DE, DC, FL, GA, IA, IL, IN, KS, KY, LA, MA,,MD, ME, MI, MN, MO, MS, NC, ND, NE, NH,NJ, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, WV			
Central	USD05	**$812.00**	3
AR, IA, IL, IN, KS, LA, MI, MN, MO, ND, NE, OK, SD, TX, WI			
Central & West	USE05	**$1,018.00**	4
AR, AZ, CA, CO, IA, ID, IL, IN, KS, LA, MI, MN, MO, MT, ND, NE, NM, NV, OK, OR, SD, TX, UT, WA, WI, WY			
North Central	USN05	**$579.95**	2
CO, IA, KS, MN, MO, MT, ND, NE, SD, WY			
Great Lakes	USP05	**$509.00**	2
IL, IN, KY, MI, OH, WI			
Northeast	USR05	**$515.00**	2
CT, DE, DC, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV			
Southeast	USS05	**$535.00**	2
AL, FL, GA, MS, NC, SC, TN			
South Central	UST05	**$444.00**	1
AR, LA, NM, OK, TX			
N. Cntl. & Gt. Lakes	USU05	**$850.00**	3
CO, IA, IL, IN, KS, KY, MI, MN, MO, MT, ND, NE, OH, SD, WI, WY			
S. & S. Central	USW05	**$736.95**	2
AL, AR, FL, GA, LA, MS, NC, NM, OK, SC, TN, TX			
California	CAL05	**$174.75**	1
CA			
Florida	FLA05	**$137.75**	1
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California, J-CA: ..... California
Alaska, J-AK:..... Alaska

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North Central, J-NC:..... Minnesota, Iowa, Wisconsin
Great Lakes, J-GL:..... Wisconsin, Illinois
East Central, J-EC:..... Indiana, Ohio
South Central, J-SC: ..... Oklahoma, Arkansas, Louisiana
Texas, J-TX:..... Texas
Michigan, J-MI:..... Michigan

EASTERN AREA

Northeast, J-NE:..... Maine, Massachusetts, Connecticut,
..... New Hampshire,Rhode Island, Vermont
East, J-EA: ..... New York, Pennsylvania, New Jersey
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Mid-South, J-MS:..... Kentucky, Tennessee, Mississippi, Alabama
Florida, J-FL: ..... Florida

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Central	13-22740	**$79.99**
California	13-22745	**$69.95**
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Northwest	13-22760	**$51.25**
East	13-22765	**$76.95**
Northeast	13-22770	**$48.95**
Michigan	13-22775	**$48.95**
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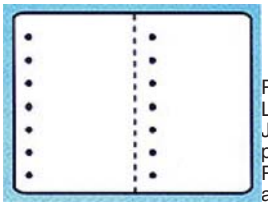
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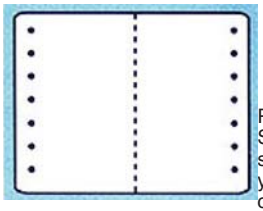
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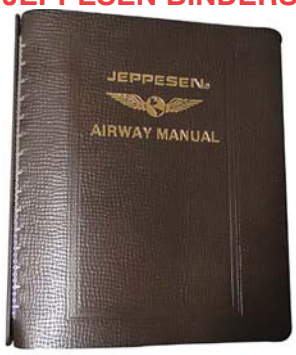
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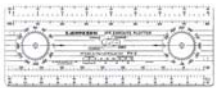
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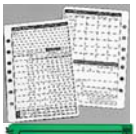
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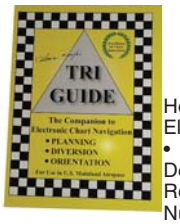
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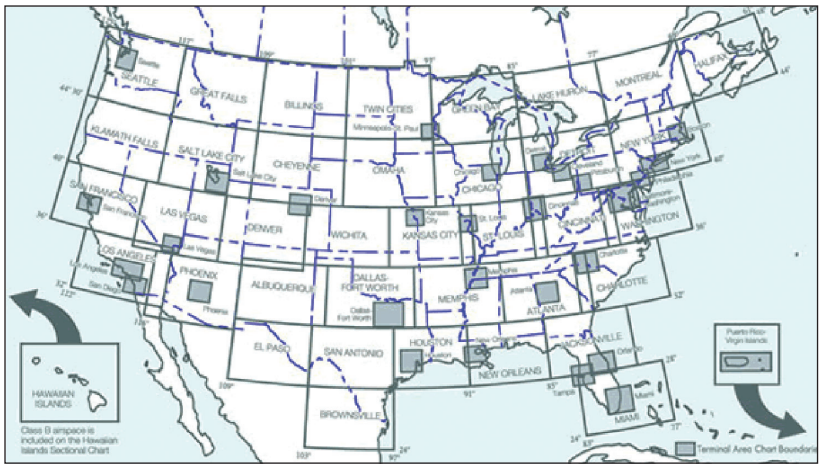
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Lake Huron	New York	Los Angeles	Houston	Aleutian Islands	Fairbanks	Cold Bay
Montreal	San Francisco	Phoenix	New Orleans	Western	Dawson	
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Terminal Area Charts depict the airspace designated as Class B Airspace. The information found on these charts, while similar to that found on Sectional Charts, is shown in much more detail because of the larger scale. These charts should be used by pilots intending to operate from airfield within or near a Terminal Control Area or an Airport Radar Service Area. Locations of Terminal Area Charts are indicated by a • on the Sectional Chart indexes. (Scale 1 inch = 3.43nm/1:250,000. 25 x 20 inches folded to 5 x 10 inches.) Revised semi-annually, except Puerto Rico/Virgin Islands is revised annually.

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NOTE: When ordering charts, complete part number with first 3 letters of chart title. Ex: Los Angeles terminal chart is P/N 8064LOS.

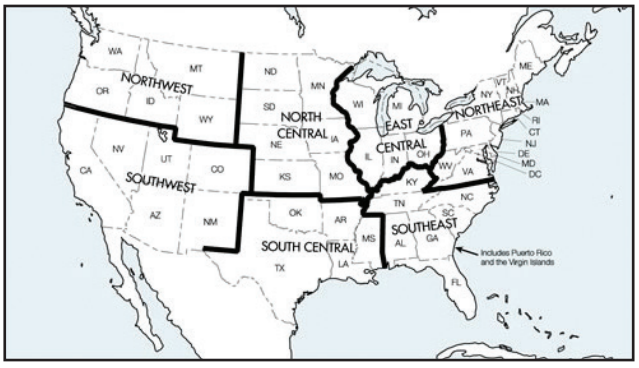
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CINCINNATI VFR TERMINAL AREA & FLYWAY CHART

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AERONAV AIRPORT / FACILITY DIRECTORY



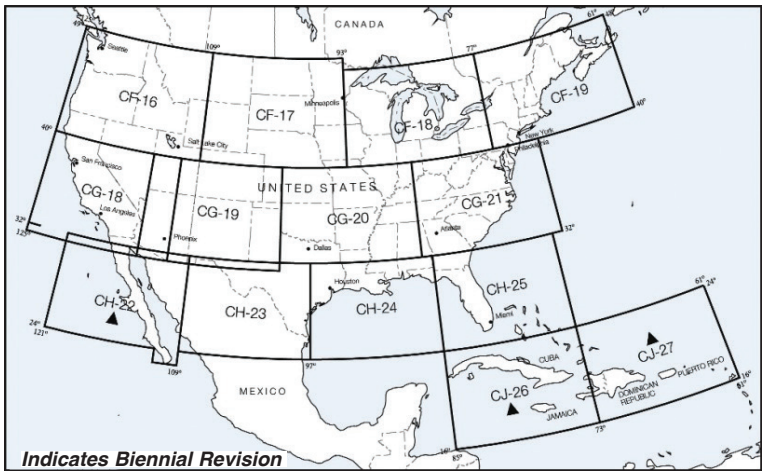
The Airport/Facility directory is a pilot's manual which contains data on public and joint use airports, seaplane bases, heliports, VFR airport sketches, NAVAIDs, communications data, weather data sources, airspace, special notices, VFR waypoints and operational procedures. The seven volumes cover the conterminous United States, Puerto Rico, and the Virgin Islands. Includes data that cannot be readily depicted in graphic form; e.g., airport hours of operation, types of fuel available, runway data, lighting codes, etc. **$4.50 ea.**

Area	Part No.
Southwest U.S.	AFD-SW
Northwest U.S.	AFD-NW
So. Central U.S.	AFD-SC
No. Central U.S.	AFD-NC

Area	Part No.
East Central U.S	AFD-EC
Southeast U.S.	AFD-SE
Northeast U.S.	AFD-NE

PS

AERONAV VISUAL NAVIGATION CHARTS



Indicates Biennial Revision

World Aeronautical Charts for the conterminous U.S., Mexico, & Caribbean Areas

WORLD AERONAUTICAL CHARTS

World Aeronautical Charts by NOS are designed to provide standard for the land areas of the world in a size and scale convenient for navigation by moderate-speed aircraft. Topographic information includes cities and towns, principal roads, railroads, distinctive landmarks, drainage, and relief. Aeronautical information includes visual and radio aids to navigation, airports, airways,restricted areas, obstructions, and other data considered pertinent. Scale 1:1,000,000 or 1" to 13.7 nautical miles, less detailed than Sectional & Terminal Area Charts, but useful for longer distance planning. Revised annually. 12 charts cover the US

WAC Charts.....P/N 8567..... **$9.50 ea**

NOTE: When ordering charts, complete part no. with chart number.

Example: WAC chart CF-17 is P/N 8567CF-17.

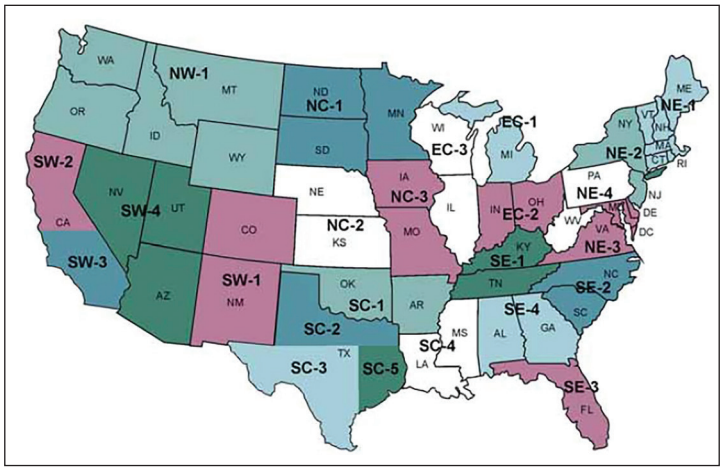
For SUBSCRIPTION service: Add -SUB (example: 8567CF-17-SUB) and a new WAC chart will be shipped and billed to you automatically at every revision until you cancel the subscription. Subscription chart orders require a credit card number on file.

OTHER VFR CHARTS:

VFR-IFR Wall Planning Chart (U.S.) Flat/Wall.....P/N 13-30703 ..... **$6.50**
VFR-IFR Wall Planning Chart (U.S.) Folded.....P/N 13-06455 ..... **$6.50**
U.S. Gulf Coast VFR Chart .....P/N 13-30704 ... **$11.95**
Grand Canyon VFR Chart .....P/N 13-30706 ..... **$3.60**
Baltimore-Washington Helicopter Route Chart.....P/N 13-30707 ... **$12.95**
Chicago Helicopter Route Chart.....P/N 13-30709 ... **$13.25**
Houston Helicopter Route Chart.....P/N 13-30711 ... **$13.25**
Los Angeles Helicopter Route Chart .....P/N 13-30712 ... **$12.85**
New York Helicopter Route Chart .....P/N 13-30713 ... **$12.95**
Pacific Chart Supplement .....P/N 13-07875 ..... **$6.50**

World Aeronautical Charts for Alaska





TERMINAL PROCEDURES COVERAGE OF THE CONTERMINOUS U.S.

Includes: • Instrument Approach Procedure (IAP) Charts •Departure Procedure (DP) Charts • Standard Terminal Arrival (STAR) Charts • Charted Visual Flight Procedures (CVFP) • Airport Diagrams

IAP Charts are designed to provide an IFR descent from the enroute environment to a point where a safe landing can be made. DP charts are Air Traffic Control (ATC)-coded departure procedures which have been established at certain airports to simplify clearance delivery procedures. STAR charts are ATC-coded IFR arrival routes established for certain airports to simplify clearance delivery procedures. CVFPs are an operational technique designed to move air traffic safely and expeditiously. In addition to conventional visual approach procedures, it has been necessary to specify routes/altitudes to enhance noise abatement at some locations. CVFPs have been developed to provide a pictorial display of these visual arrival routes. Airport Diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations and provide information for updating geodetic position navigational systems aboard aircraft.

Bound Volumes **$4.25**
Loose Leaf Volumes.....**$4.25**

PS

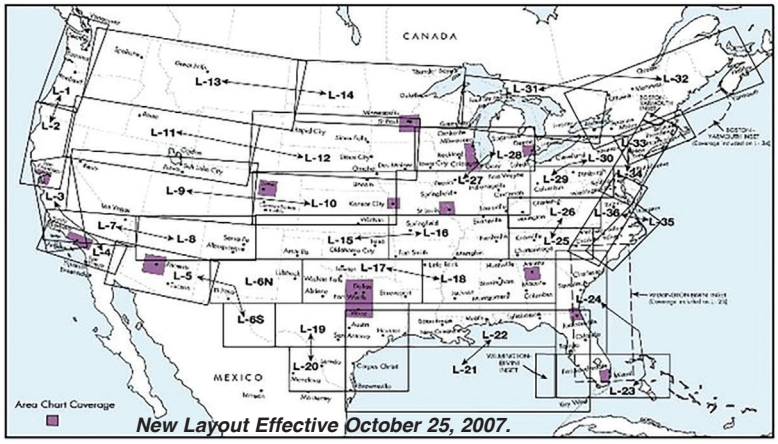
Description	Bound P/N	Loose Leaf P/N
South Central Vol.1	13-01331	13-01364
South Central Vol.2	13-01332	13-01365
South Central Vol.3	13-01333	13-00774
South Central Vol.4	13-01334	13-00105
South Central Vol.5	13-01545	13-02002
Southeast Vol. 1	13-01335	13-01366
Southeast Vol. 2	13-01336	13-01367
Southeast Vol. 3	13-01337	13-01368
Southeast Vol. 4	13-01338	13-00106
Southwest Vol. 1	13-01339	13-01369
Southwest Vol. 2	13-01340	13-01370
Southwest Vol. 3	13-01445	13-01446

Description	Bound P/N	Loose Leaf P/N
Southwest Vol. 4	13-00814	13-01546
East Central Vol. 1	13-01341	13-01354
East Central Vol. 2	13-01342	13-01355
East Central Vol. 3	13-01343	13-01356
North Central Vol. 1	13-01344	13-01357
North Central Vol. 2	13-01345	13-01358
North Central Vol. 3	13-01346	13-01359
Northeast Vol. 1	13-01347	13-01360
Northeast Vol. 2	13-01348	13-01361
Northeast Vol. 3	13-01349	13-01362
Northeast Vol. 4	13-02062	13-02063
Northwest Vol. 1	13-01350	13-01363

Area	Part No.	Price
Caribbean Low Enroute 1/2	13-07902	**$4.45**
Caribbean Low Enroute 3/T3	13-07903	**$4.45**
Caribbean Low Enroute 5/6	13-07904	**$4.45**
Caribbean Low Enroute T1/T2	13-07905	**$4.45**

INSTRUMENT NAVIGATION CHARTS

AERONAV ENROUTE LOW ALTITUDE CHARTS



New Layout Effective October 25, 2007.

Enroute low altitude charts for conterminous U.S. (includes area charts)

Enroute Low Altitude charts (Conterminous U.S. and Alaska) provide aeronautical information for navigation under instrument flight rules below 18,000 feet MSL. Information includes: airways; limits of controlled airspace; position, identification, and frequencies of radio aids to navigation (Alaska 4-color series includes geographic coordinates); airports with terminal air/ground communications; minimum enroute and obstruction clearance altitudes; airway distances; reporting points; special use airspace areas; military training routes. Scales vary from 1 inch = 5nm to 1 inch = 20nm. 50 x 20 inches folded to 5 x 10 inches. Revised every 8 weeks. Area charts, which show congested terminal areas at a large scale, are included with subscriptions to any conterminous U.S. Set Low (Full set, East or West sets). Chart L-28 covers the Washington-Boston corridor at a scale similar to an Area Chart. Charts are revised every 8 weeks.

Enroute Low Altitude Charts..... P/N 8070L..... **$4.45/ea.**

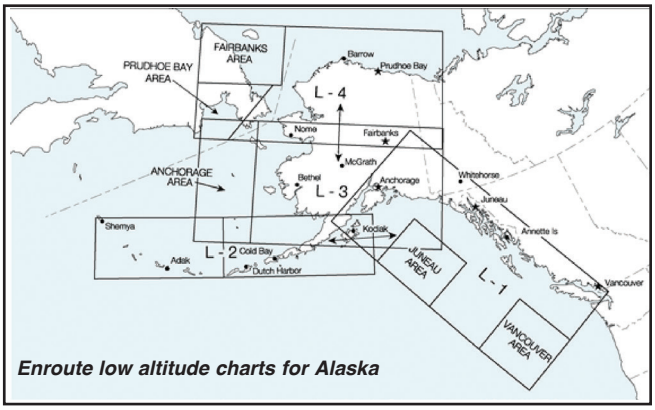
Full Set (L1/2-L27/28 & Area Chart)
P/N 13-30714 .... **$84.25**

Western U.S. Set (L1/2-L15/16 & Area Chart)
P/N 13-30716 .... **$48.50**

Eastern U.S. Set (L11/12, L13/14, L17/18-L27/28 & Area Chart)
P/N 13-30717 .... **$53.00**

Alaskan Set (Alaskan L1/2-Alaskan L3/4) ..... P/N 13-30718 ..... **$8.75**

For individual charts please call 877-4-SPRUCE or visit our website at:
www.aircraftspruce.com



Enroute low altitude charts for Alaska

IFR GULF OF MEXICO CHART - WEST P/N 13-08004 .....**$16.50**

IFR GULF OF MEXICO CHART - CENTRAL P/N 13-08003 .....**$17.50**

NOTE: When ordering individual charts, complete part number with the chart number. Example: Enroute Low Altitude Chart L-10 is P/N 8070L-10.

For SUBSCRIPTION service, add -SUB (example: 8070L-10-SUB) and a new chart will be shipped and billed to you automatically at every revision until you cancel the subscription. Subscription chart orders require a credit card number on file.

Chart Master On-Line Chart Selector

CHART MASTER

Chart Master is Aircraft Spruce's online chart selection program designed to tell you exactly which aviation charts you will need for the route you intend to fly. Just plug in the 3 letter airport identifiers for your departure and destination airports, and Chart Master will provide you with a list of all of the charts needed for your route. Select VFR (sectional, terminal, WAC, AFD, or IFR (Low altitude enroute) or both and order any or all of the charts listed by Chart Master. This program is available on line at www.aircraftspruce.com.

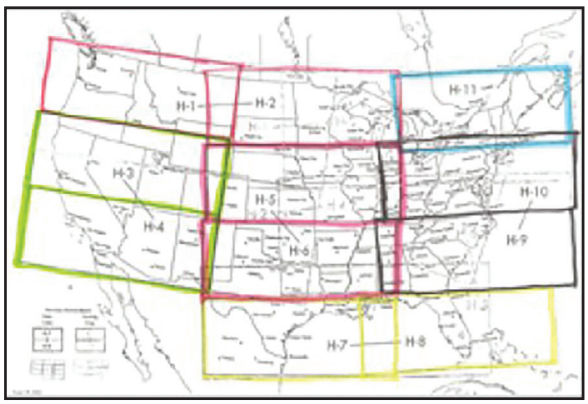
AERONAV IFR ENROUTE HIGH ALTITUDE CHARTS

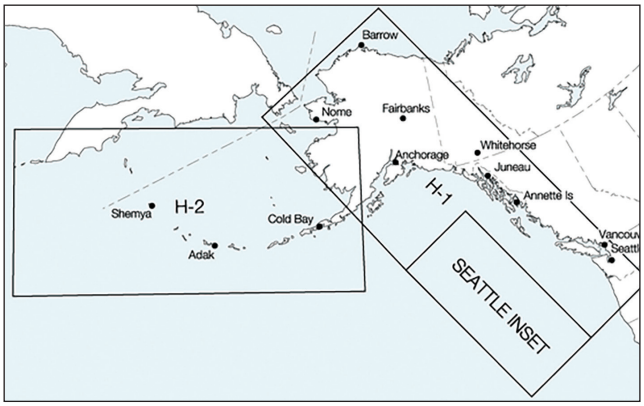
IFR Enroute High Altitude Charts (Conterminous U.S. and Alaska) are designed for navigation at or above 18,000 feel MSL. This four color chart series includes: Jet route structure; VHF radio aid to navigation (frequency, ID, channel, geographic coordinates); selected airports; reporting points. (Scales vary from 1" = 78nm to 1" = 30nm. 55 x 20" folded to 5 x 10".) Revised every 8 weeks.

NOTE: When ordering individual charts, complete part no. with the chart no. Ex: Enroute High Altitude Chart H1/2 is P/N

Full Set (H1/H2, H3/H4, H5/6, H9/H10, H11),(H3/H4, H5/H6, H7/H8-very small area,H9/H10), (H3/H4-very small area, H5/H6, H7/H8, H9/H10, H11) P/N 8075-1 .....**$26.25**

For SUBSCRIPTION service: Add -SUB (example: 8075-H1/2-SUB) and a new chart will be shipped and billed to you automatically at every revision until you cancel the subscription. Subscription chart orders require a credit card number on file.



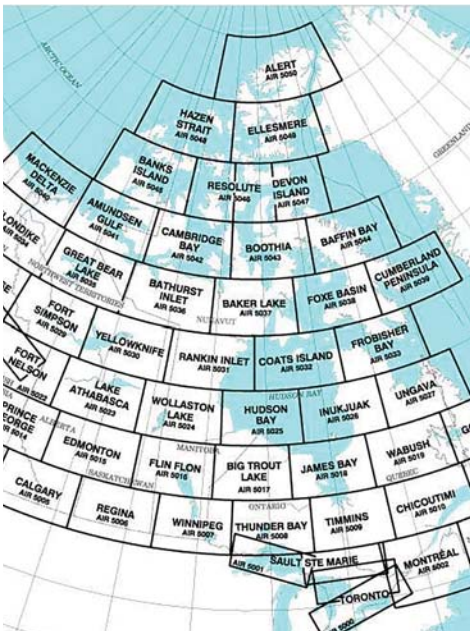


PS

CANADIAN AIA CHARTS

CANADIAN VNC (VFR) CHARTS

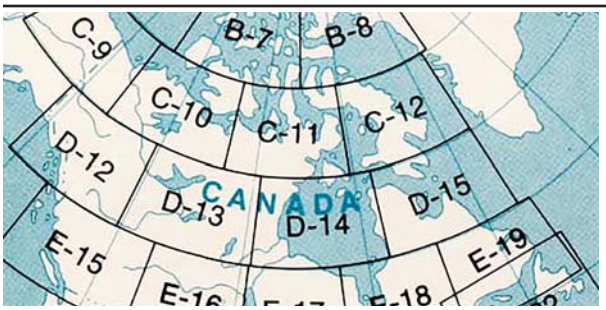
The VNC is used by VFR pilots on short to extended cross-country flight at medium altitudes and at low to medium airspeeds. These charts show aerodrome data, airspace information, radio aids to navigation, air/ground communications, and elevation with contour lines, tints and shaded relief.



VNC

Item	Title	Part No.	Price
5000	VNC Toronto	13-04425	$18.75
5001	VNC Sault Ste Marie	13-04434	$18.75
5002	VNC Montreal	13-04433	$18.75
5003	VNC Moncton	13-04466	$18.75
5004	VNC Vancouver	13-04467	$18.75
5005	VNC Calgary	13-04468	$18.75
5006	VNC Regina	13-04469	$18.75
5007	VNC Winnipeg	13-04470	$18.75
5008	VNC Thunder Bay	13-04436	$18.75
5009	VNC Timmins	13-04435	$18.75
5010	VNC Chicoutimi	13-04471	$18.75
5011	VNC Anticosti	13-04472	$19.75
5012	VNC Gander	13-04473	$18.75
5013	VNC Kitimat	13-04474	$18.75
5014	VNC Prince George	13-04475	$18.75
5015	VNC Edmonton	13-04476	$18.75
5016	VNC Flin Flon	13-04477	$18.75
5017	VNC Big Trout	13-04478	$18.75
5018	VNC James Bay	13-04479	$18.75
5019	VNC Wabush	13-04480	$18.75
5020	VNC Goose Bay	13-04481	$18.75
5021	VNC Atlin	13-04482	$18.75
5022	VNC Fort Nelson	13-04483	$18.75
5023	VNC Athabasca	13-04484	$18.75
5024	VNC Wollaston	13-04485	$18.75
5025	VNC Hudson Bay	13-04486	$18.75

Item	Title	Part No.	Price
5026	VNC Inukjuak	13-04487	$18.75
5027	VNC Ungava	13-04488	$18.75
5028	VNC Whitehorse	13-04489	$18.75
5029	VNC Ft Simpson	13-04490	$18.75
5030	VNC Yellowknife	13-04491	$18.75
5031	VNC Rankin	13-04492	$18.75
5032	VNC Coats Isl.	13-04493	$18.75
5033	VNC Frobisher	13-04494	$18.75
5034	VNC Klondike	13-04495	$18.75
5035	VNC Great Bear Lake	13-04496	$18.75
5036	VNC Bathurst Inlet	13-04497	$18.75
5037	VNC Baker Lake	13-04498	$18.75
5038	VNC Foxe Basin	13-04499	$18.75
5039	VNC Cumberland	13-04501	$18.75
5040	VNC MacKenzie	13-04502	$18.75
5041	VNC Amundsen	13-04503	$18.75
5042	VNC Cambridge	13-04504	$18.75
5043	VNC Boothia	13-04505	$18.75
5044	VNC Baffin Bay	13-04506	$18.75
5045	VNC Banks Island	13-04507	$18.75
5046	VNC Resolute	13-04508	$18.75
5047	VNC Devon Island	13-04509	$18.75
5048	VNC Hazen Strait	13-04510	$18.75
5049	VNC Ellesmere	13-04511	$18.75
5050	VNC Alert	13-04512	$18.75
5099	VNC Alaska Highway	13-04516	$18.75

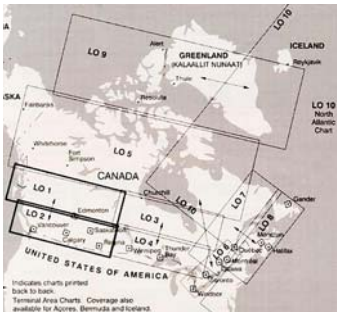


CANADIAN WAC CHARTS

Item	Title	Spruce PN	Price
WACB7	C-WAC B-7	13-04518	$13.75
WACB8	C-WAC B-8	13-04519	$13.75
WACD14	C-WAC D-14	13-04526	$16.25

For a complete image of the area map above, please visit www.aircraftspruce.com.

LOW ALTITUDE ENROUTE CHARTS



Enroute Low and High Altitude charts provide aeronautical information for instrument navigation in the low and high airway structure of the Canadian Domestic Airspace. The airspace over foreign territory and international waters in which Canada accepts responsibility for the provision of air traffic services, and other areas required for military use. The primary purpose of Enroute charts is to depict radio navigation data to provide rapid and precise location and identification of information requisite to radio instrument navigation.

Item	Title	Spruce PN	Price
LE12	LE12 Low Enroute Chart 1-2	13-04539	$4.95
LE34	LE34 Low Enroute Chart 3-4	13-04541	$4.95
LE56	LE56 Low Enroute Chart 5-6	13-04542	$4.95
LE78	LE78 Low Enroute Chart 7-8	13-04543	$4.95
LE910	LE910 Low Enroute Chart 9-10	13-04544	$4.95



CANADA WATER AERODROME SUPPLEMENT (WAS)

Provides tabulated, textual data and graphical information in support of Canadian VFR charts. Contains an Aerodrome/Facilities Directory of all water aerodromes shown on Canadian VFR charts. Updated once a year in March. ..... P/N 13-04552 ..... **$56.75**



CANADA VTA TERMINAL CHARTS

Terminal area charts provide detailed information in congested air traffic areas. The six charts of the series cover Toronto, Montreal, Vancouver, Winnipeg, Calgary and Edmonton. The latter two are printed back to back. All charts are at a scale of 1:250,000.

Emonton/Calgary ..... P/N 13-04426 ..... **$18.75**
Montreal ..... P/N 13-04427 ..... **$18.75**
Toronto ..... P/N 13-04428 ..... **$18.75**
Winnipeg ..... P/N 13-04430 ..... **$18.75**
Vancouver ..... P/N 13-04429 ..... **$18.75**



CANADA AIR PILOT

The Canada Air Pilot contains aeronautical information related to the conduct of the arrival or departure portion of flight instrument approach procedures, standard instrument departure procedures and noise abatement procedures. The publications are updated every 56 days.

CAP GEN contains general pages for all volumes except CAP 6*. CAP GEN is amended and reissued as required.

Note: The charts listed below are always shipped with the Canada Air Pilot General Chart.

Coverage Area	Description	Part No.	Price
Yukon & Northwest Territories	Canada Air Pilot - CAP 1	13-04553-1	$17.50
British Columbia	Canada Air Pilot - CAP 2	13-04554-1	$17.50
Alberta, Saskatchewan & Manitoba	Canada Air Pilot - CAP 3	13-04555-1	$17.50
Ontario	Canada Air Pilot - CAP 4	13-04556-1	$17.50
Quebec (English Version)	Canada Air Pilot - CAP 5	13-04557-1	$17.50
Quebec (French Version)	Canada Air Pilot - CAP 6	13-04558-1	$17.50
Atlantic Provinces	Canada Air Pilot - CAP 7	13-04559-1	$17.50

PS

Prices Subject to Change Without Notice

ASA FLIGHT TRAINING

FAR/AIM REGULATIONS



Model No.	Description	Part No.	Price
18-FAR-AMT	Maint Tech FAR	13-15300-18	$18.95
18-FAR-AMT2X	Maint Tech FAR E-bundle	13-12111-18	$23.99
18-FAR-FC	Flight Crew FAR	13-02293-18	$15.95
18-FAR-FC2X	Flight Crew FAR E-bundle	13-12109-18	$17.95
18-FR-AM-BK	FAR-AIM Book	13-15200-18	$9.75
18-FR-AM-PP	FAR-AIM Profit Pack	13-15200-18	$9.75
18-FR-AM2X	FAR-AIM E-bundle	13-12110-18	$18.95
CARDS-ATP	Flashcards For ATP	13-05852	$14.95

FAA AMT HANDBOOKS



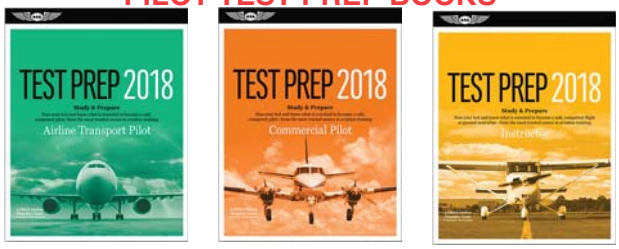
Model No.	Description	Part No.	Price
8083-30	AMT General Handbook	13-06257	$27.85
8083-30-2X	General Handbook E-bundle	13-19058	$29.50
8083-31V1	Airframe Handbook Vol 1	13-13077	$21.75
8083-31V1-2X	Airframe Handbook Vol 1 E-bundle	13-19059	$25.50
8083-31V2	Airframe Handbook Vol 2	13-13078	$23.95
8083-31V2-2X	Airframe Handbook Vol 2 E-bundle	13-19060	$25.50
8083-32	Powerplant Handbook	13-13076	$18.50
8083-32-2X	Powerplant Handbook E-bundle	13-19061	$25.50
8083-AMT-GX	Images From FAA AMT Handbooks	13-19071	$36.50
AC43-3-7	Testing - Nondest/Ultrasonic	13-02342	$9.50
AC43.13-1B2B	Aircraft Repairs & Modifications	13-06050	$17.95
AC43.13-2X	Aircraft Inspection/Repair E-bundle	13-18724	$21.80

FAA TEST FIGURES BOOKS



Model No.	Description	Part No.	Price
CT-8080-1D	Commercial Test Figures	13-18914	$6.95
CT-8080-2G	Private Test Figures	13-18913	$7.95
CT-8080-4F	AMT Test Figures	13-01296	$19.95
CT-8080-5G	CFI Test Figures	13-18916	$6.95
CT-8080-6A	Flight Engineer Test Figures	13-01293	$7.95
CT-8080-7CY	ATP Test Figs With Addenda	13-16531	$26.50
CT-8080-8D	Inspection Auth Test Figures	13-02262	$94.75

PILOT TEST PREP BOOKS



Model No.	Description	Part No.	Price
TP-ATP-18	Air Transport Pilot Test Prep	13-01301-18	$34.75
TP-C-18	Commercial Test Prep	13-01298-18	$19.75
TP-CFI-18	Flight Instructor Test Prep	13-32311-18	$21.85
TP-FE	Flight Engineer Test Prep	13-18451	$22.95
TP-I-18	Instrument Test Prep	13-00974-18	$22.95
TP-P-18	Private Test Prep	13-00984-18	$14.95
TP-UAS	Remote Pilot Test Prep	13-19086	$15.75

FAA PILOT HANDBOOKS



Model	Description	Part No.	Price
8082-22	Remote Pilot Suas Study Guide	13-19501	$11.85
8083-13A	Glider Flying Handbook	13-02589	$17.75
8083-13A-2X	Glider Flying Handbook E-bundle	13-19054	$21.80
8083-15B	Instrument Flying Handbook	13-00986	$18.95
8083-15B-16A	Instrument Combo	13-18485	$38.95
8083-15B-2X	Instrument Flying Handbook E-bundle	13-19055	$21.80
8083-16A	Instrument Procedures Handbook	13-15939	$21.85
8083-16A-2X	Instrument Procedures Handbook E-bundle	13-16213	$25.50
8083-19A	Plane Sense	13-02338	$12.50
8083-1B	Weight & Balance Handbook	13-01059	$10.95
8083-2	Risk Management Handbook	13-06667	$12.95
8083-21A	Helicopter Flying Handbook	13-00735	$12.95
8083-21A-2X	Helicopter Flying Handbook E-bundle	13-19056	$15.95
8083-23	Float & Ski Handbook	13-03470	$11.95
8083-25B	Pilots Handbook Aero Know	13-00983	$17.95
8083-25B-2X	Pilots Handbook Aero Know E-bundle	13-19057	$21.80
8083-27A	Student Pilot Guide	13-04565	$2.95
8083-29	Powered Parachute Handbook	13-05761	$19.95
8083-3B	Airplane Flying Handbook	13-10219	$15.95
8083-3B-25B	Private Pilot Combo	13-11674	$34.95
3B-2X	Airplane Flying Handbook E-bundle	13-19681	$18.50
8083-6	Advanced Avionics Handbook	13-06670	$14.95
8083-9A	Aviation Instructors Handbook	13-19380	$15.25
8083-9A-2X	Aviation Instructors Handbook E-bundle	13-19070	$17.95
AC00-45H	Aviation Weather Services	13-18498	$17.85
AC00-45H-2X	Aviation Weather Services E-bundle	13-19682	$21.80
AC00-6B	Aviation Weather	13-01062	$9.95
AC00-6B-45H	Aviation Weather Combo	13-02341	$27.75
AC00-6B	Aviation Weather	13-01062	$9.95
ANA	Aerodynamics Naval Aviators	13-01060	$16.95
CUG-12	Chart Users Guide	13-15497	$12.75
CUG-12-2X	Chart Users Guide E-bundle	13-15498	$11.75
MED-Handbook	Medical Handbook For Pilots	13-06669	$11.70
RW-4	Rotary Wing Flight	13-02381	$10.95

AMT TEST GUIDE BOOKS



Model	Description	Part No.	Price
AMA-18	Airframe Test Guide	13-32321-18	$11.95
AMG-18	General Test Guide	13-32323-18	$10.95
AMP-18	Powerplant Test Guide	13-32322-18	$11.95
IA-7	Inspection Auth Test Guide	13-01297	$27.75

BV

ASA FLIGHT TRAINING

FAA TEST & CERT STANDARDS







Model	Description	Part No.	Price
8081-12C	Practical Test Standards Commercial Pilot	13-00980	$7.95
8081-15A	Practical Test Standards: Private Pilot Rotorcraft	13-02337	$4.95
8081-16B	Commercial & CFI - Helicopter	13-07269	$4.75
8081-5F.7	ATP/Dispatch	13-03575	$4.50
8081-6DM	CFI Multi-engine	13-02288	$4.95
8081-6DS	CFI Single Engine Pts	13-32314	$4.95
8081-9D	CFI Instrument	13-02296	$4.95
8081-AMT-4	Aviation Mechanic	13-18425	$7.50
8081-SPORT	Sport Pilot	13-05855	$7.50
ACS-10	Remote Pilot Airman Certificate Standards	13-19089	$3.95
ACS-6B	ACS: Private Pilot Airplane	13-18974	$8.95
ACS-8	ACS: Instrument Rating Airplane	13-18976	$8.95

TEST PREP SOFTWARE & APP



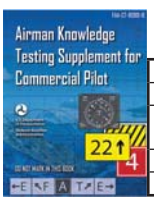
Model	Description	Part No.	Price
TW-AMA-18	AMT Airframe Prepware	13-08683-18	$33.50
TW-AMG-18	AMT General Prepware	13-08679-18	$33.50
TW-AMP-18	AMT Powerplant Prepware	13-08682-18	$34.99
TW-AMT-18	AMT 3-test Prepware	13-16212-18	$83.75
TW-ATP-FE-18	ATP & Fe Prepware	13-01082-18	$41.65
TW-C-18	Commercial Prepware	13-01080-18	$41.65
TW-CFI-18	Flt Instructor Prepware	13-01081-18	$41.65
TW-I-18	Instrument Prepware	13-01079-18	$41.65
TW-IA-7	Insp Auth Prepware	13-06663	$39.95
TW-PVT-18	Private Prepware	13-01078-18	$39.85
TW-UAS	Remote Pilot Prepware	13-19087	$33.50
TWO-SCL-S	Student Online Prepware Card	13-16215	$33.50
TWO-SCL-D	ASA Prepware School	13-19700	$314.00

VTP TEST PREP VIDEOS



Model	Description	Part No.	Price
VTP-FLIGHT	Flight Maneuvers Video	13-17840	$41.65
VTP-GRAFX-3	Graphics From Vtp Courses	13-10193	$66.75
VTP-HELI	Helicopter Fundamentals Dvd	13-05828	$24.95
VTP-I	Instrument Vtp Course	13-12382	$168.95
VTP-PVT4	Pvt Video Course	13-06051	$118.95
VTP-SCHOOL	Test Prep Videos For Schools	13-19698	$2,495.00
VTP-SCHOOL-H	Heli Video For School Use	13-19699	$495.00

ASA AIRMAN KNOWLEDGE TESTING SUPPLEMENTS



Description	Part No.	Price
Commercial Pilot	13-21339	$6.75
Sport / Recreational / Remote And Private Pilot	13-21340	$5.85
AMT And Parachute Rigging	13-21341	$19.95
Flight / Ground And Sport Instructor	13-21342	$6.75

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Model	Description	Part No.	Price
TPB-AMA-18	Airframe Test Bundle	13-10160-18	$33.50
TPB-AMG-18	General Test Bundle	13-10158-18	$33.50
TPB-AMP-18	Powerplant Test Bundle	13-10162-18	$33.50
TPB-ATP-18	Air Transport Tp Bundle	13-10155-18	$62.75
TPB-C-18	Commercial Tp Bundle	13-10152-18	$45.80
TPB-CFI-18	Flt Inst Tp Bundle	13-10148-18	$49.99
TPB-I-18	Instrument Tp Bundle	13-10146-18	$49.99
TPB-IA7	Insp Auth Tp Bundle	13-10166	$58.75
TPB-IA7	Insp Auth Tp Bundle	13-10166	$58.75
TPB-PVT-18	Private Tp Bundle	13-10145-18	$45.85
TPB-UAS	Remote Pilot Tp Bundle	13-19088	$33.50

AMT TEXTBOOKS



Model	Description	Part No.	Price
AMT-CG4	Amt Curriculum Guide	13-06664	$156.95
AMT-EKIT-A	Maint Tech E-kit Box	13-13079	$122.75
AMT-G3-2X	Amt General Text E-bundle	13-19047	$58.75
AMT-G3H	Amt General Textbook	13-00574	$49.95
AMT-GRAFX-4	Amt Graphics Cd	13-06660	$53.75
AMT-P3	Amt Powerplant Textbook	13-00583	$49.95
AMT-P3-2X	Amt Powerplant Text E-bundle	13-19684	$58.75
AMT-STRC3-2X	Airframe Structures E-bundle	13-19049	$49.99
AMT-STRUC-3H	Airframe Structures	13-00581	$42.85
AMT-SYS-3H	Airframe Systems	13-00582	$42.85
AMT-SYS3-2X	Amt Systems Text Ebundle	13-19050	$49.99
COMP-101	Comp Gd To Composites	13-18605	$20.95
COMP-101-2X	Comp Gd To Composites	13-19077	$29.50
COMPOSITE	Advanced Composites	13-07295	$48.95
COMPOSITE-2X	Advanced Composites E-bundle	13-15503	$52.95
MHB-6	Mechanics Handbook	13-02366	$12.95

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Model	Description	Part No.	Price
GS-PVT-X	Private Pilot On-line Ground School	13-12230	$118.75
HELI-KIT	Helicopter Student Kit	13-06414-18	$124.99
PM-EKIT	Flight School Ebook Kit	13-13081	$129.90
PPT-EKIT	Private Pilot E-kit	13-13080	$57.95
PPT-KT	Student Pilot Kit	13-02271	$71.85
PVT-141-KIT	Privatte Pilot School Kit	13-03128-18	$204.95
PVT-61-KIT	Complete Private Pilot Kit	13-03127-18	$119.85

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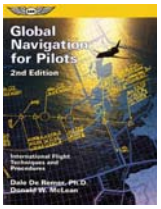
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ASA FLIGHT TRAINING

PILOT TEXTBOOKS







Model	Description	Part No.	Price
AERODYN-2	Aerodynamics	13-18972	$36.50
AERODYN-2-2X	Aerodynamics E-bundle	13-18973	$43.60
AIRPT-MGT	Airport Management	13-18534	$48.95
AIRPT-MGT-2X	Airport Management Ebundle	13-18535	$58.75
CAP-5	Comp Advanced Pilot	13-01714	$22.95
CAP-5-2X	Comp Advanced Pilot E-bundle	13-19075	$25.95
FM-ADV-8	Advanced Pilot Flight Manual	13-32225	$17.50
FM-ADV-8-2X	Advanced Pilot Flight Manual Ebundle	13-19080	$25.50
FM-AERO-2	Basic Aerobatic Manual	13-32210	$15.85
FM-CFI-5	Flight Instructor's Manual	13-32220	$25.50
FM-INST-7	Instrument Flight Manual	13-32215	$17.95
FM-INST-7-2X	Instrument Flight Manual E-bundle	13-18880	$27.99
FM-STU-10	Student Pilot Flight Man	13-32230	$19.85
FM-STU-10-2X	Student Pilot Flight Man E-bundle	13-18879	$27.99
GNP-2	Global Navigation For Pilots	13-01061	$23.95
HELI-FM	Helicopter Flight Maneuvers	13-18467	$14.95
MPT-3	Comp Multiengine Pilot	13-06661	$17.95
PHF-2	Principles Helicopter Flight	13-05799	$17.95
PHF-2-2X	Principles Helicopter Flight Ebundle	13-19083	$25.50
PHF-GRAFX-CD	Principles Of Helicopter Textbook Images Cd Rom	13-19084	$36.50
PM-1B	Flight School	13-00982	$54.75
PM-1B-2X	Flight School E-bundle	13-17909	$58.75
PM-2C	Ground School	13-00978	$47.95
PM-2C-2X	Ground School E-bundle	13-18402	$58.75
PM-3C	Instrument Flying	13-00979	$56.95
PM-3C-2X	Instrument Flying E-bundle	13-18403	$58.75
PM-AF	Access To Flight Private-Instrument Text	13-06339	$64.75
PM-AF-2X	Access To Flight E-bundle	13-18404	$69.95
PM-AF-S	Pvt-inst Syllabus	13-06340	$49.55
PM-ME	Multi Engine Flying	13-18405	$33.50
PM-S-P5	Private Syllabus	13-02264	$9.95
PPT-12	Complete Private Pilot	13-03458	$17.95
PPT-12-2X	Complete Private Pilot E-bundle	13-19085	$25.50
PPT-S5	Complete Private Pilot Syllabus	13-02268	$8.95
PRCT-AV-LAW6	Practical Aviation Law	13-05810	$38.75
PRCT-AV-WK6	Practical Aviation Law Workbook	13-05811	$15.99
PRCT-LAW6-2X	Practical Aviation Law E-bundle	13-19092	$43.60
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PRCT-LWK6-2X	Practical Aviation Law Wk Ebundle	13-19094	$21.80
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SPT	Complete Seaplane Pilot	13-05795	$27.95
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VFM-HI-3	Visual Flight Manuvers Blue High Wing	13-02289	$14.95
VFM-LO-3	Visual Flight Manuvers Red Low Wing	13-05854	$14.95

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Model	Description	Part No.	Price
CARDS-R22	R-22 Helicopter Flash Cards	13-18466	$16.65
CARDS-TH67	TH67 Creek Heli Flash Cards	13-19076	$18.50
PG-C-150	Cessna 150 Pilot's Guide	13-01053	$10.95
PG-C-152	Cessna 152 Pilot's Guide	13-01054	$10.95
PG-C-172	Cessna 172 Pilot's Guide	13-01055	$11.75
PG-PA-28C	Piper Cherokee Pilot's Guide	13-01057	$11.75
PG-PA-38	Piper Tomahawk Pilot's Guide	13-01058	$10.95
PG-R-22	Robinson R-22 Pilot's Guide	13-01464	$9.95

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Model	Description	Part No.	Price
OEG-ADX	Aircraft Dispatcher Oral Exam Gd	13-18470	$18.50
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OEG-ATP3	ATP Oral Exam Guide	13-02284	$9.85
OEG-BFR7	Flight Review Guide	13-00973	$9.85
OEG-C9	Commercial Oral Exam Guide	13-02283	$9.95
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OEG-H2	Helicopter Oral Guide	13-05853	$9.85
OEG-I8	Instrument Oral Exam Guide	13-00976	$9.95
OEG-ME7	Multi-engine Oral Exam Guide	13-02060	$9.95
OEG-P10	Private Oral Exam Guide	13-00977	$9.95
PRACT-CFI	Pract Cfi Ckride	13-18768	$14.55
PRACT-CFI-2X	Practical Guide to CFI Ckride Ebundle	13-19090	$18.50
PRACT-PVT	Practical Guide to Private Pilot Ckride	13-17604	$13.95
PRACT-PVT-2X	Practical Guide to Private Pilot Ckride Ebundle	13-19091	$18.50

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Model	Description	Part No.	Price
ACC-REV	Accident Review	13-18598	$13.95
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ACFT-SYS	Aircraft Systems	13-02422	$17.75
AIR-CR2	Air Carrier Operations 2nd Ed	13-05809	$31.70
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COCKPIT-AUTO	Cockpit Automation With Dvd	13-05806	$19.95
COCKPIT-PRO	Cockpit Procedures	13-06254	$14.95
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CON-FLY	Confident Flying	13-02358	$13.95
CON-GEAR	Conventional Gear	13-01552	$14.95
DAT-5	Dictionary Aero Terms	13-28700	$14.95
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FAW	Flying America's Weather	13-04065	$14.95
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FLIERS	Fliers In Their Own Words	13-02362	$10.95
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PILOT BOOKS







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AP-BD-DL1	7-Ring Deluxe 1" Binder	13-05759	**$25.75**
AP-BD-DL2	7-Ring Deluxe 2" Binder	13-05760	**$29.95**
AP-BD-FLIP	4-Ring Flip Binder	13-02321	**$10.95**
AP-DIV-7RNG	7-Ring Dividers	13-02323	**$6.95**
AP-KT-7RNG	7-Ring Binder Kit	13-02322	**$19.95**
AP-PAD-4RNG	4-Ring Notepad	13-05822	**$4.85**
AP-PAD-7RNG	7-Ring Notepad	13-05823	**$4.85**
AP-SP-7RNG	7-Ring Sheet Prot 10 Pak	13-02318	**$5.95**
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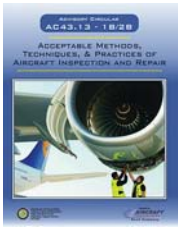
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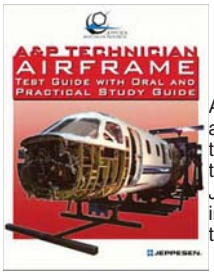
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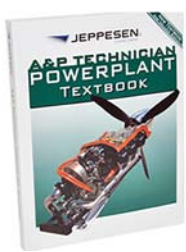
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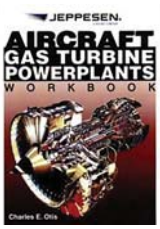
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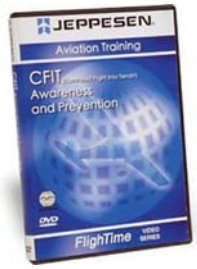


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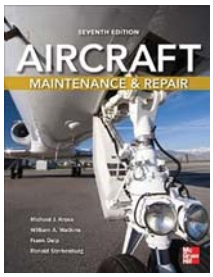
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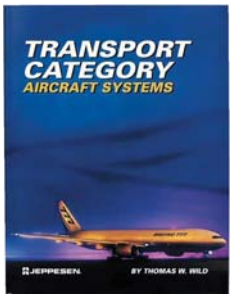
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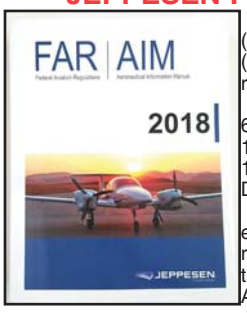


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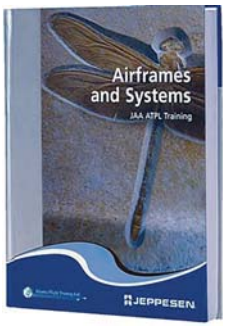
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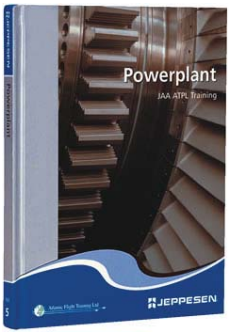
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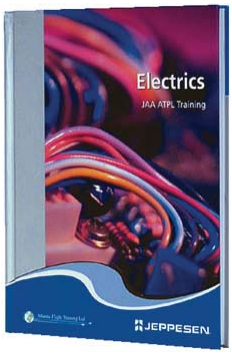
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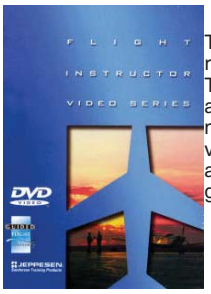


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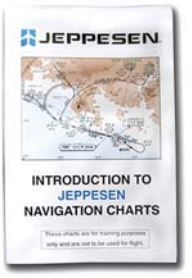
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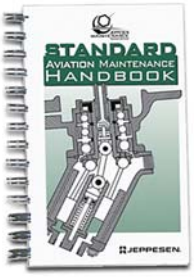
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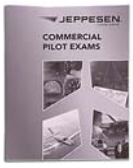
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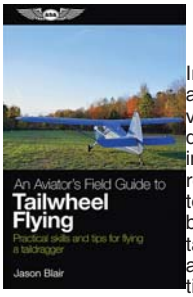
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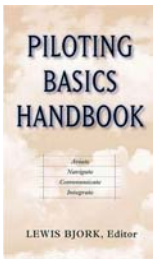
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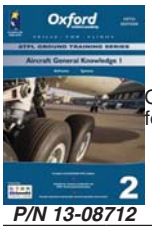
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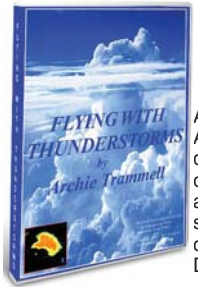
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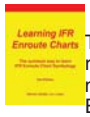
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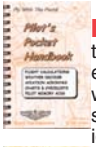


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The purpose of this manual is to help in the explanation, visualization and execution of the flight maneuvers required for the Private Pilot Practical Flight Test. Students preparing for their oral and flight test will find this manual helpful. Any pilot preparing for a Biennial Flight Review (BFR), can use this manual as a refresher on maneuvers that you may not have executed in quite some time. Flight Instructor applicants and Certified Flight Instructors will find this manual a beneficial teaching aid.

The manual breaks down each maneuver required on the Private Practical Test in six parts: FAA objective for the maneuver. FAA completion standards. General description of the maneuver. Detailed step by step textual description on how to execute the maneuver as recommended by the FAA. References to FAA publications where the information was compiled from. Detailed graphic profiles summarizing the procedure in a visual format. Also included are airspeeds, pitch attitudes, bank angles, power settings and configurations for a Cessna 172P plus room to add the same information for up to three additional aircraft.

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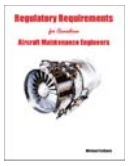

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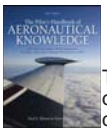

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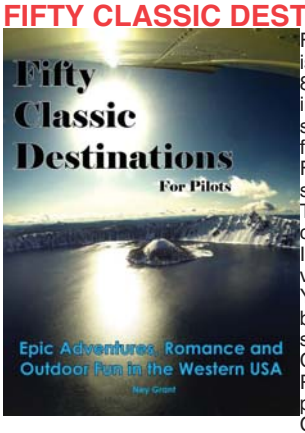


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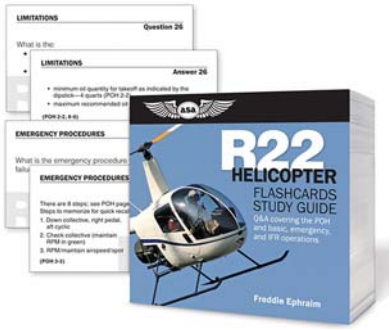
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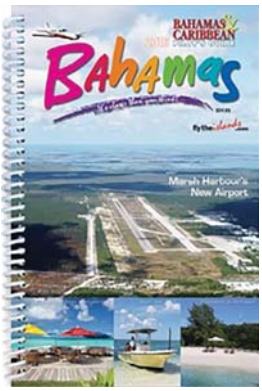
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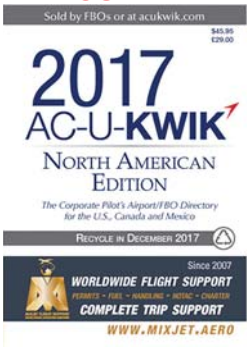
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GLEIM PRIVATE PILOT KIT - Designed to help you expedite your training for your private pilot certificate. A complete training program at a price you can afford. "User-friendly" self-study materials that are carefully designed to make it easy for you to learn and understand. ..... P/N 13-22229 .. **$124.95**
Deluxe Private Pilot Kit ..... P/N 13-11647 .. **$174.50**
Deluxe Private Pilot Kit with Audio Review ..... P/N 13-11646 .. **$208.95**



GLEIM INSTRUMENT PILOT FAA AUDIO REVIEW - Gleim's customers have requested audio lectures to accompany the Test Prep CD-Rom and books. Gleim Publications has responded by providing FAA Audio Review, which is available on compact disc. ..... P/N 13-05683 ... **$64.95**



GLEIM INSTRUMENT PILOT KIT – The Instrument Pilot Kit is designed to SIMPLIFY and FACILITATE your training for your instrument pilot rating. They prepare "user-friendly" self-study materials that are carefully designed to make it easy for you to learn and understand. FAA Test Prep CD-Rom is included. ..... P/N 13-05685 . **$135.75**
Deluxe Instrument Pilot Kit ..... P/N 13-11652 . **$194.50**
Deluxe Instrument Pilot Kit with Audio Review . P/N 13-11651 . **$241.95**



GLEIM COMMERCIAL PILOT KIT – SIMPLIFY and FACILITATE your training for your commercial pilot certificate. They prepare "user-friendly" self-study materials that are carefully designed to make it easy for you to learn and understand..... P/N 13-05684 . **$134.75**



GLEIM INSTRUMENT/COMMERCIAL PILOT COMBO KIT - The Instrument/Commercial Pilot Kit is designed to SIMPLIFY and FACILITATE training for your instrument and/or commercial pilot certificate(s). They prepare "user-friendly" self-study materials that are carefully designed to make learning and understanding easy. FAA Test Prep Test Prep CD-Rom is included.
Deluxe Inst/Comm Pilot Kit ..... P/N 13-00837 . **$310.00**
Deluxe Inst/Comm Kit w/ FAA Audio Review.... P/N 13-12125 . **$313.00**
Deluxe Comm. Pilot Kit ..... P/N 13-11650 . **$139.95**

All Gleim products that include software are also available for iPad, tablets, and smartphones.
See www.aircraftspruce.com for Training Kit contents.

BV

GHOSTS 2018 CALENDARS



P/N 13-01318

Renowned aviation photographer Philip Makanna has captured the essence of this era in his GHOSTS of The Great War and A Time Remembered, a large-format calendar that features his stunning, air-to-air, color photographs. In this edition, his images depict the beginnings of military aviation. The calendar continues through to the advanced aircraft that appeared at the war's end. Stunning images and an evocative day-by-day history of the aviation (and related) events of the period combine to describe the beauty, the romance and the tragedy of military aviation's early days.



P/N 13-06012

Ghosts WWII- A time rememered.....P/N 13-01318 .....**$12.75**
Ghosts WWI - The Great War .....P/N 13-06012 .....**$12.75**
Ghosts of the Skies Book .....P/N 13-01319 .....**$37.95**
Ghosts of the Skies II Book .....P/N 13-01957 .....**$29.95**

WARBIRD PINUP GIRLS COLLECTORS BOOK



This is the ultimate Warbird Pinup Girls collectors photography book. Featuring never before seen shots from the entire collection including some sneak peeks into the upcoming calendar. Featuring production work photography, aircraft static shots and commentary from the artist. 8.5"x11" format full color page, soft bound.

P/N 13-15491 .....**$49.95**

2018 AIRCRAFT CALENDARS



The most popular Aircraft calendars in the industry! With outstanding photos of aircraft in flight, this is truly a must for the aviation enthusiast. 6 to choose from.

Military Jets..... P/N 13-06589.....**$14.95**
Ghost Warbirds..... P/N 13-06588.....**$14.95**
Helicopter 2015 ..... P/N 13-06590.....**$14.95**
Shock and Awe..... P/N 13-06591.....**$14.95**
General Aviation ..... P/N 13-06592.....**$14.95**
Commercial Aircraft ..... P/N 13-06637.....**$14.95**

BOMBSHELLS WARBIRDS 2018 PIN-UP CALENDAR



The calendar features beautiful women in a mix of modern and vintage style clothing together with some of our favorite flying machines from the past.

P/N 13-06211.....**$19.95**

2018 BERINGER AERO CALENDAR



Planes equipped with Beringer wheels, brakes and landing gear flying worldwide grace each month of the Beringer Aero calendar. Full-size and color, each page measures 11.69 x 16.53 inches. The spiral spine allows the calendar to hang flat.

P/N 13-19704 .....**$24.95**

T-REF FLIGHT TRAINING REFERENCES



This is a hardcopy product, measuring 8.5" x 11" when closed and 23.375" x 11" when fully opened! The first of two T-Refs dedicated to private pilot training. This first T-Ref provides many important acronyms that a student pilot must know, as well as important information about the airport environment, hypoxia, landing tips, and many other important elements of flying!

Private Pilot T-Ref 1 ..... P/N 13-12742.....**$13.95**
Private Pilot T-Ref 2 ..... P/N 13-12743.....**$13.95**
Instrument Pilot T-Ref 1..... P/N 13-12740.....**$13.95**
Instrument Pilot T-Ref 2..... P/N 13-12741.....**$13.95**
Weather T-Ref ..... P/N 13-12744.....**$13.95**
T-Ref Complete Package ..... P/N 13-12745.....**$49.85**

Practical Test Standards are a guide for students, instructors, and FAA-designated examiners to know what is expected of pilots in a checkride. Every PTS is written by the FAA and details the type and levels of skill and knowledge that must be demonstrated before an examiner can issue a certificate or rating to an applicant, and describes background study and reference materials.

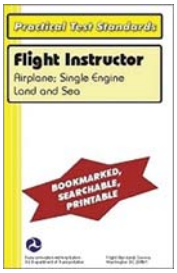
PTS PRIVATE PILOT TEST PREP COURSE



We're proud to offer the FAA Private Pilot written exam in a DVD format for PC. The course contains the material, the question bank and the FAA testing supplement for the appropriate test – and we'll sign you off to take the exam once you have a good handle on all of the information at no additional cost. Just a few evenings is all it can take to get the education you need to pass the FAA knowledge test with Flying Colors.

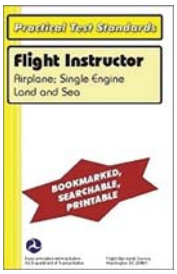
P/N 17-00327 .....**$69.95**

PTS: FLIGHT INSTRUCTOR AIRPLANE SINGLE ENGINE



Newly revised FAA 8081 6C with Changes 1, 2, 3, 4 and 5 - Practical Test Standards for Flight Instructor - Airplane, single engine land and seaplane. Practical Test Standards are a guide for students, instructors, and FAA-designated examiners to know what is expected of pilots in a checkride. Every PTS is written by the FAA and details the type and levels of skill and knowledge that must be demonstrated before an examiner can issue a certificate or rating to an applicant, and describes background study and reference materials.....P/N 13-10243 .....**$5.75**
Ebook .....P/N 13-10242 .....**$4.95**

PTS: FLIGHT INSTRUCTOR AIRPLANE MULTI-ENGINE



FAA 8081 6CM - Practical Test Standards for Flight Instructor for airplane multi-engine land and sea. Practical Test Standards are a guide for students, instructors, and FAA-designated examiners to know what is expected of pilots in a checkride. Every PTS is written by the FAA and details the type and levels of skill and knowledge that must be demonstrated before an examiner can issue a certificate or rating to an applicant, and describes background study and reference materials.... P/N 13-10241.....**$9.65**
Ebook ..... P/N 13-10240.....**$4.95**

PTS: FLIGHT INSTRUCTOR INSTRUMENT AIRPLANE AND HELICOPTER



FAA 8081 9D - Practical Test Standards for Flight Instructor Instrument for Airplane and Helicopter. Practical Test Standards are a guide for students, instructors, and FAA-designated examiners to know what is expected of pilots in a checkride. Every PTS is written by the FAA and details the type and levels of skill and knowledge that must be demonstrated before an examiner can issue a certificate or rating to an applicant, and describes background study and reference materials.... P/N 13-10234.....**$5.75**
Ebook ..... P/N 13-09874.....**$4.95**

ASA PROFICIENT PILOT GIFT SET



A compilation of Barry Schiff's popular monthly column in AOPA Pilot magazine, these books contain favorite articles from over the years, arranged by subject. These articles are pulled from his more than 26,000 flight hours in 260 types of aircraft, for a set of books filled with Schiff's vast knowledge and experience as an aviator and flight instructor.

The Proficient Pilot set delivers a wealth of information, a plethora of aviation stories, and tips of the trade from one of the industry's favorite pilot-writers, all together in a handsome gift box. Each book in the series is softcover, illustrated, and includes a comprehensive index.

Volume 1 ..... P/N 13-23100.....**$13.50**
Volume 2 ..... P/N 13-01443.....**$13.50**
Volume 3 ..... P/N 13-01444.....**$14.50**
Gift Set (3 volumes)..... P/N 11-08794.....**$37.90**

BV

AIRCRAFT CONSTRUCTION DVDS

AN INTRODUCTION TO ALUMINUM WORK



5 DVD Set Includes:
-Shaping Aluminum Wheel Pants
-Shrinking Magic
-Basic Damage Repair on the Aluminum Body
-Sheet Metal Repairs to the P38 Lightning
-Metal Aircraft Construction Methods
These 5 DVDs cover hand tools, measuring, cutting, forming, form blocks, riveting, patterns, bucks, shrinking, stretching, and some gas welding on the aluminum, too.

P/N 13-13055 ..... **$279.30**

METAL AIRCRAFT CONSTRUCTION METHODS



This fascinating look inside the airplane factories shows just how we produced over 330,000 aircraft in 4 1/2 years. Patterns, blanking, forming, and assembly are shown, of course, but so also are pressformers, drop hammers, metal spinning, and power hammers. And then watch the complicated assembly process of the P-39 Airacobra!

P/N 13-13049 ..... **$87.75**

AIRCRAFT STRUCTURAL TUBING



3 DVD Set Includes: -4130 Chromemoly Airframe Construction (2 DVD set) -Repairing Structural Tubing. The 4130 DVD: Three EAA Technical Counselors (over 60 years' total experience) show you the procedures necessary to construct a complete airframe from plans.

P/N 13-13051 ..... **$98.90**

REPAIRING STRUCTURAL TUBING



This class teaches measuring, geometry, straightening, cutting fishmouths, fitting, splicing, and welding to repair some fuselage damage. A fine companion to our full-length 2-DVD series, 4130 Chromemoly Airframe Construction.

P/N 13-13044 ..... **$55.95**

AUTOBODY STEEL PATCH PANELS



No machinery here--just common hand tools and a welder (torch or electric). The first part shows how to fit the 'one size fits all' patch panel into an early Ford door. The second part shows how to form complex patches on your own to repair a '34 Ford grille by hammering and butt welding.

P/N 13-14852 ..... **$34.99**

SHEET METAL REPAIRS TO THE P38 LIGHTNING



Learn to make a perfectly fit and contoured "coin" or flush patch on a compound surface using only basic, non-powered hand tools – the same standard aviation tools and methods that are still used today, but you get to learn them on a classic airplane!!!

P/N 13-13045 ..... **$44.70**

FLUID FORMING COMPOUND SHAPES IN ALUMINUM PARTS



Use water pressure and a cavity to form sheetmetal parts, with either city water pressure or an inexpensive high-pressure pump. See detailed coverage of the pressures required for various sized parts, the inexpensive pumps available, and some engineering designs for the cavities. We make aluminum shapes that are smooth and free of marks, although other types of sheetmetal can certainly be "inflated" into some interesting shapes.

P/N 13-13046 ..... **$41.95**

ALUMINUM WELDING METHODS (ALCOA)



This film covers basic production oxy-fuel welding with both hydrogen and acetylene, with torch settings, joint setup, mixing the flux, and basic technique. Methods for both thin and thick sections are shown. Shows proper preheat and postheat methods for heavy sections, and proper edge beveling and gapping also. An excellent resource. Being as old as it is, it also details stick welding, carbon arc, atomic hydrogen, and spot welding methods and machines. You can learn a lot about these methods, which are probably not shown much anywhere else. Spot welding is used mainly for aviation construction and the details in this film are quite specific, going over all three machine types. Black and white with loads of "colorful" information.

P/N 13-13047 ..... **$33.55**

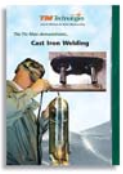
GAS WELDING ALUMINUM 2.1, "THE DIFFICULT"



(This 2-DVD set is designed to be a companion to our first film, Gas Welding Aluminum .) Setting up the oxy-acetylene welding rig, with leak-testing, safety, and proper adjustment of the torch is a standard-but-essential step-by-step procedure. Alloy selection, cleaning and preparation of the material and filler, and mixing and application of the aluminum welding flux are also requisite, so I chose to include them. Crack prevention, which is necessary with the higher-strength aluminum alloys, is shown in depth, and will help to solve a lot of your problems. The intricacies of Butt joints, Tee joints, and Lap joints are thoroughly described and demonstrated. Brazing and soldering are covered in two specific segments, with proper cleaning, flux and filler selection and strength and corrosion issues.

P/N 13-13054 ..... **$77.95**

CAST IRON WELDING WITH THE TORCH & ARC



Using traditional materials and proven simple methods, this dvd shows you a nearly perfect system to repair exhaust manifolds, pump housings, valve bodies, and some blocks.

P/N 13-13057 ..... **$48.95**

FENDER ARCHES



This is a fly-on-the-wall style effort for those who want to watch a complete metal working process. Be the fly-on-the-wall as two metal guys, Richard Ufheil and Kent White, "The Tin Man", go after a pair of 1935 Packard front fenders needing fender (or wheel) arch replacement.

P/N 13-14851 ..... **$42.85**

EYES OF FLIGHT



If you want to learn how to handle, cut, drill, form and care for Plexiglas, then this is the film! Many experienced craftsmen have told me how much they enjoyed this film. Special drills, saw speeds, solvents and polishing techniques are shown, along with the causes of "crazing". Includes footage from Bell showing how canopies are blown. Warbird footage! Great info!

P/N 13-13048 ..... **$90.95**

POLISHING ALUMINUM AIRCRAFT

Also known as the Swift Polishing Video. This "how-to" film was done by the skilled folks at the Swift Airplane Museum. Polishing any aluminum can be frustrating, and a lot of work. I have seen the results of these methods, and must say this is the way to get the finest results (Blankenberg's Spartan Exec. was done this way). The work is still there, but the trial and error is gone! The tools, the materials, and the methods are clearly defined.

P/N 13-13052 ..... **$46.90**

COMPLETE PIPER J3 TRAINING SERIES



Four separate films have been combined into one very educational 110-minute DVD. See how the Piper factory originally built the J-3 in 1937, and then watch how they do a preflight inspection, and annual inspections on airframe and engine! Can you imagine watching the actual construction of a J-3 in the Piper factory in Lock Haven, Pennsylvania? See the step-by-step construction of fuselage, wing, and gear. See fabric covering, control installation, rib forming, and engine installation and runup. Inspiring!!! Remember that many of the tube-and-fabric aircraft can benefit from this valuable information.

P/N 13-13053 ..... **$76.95**

BV

AVIATION VIDEOS & DVDS



EAA SPORTAIR WORKSHOP VIDEOS

All videos produced by the EAA SportAir Center

BASIC FABRIC COVERING DVD- Aircraft Fabric Covering is a must for anyone who wants to cover their own airplane. This 2-hour comprehensive video presents every aspect of the Poly-Fiber™ fabric covering process in detail, and in easy-to-understand language. From preparing the airplane for covering to spraying on the colors, you are guided step by step through the entire process by a professional EAA SportAir fabric instructor. When used in conjunction with the Poly-Fiber manual, Aircraft Fabric Covering removes the mystery surrounding this important process in the construction or restoration of your airplane. Information covered includes: • Preparing surfaces • Attaching the fabric •Tightening the fabric • Applying the first coat of Poly-Brush • Tying rib-lacing knots • Applying finishing tapes • Spraying UV-blocking chemical, Poly-Spray • Applying the color coats. P/N 13-40428 ..... **$39.95**

THE EDUCATED OWNER VIDEO SERIES



VOLUME I: PREVENTATIVE MAINTENANCE – initially details the FAAs rules concerning what maintenance tasks an owner can legally perform, It then proceeds to instruct viewers on the proper tools and supplies for common maintenance tasks and follows with detailed, step-by-step demonstrations of Engine Inspections, Landing Light Replacement, Oil Changes, Spark Plug Maintenance and Tire & Wheel servicing. The video is approx. 60 min. long.
DVD .....P/N 13-03572 ..... **$39.95**



VOLUME III: Teaches pilots and prospective aircraft owners all about aircraft ownership. Teaches how to analyze the costs of aircraft ownership and takes viewers, step-by-step, through the selection, pre-purchase and sales transactions. Includes detailed information on preventative maintenance, annual inspections and tips for living with your new aircraft. 90 min.
VHS .....P/N 13-01626 ..... **$34.95**
DVD .....P/N 13-03574 ..... **$39.50**



INTRODUCTION TO STEEL WORK

If you are just starting out and wish to have a good overview, Kent has chosen these DVDs specifically for you. It is difficult in the beginning of learning a skill, so you need some inspiration and careful instruction, both to keep your interest and to feed your curiosity. These 4 DVDs cover hand tools, measuring, cutting, forming, form blocks, patterns, shrinking, stretching, Pullmax, Air Hammer, gas welding, and spot welding.
P/N 13-13056.....**$125.95**

ALASKANS FLY ALASKA

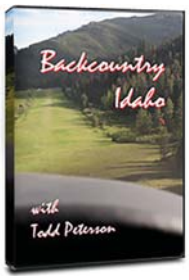


Join the fun as Alaska pilots sharpen their skills in vast and varied Southwest Alaska, an uninhabited, untamed, and undeveloped wilderness. Experience the excitement of the possibilities open to the small plane pilot, flying low and slow through western Canada and Alaska. Come along as they fly though Canada, following the popular routes preferred by experienced small plane pilots. Explore Alaska's back country, where there are no roads and no people for hundreds of miles. Touch down on remote beaches, sandbars, and fields, in places only the bush pilot can go. Marvel at the breathtaking views of spectacular glaciers, ancient canyons, sun-bathed seascapes, and unsurpassed mountain ranges. Enjoy an enthusiastic look at possibilities open to the small plane pilot flying in Canada and Alaska. P/N 13-07374.....**$24.95**



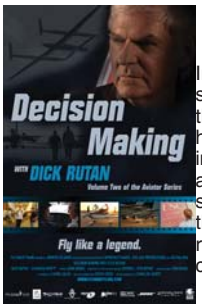
RED BULL

Take the top 12 pilots in the world to 8 of the most stunning cities around the globe. Add tight twisting race tracks, planes flying close to 400 km/h, chuck in 12G s for good measure and you've got the 2008 Red Bull Air Race World Championship another spectacular season of high drama and amazing skill. Watch the very best moments from the opening race in Abu Dhabi to the first ever double header taking place at San Diego and Detroit in the United States. The pilots battled against the elements in Rotterdam and London and came out on top before heading to Budapest. In Porto a new champion came of age before the finale in Perth where the winner of the 2008 Red Bull Air Race World Championship was crowned. Picture Format: NTSC P/N 13-06889 ..... **$19.95**



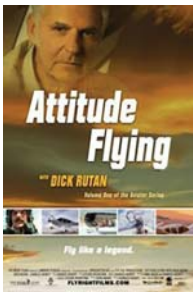
BACKCOUNTRY IDAHO

Pilots of all skill levels will truly enjoy the exhilaration and adventure of Idaho backcountry flying at its best with ... Backcountry Idaho. Visit some of the best backcountry airstrips in the Rocky Mountains. Explore scenic wilderness, vast pine forests, and steep canyons in search of pristine beauty and the next runway challenge. Fly right seat on the actual approaches and departures of these spectacular backcountry airstrips with Todd at the controls of his high-performance, custom designed, King Katmai.
P/N 13-06298.....**$24.95**



DECISION MAKING WITH DICK RUTAN

In Decision Making with Dick Rutan, you'll fly shoulder-to-shoulder with Dick Rutan, one of the most renowned aviators of all time. Discover how human factors affect your performance and influence your decision making. Explore the brain, and learn how the mind responds and processes stimulus during in-flight emergencies. And learn the importance of channeling reactive, emotional responses into pro-active, positive decisions that can literally save your life.
P/N 13-06868.....**$29.95**



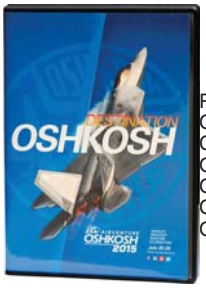
ATTITUDE FLYING WITH DICK RUTAN "FLY LIKE A LEGEND"

For serious pilots only. Conceived and designed to take you above and beyond other aviation training programs, the Aviator Series captivates and educates like no other training video you've seen before. Puts you shoulder-to-shoulder with the world's foremost aviators as they share leading edge skills and techniques that made them legends.
DVD..... P/N 13-05858.....**$29.95**
Attitude &Decision Flying Set
P/N 13-10297.....**$49.95**
BluRay Disc..... P/N 13-05859.....**$34.95**

FLIGHT OF VOYAGER CD (DICK RUTAN)



This is a recount of the horrific, horrendous, heroic and humorous moments of the Voyager project through the eyes of the pilot Dick Rutan. On December 14, 1986 Voyager took off from Edwards AFB in California and 9 days later landed at the Edwards, completing the first ever non-stop, unrefueled world flight. This 3-CD set (3.5 hrs) includes a mini journal map of the flight, historic photos, fun facts, and more.
P/N 13-01163 ..... **$34.95**



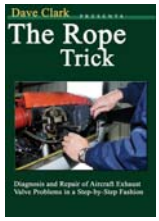
EAA AIRVENTURE OSHKOSH

Relive all the excitement of EAA AirVenture Oshkosh, the World's Greatest Aviation Celebration, with the souvenir videos.
Oshkosh 2015 ..... P/N 13-18549 ..... **$12.99**
Oshkosh 2009 ..... P/N 13-10011 ..... **$14.99**
Oshkosh 2008 ..... P/N 13-06225 ..... **$14.50**
Oshkosh 2007 ..... P/N 13-05650 ..... **$4.50**

BV

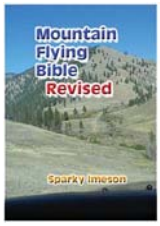
Prices Subject to Change Without Notice

AVIATION VIDEOS & DVDS



THE ROPE TRICK

The diagnosis and repair of aircraft exhaust valve problems in a step-by-step fashion. Watch as Dave Clark walks you through the steps for inspecting valve clearances, reaming valve guides, and freeing stuck valves. This video can save you a lot of time and money. P/N 13-10141 .....**$24.95**



MOUNTAIN FLYING BIBLE REVISED

Learn the basic, intermediate and advanced techniques of mountain flying. Learn to anticipate how your airplane will perform in the mountains. Discover simple rules-of-thumb to enhance safety and simplify operations. Learn the weather information required for peace of mind and increased pleasure. 16 pages of color photos of backcountry strips covering the approach, landing and takeoff procedures.

P/N 13-04035 ..... **$38.95**



THE SHIRT POCKET MOUNTAIN FLYING GUIDE

This is not a rehash of the Mountain Flying Bible. It includes new material and color photos throughout. There are 129-color pages of the 208 pages. What is Covered: Section 1 - Do's and Don'ts • Section 2 - Basic Premises • Section 3 - Flying Canyons • Section 4 - Crossing Ridges • Section 5 - Turbulence & Va • Section 6 - Maximum Lift Flap Setting • Section 7 - How to Land an Airplane • Section 8 - Visual Illusions • Section 9 - Spot Method for Landing • Section 10 - Mountain Airstrip Operations • Section 11 - Mountain Weather.

Book.....P/N 13-04051 ..... **$18.75**

ASA PROFICIENT FLYING - THE VERY BEST OF BARRY SCHIFF DVD



Barry Schiff brings critical subjects to life in this 3-DVD set. Barry Schiff needs no introduction. He's known throughout the industry as a consummate aviator, author and educator with a passion for General Aviation like few others. His seemingly boundless experience and knowledge are surpassed only by his warm, rich writing style and unforgettable presentation techniques. In Proficient Flying Barry Schiff uses these educational skills to help pilots visualize techniques and procedures that can make them safer pilots. He brings critical subjects to life in this DVD series with more than 4 hours of instruction. Schiff's knack for guiding pilots through intricate aspects of flying makes these lessons invaluable and memorable, giving viewers true insight and understanding of the subjects presented. P/N 13-19095 ..... **$29.50**

FORMATION FLYING, THE ART



The Art in DVD format. "Formation Flying, The Art " DVD was originally introduced to the Warbird community in 1993 as a integral part of the FAA Mandated Civilian Formation Training and Credential Program. Currently the video is now the "F.A.S.T." standard and endorsed by all major Warbird flying organizations such as the EAA / Warbirds of America, North American Trainer Association, T-34 Association and others world wide.

DVD ..... P/N 13-04572 ..... **$75.00**
VHS..... P/N 13-15150 ..... **$69.95**

THE GREAT ARCTIC AIR ADVENTURE



Take to the world's northernmost skies and explore the planet's "last imaginary place"-the enigmatic Arctic. The Great Arctic Air Adventure is the story of Seattle's Mark Schoening and Doug DeVries, who piloted their de Havilland Beaver seaplanes around Canada via the famed Northwest Passage. Over six weeks battling miserable weather, frozen tundra and inaccessible terrain in one of the least populated places on earth, the pair builds a lasting bond and discovers that in the unyielding Arctic, adaptation is key. P/N 13-11552 ..... **$24.95**



BASIC AEROBATICS

Introduces the basic building blocks of aerobatics - spins, rolls and loops - with a wealth of in-cockpit and from-the-ground views of each maneuver. This video is and indispensable aid to those considering a departure from straight and level. (54 min.) 6618A

P/N 13-04302 ..... **$59.80**



TAILWHEEL 101

Tailwheel: 101 will help you get there. This video is the premiere study guide for all pilots wishing to get their tailwheel endorsement, or for any tailwheel pilot who'd like to learn a thing or two from the most widely recognized tailwheel expert in America, Damian DelGaizo. Ride along with Damian and his student Jill as she gets her tailwheel endorsement. Each ground segment is immediately followed by its real-world airplane demonstration to reinforce the material and make pre-flight study sessions easy and efficient. P/N 13-06023 ..... **$49.95**

TAILWHEEL: 201 BEYOND THE BASICS



Tailwheel: 201 goes beyond the tailwheel checkout, building on the tailwheel basics introduced in Damian's first DVD, Tailwheel 101. Teaches advanced techniques from short field operations, to advanced slips, to precautionary off airport landings. Like Tailwheel: 101, this DVD includes ground school and in-flight instruction both inside and outside the cockpit. Whether you are new to the world of tailwheel flying or a seasoned aviator, Tailwheel: 201 will help you become a more proficient pilot. P/N 13-09653 ..... **$39.95**

LIVING IN THE AGE OF AIRPLANES BLU-RAY



Living in the Age of Airplanes offers a fresh perspective on a modern-day miracle that many of us take for granted: flying. Produced and directed by Brian J. Terwilliger (One Six Right), narrated by Harrison Ford and featuring an original score from Academy Award® winning composer James Horner (Avatar, Titanic), the film takes viewers to 18 countries across all seven continents to illuminate how airplanes have empowered a century of global connectedness our ancestors could never have imagined.

P/N 13-20150 ..... **$29.95**

MOUNTAIN FLIGHT



Mountain Flight, filmed in part in the Idaho Primitive Area, includes in-flight footage of some of the most beautiful, rugged and demanding mountain terrain in the U.S. It covers flight planning, accident causes, weather, density altitude, approaches, landings, departures, and survival. The weather section includes time lapse sequences of thunderstorms, mountain waves, lenticular and rotor clouds. Graphics are used to clarify, explain and demonstrate the ground and flight procedures for safe operation in the mountains. Color, approximately 80 minutes. P/N 13-04052 ..... **$27.85**

ALASKA'S BUSH PILOTS THE REAL DEAL



The story is interlaced with in-depth and exciting interviews of these courageous pilots as they recall many different stories of their experiences in the remote wilderness. They tell stories about rescues of stranded fellow pilots, taking their families 40 miles from their already remote bush homes to go fishing at "a better spot" to encounters with vast herds of caribou and the huge bears. You will "fly" in the seat right next to these men in the cockpit and witness wingtip-to-wingtip aerial HD photography that Jim Oltersdorf shot during filming as he is known nationally for. Its about where they fly, how they fly and why they fly. If you've even known what excitement is, step aside, this one is going to blast you off your seat!

P/N 13-06937 ..... **$18.95**

ALASKA'S BUSH PILOTS (THE REAL DEAL) COMMERCIAL OPERATION



In-depth knowledge of commercial bush pilots who fly the bush in Alaska. Provides an insight into the world of advanced technologies of aviation equipment for the viewers. After analyzing the first documentary it became apparent that a presentation of commercial pilot activities was warranted. There is no duplication for any footage or any information from "Alaska Bush Pilots....The Real Deal: it is all brand new! The pilots who use this equipment on a daily basis explain in detail the components of G-1000 glass cockpits and relative avionics devices.

P/N 13-09481..... **$18.95**

BV

AVIATION VIDEOS & DVDS

HOW TO LICENSE YOUR HOMEBUILT AIRCRAFT



This DVD will walk you through each step to successfully license your experimental amateur homebuilt aircraft. The actual FAA forms required are displayed on screen, and where to obtain them and how to fill them out.

P/N 13-03609.....**$29.95**

HOMEBUILT HELP ELECTRICAL WIRING TUTORIAL



Explains and demonstrates the common procedures, tools and components required for the basic wiring of a homebuilt aircraft. Demonstrations of crimping, soldering, wire selection and wiring design with simple schematics that are applicable to a homebuilt electrical system. Video length is 1 hour and 20 minutes.

P/N13-03578.....**$29.95**

AIRFRAME CONSTRUCTION TECHNIQUES



Potter, who is an A&P I/A, commercial pilot, and parachute rigger, has worked in the aircraft maintenance field for 25 years. The DVD focuses on modern techniques and tools that are available to a new generation of builders. Some topics covered include: setting-up shop, shop safety, purchasing tools and steel, building and leveling your jig table, lay-out and jigging, cutting and fitting, welding with an emphasis on TIG, completing the fuselage box, bending-in the sides, fitting the tail post, vertical jigging, bending and flattening tubing, building fittings, builders groups and support. This 1 hour and 18 minute DVD takes you step-by-step through the entire building process.

P/N 13-06833.....**$44.85**

AIRCRAFT PAINTING 101



An excellent 2 hour video in which Sam James takes you, in detail, through the finishing, priming, and painting of his RV-4 with the Dupont Veriprime and Chromabase systems. This video is not as finely produced as some others, but the vast quantity of practical information it contains more than makes up for it. Takes you through the complete process of working an metal wing, a fiberglass wheel pant, and detailed custom design on a horizontal stabilizer. Run Time: 120 min by Sam James P/N 13-06567 .....**$24.95**

METALWORKING 101



Targeted to the beginning student of pop-riveted metal kit plane construction. Ideal for the person who is contemplating the undertaking of a metal kit plane project. Takes you thru the actual construction of a Zenith rudder, from start to finish. While it can be used to supplement the construction guide supplied by the manufacturer with this rudder (a CH701 or CH601), it is actually intended to demonstrate to the beginning builder just what tasks and skills are required. General metal building procedures are explained and demonstrated. P/N 13-03369 .....**$28.95**

WEIGHT & BALANCE 101 FOR HOMEBUILT



Completing a homebuilt requires you to calculate and document the weight & balance figures for your plane and present them to the inspector...and for many homebuilders this task is confusing and complicated -- however, this video makes this task simple and easy to understand. The video makes it easy for you to understand the concepts required to perform your own weight and balance analysis on your aircraft and then document the findings for the inspection process. P/N 13-04184 .....**$32.95**

CANARD AIRCRAFT



The DVD has 3 hours of video on canard aircraft only, truly a one of a kind DVD. It covers the Cozy MkIV, LongEZ, Berkut, ERacer, StaggerEZ, Bateleur, Defiant, LongEZ Jet and a custom LongEZ. Want to know what it's like to build a Cozy aircraft? Or see what it looks like to do a high speed fly-by from the cockpit? Then you'll want to see this DVD. You'll get lot's of encouragement from every builder for you to continue on your journey to complete your canard aircraft. 60 minutes of air to air shots, high speed fly-bys, take offs and landings. With all the natural sounds as they fly right over head at more than 200 miles per hour!

P/N 13-04260.....**$42.50**

SKYWARD TECH AIRCRAFT ENGINE REBUILDING



De-mystify the overhaul procedures on selected Continental & Lycoming engines. Videos begin with a dismantled engine, show the crankshaft being mounted on a stand and then proceed through complete assembly. These videos effectively present the step-by-step procedures of re-assembly.

Description	DVD P/N	Price
Cont. 0-200 Rebuild	13-03208	**$29.95**
Lyc. 0-320 Rebuild	13-04465	**$29.95**
Lyc. 0-360 Rebuild	13-03210	**$29.95**
Lyc. I0-360 Rebuild	13-03209	**$29.95**

SCRATCH BUILDING BASICS FOR METAL AIRCRAFT



An excellent way to determine if building a homebuilt aircraft from scratch is right for you... you will obtain a full understanding of the trials, tribulations, joys and successes that this type of building process entails. You can't watch these guys at work and not learn something that might change the way you think about the process and people that build their own planes from scratch! Approximately 3.5 hours in length and is divided into 10 video chapters to make navigation and review of desired sections fast and easy. The DVD set includes web links to plans for building your own sheet metal brake and other tools used in this video (you can print the plans on your own printer). P/N 13-04185.....**$38.95**

RV-12 EMPENNAGE TAILCONE



This double disk DVD is the first in a series of videos being developed to cover the entire build process for the Van's RV-12 aircraft kit. It covers the complete empennage/tailcone kit as supplied by Van's Aircraft. It is a great starting place to begin your project – there are no prerequisite assemblies that need to be completed before starting. All in the exact sequence of building as specified by the construction manual. Approximately 2.5 hours in length and is divided into various video chapters to make navigation and review of desired sections fast and easy. They are completing production on the subsequent volumes of the RV-12 build (that are also sequenced to the sub-kits as provided by Van's Aircraft).

P/N 13-09590.....**$48.85**

COMPLETE COMPOSITE & FIBERGLASS LIBRARY



All five of our How-To videos on a convenient 2 DVD set. A total of 190 minutes of the most complete guide for using composite materials available anywhere! The Complete Fiberglass and Composite Library contains The Basics of Fiberglass, A Step-By-Step Guide to Molding Fiberglass, Advanced Moldmaking and Plug Construction, Vacuum Bagging and Sandwich Core Construction and The Art of Moldless Composites. P/N 13-06551.....**$161.95**

DEEP INSIDE YOUR ROTAX



You can now see and understand what procedures are involved with the 150 and 300 hour inspection/rebuild services. Alan points out the places carbon accumulates, where the common areas of wear occur, and other signs indicating the possibility of potential failures. The specialized Rotax engine tools are demonstrated as to their function in removing various internal components. Installation and maintenance tricks are also demonstrated and explained for the purpose of heading off future engine failures that can lead to disaster. And More.

P/N 13-03370 .....**$34.95**

ROTAX 912 INSTALLATION TIPS & TECHNIQUES



This presentation explains the most important details of preparing and installing th epopular Rotax 912 family of four stroke engines in your experimental homebuilt aircraft. This reliable, high performance engine will only perform safely if installed properly as specified by the Rotax installation guide. The important details in this guide are often misunderstood or even ignored completely resulting in catastrophic engine failures and dangerous flying situations. DVD Running time: 1.5 hours

P/N 13-04183 .....**$35.95**

BUILDING A GLASS PANEL FOR HOMEBUILT AIRCRAFT



Mark Townsend of CanZac Aviation takes you step-by-step from the planning stages through the actual fabrication procedures and wiring for a combination glass/conventional instrument panel for an experimental aircraft. 80-minute DVD.

P/N 13-04969 .....**$23.95**

RV RUDDER WORKSHOP

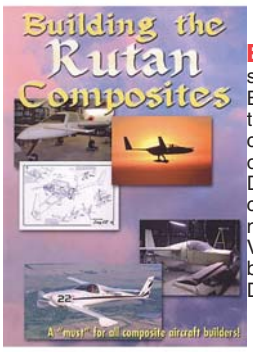


This instructional video has 2 major sections: The first section contains an overview and demonstration of the tools and techniques that are required for building an RV aircraft. These specialized building techniques center around riveting with solid rivets - essential for the RV aircraft. Many specialized tools are required for this type of construction and are discussed and demonstrated. Techniques that are shown include: dimpling, countersinking, deburring, drilling, back riveting and pop riveting. A full discussion of the types of rivets that are used along with their important characteristics is included in this first section of the video. The tools for measuring proper rivet setting (rivet gauges) are shown and demonstrated. Some of the tools that are featured include: hand squeezer, pneumatic rivet gun, flush and universal rivet sets, dimple dies, back rivet sets, scotch-brite polishing wheel and deburring tools. P/N 13-04791 .....**$31.50**

BV

AVIATION VIDEOS & DVDS

INSTRUCTIONAL VIDEO TAPES



BUILDING THE RUTAN COMPOSITES – This step-by-step instructional program features Burt Rutan and Mike Melvill proceeding through the complete foam-epoxy-fiberglass composite construction procedure as used on the VariEze, Long-EZ, Quickie, Q2, Dragonfly, Sea Hawk, Polliwagen and other composite aircraft. Also included is a formation flight by the Long-EZ, Defiant and VariViggen. A must for all composite aircraft builders. 1hr, 36 mins.
DVD .....P/N 13-04809 ..... **$26.95**



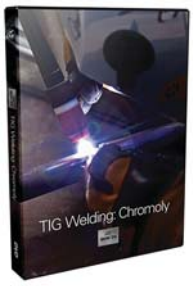
FIBERGLASS 101 – This tape shows aircraft builders how to make molds, fairings, and parts from fiberglass. It takes you step by step through the phases of glass work so that you can build parts yourself. Produced by fiberglass expert Sam James. 2 hrs.....
Note: The quality of this DVD may not be standard for DVDs due to format conversion technique used.
DVD....P/N 13-03875 ..... **$32.50**

EAA SHEET METAL BASICS DVD



This new instructional video will provide you the basics of sheet metal application needed to build any metal kit aircraft. EAA SportAir Workshops instructor Mark Forss will walk you through the terminology, tools, and techniques required to build the aircraft of your dreams. Mark has taught hundreds of EAA members how to successfully build with sheet metal, and now you can learn those same skills at your own pace and in the comfort of your own home.
P/N 13-18211..... **$32.95**

EAA TIG WELDING CHROMOLY DVD



"Mr. TIG"™, Wyatt Swaim, is known throughout the world as a leading expert on TIG welding. The author of numerous articles on high technology welding, Wyatt is dedicated to training others to the level of Aerospace TIG Welding. Wyatt conducts advanced training seminars for EAA SportAir Workshops, motorsports teams, and is part of the trackside welding team at the Indianapolis 500. He is a regular TIG Welding instructor at EAA AirVenture Oshkosh. Now Wyatt brings his more than 30 years experience directly to you in this comprehensive approx.
P/N 13-18210..... **$32.95**



STEWART SYSTEMS 6 DVD SET

FABRIC COVERING, METAL AND OTHER SUBSTRATE PREP, MIXING PAINT AND PAINTING - 6 Disc Stewart Systems Combination Package Covering & Painting Videos. Most everything you need to know about our covering system, including complete information using the Stewart Systems Covering Process. It includes product application, painting instructions, STC and more. Well over 2 hours of video.
P/N 13-09411..... **$21.65**

"TIN MAN" METAL WORKING VIDEOS

These videos provide excellent instruction for the aircraft builder. Ken White, The Tin Man, is a master craftsman and instructor for the Experimental Aircraft Associations metal working workshops at Oshkosh.



BASIC DAMAGE REPAIR ON ALUMINUM – Take an axe and drive it through the nose of an RSK Porsche. now we're ready to begin by bumping, smoothing, gas welding, planishing, and metal finishing. All work completed on camera. Complete and very detailed. Color, 63 min.
DVD..... P/N 13-04377 ..... **$41.50**



EDGE THOSE PANELS – Learn to make flanges, hems wired edges, and flares. With just a hammer, dolly, and some simple tools you can make, you'll be able to easily edge lots of panels. Wing rib construction is also shown. Then a rotary machine (bead roller) is used to do really fancy artwork! Color, 126 min.
DVD .....P/N 13-04378.....**$55.95**



AN AMERICAN'S VIEW OF THE ENGLISH WHEEL – Shrink on the wheel? You bet! Analyze frame design, tracking patterns, layering, pressure measurement, rapid high crown development, nearly flat panels, and much more. Last segment shows air hammer shaping and shrinking on the Pullmax. Color, 126 minutes. DVD..... P/N 13-40302 ..... **$39.95**



SHRINKING MAGIC – The art of shrinking (crimping or compression) is demonstrated using both the Lancaster machine and the torch and hammer method. Hot work demonstrations include steel, aluminum, copper, stainless, titanium, and magnesium. An excellent segment on form block work is shown as well. Color, 84 minutes. DVD..... P/N 13-04381 ..... **$55.95**



SHAPING ALUMINUM WHEEL PANTS-WITH 7 SIMPLE HAND TOOLS – Using a torch, mallet, stump, forming bag, slapper, dolly, and clamp you can make a really nice pair of pants (fenders or tank). This video includes buck development, pattern work, and hot shrinking. Air hammer shaping and Pullmax shrinking segment at the end. Color, 125 minutes.
DVD..... P/N 13-04380 ..... **$55.95**



HOW TO GAS WELD ALUMINUM – Learn the professional methods of setting the torch, regulator pressures, and secrets of the flux. Filmed with two cameras through the finest eyewear available to show tacking, distortion control, flat and vertical welds. Many 30-year veteran welders have benefited from this video. Color, 105 minutes.
DVD..... P/N 13-04379 ..... **$48.95**



4130 CHROMOLY AIRFRAME CONSTRUCTION – This video is highly recommended for anyone considering a steel tube fuselage aircraft. It covers the whole process: Workflow, welding rod selection, jigging, fitting, and welding. (Note: The discussions and advice are almost exclusively about oxyacetylene welding. TIG, GTAW, is mentioned only in passing.)
DVD..... P/N 13-04375 ..... **$76.95**

WEST SYSTEM EPOXY GELCOAT BLISTER REPAIRS - Dry rot repair & replacement, Fuel tank removal, Inspection & installation, Fiberglass procedures for strength, rigidity & surfacing. P/N 13-12703.....**$18.75**

WEST SYSTEM EPOXY BASIC APPLICATION TACHNIQUES - Covers repairing and preventing gelcoat blisters plus an analysis of the factors contributing to blister formation. P/N 13-12704.....**$18.75**

WEST SYSTEM EPOXY FIBERGLASS REPAIRS - Step-by-step program takes you through all the procedures you need to know to make professional, longlasting fiberglass repairs with epoxy.
P/N 13-12702.....**$23.75**

WEST SYSTEM EPOXY REPAIRS DVD SET - Includes: DVD Fiberglass Repair with West System Epoxy, DVD Gelcoat Blister Repair with West System Epoxy, and DVD Basic Application Techniques West Epoxy.
P/N 13-12705.....**$52.95**

COSMETIC GELCOAT / FIBERGLASS REPAIR BASIC DAMAGE AND FINISHING DVD - This program takes you step-by-step through every type of cosmetic repair. You'll learn the proper techniques, materials, tools and tricks of the trade from one of the best fiberglass repairman in the country. P/N 13-04810.....**$26.95**

FIBERGLASS REPAIRS MADE EASY DVD SET - Learn how to make fiberglass repairs as you look over the shoulder of a professional fiberglass repairman. P/N 13-12701.....**$32.75**

FIBERGLASS REPAIRS MADE EASY VOL I FIBERGLASS REPAIR AND GELCOAT DAMAGE - Learn how to make fiberglass repairs as you look over the shoulder of a professional. Covers grinding out damaged material, applying new fiberglass laminate, shaping to original lines and finishing. 54 mins P/N 13-12697.....**$29.95**

COSMETIC GELCOAT / FIBERGLASS REPAIR COLOR MATCHING AND FINISHING - This program takes you step-by-step through every type of cosmetic repair. You'll learn the proper techniques, materials, tools and tricks of the trade from one of the best fiberglass repairman in the country. P/N 13-12698.....**$26.75**

COSMETIC GELCOAT / FIBERGLASS REPAIR STESS CRACKS / AIR VOIDS AND FRACTURES - This program takes you step-by-step through every type of cosmetic repair. You'll learn the proper techniques, materials, tools and tricks of the trade from one of the best fiberglass repairman in the country. P/N 13-12699.....**$26.75**

BV

AVIATION VIDEOS & DVDS



FROM THE GROUND UP VOL 1-13

EAA, in conjunction with Discovery Channel International, presents all 13 episodes of the television series From the Ground Up on 3 DVDs. TV's first how - to aviation program. Enter the exciting world of airplane homebuilding and restoration. P/N 13-07442 ..... **$59.99**

BIG ROCKS AND LONG PROPS VOLUME I



50 thrilling minutes of water assisted landings, big rocks, big tires, and great flying in a Super Cub and Experimental Maule (A.K.A. Bushwacker) Alaska and Northwest bush pilot Loni Habersetzer and Northwest bush pilot Greg Miller take you into their incredible playground of rock bars and water landings - on tires! P/N 13-04018 ..... **$33.95**

BIG ROCKS & LONG PROPS - VOLUME II



You will go from Greg's training ground to the desert and on to the mountains. The main movie is 40+ minutes long and includes a commentary track. There is a section on field repair and a section on the STOL competition for the bush class in Valdez Alaska for 2006. In all, almost 90 minutes of playing time. It has Greg Miller flying "Bushwacker" and also the 5 place Sherpa, which is basically a Super Cub on steroids. It also features Doug Keller and his amazing. Husky Cub P/N 13-04384 ..... **$33.95**

BIG ROCKS AND LONG PROPS VOLUME III



See the culmination of 30 years of bush flying experience as Paul flies his Turbine Otter and Super Cub in the rugged wilderness of the Wrangell-St. Elias National Park. Watch Greg as he learns the ins and outs of ski-flying in one of the most challenging places in Alaska, where the margin between life and death can be extremely thin.
P/N 13-05728 ..... **$33.95**

BIG ROCKS & LONG PROPS VOL. 4



Join Greg Miller on his Alaskan Adventure. Greg flies his experimental Maule a.k.a. Bushwacker to Alaska in the winter of 2008. The setting for this adventure is the Wrangell-St. Elias National Park. You'll see Greg landing his ski-equipped airplane on snow, ice, rock, and water. Come along as he climbs an ice fall, skins up mountain peaks, and skis down virgin snow-covered mountains. Running Time: 121 minutes
P/N 13-06275 ..... **$33.95**

BIG ROCKS & LONG PROPS - HIGH COUNTRY VOLUME 5



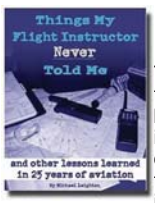
Big Rocks & Long Props Volume 5 - High Country DVD. Greg Miller, tired of the rain in the Pacific Northwest, heads for some dryer high-country with the founder of Nflightcam, Patrick Carter. Greg is interested in exploring and Patrick will provide the shots using a Canon 1080p HD camera and multiple Contour Plus cameras mounted to various parts of Bushwacker. Join them for this adventure as they explore the breathtaking scenery of the desert high-county.
P/N 13-11977 ..... **$33.95**

HOODRIVER BASIN COZY



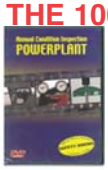
In this DVD they'll fly you around the luscious green Hood River Basin in Oregon. During this scenic flight, you'll fly so close to Mt Hood, Mt Rainier, Mt St Helens and Mt Jefferson, it'll seem like you can reach out and just touch the snow covered peaks. Along the way, they will pass through the majestic Columbia River Gorge. The DVD length is 25 minutes. ..... P/N 13-08044 ..... **$19.95**

THINGS MY FLIGHT INSTRUCTOR NEVER TOLD ME



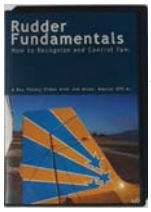
Topics like fuel management, flight planning, reluctant passengers, dealing with weather, the FAA, buying and owning an aircraft, as well as moving up to bigger and faster aircraft, are all discussed with humor and whit. He also discusses the people in aviation he has met that have had an influence on his flying career.
Book..... P/N 13-03381 ..... **$19.95**
E-Book..... P/N 13-09969 ..... **$17.95**

THE 100 HOUR INSPECTION POWERPLANT



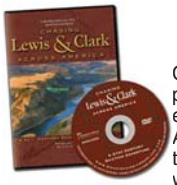
Step by step demonstration of a 100 hour inspection of the powerplant section of a Lycoming 0-360 powered Piper Arrow. Explains every segment of the inspection process from an initial AD search to the final log entries. It details each procedure along with the techniques, tool and material usage, and plenty of professional hints and tips. Covers safety wiring techniques..... P/N 13-03883 ..... **$24.95**

RUDDER FUNDAMENTALS



Most pilots admire the skills of a good stick: an aerobatic pilot rolling on top of a loop; the pilot who lands a float plane on a tiny mountain lake or the local tailwheel pilot making a perfect touchdown in a strong cross wind? Have you wondered what you can you do to become a confident and skillful flyer? Actually there are only two fundamentals to master: Don't cause the airplane to stall Recognize and control yaw. My Key Points video Stall, Upset and Spin Recovery explores the first fundamental. Using ground school and film clips from the air, Rudder Fundamentals offers a unique and valuable presentation of the second fundamental; the recognition and control of yaw. You will: Learn to control adverse, P-factor and gyroscopic yaw. Master the Dutch roll, the definitive stick and rudder skill. Learn to use the technique of cross controlled rudder and aileron to perform a plethora, of aerial maneuvers.
P/N 13-12925 ..... **$19.95**

CHASING LEWIS & CLARK ACROSS AMERICA



Climb into the cockpit to get a different, low-altitude perspective on America. Set to stirring music, selected photographs from the Chasing Lewis & Clark Across America book provide a view of our country that will nourish one's patriotic soul. From the virgin wilderness that Lewis and Clark discovered, to cities with the creations of man, this collection of photographs is like a tightly woven tapestry of America. The other half of the DVD provides a behind the scenes look at the trip including plane construction. DVD total 45 min., Wide screen, Stereo. Book (P/N 13-04562) and Book/DVD Combo (P/N 13-04564) available.

DVD ..... P/N 13-04563 ..... **$19.95**
Book ..... P/N 13-04562 ..... **$37.95**
Book/DVD Combo ..... P/N 13-04564 ..... **$57.50**

CRAZED PILOT BUSH PILOTS OF COSTA RICA DVD & BLU-RAY



Fly along with Bush Pilots of Costa Rica! Experience thrill and challenges of tiny jungle landing strips and short take-offs, soaring right out over the azure Costa Rican shores! Fly over uninhabited jungles and view this majestic country as only a Bush Pilot can!
DVD ..... P/N 11-14680 ..... **$21.90**
Blu-Ray ..... P/N 11-14682 ..... **$33.90**

CRAZED PILOT COSTA RICA BY AIR DVD & BLU-RAY



Take flight over the remote jungles of Costa Rica, view the lush valleys and streams, and marvel at the active volcanoes as you pass by. Soar serenely out over the azure ocean waters and enjoy the sparkling white sands of the vast Costa Rican beaches as never before! Two hours of calm, relaxing music and beautiful, exhilarating tropical scenery – much of which has never before been caught on film!
DVD ..... P/N 11-14683 ..... **$21.90**
Blu-Ray ..... P/N 11-14684 ..... **$33.90**

BUILDING YOUR OWN ZENAIR FLOAT



Zenair now offers their popular experimental aircraft floats as a kit which can be built with relatively simple construction techniques. This provides a substantial reduction in the cost of ownership making floats now affordable for many aircraft owners. (See www.ZenairFloats.com for product information and prices) While this video demonstrates the construction of a Zenair float, it does not show: the rigging of floats to an aircraft, spreader bars, mounting tires, nor other repetitive tasks such as painting, priming, riveting, etc. The effort was to keep the content of the video restricted to the unique tasks of float construction. P/N 13-09049 ..... **$42.95**

BV

Prices Subject to Change Without Notice

AVIATION VIDEOS & DVDS



FLYING SINGLE PILOT IFR

If you fly single pilot IFR, this video is for you. Explains risks involved and how to minimize them. Explores equipment requirement, organization, getting real time weather, staying ahead of the airplane, copilot selection and situational awareness. (60 min)

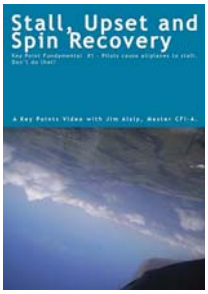
P/N 13-23850 .....**$32.95**



HOW TO GET A FLIGHT REVIEW

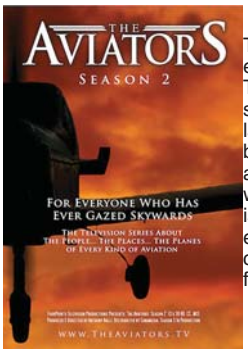
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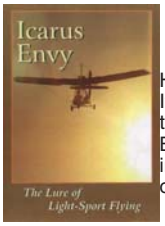
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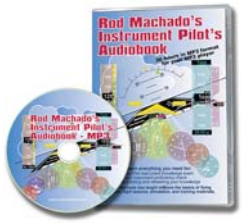
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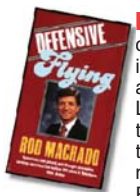
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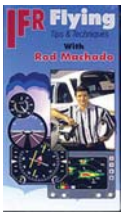


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17-00178	Cessna Turbo 182t Im Bus W/integrated Autopilot	$57.00
17-00177	Cessna Turbo 182t-im Aus W/ Nav Iii Panel 2005 & Up (Blue Dot)	$47.50
14-01340	Cessna Turbo 207 Skywagon 1969	$20.75
14-01341	Cessna Turbo 207 Skywagon 1970	$20.70
14-01342	Cessna Turbo 207 Skywagon 1971-73	$20.70
14-01343	Cessna Turbo 207 Skywagon 1974	$20.70
14-01344	Cessna Turbo 207 Skywagon 1975	$20.70
14-01389	Cessna Turbo 310p 1969	$21.85
14-01390	Cessna Turbo 310q 1970-72	$30.95
14-01391	Cessna Turbo 310q 1973	$21.85
14-01392	Cessna Turbo 310q 1974	$21.85
14-01393	Cessna Turbo 310r 1975	$22.50
17-00169	Diamond Str Da20-c1	$73.85
14-02924	Diamond Str Da40-180	$78.95
17-00050	Garmin Gns 430 Goal Page Set Manual	$65.50
14-02918	Grumman Amer Aa-5/trlr Owner M	$13.95
14-02919	Mooney M20r Plt Op Handbook	$23.95
14-01301	Piper J3c-65 Cub 1946	$15.95
14-01220	Piper Pa-14 Piper Family Cruiser	$15.95
14-01282	Piper Pa18 Supercub #7409140 & Up 1975	$15.95
14-01283	Piper Pa18-105 Series Owner's Handbook	$15.95
14-01284	Piper Pa18-125, Pa18a-125	$15.99
14-01281	Piper Pa18-150 (S/n's 1809001 And Up)	$15.99
14-01280	Piper Pa18-150 (S/n's 7409140 Thru 8309025)	$15.95
14-01285	Piper Pa18-150 Super Cub	$15.95
14-01286	Piper Pa18-95, 135, Pa18a-135 Supercub	$15.99
14-01276	Piper Pa18-95, Pa18-135, Pa18a-135	$15.95
14-01279	Piper Pa18-95, Pa18-150 (1961-1974)	$19.75
14-01277	Piper Pa18-95, Pa18-150, Pa18a-150 (1955-1958)	$15.95
14-01278	Piper Pa18-95, Pa18-150, Pa18a-150 (1959)	$15.95
14-01287	Piper Pa18-95, Pa18-150, Pa18a-150	$15.99
14-01288	Piper Pa18-95,-150, Pa18a-150 Supercub	$15.95
14-01292	Piper Pa20-115, Pa20-125	$19.95
14-01296	Piper Pa20-135	$15.95
14-01291	Piper Pa20-135 Pacer Pa22-135 Tri-pacer	$15.95
14-01293	Piper Pa22-108 1961-1964	$15.95
14-01294	Piper Pa22-108 1962	$15.95
14-01295	Piper Pa22-125, Pa22-135	$15.95
14-01290	Piper Pa22-150, Pa22-160	$15.95
14-01222	Piper Pa24-180, 250 Comanche 1958	$15.95
14-01224	Piper Pa24-180, 250 Comanche 1959-60	$15.95
14-01223	Piper Pa24-180, 250 Comanche 1961	$15.95
14-01221	Piper Pa24-180, 250 Comanche 1962-64	$15.95
14-01225	Piper Pa24-260 1965 Owner's Handbook	$15.95
14-01226	Piper Pa24-260 1970-1972 Turbo Owner's Handbook	$15.95
14-01227	Piper Pa24-260 B Comanche 1966-69	$15.95
14-01228	Piper Pa24-260 Comanche C 1969-72	$15.95
14-01229	Piper Pa24-400 1964-1965	$15.95
14-01297	Piper Pa25-150, 235 Pawnee Thru 1964	$15.95
14-01298	Piper Pa25-235, Pa25-260c 1967-72	$15.95
14-01299	Piper Pa25-235, Pa25-260d 1973 & Up	$13.95
14-01300	Piper Pa25-235b Pawnee 1965-66	$15.95
14-01187	Piper Pa28-140 Cherokee 1964-68	$15.95
14-01188	Piper Pa28-140 Cherokee Cruiser 1973	$15.95
14-01189	Piper Pa28-140 Cherokee Cruiser 1974-76 Pilot	$22.95

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OWNERS MANUALS – PIM

Part No.	Decription	Price
14-01190	Piper Pa28-140 Cherokee Cruiser 1977 Pilot's	$21.50
14-01191	Piper Pa28-140b 1968-1969 Owner's Handbook	$15.95
14-01194	Piper Pa28-140c 1970	$15.50
14-01192	Piper Pa28-140d Cherokee 1971	$15.95
14-01193	Piper Pa28-140e Cherokee 1972	$15.95
14-01205	Piper Pa28-150,160,180b Thru 1964	$15.95
14-01204	Piper Pa28-150,160,180c 1965-67	$15.95
14-00901	Piper Pa28-151 Cherokee Warrior 1974-76 Pilot's Manual	$23.95
14-01163	Piper Pa28-151 Cherokee Warrior 1977 Pilot's	$22.50
14-01168	Piper Pa28-161 Cadet Pilot's	$22.95
14-01169	Piper Pa28-161 Cadet Pilot's	$22.95
14-01167	Piper Pa28-161 Warrior Ii 1977-82 Pilot's	$23.95
14-01164	Piper Pa28-161 Warrior Ii 1983-94 Pilot's	$32.95
14-01165	Piper Pa28-161 Warrior Iii 1994-1995 Pilot's	$44.00
14-01166	Piper Pa28-161 Warrior Iii 1995 & Up Pilot's	$77.80
14-01211	Piper Pa28-180 Archer 1974-75 Pilot's	$22.95
14-01206	Piper Pa28-180 Cherokee 1973	$15.95
14-01207	Piper Pa28-180d 1967-69	$15.95
14-01208	Piper Pa28-180e Cherokee 1970	$15.95
14-01209	Piper Pa28-180f 1971	$15.95
14-01210	Piper Pa28-180g 1972	$15.95
14-01175	Piper Pa28-181 Archer Ii 1976 Pilot's	$25.50
14-01176	Piper Pa28-181 Archer Ii 1977-79 Pilot's	$32.80
14-01177	Piper Pa28-181 Archer Ii 1980-94 Pilot's	$23.95
14-01178	Piper Pa28-181 Archer Iii 1994-95 Pilot's	$64.75
14-01179	Piper Pa28-181 Archer Iii Pilot's	$69.75
14-01180	Piper Pa28-201t Turbo Dakota 1979-80 Pilot's	$22.95
14-01195	Piper Pa28-235 Cherokee 1963-65	$15.95
14-01196	Piper Pa28-235 Cherokee 1973	$15.95
14-01198	Piper Pa28-235 Pathfinder 1974-76 Pilot's	$22.95
14-01197	Piper Pa28-235 Pathfinder 1977 Pilot's Operating Handbook	$21.95
14-01199	Piper Pa28-235b Cherokee 1966-67	$15.95
14-01200	Piper Pa28-235c 1968-69	$15.95
14-01201	Piper Pa28-235d 1970	$15.95
14-01202	Piper Pa28-235e 1971	$15.95
14-01203	Piper Pa28-235f 1972	$15.95
14-01185	Piper Pa28-236 Dakota 1979-95 Pilot's	$22.95
14-01213	Piper Pa28r-180 1967-69	$15.95
14-01212	Piper Pa28r-180 1970	$15.95
14-01214	Piper Pa28r-180b Cherokee Arrow 1971	$15.95

Part No.	Decription	Price
14-01215	Piper Pa28r-200 Arrow 1969	$15.95
14-01216	Piper Pa28r-200 Arrow 1970	$15.95
14-01217	Piper Pa28r-200 Arrow Ii 1972-73 Pilot's	$32.95
14-01186	Piper Pa28r-200 Cherokee Arrow 1974-76 Pilot	$24.95
14-01218	Piper Pa28r-200b Arrow 1971	$17.50
14-01172	Piper Pa28r-201 Arrow 1988-1994 Pilot's	$18.95
14-01170	Piper Pa28r-201 Arrow 1995 & Up Pilot's	$42.95
14-01171	Piper Pa28r-201 Arrow Iii 1977-78 Pilot's	$22.95
14-01174	Piper Pa28r-201t Turbo Arrow Iii 1977-78 Pilot's Manual	$22.95
14-01173	Piper Pa28r-201t Turbo Arrow Pilot's	$71.95
14-01182	Piper Pa28rt-201 Arrow Iv 1979 Pilot's	$22.95
14-01183	Piper Pa28rt-201 Arrow Iv 1980 & Up Pilot's	$22.95
14-01181	Piper Pa28rt-201t Turbo Arrow Iv 1979 & Up Pilot Manual	$22.95
17-00136	Piper Pa-31-350 Chieftain (77-79)	$33.85
14-01234	Piper Pa32-260 1965-68	$15.95
14-01235	Piper Pa32-260 1972	$15.95
14-01236	Piper Pa32-260 1973	$15.95
14-01240	Piper Pa32-260 C 1970	$15.95
14-01237	Piper Pa32-260 Cherokee Six 260 1974-76 Pilot's Manual	$21.95
14-01238	Piper Pa32-260 Cherokee Six 260 1977-78 Pilot's Manual	$22.95
14-01239	Piper Pa32-260 Cherokee Six B 1968-69	$15.95
14-01241	Piper Pa32-260 D 1971	$15.95
14-01244	Piper Pa32-300 1966-68	$15.95
14-01242	Piper Pa32-300 Cherokee Six 1973	$15.95
14-01243	Piper Pa32-300 Cherokee Six 300 1974-76 Pilot's Manual	$22.95
14-01245	Piper Pa32-300 Cherokee Six 300 1977-79 Pilot's Manual	$22.95
14-01246	Piper Pa32-300b 1969	$22.80
14-01247	Piper Pa32-300c Cherokee Six 1970	$15.99
14-01248	Piper Pa32-300d Cherokee Six 1971	$15.99
14-01249	Piper Pa32-300e Cherokee Six 1972	$15.95
14-01250	Piper Pa32-301 Saratoga 1980 & Up Pilot's	$28.75
14-01252	Piper Pa32-301 Saratoga, Turbo 1980&up Pilot's Information Manua	$22.99
14-01251	Piper Pa32-301 Saratoga, Turbo 1980&up Pilot's Manual	$72.00
14-01264	Piper Pa32-301ft Piper 6x Pilot's	$77.75
14-01253	Piper Pa32r-300 Cherokee Lance 1976 Pilot's	$22.95
14-01254	Piper Pa32r-300 Cherokee Lance 1977-78 Pilot's Manual	$22.95

Part No.	Decription	Price
14-01258	Piper Pa32r301 Saratoga Ii 1995 & Up Pilot's	$77.75
14-01233	Piper Pa32r-301 Saratoga Ii Hp 1996-97 Pilot's Manual	$71.95
14-01255	Piper Pa32r-301 Saratoga Ii Hp Pilot's	$44.00
14-01257	Piper Pa32r-301 Saratoga Ii Hp1993-95 Pilot's	$71.99
14-01256	Piper Pa32r-301 Saratoga Sp 1980-93 Pilot's	$22.75
14-01260	Piper Pa32r-301t Saratoga Sp 1980 & Up Pilot's Manual	$22.95
14-01259	Piper Pa32r-301t Turbo Saratoga Ii Tc Pilot's	$74.95
14-01261	Piper Pa32rt-300 Lance Ii 1978-79 Pilot's	$22.95
14-01262	Piper Pa32rt-300t Lance Ii 1978-79 Pilot's	$22.95
14-02207	Piper Pa34-200 Seneca 1974 Pilot's	$25.50
14-02208	Piper Pa34-200 Seneca Pilot's	$24.95
14-02209	Piper Pa34-200 Seneca Pilot's	$25.95
14-02210	Piper Pa34-200t Seneca Ii 1975-76 Pilot's	$25.85
14-02211	Piper Pa34-200t Seneca Ii 1977-81 Pilot's	$25.95
14-02214	Piper Pa34-220t Seneca Iii 1981 & Up Pilot's	$25.50
14-02215	Piper Pa34-220t Seneca Iii 1989-94 Pilot's	$77.75
14-02216	Piper Pa34-220t Seneca Iv 1994-95 Pilot's	$71.99
14-02212	Piper Pa34-220t Seneca Iv 1995&up Pilot's	$71.99
14-01230	Piper Pa-36-285 Pawnee Brave Pilot's	$22.95
14-01231	Piper Pa-36-300 Pawnee Brave 300 Pilot's	$22.95
14-01232	Piper Pa-36-375 Brave 375 1979 & Up Pilot's	$22.95
14-01219	Piper Pa38-112 Tomahawk 1978 & Up Pilot's	$22.95
17-00137	Piper Pa-44-180 Piper Seminole (1979-1982)	$25.95
17-00138	Piper Pa-44t-180 Turbo Seminole (1980-up)	$25.65
14-01265	Piper Pa46-310p 1984-1986 Malibu Pilot's	$45.50
14-01266	Piper Pa46-310p Malibu 1986-1988 Pilot's	$29.00
14-01269	Piper Pa46-350p 1995 Malibu Mirage Pilot's	$71.99
14-01268	Piper Pa46-350p 1996-1997 Malibu Mirage Pilot's Info Manual	$71.99
14-01267	Piper Pa46-350p 1998-1999 Malibu Mirage Pilot's Info Manual	$71.99
14-01271	Piper Pa46-350p Malibu Mirage 1989-95 Pilot's	$32.95
14-01270	Piper Pa46-350p Malibu Mirage 1999-2005 Pilot's Info Manual	$71.99
14-01274	Piper Pa46-350p Malibu Mirage 2006 & On Pilot's Info Manual	$71.99
14-01273	Piper Pa46-500tp 2004-2005 Meridian Pilot's	$71.99
14-01275	Piper Pa46-500tp 2006 & Up Meridian Pilot's	$72.00
14-01272	Piper Pa46-500tp Meridian 2000-2003 Pilot's	$70.75

PILOT OPERATING HANDBOOKS (POH)

Part No.	Description	Price
14-02654	POH Cessna 185a-d 1961-1965	$15.80
17-00141	POH Beech Duchess 76	$34.50
17-00149	POH C172n 1978 Floatplane	$51.00
14-02638	POH Cessna 172k (Army 7-41a)	$20.95
14-02658	POH Cessna 180 1953	$15.95
14-02659	POH Cessna 180 1954	$15.95
14-02660	POH Cessna 180 1955	$17.75
14-02661	POH Cessna 180 1956	$17.75
14-02662	POH Cessna 180 1957	$17.75
14-02663	POH Cessna 180 1958	$15.95
14-02664	POH Cessna 180 1959	$17.75
14-02665	POH Cessna 180 1960	$15.95
14-02666	POH Cessna 180 1961	$17.75
14-02667	POH Cessna 180 1962	$16.00
14-02668	POH Cessna 180 1963	$17.75
14-02669	POH Cessna 180 1964	$17.75
14-02670	POH Cessna 180 1965	$17.75
14-02671	POH Cessna 180 1966	$17.95
14-02672	POH Cessna 180 1967	$15.95
14-02673	POH Cessna 180 1968	$15.95
14-02674	POH Cessna 180 1968	$17.75
14-02675	POH Cessna 180 1970	$15.95
14-02676	POH Cessna 180 1971-1972	$17.75
14-02677	POH Cessna 180 1973	$15.95
14-02678	POH Cessna 180 1974	$17.75
14-02679	POH Cessna 180 1975	$17.75
14-02680	POH Cessna 180 1963-1968 Supmt	$17.95
14-02681	POH Cessna 180 1969-1972 Supmt	$17.75
14-02682	POH Cessna 180j 1975 Suplment	$15.85
14-02640	POH Cessna 185 1961	$17.75

Part No.	Description	Price
14-02641	POH Cessna 185 1963	$17.75
14-02642	POH Cessna 185 1964	$17.75
14-02643	POH Cessna 185 1965	$17.75
14-02644	POH Cessna 185 1966	$15.95
14-02645	POH Cessna 185 1967	$17.75
14-02646	POH Cessna 185 1968	$17.95
14-02647	POH Cessna 185 1969	$17.75
14-02648	POH Cessna 185 1970	$15.95
14-02652	POH Cessna 185 1974	$17.75
14-02655	POH Cessna 185 1966 Supplement	$17.75
14-02656	POH Cessna 185 1967-1968 Supmt	$17.75
14-02657	POH Cessna 185 1967-1972 Supmt	$15.95
14-02635	POH Cessna 185a 1965	$17.95
14-02649	POH Cessna A185e 1970-1972	$15.95
14-02651	POH Cessna A185f 1973	$17.75
14-02650	POH Cessna A185f 1973-1974	$17.75
14-02639	POH Cessna Fr172j Reims Rocket	$15.95
14-02637	POH Cessna R172e (Army 7-41b)	$16.95
14-02636	POH Cessna Skylark 1962	$17.75
14-02634	POH Grumman Amcan Aa-5 & Trvlr	$15.95
13-18023	Pstr B757 Cockpit	$29.95
17-00173	Grumman Cheetah Aa-5a 1977-1979	$23.50
17-00174	Learjet 35a/36a Century Iii	$54.50
17-00175	Mooney M20j 1980 Pilot Operating Manual	$27.75
17-00134	Piper Pa-23-250 Aztec (1960-1961)	$18.50
17-00135	Piper Pa23-250 Aztec E 1970-75 Pilots Information Manual (Part# 761-455)	$25.95

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Prices Subject to Change Without Notice

ENGINE & AIRCRAFT MANUALS



ENGINE & ACCESSORY OVERHAUL & PARTS MANUALS



Continental Engine Manuals	Model	Part No.	Price
A-65, A-75 Overhaul, Maintenance & Parts Manual	A-A40	13-03751	$15.95
E-165, E-185, E-225 Overhaul Manual	X30016	13-03999	$76.95
IO-520 Overhaul Manual	X30039A	13-03932	$67.21
TSIO-520 Permold Overhaul Manual	X30574A	13-03937	$102.75
TSIO-520 Sandcast Overhaul Manual	X30575A	13-03938	$102.40
GTSIO-520 Overhaul Manual	X30045A	13-03933	$102.40

Lycoming Engine Manuals	Model	Part No.	Price
Overhaul Manual, Reprint of Direct Drive Manual (Incl. Table of Limits)	60294-7	13-15500	$17.85
Vertical, Overhaul Manual	60294-8	60294-8	$81.25
0 & H0-360 Parts Catalog	PC-106	13-03969	$52.50
0-320 B & D Parts Catalog	PC-203-2	13-03974	$45.00
O-320, IO-320, AIO-320, LIO-320	13-60297-31	13-60297-31	$30.00

CLASSIC AIRCRAFT MANUALS













CESSNA MANUALS

Aircraft	P/N	Price
120-140 Parts Catalog	13-00150	$30.50
140A Parts Catalog	13-00155	$219.95
150 Parts Cat., 1970-1977	13-00160	$247.95
152 series Service Manual	13-01073	$225.95
170 Parts Cat. 1948	13-00165	$66.75
170A Parts Cat., 1949-1951	13-00170	$59.75
170B Parts Cat.,1952-1956	13-00175	$59.75
100 Series Service Manual, 1953-1962: (150, 172, 175, 180, 182, 185)	13-00180	$61.75
172 series Parts Manual	13-00438	$242.95
Note: This manual is not written specifically for the 120, 140 or 170 Cessna series. However, much of the information it contains is useful to these aircraft.		
100 Series Srvc Man.,1963-1968	13-00185	$73.95
120-140 Owners Manual	13-00190	$11.50
140A Owners Manual	13-00195	$15.50
170 Owners Manual, 1948	13-00200	$15.50
170A Owners Man.1949-51	13-00215	$14.95
170B Owners Man. 1952-55	13-00220	$18.55
170B Owners Manual, 1956	13-00225	$17.50
Please call for manuals for: (C-150 / C-152 / C-172 / C-180 / 182 / C-185)		

LUSCOMBE MANUALS

Aircraft	P/N	Price
8A Owners Manual	13-00230	$5.55
8E Owners Manual	13-00235	$5.70
"8" Series Master Parts List, Illus.	13-00240	$21.55
Service Manual, early fabric wing	13-00245	$12.90

TAYLORCRAFT MANUALS

Aircraft	P/N	Price
BC12 Owners Manual	13-00250	$19.50
BC12D Service Manual	13-00255	$16.50

PIPER MANUALS

Aircraft	P/N	Price
PA-16 Flight Manual	13-00260	$6.95
PA-16 Parts list, (not illustrated)	13-00265	$17.50
PA-17 Flight Manual	13-00270	$7.50
PA-18 95/135 hp. Owners Manual	13-00275	$13.50
PA-18 95/150 hp. Owners Manual	13-00280	$11.85
PA-18 150 hp., 1974 and later: Owners Manual	13-00285	$15.95
PA-18 Parts Manual	13-00290	$27.50
PA-20/22 115/125 hp. Owners Manual	13-00295	$16.99
PA-20 & PA-22 135 hp. Owners Manual	13-00300	$10.50
PA-20 Parts Catalog	13-00315	$28.50
PA-22 108 hp. Flight Manual	13-00320	$7.99
PA-22 150/160 hp Owners Manual	13-00325	$12.90
PA-22 Parts Manual	13-00330	$38.99
PA-22 108 hp. Owners Manual	13-00335	$27.50
PA-25 Parts Manual	13-00340	$45.99
Service Aids, Bulletins, Letters and Memos:		
J-3 - J-5	13-00345	$60.75
PA-11 - Pa-22	13-00350	$70.75
J-3 Owners Manual, C-65	13-00355	$15.50
J-3 Paint Scheme	13-00360	$1.58
J-3 Parts Manual	13-00365	$17.50
J-3 Service Manual	13-00370	$17.50
J-4 Service Manual	13-00375	$12.90
J-4 (1939) Paint Scheme	13-00380	$1.24
J-4 (1940) Paint Scheme	13-00385	$1.18
J-4 (1941) Paint Scheme	13-00390	$1.18
J-5 (1940) Paint Scheme	13-00395	$1.44
J-5 (1941) Paint Scheme	13-00400	$2.00
J-5 Parts Manual	13-00415	$43.95
J-5 Service Manual	13-00420	$10.50
PA-11 Parts Manual	13-00425	$18.50
PA-11 Paint Scheme	13-00430	$1.59
PA-12 Parts Manual	13-00435	$18.50
PA-12 Paint Scheme	13-00440	$1.50
PA-12 Operating Manual	13-00445	$10.55
PA-12 Flight Manual	13-00450	$6.50
PA-14 Paint Scheme	13-00455	$1.31
PA-14 Flight Manual	13-00460	$6.70
PA-14 Operators Manual	13-00465	$11.50
PA-15/17 Parts List, (not illustrated)	13-00470	$7.99

ERCOUPE, FORNEY, & ALON & M-10 CADET MANUALS

Aircraft	P/N	Price
Alon A2 Flight Manual	13-00475	$15.95
Alon A2 Service Bulletins	13-00480	$15.95
Alon A2/A2A Service Manual	13-00485	$15.95
Alon A2 Owners Manual	13-00490	$10.50
Ercoupe Service Bulletins/Memos,	13-00495	$42.85
Ercoupe Flight Manual, 415-C	13-00500	$11.50
Ercoupe Flight Manual, 415-D	13-00515	$8.99
Ercoupe Flight Manual, 415-E/G/F1	13-00520	$9.80
Fundamentals of Elem. Ercoupe Flt. Man.	13-00525	$18.50
Ercoupe Owners Instruction Manual	13-00530	$9.80
Ercoupe Parts Catalog	13-00535	$11.50
Ercoupe Service Manual	13-00540	$29.50
Forney Flight Manual, F1A	13-00545	$10.80
Forney Parts Manual, F1A	13-00550	$22.50
Forney Service Manual, F1/F1A	13-00560	$22.50
Forney Instruction Manual, F1	13-00565	$10.80
Mooney Owners Manual,1969 M-10	13-00570	$18.55
Mooney Owners Manl, 1970 M-10	13-00575	$18.55
Mooney M-10 Parts Catalog	13-00580	$21.50
Mooney M-10 Service Manual	13-00585	$47.85
Ercoupe Specs,ADS & STCs	13-00590	$25.50

AERONCA, CHAMPION, SCOUT CITABRIA, DECATHLON MANUALS:

Aircraft	P/N	Price
Aeronca 7AC Service Manual	13-00595	$20.50
Aeronca 7EC/FC Service Manual	13-00605	$31.55
Aeronca 11AC Service Manual	13-00610	$16.50
Citabria Parts Manual, 1964-1973	13-00615	$31.70
Citabria Parts Manual, 1974-1979	13-00620	$17.99
Citabria Service Manual	13-00625	$18.50
Citabria Owners Manual, pre-1975	13-00630	$19.50
Citabria Owners Manual, 1975-77	13-00635	$12.90
Decathlon Parts Manual	13-00640	$17.99
Decathlon Service Manual	13-00645	$37.55
Decathlon Owners Manual	13-00650	$15.50
Scout Parts Manual	13-00655	$26.50
Scout Service Manual	13-00660	$29.60
Scout Owners Manual	13-00665	$10.50

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BOOKS



ASA AIRCRAFT INSPECTION, REPAIR & ALTERATIONS - The "bible" for AMTs, aircraft owners, and homebuilders, this FAA Advisory Circular outlines the standards for acceptable methods, techniques, and practices for the inspection, repair and alteration of non-pressurized areas of civil aircraft with a gross weight of 12,500 lbs or less. Includes both Part 1B and Part 2B.
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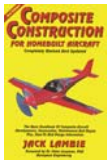
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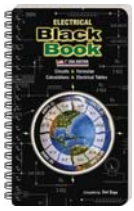


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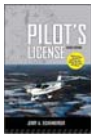
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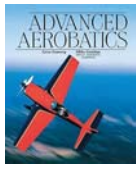
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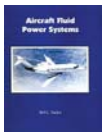
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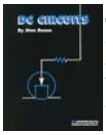
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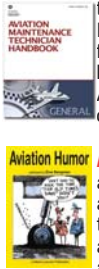


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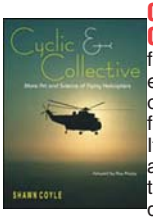
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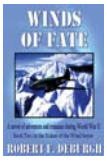
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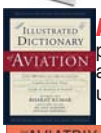
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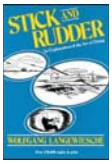
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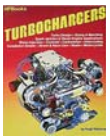
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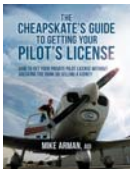




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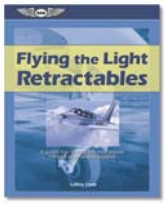
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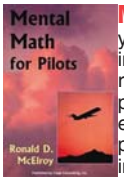
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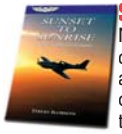
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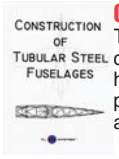
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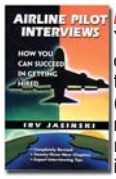
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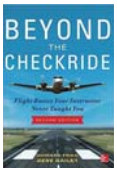
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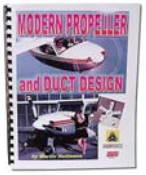
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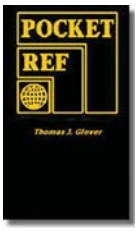
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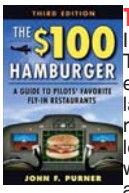


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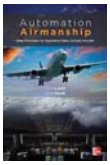
FROM TRAVEL AIR TO BARON...HOW BEECH CREATED A CLASSIC! – The complete story of Beech Aircraft's recognition of the need for a true light twin to fill the market gap between the Bonanza and the larger Model 50 Twin Bonanza. This book covers the design concept, marketing strategy, and development of this Beechcraft model line from the first Travel Air in 1958 until the last in 1968. All the Baron models are included, from the Model 55 in 1961 and continuing through the 1994 Model 58 Baron.
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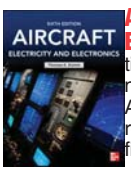
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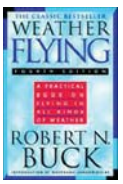
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THE GOLDEN AGE OF AVIATION SERIES

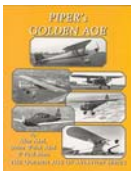
CESSNA'S GOLDEN AGE (ALAN ABEL, DRINA WELCH ABEL & PAUL MATT) –



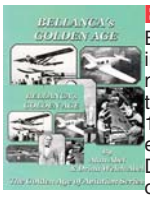
Takes a look at Clyde Cessna and nephew Dwane Wallace, longtime Cessna President, & the Cessna Aircraft Company from early 1900s, through the struggling years of the Great Depression, through World War II and the post-war years. Emphasis is given to Cessna Primary Gliders, Cessna Airmasters, Cessna T-50 Bobcats, Waco CG-4A Gliders (Cessna built), and Cessna 120/140 airplanes. Other Cessna models are also included. 96 pgs, softbound, 180 photos, 8 pgs of 3-view scale drawings. P/N 13-01534 ..... **$22.95**



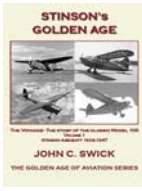
AERONCA'S GOLDEN AGE – Progressively details the events leading to the Aeronautical Corporation of America, from the early 1900s, through the Great Depression, the disastrous flood of 1937, World War II and beyond. The book includes biographical information on the founders of Aeronca, and details the people, facilities and manufacturing operations of Aeronca during the Golden Years. It also includes the reasons for the company's name change to Aeronca. Emphasis is given to Aeronca's C-2, C-3, Model K, Model L, 7AC Champ and 11AC Chief. All Aeronca's models are discussed. Several factory photos are included. 152 pgs, softbound, 240+ photos, 18 pages of internationally acclaimed 3-view scale drawings. P/N 13-01535 ..... **$26.95**



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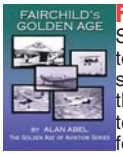


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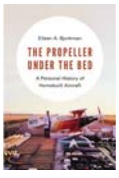
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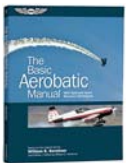
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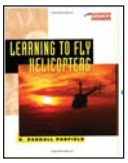
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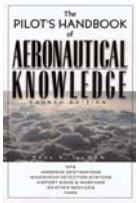
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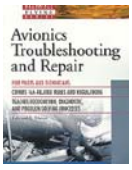
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U.S. AND METRIC SYSTEM EQUIVALENTS

LENGTH EQUIVALENTS

Unit	Millimeters	Centimeters	Inches	Feet	Yards	Meters
1 Millimeter=	1	.1	.03937	.003281	.001094	.001
1 Centimeter=	10	1	.3937	.032808	.010936	.01
1 Inch=	25.4001	2.54001	1	.083333	.027778	.025400
1 Foot=	304.801	30.4801	12	1	.333333	.304801
1 Yard=	914,402	91.4402	36	3	1	.914402
1 Meter=	1000	100	39.37	3.28083	1.09361	1

Unit	Feet	Yards	Meters	Rods	Furlongs	Miles (Statute)
1 Rod=	16.5	5.5	5.02921	1	.025 (1/40)	.003125 (1/320)
1 Furlong=	660	220	201.168	40	1	.125(1/8)
1 Mile (Statute)=	5280	1760	1609.35	320	8	1

1 Nautical Mile = 6080.2 feet = 1.15155 statute miles = 1/3 league.
1 Light Year = 5.879 trillion miles = 9.46 trillion kilometers.

WEIGHT EQUIVALENTS

Unit	Grains	Grams	Ounces (Troy)	Ounces (Avoir.)	Pounds (Troy)	Pounds (Avoir.)	Kilo-grams
1 Grain=	1	.064799	.002083	.002286	.000174	.000143	.000065
1 Gram=	15.4324	1	.032151	.035274	.002679	.002205	.001
1 Ounce (Troy) =	480	31.1035	1	1.09714	.083333	.068571	.031104
1 Ounce (Avoir.) =	437.5	28.3495	.911458	1	.075955	.0625	.028350
1 Pound (Troy) =	5760	373.242	12	13.1657	1	.822857	.373242
1 Pound(Avoir.) =	7000	453.592	14.5833	16	1.21528	1	.453592
1 Kilogram =	15432.4	1000	32.1507	35.2740	2.67923	2.20462	1

Unit	Kilograms	Pounds (Troy)	Pounds (Avoir.)	Metric Tons	Net (Short)	Gross (Long Tons
1 Metric Ton =	1000	2679.23	2204.62	1	1.10231	.984206
1 Net (Short) Ton=	907.185	2430.56	2000	.907185	1	.892857
1 Gross (Long) Ton=	1016.05	2722.22	2240	1.01605	1.12	1

VOLUME AND CAPACITY EQUIVALENTS

Unit	Cubic CM	Cubic In	Liters	Qts (Liq.)	Qts (Dry)	Gals. (Liq.)	Gals. (Dry)	Cubic Feet
1 Cu. Centimeter=	*1*	*.06102*	*.001*	*.00106*	*.00091*	*.00026*	*.00023*	*.00004*
1 Cu. Inch=	*16.387*	*1*	*.01639*	*.01732*	*.01488*	*.00433*	*.00372*	*.00058*
1 Gill=	*118.29*	*7.2188*	*.125*	*.10742*	*.03125*	*.02686*	*.02686*	*.00418*
1 Pint (Liquid)=	*473.18*	*28.875*	*.47318*	*.5*	*.42968*	*.125*	*.10742*	*.01671*
1 Pint (dry)=	*550.62*	*33.600*	*.55062*	*.58182*	*.5*	*.14546*	*.125*	*.01945*
1 Liter=	*1000*	*61.023*	*1*	*1.0567*	*.90808*	*.26417*	*.22702*	*.03531*
1 Quart (Liquid)=	*946.36*	*57.75*	*.94636*	*1*	*.85937*	*.25*	*.21484*	*.03342*
1 Quart (dry)=	*1101.2*	*67.201*	*1.1012*	*1.1637*	*1*	*.29091*	*.25*	*.03889*
1 Gallon (Liquid)=	*3785.4*	*231*	*3.7854*	*4*	*3.4375*	*1*	*.85937*	*.13368*
1 Gallon (dry)=	*4404.9*	*268.80*	*4.4049*	*4.6546*	*4*	*1.1636*	*1*	*.15556*
1 Pack=	*8809.8*	*537.61*	*8.8098*	*9.3092*	*8*	*2.3273*	*2*	*.31111*
1 Cu. Foot=	*28317.0*	*1728*	*28.317*	*29.922*	*25.714*	*7.4805*	*6.4285*	*1*
1 Bushel=	*35239.3*	*2150.4*	*35.239*	*37.237*	*32*	*9.3092*	*8*	*1.2445*
1 Barrel=	*119241.2*	*7276.5*	*119.24*	*126*	*108.28*	*31.5*	*27.070*	*4.2109*
1 Cu. Yard=	*764559.4*	*46656*	*764.56*	*807.90*	*694.28*	*201.97*	*173.57*	*27*
1 Cu. Meter=	*1000000*	*61023.4*	*1000*	*1056.7*	*908.08*	*264.17*	*227.02*	*35.314*

AREA EQUIVALENTS

Unit	Square Inches	Square Feet	Square Yards	Square Meters
1 Square Foot=	*144*	*1*	*.1111*	*.09290*
1 SquareYard=	*1296*	*9*	*1*	*.83613*
1 Square Meter =	*1550*	*10.7639*	*1.19599*	*1*
1 Square Rod=	*39204*	*272.25*	*30.25*	*25.293*
1 Are=	*155000*	*1076.39*	*119.599*	*100*
1 Acre=	*6272640*	*43560*	*4840*	*4046.86*
1 Square Mile (640 Acres)=	*-*	*27878400*	*3097600*	*2589999*
1 Square Kilometer=	*-*	*10763867*	*1195985*	*1000000*

MISCELLANEOUS LIQUID MEASURE CONVERSIONS

1 Fl. Oz. = 1.805 Cu. In.	1 Quart = 946 Cu. Cm.
1 Fl. Oz. = 29.6 Cu. Cm.	1 Gallon = 8 Pints
1 Pint = 16 Fl. Oz.	1 Gallon = 4 Quarts
1 Quart = 32 Fl. Oz.	1 Firkin = 9 Gallons
1 Quart = 2 Pints	1 Hogshead = 63 Gallons

METRIC SYSTEM

LENGTH

1 Meter (m) = { 10 decimeters (dm); 100 centimeters (cm); 1,000 millimeters (mm)

1 dekameter (dkm) = 10 meters (m)
1 hectometer (hm) = 100 meters (m)
1 kilometer (km) = 1,000 meters (m)

WEIGHT

1 gram (g) = { 10 decigrams (dg); 100 centigrams (cg); 1,000 milligrams (mg)

1 dekagram (dkg) = 10 grams (g)
1 hectogram (hg) = 100 grams (g)
1 kilogram (kg) = 1,000 grams (g)

1 metric ton = { 1,000 kilograms (kg); 1,000,000 grams (g)

VOLUME & CAPACITY

1 liter (l) = { 1 cubic decimeter (dm^3); 10 decileters (dl); 100 centiliters (cl); 1,000 milliliters (ml); 1,000 cubic centimeters (cm^3 or cc)

1 dekaliter (dkl) = 10 liters (l)
1 hectoliter (hl) = 100 liters (l)

1 kiloliter (kl) = { 1 cubic meter (m^3); 1 stere (s); 1,000 liters (l)

AREA

1 centare (ca) = { 1 square meter (m^2); 100 square decimeters (dm^2); 10,000 square centimeters (cm^2); 1,000,000 square millimeters (mm^2)

1 are (a) = { 1 square dekameter (dkm^2); 100 square meters (m^2)

1 hectare (ha) = { 100 ares (a); 10,000 square meters (m^2)

1 square kilometer (km^2) = 1,000,000 square meters (m^2)

Other prefixes occasionally used:
micro—one millionth • myria—10,000 times
• deca—10 times (same as deka) • mega—1,000,000 times

AN/MS O-RING EQUIVALENTS

The AN6227B, AN6230B and MS28775 O-Rings have the same composition. For use in aircraft hydraulic systems using MIL-H-5606 petroleum base hydraulic fluid.

AN6227B/MS28775 Equivalents

AN6227B Dash No.	*MS28775 Dash No.*	*Nominal Size Width*	*I.D.*	*O.D.*
1	*6*	*1/16*	*1/8*	*1/4*
2	*7*	*1/16*	*5/32*	*9/32*
3	*8*	*1/16*	*3/16*	*5/16*
4	*9*	*1/16*	*7/32*	*11/32*
5	*10*	*1/16*	*1/4*	*3/8*
6	*11*	*1/16*	*5/16*	*7/16*
7	*12*	*1/16*	*3/8*	*1/2*
8	*110*	*3/32*	*3/8*	*9/16*
9	*111*	*3/32*	*7/16*	*5/8*
10	*112*	*3/32*	*1/2*	*11/16*
11	*113*	*3/32*	*9/16*	*3/4*
12	*114*	*3/32*	*5/8*	*13/16*
13	*115*	*3/32*	*11/16*	*7/8*
14	*116*	*3/32*	*3/4*	*15/16*
15	*210*	*1/8*	*3/4*	*1*
16	*211*	*1/8*	*13/16*	*1-1/16*
17	*212*	*1/8*	*7/8*	*1-1/8*
18	*213*	*1/8*	*15/16*	*1-3/16*
19	*214*	*1/8*	*1*	*1-1/4*
20	*215*	*1/8*	*1-1/16*	*1-5/16*
21	*216*	*1/8*	*1-1/8*	*1-3/8*
22	*217*	*1/8*	*1-3/16*	*1-7/16*
23	*218*	*1/8*	*1-1/4*	*1-1/2*
24	*219*	*1/8*	*1-5/16*	*1-9/16*
25	*220*	*1/8*	*1-3/8*	*1-5/8*
26	*221*	*1/8*	*1-7/16*	*1-11/16*
27	*222*	*1/8*	*1-1/2*	*1-3/4*
28	*325*	*3/16*	*1-1/2*	*1-7/8*
29	*326*	*3/16*	*1-5/8*	*2*
30	*327*	*3/16*	*1-3/4*	*2-1/8*

AN6230B/MS28775 Equivalents

AN6230B Dash No.	*MS28775 Dash No.*	*Nominal Size Width*	*I.D.*	*O.D.*
1	*223*	*1/8*	*1-5/8*	*1-7/8*
2	*224*	*1/8*	*1-3/4*	*2*
3	*225*	*1/8*	*1-7/8*	*2-1/8*
4	*226*	*1/8*	*2*	*2-1/4*
5	*227*	*1/8*	*2-1/8*	*2-3/8*
6	*228*	*1/8*	*2-1/4*	*2-1/2*
7	*229*	*1/8*	*2-3/8*	*2-5/8*
8	*230*	*1/8*	*2-1/2*	*2-3/4*
9	*231*	*1/8*	*2-5/8*	*2-7/8*
10	*232*	*1/8*	*2-3/4*	*3*
11	*233*	*1/8*	*2-7/8*	*3-1/8*
12	*234*	*1/8*	*3*	*3-1/4*
13	*235*	*1/8*	*3-1/8*	*3-3/8*
14	*236*	*1/8*	*3-1/4*	*3-1/2*
15	*237*	*1/8*	*3-3/8*	*3-5/8*
16	*238*	*1/8*	*3-1/2*	*3-3/4*
17	*239*	*1/8*	*3-5/8*	*3-7/8*
18	*240*	*1/8*	*3-3/4*	*4*
19	*241*	*1/8*	*3-7/8*	*4-1/8*
20	*242*	*1/8*	*4*	*4-1/4*
21	*243*	*1/8*	*4-1/8*	*4-3/8*
22	*244*	*1/8*	*4-1/4*	*4-1/2*
23	*245*	*1/8*	*4-3/8*	*4-5/8*
24	*246*	*1/8*	*4-1/2*	*4-3/4*
25	*247*	*1/8*	*4-5/8*	*4-7/8*

No MS28775 Equivalent for AN6230B-31 and Larger

CONVERSION CHARTS

FRACTIONAL INCHES CONVERTED TO DECIMAL MILLIMETERS

Fraction of Inch	Decimal Inch	Decimal MM.	Fraction of Inch	Decimal Inch	Decimal MM.	Fraction of Inch	Decimal Inch	Decimal MM.	Fraction of Inch	Decimal Inch	Decimal MM.
1/64	.015625	0.39688	17/64	.265625	6.74689	33/64	.515625	13.09690	49/64	.765625	19.44691
1/32	.03125	0.79375	9/32	.28125	7.14376	17/32	.53125	13.49378	25/32	.78125	19.84379
3/64	.046875	1.19063	19/64	.296875	7.54064	35/64	.546875	13.89065	51/64	.796875	20.24067
1/16	.0625	1.58750	5/16	.3125	7.93752	9/16	.5625	14.28753	13/16	.8125	20.63754
3/64	.078125	1.98438	21/64	.328125	8.33439	37/64	.578125	14.68440	53/64	.828125	21.03442
3/32	.09375	2.38125	11/32	.34375	8.73127	19/32	.59375	15.08128	27/32	.84375	21.43129
7/64	.109375	2.77813	23/64	.359375	9.12814	39/64	.609375	15.47816	55/64	.859375	21.82817
1/8	.125	3.17501	3/8	.375	9.52502	5/8	.625	15.87503	7/8	.875	22.22504
9/64	.140625	3.57188	25/64	.390625	9.92189	41/64	.640625	16.27191	57/64	.890625	22.62192
5/32	.15625	3.96876	13/32	.40625	10.31877	21/32	.65625	16.66878	29/32	.90625	23.01880
11/64	.171875	4.36563	27/64	.421875	10.71565	43/64	.671875	17.06566	59/64	.921875	23.41567
3/16	.1875	4.76251	7/16	.4375	11.11252	11/16	.6875	17.46253	15/16	.9375	23.81255
13/64	.203125	5.15939	29/64	.453125	11.50940	45/64	.703125	17.85941	61/64	.953125	24.20942
7/32	.21875	5.55626	15/32	.46875	11.90627	23/32	.71875	18.25629	31/32	.96875	24.60630
15/64	.234375	5.95314	31/64	.484375	12.30315	47/64	.734375	18.65316	63/64	.984375	25.00318
1/4	.25	6.35001	1/2	.5	12.70003	3/4	.75	19.05004	1	1.	25.40005

MILLIMETERS CONVERTED TO DECIMAL INCHES

	INCH EQUIVALENTS									
Millimeters	0	1	2	3	4	5	6	7	8	9
	0.00000	0.03937	0.07874	0.11811	0.15748	0.19685	0.23622	0.27559	0.31496	0.35433
10	0.39370	0.43307	0.47244	0.51181	0.55118	0.59055	0.06299	0.66929	0.70866	0.74803
20	0.78740	0.82677	0.86614	0.90551	0.94488	0.98425	1.02362	1.06299	1.10236	1.14173
30	1.18110	1.22047	1.25984	1.29921	1.33858	1.37795	1.41732	1.45669	1.49606	1.53543
40	1.57480	1.61417	1.65354	1.69291	1.73228	1.77165	1.81102	1.85039	1.88976	1.92913
50	1.96850	2.00787	2.04724	2.08661	2.12598	2.16535	2.20472	2.24409	2.28346	2.32283
60	2.36220	2.40157	2.44094	2.48031	2.51968	2.55905	2.59842	2.63779	2.67716	2.71653
70	2.75590	2.79527	2.83464	2.87401	2.91338	2.95275	2.99212	3.03149	3.07086	3.11023
80	3.14960	3.18897	3.22834	3.26771	3.30708	3.34645	3.38582	3.42519	3.46456	3.50393
90	3.54330	3.58267	3.62204	3.66141	3.70078	3.74015	3.77952	3.81889	3.85826	3.89763
100	3.93700	3.97637	4.01574	4.05511	4.09448	4.13385	4.17322	4.21259	4.25196	4.29133
110	4.33070	4.37007	4.40944	4.44881	4.48818	4.52755	4.56692	4.60629	4.64566	4.68503
120	4.72440	4.76377	4.80314	4.84251	4.88188	4.92125	4.96062	4.99999	5.03936	5.07873
130	5.11810	5.15747	5.19684	5.23621	5.27558	5.31495	5.35432	5.39369	5.43306	5.47243
140	5.51180	5.55117	5.59054	5.62991	5.66928	5.70865	5.74802	5.78739	5.82676	5.86613
150	5.90550	5.94487	5.98424	6.02361	6.06298	6.10235	6.14172	6.18109	6.22046	6.25983
160	6.29920	6.33857	6.37794	6.41731	6.45668	6.49605	6.53542	6.57479	6.61416	6.65353
170	6.69290	6.73227	6.77164	6.81101	6.85038	6.88975	6.92912	6.96849	7.00786	7.04723
180	7.08660	7.12597	7.16534	7.20471	7.24408	7.28345	7.32282	7.36219	7.40156	7.44093
190	7.48030	7.51967	7.55904	7.59841	7.63778	7.67715	7.71652	7.75589	7.79526	7.83463
200	7.87400	7.91337	7.95274	7.99211	8.03148	8.07085	8.11022	8.14959	8.18896	8.22833
210	8.26770	8.30707	8.34644	8.38581	8.42518	8.46455	8.50392	8.54329	8.58266	8.62203
220	8.66140	8.70077	8.74014	8.77951	8.81888	8.85825	8.89762	8.93699	8.97636	9.01573
230	9.05510	9.09447	9.13384	9.17321	9.21258	9.25195	9.29132	9.33069	9.37006	9.40943
240	9.44880	9.48817	9.52754	9.56691	9.60628	9.64565	9.68502	9.72439	9.76376	9.80313
250	9.84250	9.88187	9.92124	9.96061	9.99998	10.03935	10.07872	10.11809	10.15746	10.19683
260	10.23620	10.27557	10.31494	10.35431	10.39368	10.43305	10.47242	10.51179	10.55116	10.59053
270	10.62990	10.66927	10.70864	10.74801	10.78738	10.82675	10.86612	10.90549	10.94486	10.98423
280	11.02360	11.06297	11.10234	11.14171	11.18108	11.22045	11.25982	11.29919	11.33856	11.37793
290	11.41730	11.45667	11.49604	11.53541	11.57478	11.61415	11.65352	11.69289	11.73226	11.77163

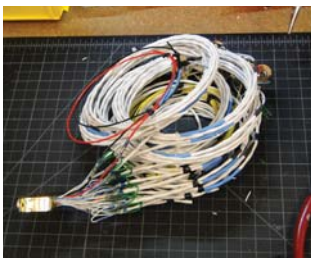
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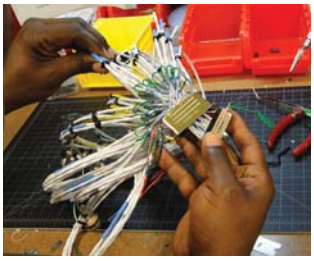
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EATON AEROQUIP 303

This standard hose is used in medium pressure A/C hydraulic, fuel, oil and coolant systems. An inner tube of seamless synthetic rubber is reinforced with a synthetic-impregnated single-wire braid over a single cotton braid and an outer cover of synthetic-impregnated oil-resistant cotton braid. Operating temperature -65 to 250F. Conforms to MILH-8794 (supersedes MIL-H-5511A). Used with Aeroquip 491 hose fittings.



EATON AEROQUIP 666

Aeroquip 666 medium pressure Teflon™ hose is widely used in aircraft applications handling fuel, oils, and other fluids. It is unaffected by all fuels, oils, alcohols, coolants, or solvents commonly use in aircraft. Construction of Aeroquip 666 hose is of spiral extruded Teflon™ resin for the inner tube with a reinforcement and outer cover of Type 300 Series stainless steel wire braid. The result is a lightweight hose able to withstand prolonged flexing and vibration under all service conditions. Aeroquip 666 hose is also used in hydraulic and pneumatic applications at pressures up to 1500 psi. Operating temperature is -65° to 450°F.



EATON AEROQUIP AE466

Aeroquip integral silicone firesleeves on Aroquip Teflon™ hose assemblies. This hose/sleeve combination meets the test requirements of TSO-C53A Type D and TSO-C75 Type IIIA and IIIB.

The Silicone sleeve is applied directly onto the metal braid an fittings to form a smooth, tight bond. Hose flexibility is not impaired. Non-age sensitive for extra-long service life. Eliminates the use of band clamps. Temperature range -65°F to +450°F. Available in blue or brown.



EATON AEROQUIP AE701

An inner tube of seamless, specially formulated synthetic rubber reinforced with a stainless steel partial inner braid and full-coverage stainless steel outer braid. Operating temperature -65 to 300F. Aeroquip 701 hose is widely used for aircraft fuel and oil lines where flexibility and light weight are prime considerations. Because of its lighter weight and lower operating pressure than type 303 hose, it is not recommended for hydraulic lines. Use with Aeroquip 816 hose fittings. Aeroquip 601/ AE701 is a direct replacement for old 601 hose. AE701 hose has no shelf life and is the upgraded version of 601 hose



EATON AEROQUIP FIRESLEEVE

Aeroquip Firesleeve was specially developed to meet the fire resistance requirements of FAATSO - C53a OR TSO - C75. May be used for all fuel, oil, hydraulic, fire extinguisher & propeller feathering lines. “Fire-proof” hose lines as defined by FAA must withstand a direct flame for fifteen minutes under specified flow conditions without failure. Fire-resistant lines must withstand a 5-minute exposure under these conditions. Fire-proof hose lines are obtained when the proper size Aeroquip Firesleeve is selected from the chart below and properly assembled. 900591B Clamps - used to secure firesleeve material on each end over the basic hose assembly.

AE102 firesleeve is used to meet the fire resistance requirements of FAA TSO-C53a and TSO-C75. This firesleeve can be indentified by its orange colored outer surface. It functions effectively within a continuous operating temperature range of -65 degree to +450 degree.

NOTES

NOTES

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3-IN-1 GAUGES– 567
3M™– 33, 924
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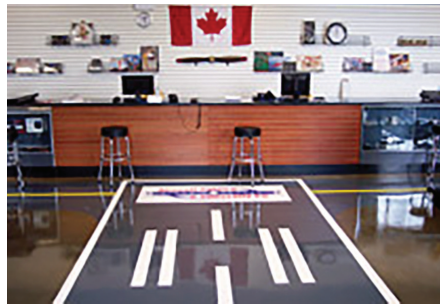
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